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Live Streaming of Egypt's International Events in Creating Understanding of Sustainability to Local Youth

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Abstract

Event participation among youth has changed because of rapid developments in media technologies. Viewing live stream or hybrid events has gained popularity among youth over televised events. Popular live streaming video platforms (LSVP) are Instagram Live, Facebook Live, and TikTok Live. Over the past six years, Egypt has hosted several international events, like the 27th Conference of the Parties to the United Nations Framework Convention on Climate Change (COP27) and the World Youth Forum (WYF), that were live streamed from Sharm el-Sheikh. These events discussed sustainability and the 2030 Sustainable Development Goals (SDGs). Hence, this study examines whether live streaming of Egypt's international events helped Egyptian youth understand sustainability. The study used two research techniques, a survey on Egyptian youth and interviews. According to the survey results, most of the respondents understood sustainability from their universities and heard about both the COP27 and WYF events. Those that saw live streams of the events agreed that watching live stream events on sustainability helped them understand sustainability. The study also found a positive statistical correlation between seeing live streams of COP27 and WYF on TikTok and helping youth understand sustainability.

Keywords: Egypt; events; live streaming; sustainability; and youth

Introduction

People disagreed on a standardized term for an event (Bowdin et al., 2006). The Events Industry Council described an event as "An organized occasion such as a meeting, convention, exhibition, special event, gala dinner, etc. An event is often composed of several different yet related functions" (Events Industry Council Insights, 2018). At the start of the 1980s, governments began comprehending the importance of events. During the beginning of the 21st century, countries hosted events due to their positive effect and role in developing arts, education, tourism, and culture. There was an increase in academic research into events and the event industry at the end of the 21st century as events became more popular (Mair & Whitford, 2013).

According to the United Nations website, youth are between the ages of 15 to 24, making up globally 1.2 billion young people, 16% of the world population. The number of youths, according to the UN website should reach 1.3 billion by meeting the 2030 Sustainable Development Goals (SDGs). The oldest of the Generation Z began early adulthood, a period of forming values. Major events such as the Covid pandemic will forever affect these young lives (Azimi et al., 2022). Each generation was born into a different "media landscape" (Bolin, 2017). Hence, youth are the most technologically advanced in information and communication technology (ICT) (Fortunati et al., 2019). The growth of ICT supported the distribution of information and provided the chance for two-way communication between senders and receivers (Heo et al., 2020).

Technological advancements have drastically changed how modern events are consumed and produced and people are not only viewing events via television broadcasts (Lee Ludvigsen & Petersen-Wagner, 2022). The way Generation Z consume events has changed due to the Covid-19 pandemic as they followed governmental restraints of not participating in social gatherings and not going out in public spheres (Harari et al., 2022). The pandemic transformed the event industry, where event planners reassessed everything from content distribution, revenue models and event technologies (100 event statistics, 2022). The pandemic triggered changes to people's behaviour (Gonçalves, 2021). Today, the trending technologies for viewing events over the internet are Video on Demand (VOD) and Live Streaming (Walia, 2016), which bring events globally to people's computers (Haimson & Tang, 2017), smartphones, and tablets (Heo et al., 2020).

Events on sustainability have taken a front row ever since sustainability became an international debate (Dickson & Arcodia, 2010). Youth are the most prone to play a potential role in the sustainable development goals (Youth-United Nations Sustainable Development, n.d.) because they own social capital that can be utilised in creating awareness about sustainable development by using social media (Srivastava, 2021).

Egypt became a global player in conducting events promoting climate change and sustainability in the 27th Conference of the Parties (COP27) to the United Nations Framework Convention on Climate Change (UNFCCC) event (Arora & Arora, 2023) and the World Youth

Forum (WYF) events. Youth participation of events on sustainability is important for their understanding of sustainability. Thus, this study examines the role of live streaming of Egypt's international events in creating youth understanding of sustainability.

The Significance of the Study

- This study is significant in new technology studies since live streaming of events became increasingly popular amongst youth.
- To the best of the author's knowledge, there is little research on the live streaming of events and none on the live streaming of events on sustainability. This study is significant since it examines Egypt's international events on sustainability.
- This study is significant since it investigates how youth are essential pillars in reaching sustainable development goals. Events on sustainability can create awareness amongst youth. Hence, their understanding of sustainability is vital in helping reach the 2030 SDGs.

The Purpose of the Study

- To learn if youth are aware of sustainability.
- To determine how youth got to understand sustainability.
- To examine if watching live streams of COP27 or WYF events on sustainability helped youth understand sustainability.
- To explore if the coverage of events by social media influencers help youth understand sustainability.
 - To investigate which social media platforms youth most use for live streaming events.
 - To discover tools other than live streaming that can help youth understanding sustainability.

Literature Review

The Evolution of the Event Industry

Traditional events consist of vast numbers of people, a large venue, and a stage for entertainers to carry out their performances on (Choudhary, 2020). There are four kinds of events: Mega events, Major events, Hallmark events, and Local events (Oklobdžija, 2015). Getz (2005) describes Mega-events: "... by way of their size or significance, are those that yield extraordinarily high levels of tourism, media coverage, prestige, or economic impact for the host community, venue or organization." Major events are important because they impact the economy of the host country and have international media coverage. They are

mostly sports-related events like the Formula One Grand Prix. A Hallmark event supports a hosting country's image and revives its culture. Examples of Hallmark events are the Tour de France and the Rio de Janeiro Carnival. Local events are enjoyed by local audiences for their entertainment, fun, and social features (Oklobdžija, 2015).

Events can be business events like exhibitions, conferences, and incentive travel. They can also be charity events, entertainment events, festivals or cultural events, outdoor events, sports events, and wedding events. The event industry has various shareholders, including industry experts, the media, sponsors, participants, host community, students, and organisers (Bowdin et al., 2006). The organisers are often governmental bodies such as parliaments, political parties, and international bodies like the Olympics committee who cooperate with the media, (Dayan & Katz, 1992). Furthermore, the World Tourism Organisation (WTO) began to recognise events as an important industry (Bowdin et al., 2006). Events are an important part of the tourism and the hospitality industry. They are known globally for their strong effect on the host economy, tourism, education, culture, and public progress (Singh, 2020).

During the early 20th century, the events industry materialised with events like the 1908 "Daily Mail Ideal Home Show" and the 1915, "British Industries Fair" held at the Royal Agricultural Hall. The 1950s and 1960s events were distinguished for the celebration of new society cultures, for example, the 1964 "Notting Hill Carnival" event which celebrated the South Asian and West Indies civilisations (Bowdin et al., 2006).

By the 1960s, television was the main mass medium (Allen & Thomson, 2023) that broadcasted events such as the funeral of President John F. Kennedy (Dayan & Katz, 1992). It was also the era for the first satellite broadcast (1960s - History of the BBC, n.d.). On 29 July 1981, the marriage of Lady Diana to Prince Charles was watched by 750 million television spectators in 74 countries, while 600,000 physically participated (The wedding of Prince Charles and Lady Diana Spencer - History of the BBC, 1981). The 1980s saw a rise in global sporting events like Wimbledon, the Royal Ascot, and the Open Golf. Other live televised sporting events was the 1984 Olympic Games held in Los Angeles and broadcasted to 156 countries to over half of the world's population (Bowdin et al., 2006; Larrosa, 2016).

Germany was the first country to host the FIFA World Cup in 2006, the first "greening agenda" sporting event. Other events hosted in developing countries were the 2010 Commonwealth Games in India, the 2010 FIFA World Cup in South Africa, the 17th United Nations Conference of Parties under the Framework Convention on Climate Change (COP17) in 2011 held in South Africa, the 2014 FIFA World Cup in Brazil, and the 2016 Olympic Games in Brazil (Kedia et al., 2011).

There are three main developments in the events industry: social, technological, and sustainability advances (Singh, 2020). Since 2020, the pandemic forced event organisers to host online events in hybrid and virtual formats. These events were more environmentally friendly than face-to-face events. 50% in-person hybrid events meant a two-thirds reduction in energy use and carbon footprints by two-thirds. Whereas, with virtual events, sees a 94% carbon footprint reduction and energy by 90% (Tao et al., 2021).

A study by "Meeting Professionals International (MPI)" on "managing event technology ecosystems" found that 50% of event planners felt that in the past three years there was an increase in technology expenses. Such event technologies are smartphone event apps to serve event organizers and participants such as Whova (Singh, 2020; Meyer et al., 2021).

The Live Streaming of Events

The onset of the Covid-19 pandemic and the forced social distance measures-initiated consumer behavioural changes (Gonçalves, 2021). The pandemic stimulated the growth of virtual substitutes to conventional event mass-gatherings (Singapore Leans into Tech and Innovation for Sports Event Hosting Future, 2023). Modern technologies have developed into an integral part of people's lives. Event organisers responded to the changing market with revolutionary event technologies (Gonçalves, 2021). Soon virtual events boomed (Dolasinski et al., 2020).

The world shifted from a global village to a virtual one (Choudhary, 2020). There were also hybrid events that integrated virtual and live components to reach broader global spectators (Gonçalves, 2021). Recent years observed a fluctuating connection between live events and advanced technology (Mueser & Vlachos, 2018). The influence of technology advancements changed both the management of events and audience experiences (Jaimangal-Jones et al., 2018).

Video Streaming services allows audio-visual content delivery to a large audience. There are two categories of video streaming services: live streaming and VOD. With VOD, users can view, rewind, and pause the video content several times without any constraints (Walia, 2016). Whereas, with live streaming, media is recorded, distributed in real-time, and viewed without downloading to allow instantaneous communication between the live streamer and the audience (Wang, 2019; Sluman, 2021).

According to a 2021 study on the Global Live Streaming Market, global live streaming income reached \$59.14 billion and is predicted to reach \$223.98 billion by 2028. Live streaming grew tremendously due to real-time communication, a strong sense of users' satisfaction and engagement (Lv et al., 2022). Numerous organisations use social media platforms to communicate virtually and to create awareness (Choudhary, 2020). Today's social media platforms, whether YouTube or Instagram gained popularity with the VOD services (Bründl & Hess, 2016).

Live streamers use social media platforms like YouTube Live, Twitter, Instagram Live, Facebook Live, and TikTok Live to reach audiences. Viewers watched the live stream through a downloaded live streaming app. on a smartphone or through a web browser. The introduction of YouTube in 2005 gave new prospects to live streaming. In 2008, YouTube held its first live stream. In 2011, saw the launch of Twitch, the streaming platform. Facebook, Twitter, and Instagram followed in the same footsteps. Live streaming bloomed into a widely used channel for entertainment, communication, and a marketing tool (Rogers, 2022). Live streaming platforms like YouNow, Twitch, and Periscope allow content creators to simultaneously watch other broadcasts and to create their own. Live streaming platforms became so profitable that Amazon bought Twitch in 2014 for \$970 million. In 2015, Periscope bought Twitter, allowing users to broadcast live from their smartphones. Periscope had over 10 million accounts in the first quarter of its launch. Whereas, YouNow had 150,000 daily live broadcasts (Bründl & Hess, 2016). In 2016, Snapchat became a competitive player with "Snapchat Stories" and "Live Stories" features that appear between forty-five minutes to sixteen hours after events (Haimson & Tang, 2017).

The third wave in live streaming saw an inward turn of the camera rather than outwards towards the environment. These live streams are a form of a selfie to portray a person's life to other people (Lottridge et al., 2017). Sometimes a popular live streamer can have over one million views (Hou et al., 2020). Live streamers are mostly young, rich, and well-educated individuals (Sundet & Lüders, 2022). With virtual reality (VR), people experience events wherever they are, and whenever they want. VR has recently played an impressive role in the medical field, education and in teaching sustainable behaviour (Lee et al., 2022; Scurati et al., 2021).

Egyptian Youths' Role in Promoting Sustainability

According to Brundtland Report to the United Nations World Commission on Environment and Development (UNWCED) sustainable development is defined as: "...development that meets the needs of the present without compromising the ability of future generations to meet their own needs" In recent years, the word sustainability has expanded to include economic, social, and environmental elements (Dickson & Arcodia, 2010, p.3).

In line with the 2030 Agenda for Sustainable Development, Egypt introduced its sustainable development strategy "Egypt's Vision 2030." The 2030 Agendas crux are "universality" and "inclusivity" (Egypt National Review Report for Input to 2016 HLPF, 2016). The SDGs are a continuation of the Millennium Development Goals (MDGs) which were between 2000 and 2015. Since its launch in 2015, the 2030 Agenda for Sustainable Development was implemented with seventeen SDGs and 169 targets to end impoverishment and bring wealth and safety to the world (Hwang & Kim, 2017). Published in 2016, "Egypt Vision 2030 Sustainable Development Strategy" aims to have by 2030 a 10% decrease in greenhouse gas secretions (Exploring and Understanding Egypt's sustainable initiatives, 2023).

Male and female youth can play a vital role in achieving the SDGs to make a change in their lives and the lives of others (Hwang & Kim, 2017). Youth play a role in implementing, observing, and reviewing the 2030 Agenda (Youth - United Nations Sustainable Development, n.d.). Therefore, it is important to educate youth about sustainability to ensure a behavioural change concerning sustainable decisions (Scurati et al., 2021). One of the main concepts of sustainability is that every generation inherits the world from previous generations. Therefore, each generation must leave the world in a better state or even as they 'found it' (Sustainability in youth projects, n.d.).

The Egyptian government is aware of youths' potential in achieving the sustainable development process (Egypt National Review Report for Input to 2016 HLPF, 2016). Hence, youth should be educated about sustainability during their early childhood (Srivastava, 2021). Both public and private universities in Egypt have played a vital role in supporting sustainability goals. An example of this was the British University in Egypt (BUE) who signed an agreement with The United Nations Development Programme (UNDP) in 2022, to educate university students about sustainability and the SDGs (Research Newsletter: Vice President's Office for Research and Enterprise, 2022).

Additionally, young Egyptian influencers turned to social media to advocate for sustainability. One of these influencers is Mariam Diaa, an Arabic content creator on sustainability who posts her content on YouTube and Instagram. She also holds workshops to promote sustainable lifestyles. Another social media influencer, with the Instagram handle 'Eman Existing,' shares content about climate change and sustainability. Influencer and activist, Salma Muhammad used social media to encourage sustainable fashion. She owns her sustainable fashion brand "Be green by Salma" (Bakry, 2022). Other than youth educating youth via social media, events are used to promote and deliver content about sustainable development (Mair & Smith, 2022).

Live Streaming of Egypt's Events

There is an evident rise in the number of events on sustainability, like the "Sustainability LIVE London" event that was held in September 2022, and the November 2022 "Cleantech Forum Europe" event held in Brussels (Knowles, 2022). The "3rd Annual Sustainability Conference" in Luxor, Egypt was held between January 12th and 15th, 2023, under the title "Business Partnerships: Towards More Efficient Sustainable Solutions" (The 3rd Annual Sustainability Conference, 2023).

Events held in Egypt for youth was the annual World Youth Forum (WYF) established by Egyptian youth. The first event was held between November 4th and November 10th, 2017, in Sharm El-Sheikh, attended by 113 countries and more than three thousand youths (World Youth Forum 2022, n.d.). The WYF agenda has themes of interest for youth. One of these is "Sustainable Development, Technology and Entrepreneurship" which discusses different topics for reaching the SDGs globally (World Youth Forum, n.d.). The first WYF hashtag was #WeNeedToTalk and was uploaded with a video on social media to promote world peace. The video reached over seven million views (Ryder & Rizk, 2017).

Between November 3rd and 6th 2018, the second WYF had over five thousand youth attend from various countries. Youth participated in debates, workshops, and panel discussions. Between December 14th to 17th, 2019, the third WYF had over seven thousand youth from 197 countries. "The United Nations Commission for Social Development" identified the three WYF events as a global stage for youth to vent their concerns and play a role in meeting the 2030 sustainable development goals (World Youth Forum 2022, n.d.).

The fourth WYF in January 2022 had the slogan "Back Together." During the opening ceremony, Egypt's President Abdel Fattah El-Sisi stated, "We are launching the fourth edition of the World Youth Forum, which has become a platform for dialogue and communication between young people, and a tool for exchanging visions between all the world, especially at this defining moment in human history" (Abu Zaid, 2022). The topics of the fourth edition included climate change and sustainable water security. The WYF website registered over five hundred thousand youth from 196 countries (World Youth Forum 2022, n.d.). An interactive platform was launched at the link https://virtual.wyfegypt.com during the fourth WYF for youth to participate virtually in the event. The platform offers live coverage of the events, news about the forum, a bonus points program, and a "photo booth" (The World Youth Forum's New Virtual Interactive Platform, 2022). The fifth forum that was expected to be held in 2023, shall not take place (World youth forum launches a large package of development initiatives and projects, 2023).

Another international event held in Egypt was COP27, held between November 6th and 18th, 2022, in Sharm El Sheikh. It was the second environment summit held in an African country. COP27 offered a platform to discuss strategies to achieve the SDGs and activities against climate change (Arora & Arora, 2023). The COP27 theme was "Together for Implementation" (COP27: Iberdrola at the Climate Summit 2022, n.d.). An example of one of the COP27 live streamed debates was "Supporting Innovation: Raising Social Awareness with the Help of Digital Platforms for Climate Change." The panel discussed how social media can raise awareness about climate change under the theme "Digital path for sustainable green recovery" (At COP27, MCIT Partakes in Panel Discussion on 'Supporting Innovation: Raising Social Awareness with the Help of Digital Platforms for Climate Change, 2022). There were about 44 UN Climate Change events live streamed on YouTube (UN Climate Change Pavilion at COP 27, n.d.).

The World Bank Live website have numerous live streams (World Bank Group at COP27, 2022). Furthermore, two young campaigners Archana Soreng and Elizabeth Wathuti won the #MyClimateAction contest. They uploaded a video calling to end climate change (COP27: Delivering for people and the planet, n.d.). Additionally, the WYF pavilion was present at COP27 in the Green Zone. Youth held workshops and meetings on topics including violence against women, water scarcity and sustainable education(World Youth Forum in COP27, n.d.).

Many universities participated in the COP27. The Ahram Canadian University (ACU) uploaded videos on YouTube explaining issues concerning climate change (Faculty Contributions at COP27, n.d.). The American University in Cairo (AUC) (Auc@cop27 pavilion, 2022), The British University in Egypt (The British University in Egypt @COP27, 2022), Cairo University (EMCCU today: The Minister of Higher Education Inaugurates the Cairo University exhibition at the Green Innovation Pavilion within the activities of COP 27, 2022), Nile University (Nile University's Discussion Panel at COP27, 2022), and October University for Modern Sciences and Arts (MSA University) (MSA's Closing Day of the Climate Conference (COP27), 2022).

Volunteers are key supporters of any event. Youth can volunteer in events through organizations like universities, schools, clubs, and religious institutions (Nassar & Talaat, 2009). During COP27, the UN Development Programme (UNDP) had nine UN volunteers, most of whom were youth and females' that led five hundred local youth volunteers under the guidance of "Egypt's Ministry of Social Solidarity" (Volunteers Leverage Youth Action for Climate at COP27, 2022). Additionally, Egypt was chosen by UN-Habitat, Nairobi, Kenya, to host the 12th World Urban Forum (WUF) in November 2024. The conference will be held in Cairo to build on the outcome of the 11th WUF (Mohamed, 2023).

Theoretical Framework

The theoretical framework of this study adopts the following two theories:

Social Impact Theory

This study also draws on social impact theory (SIT) created in 1981 by Latané. Latané described it as "the influence on an individual's feelings, thoughts, or behaviour that is exerted by the real or implied presence or actions of others" (Chang et al., 2020). Social impact theory concentrates on how people can be the focus of social influence. The theory proposes that when people work cooperatively, social influence is dispersed across members in a group, and each extra group representative added has less influence as member numbers increase (Hoffman, 2023).

Social impact theory perceives that individuals affect others due to 'social forces.' The possibility that individuals will react to social influence is said to rise with the power of the source, the proximity of the event, and the quantity forcing the impact. Between five or six sources then the influence increases, more than six people, then the impact rises but at a declining amount, making the effect less powerful (Evans, 2023). Therefore, social impact influences people's perspective, opinions, and behaviour due to the company of others (Ang et al., 2018).

Perez-Vega et al. (2016) used social impact theory to comprehend social media communication since social media raises awareness. Live streaming with real-time features in the context of social impact theory creates awareness, and knowledge about topics-like sustainability.

The Uses and Gratification Theory

Live stream viewing is built on social motivations derived from the uses and gratifications theory (UGT) developed by Katz, Blumler, and Gurevitch (Sluman, 2021). In 1974, Blumler and Katz published the book "The Uses of Mass Communication: Current Perspectives on Gratifications Research" which explained the theory (Gordon, 2022). The UGT explains how and why individuals pursue certain media to gratify their needs. UGT is a spectator-centralised technique to comprehend mass communication. Media effect theories usually question "What does media do to people?" whereas the UGT asks "What do people do with media?" "Why do people use media" and "What do they use them for? The UGT believes that spectators choose media that meets their needs and achieves their gratification. Additionally, the media races with one another for audiences' gratification (Medacine, 2014).

Soon after the introduction of the UGT, studies treated participants as energetic beings who explore and use media in various ways and for numerous motives. Entertainment, social interaction, and identity formation gratify the audience's needs (Gordon, 2022). Live stream viewers get satisfaction from social interactions in chat rooms found on live stream platforms. Live stream audiences enjoy socialising with virtual groups that satisfy their needs in terms of learning new skills and connecting with other users (Sluman, 2021).

Survey Research Questions and Hypotheses

Research Ouestions

- RQ1. How did youth get to understand sustainability?
- RQ2. How aware are youth about sustainability?
- RQ3. Does watching live streamed events help youth understand sustainability?
- RQ4. Do social media influencers' live streams help youth understand sustainability?
- RQ5. Which of the COP27 and the WYF events did youth hear about?
- RQ6. Did youth believe that the COP27 and the WYF events helped in youth understanding of sustainability?
 - RQ7. Which of the COP 27 or the WYF events did youth see live streams of?
- RQ8. Did youth feel that watching live streams of the COP27 and the WYF events helped them understand sustainability?
 - RQ9. Which media channels did youth see the COP 27 and the WYF events on?
 - RQ10. What are the other tools that can help youth understand sustainability?

Hypotheses

- H1. There is a significant correlation between seeing live streams of COP27 or WYF on Facebook, Instagram, or TikTok and helping youth understand sustainability.
- H2. There are significant differences between watching live streams of COP27, WYF or both events and youths' awareness about sustainability.

Interview Questions

- Q1. Do you feel events like the COP27 and WYF educate youth about sustainability?
- Q2. What are the kinds of sustainability educational sessions held within these events?
- Q3. Do you feel that Egyptian youth can play a role in reaching sustainability goals?
- Q4. Is live streaming of events an effective tool to educate youth about sustainability?
- Q5. Other than live streaming events, what tools can explain sustainability to Egyptian youth?
- Q6. Do you think COP27 and WYF live streaming gave youth enough information to understand sustainability?
 - Q7. Do social media influencers covering such events help youth understand sustainability?
 - Q8. What can Egypt do to educate younger generations about sustainability?

Research Methodology

The Sample and Sample Size

The study consisted of two research techniques using a non-probability purposive sample. The first research technique was an online survey on Google forms distributed to obtain the required information from youth. The sample size was 160 Egyptian male and female youths between the ages of 18 and 24.

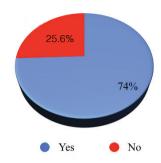
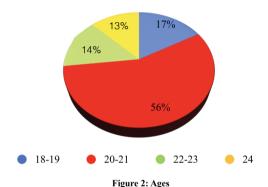


Figure 1: Knowing Sustainability: Screening Question

Out of the 160 respondents, a total of 119 respondents (74.4%) knew what sustainability was, whereas 41 respondents (25.6%) did not, which is approximately quarter of the respondents. Out of the 119 respondents there were 94 females and 25 males, their ages are illustrated in Figure 2.



As seen in Figure 2, most of the respondents, 67 respondents (56.3%) were between the ages of 20-21. Followed by 20 respondents (16.8%) who were between the ages of 18-19. Then 17 respondents (14.3%) who were between the ages of 22-23. The minority responses, 15 respondents (12.6%) were 24 years old.

The second research technique was interviews conducted on Zoom to gain insights into the COP27 and the WYF events. Additionally, how live streaming these events helped Egyptian youth understand sustainability. Interviews were conducted with the following participants:

Interview 1: Mr Sherif El-Said is a renowned and passionate professional in the field of sustainability and corporate social responsibility (CSR). With a strong background in sustainable development and a deep understanding of complex societal problems. El-Said moderated sessions in Cairo Climate Talks in the presence of local and foreign cabinet members and participated in various sustainability conferences like "The Annual Sustainability Conference" and "Egypt CSR Forum.".

Interview 2: Dr Ahmed Daoud is an Assistant Professor of Construction Engineering and Management. His area of research focuses on waste management, specifically construction and demolition waste, modular construction, and sustainability in the construction industry. He was appointed as a Global Ambassador of Sustainability in the Global Ambassadors of Sustainability initiative

Interview 3: Ms Sarah El-Haddad is an artist, traveller, and marketeer. She was a Fine Arts graduate with a Minor in Business Administration from the American University in Cairo (AUC). Since her graduation she has been working in different companies and NGOs, development related to arts. She is currently a Public Engagement Manager.

Survey Instrument and Measures

The questionnaire began with an opening statement introducing the topic, reassuring respondents that their identity will be kept anonymous, and the data collected would only be for academic use. The questionnaire consisted of one screening question, "Do you know what sustainability is?" If the respondents answered 'no', the questionnaire would automatically terminate. In addition, there were eight closed ended (multiple choice) questions asking respondents to answer one or more than one option. There was one semantic differential scale asking respondents to "Rate your awareness about sustainability" and two open ended questions asking, "In your opinion, what is sustainability?" and "Other than events, how can youth understand sustainability?" The questionnaire included nine-statements with a 5-point Likert scale ranging from strongly agree to strongly disagree. The final two questions were demographic questions concerning gender and age.

Data Collection Method

A Google form link of the questionnaire was distributed to respondents via email, WhatsApp or by scanning a QR code (quick-response code). Once the questionnaire was closed, the required data was extracted to answer the survey research questions and hypotheses. In addition, three interviews were conducted via Zoom due to interviewees' tight time schedules. Before starting the interview, the researcher asked for interviewees' consent to record and use the interview content for the paper. All interviews were conducted in English and transcribed.

Data Analysis

After collecting questionnaire data, the researcher analysed correlations to examine the relationship between certain independent and dependent variables. Data collected was analysed using the Statistical Packages for the Social Sciences (SPSS) to test the proposed hypotheses, and

to answer the research questions. The p-value that is less than $0.05 \le 0.05$ is significant showing a strong correlation. Several statistical tools like Kendall's tau correlation coefficient, standard deviation, and one-way ANOVA were used to investigate comparisons between variables.

Survey Results

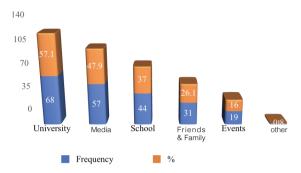


Figure 3: How Youth Got to Understand Sustainability

Figure 3 answers RQ1. 68 respondents (57.1%) got to understand sustainability from their university, followed by media with 57 respondents (47.9%), and then from schools with 44 respondents (37%). 31 respondents (26.1%) got to understand sustainability from their friends and family. The minority of 19 respondents (16%) got to understand sustainability from events. 1 respondent (0.8%) stated, "From my last summer internship."

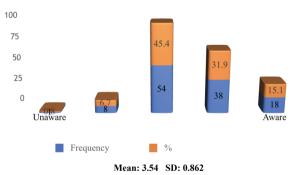


Figure 4: Awareness about Sustainability

Figure 4 answers RQ2. The majority of 54 respondents (45.4%) answered neutral to how aware they were of what sustainability is. This depicts that respondents were neither aware nor unaware of sustainability, even though they all answered yes to knowing what sustainability is. 18 respondents (15.1%) were very aware of what sustainability is and 1 respondent (0.8%) was unaware of what sustainability is.

Table 1: Opinion of What Sustainability is: Open ended question answer samples

Ability to maintain a process over time

Achieving our goals on different aspects (economically, socially, environmentally, and technologically) while not posing any harms on our planet or/and the future generations

Conserving natural resources

Consists of fulfilling the needs of current generations without compromising the needs of future generations

For me sustainability is not to exploit the resources and be able to use it on long term basis

I think it is the ability to provide for the needs of the current generation using available resources without adversely affecting future generations

Is taking care of our planet for future generations. It means using resources wisely and protecting the environment. It's important to reduce waste, conserve energy, and promote eco-friendly practices

It's trying to eliminate any waste that will cause instabilities in the environment

Shown in Table 1 is a sample of the responses to "In your opinion, what is sustainability?"

Table 2: Watching Live Streamed Events in Helping Youth Understand Sustainability

		Watching Live Streamed Events Helps Youth Understand Sustainability
Strongly Agree	Frequency	30
Strongly Agree	Percent	25.2
Адмоо	Frequency	52
Agree	Percent	43.7
Neutral	Frequency	26
Neutrai	Percent	21.8
Disagree	Frequency	11
Disagree	Percent	9.2

Mean: 3.85 SD: 0.908

Table 2 answers RQ3. The majority of 52 respondents (43.7%) agreed that watching live streamed events help youth understand sustainability. 30 respondents (25.5%) strongly agreed, 26 respondents (21.8%) answered neutral, 11 respondents (9.2%) disagreed, and no respondent strongly disagreed.

Table 3: Social Media Influencers' Live Streams Helps Youth Understand Sustainability

		Social media influencers' live streams helping youth under- stand sustainability
Stuangly Agua	Frequency	44
Strongly Agree	Percent	37
A	Frequency	49
Agree	Percent	41.2
N Y	Frequency	20
Neutral	Percent	16.8
Disagree	Frequency	4
	Percent	3.4
Strongly Disagree	Frequency	2
	Percent	1.7

Mean: 4.08 SD: 0.907

Table 3 answers RQ4. The majority of 49 respondents (41.2%) agreed that social media influencers' live streams help youth understand sustainability. 44 respondents (37%) strongly agreed, and 20 respondents (16.8%) answered neutral. The minority, 4 respondents (3.4%) disagreed, and 2 respondents (1.7%) strongly disagreed that social media influencers' live streams help youth understand sustainability.

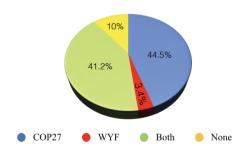


Figure 5: The Events Youth Heard About

Figure 5 answers RQ5. The majority of 53 respondents (44.5%) heard about COP27 event, 49 respondents (41.2%) heard about both the COP27 and the WYF events. 13 respondents (10.9%) did not hear about either event. The minority of 4 respondents (3.4%) heard about the WYF. A total of 106 respondents heard about the COP27 event, the WYF event or both events.

Table 4: The COP27 and the WYF Events Helped Youth Understand Sustainability

		The COP27 Event Helped Youth Understand Sustainability		
C4	Frequency	27		
Strongly Agree	Percent	25.5		
	Frequency	58		
Agree	Percent	54.7		
NI 4 I	Frequency	20		
Neutral	Percent	18.9		
D:	Frequency	1		
Disagree	Percent	0.9		
Mean: 4.05 SD: 0.695				

		The WYF Events Helped Youth Understand Sustainability		
C4	Frequency	11		
Strongly Agree	Percent	10.4		
	Frequency	40		
Agree	Percent	37.7		
NY 4 1	Frequency	50		
Neutral	Percent	47.2		
D.	Frequency	5		
Disagree	Percent	4.7		
Mean: 3.53 SD: 0.745				

Table 4 answers RQ6. Most of the respondents, 58 respondents (54.7%) agreed that they believed COP27 event helped youth understand sustainability. 27 respondents (25.5%) strongly agreed, 20 respondents (18.9%) answered neutral, 1 respondent (0.9) disagreed, and no respondent strongly disagreed.

Many of the respondents, 50 respondents (47.2%) answered neutral to whether they believed WYF events helped youth understand sustainability. 40 respondents (37.7%) agreed, 11 respondents (10.4%) strongly agreed, 5 respondent (4.7%) disagreed, and no respondent strongly disagreed. Hence, respondents believed that the COP27 event more than the WYF events helped youth understand sustainability.

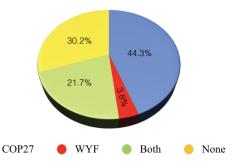


Figure 6: The Events Seen Live Streams of

Figure 6 answers RQ7. Out of the 106 respondents who heard of these events, 47 respondents (44.3%) saw live streams of COP27, followed by 32 respondents (30.2%) who did not see live streams of either event. 23 respondents (21.7%) saw live streams of both events and 4 respondents (3.8%) saw the WYF. Hence, out of the 106 respondents who heard of these events, 74 respondents saw live streams of the events.

Table 5: Watching Live Streams of the COP27 and WYF Events Helped them Understand Sustainability

		Watching live streams of the COP27 and WYF Events helped them understand sustainability
S4	Frequency	18
Strongly Agree	Percent	24.3
	Frequency	39
Agree	Percent	52.7
Neutral	Frequency	15
	Percent	20.3
Disagree	Frequency	2
	Percent	2.7

Mean: 3.99 SD: 0.749

Table 5 answers RQ8. 39 respondents (52.7%) who saw live streams of the events agreed that watching the live stream events on sustainability helped them understand sustainability. 18 respondents (24.3%) strongly agreed. 15 respondents (20.3%) answered neutral, whereas the minority of 2 respondents (2.7%) disagreed. No respondent strongly disagreed.

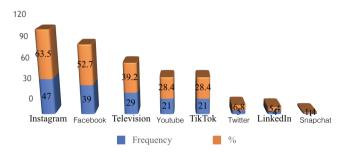


Figure 7: Media Channels Seen on it Live Streams of either COP27 and the WYF Events

Figure 7 answers RQ9. The majority of 47 respondents (63.5%) saw live streams of either COP27 or WYF on Instagram. 39 respondents (52.7%) saw live streams on Facebook. 29 respondents (39.2%) saw live streams on television. 21 respondents (28.4%) saw live streams on YouTube. 21 respondents (28.4%) saw live streams on TikTok. The minority saw live streams of either COP27 or WYF on Twitter with 5 respondents (6.8%), LinkedIn with 4 respondents (5.4%) and Snapchat with 1 respondent (1.4%).

Table 6: Other Tools that Can Help Youth Understand Sustainability

Discussions and Forums: Engaging in conversations with peers, experts, and communities to exchange ideas and solutions for a sustainable future.

More events and social media campaigns.

Attending courses about sustainability.

By engaging in more activities physically rather than just watching it.

By using interactive online content.

By watching videos and awareness campaigns on social media.

Engaging TikTok videos, celebrities, or games.

Seminars at universities.

Incorporating it into educational systems.

Through educational content such as videos explaining what sustainability is and how can people be more sustainable.

Youth can understand sustainability through video games, live streaming games, on ground activities integrated in events, and through the use of influencer.

Shown in Table 6 is a sample of the answers to RQ10.

Hypotheses Results and Discussion

Table 7: Correlations Between Seeing Live Streams of COP27 or WYF on Facebook, Instagram and TikTok and Helping Youth Understand Sustainability

	Seeing live streams of COP27 or WYF on Facebook			or on Instagram	Seeing live streams of COP27 or WYF on TikTok	
	r	р	r	р	r	p
Helping youth understand sustainability	-0.028	0.798	-0.015	0.892	.318	0.004

Table 7 answers H1. There is a positive correlation between seeing live streams of COP27 or WYF on TikTok and helping youth understand sustainability (r=.318, p=0.004). The more they see live streams of COP27 or WYF on TikTok, their understanding of sustainability increases. However, there are no correlations between seeing live streams of COP27 or WYF on Facebook or Instagram and helping youth understand sustainability.

Table 8: Significant Differences Between Watching Live Streams of COP27, WYF or Both Events and Youth Awareness about Sustainability-One Way ANOVA

	Watching live	N	Mean	Std. Devia- tion	df			
	streams of events				Between Groups	Within Groups	F	p
** .1	COP27	47	3.53	0.776				
Youth	WYF	4	4.25	0.500		102	2.007	0.110
awareness about sustainability	Both	23	3.87	0.815	3	102	2.007	0.118
Sustamatimity	None	32	3.44	1.014				

Table 8 answers H2. There are no significant differences between watching live streams of COP27, WYF, or both events and youths' awareness about sustainability (f=2.007, p=0.118).

Interview Results and Comparative Analysis Between Interviews and Survey Results Answers to Q1. Do you feel events like the COP27 and WYF educate youth about sustainability?

El-Said and Daoud believed that the events informed and raised awareness to youth about sustainability. However, El-Haddad felt that the COP27 event was not engaging youth enough but was rather targeting organisations, UN agencies and NGOs. Nevertheless, the WYF was targeting youth using different sessions. When comparing the interviewees opinions with the survey results, the survey respondents believed that the COP27 more than the WYF events helped youth understand sustainability. The following answers shows the interviewees' opinions.

El-Said replied:

They had an impact on raising awareness about sustainability and issues related to the climate since most of these events depend on edutainment. They have both the education and the entertainment part which I think is the most efficient way to reach young people.

Similarly, Daoud stated:

The different workshops held in such events enabled youth to be informed about what is the meaning of sustainability. How can we transform our communities into more sustainable communities? They inform them about the agenda of the 2030 vision and the seventeen SDGs. These events make youth more informed and educated about the meaning of sustainability and how we can enrich our communities and make them sustainable.

El-Haddad said:

The Word Youth Forum, I would believe so, since technically its target is the youth. Yet COP27, I do not really believe that there was awareness in Egypt. I do not believe that everyone was engaged, especially the youth. It is targeting more corporates, the big NGOs, and the UN agencies ... The WYF was targeting the youth in different universities, and they had different sessions.

Answers to Q2. What are the kinds of sustainability educational sessions held within these events?

El-Said and El-Haddad believed that there were sustainability educational sessions held within these events like on sustainability in the agriculture, the food supply chain and sustainability in climate change and the environment. The following shows two of the interviewees' answers.

El-Said answered:

The World Youth forum was more towards youth. Most of the events that were going on, the side events were targeting the youth and their problems. One booth in COP27 was related to one of the UN agencies for youth and they had an open space that hosted artists, singers, performers ... They are concerned with climate change and the environment so, the material they provided was very good ... In COP27 there were all levels, government, UN embodies but for the youth specifically. This was the one that caught my eye the most, and I even sat in this arena or booth and listened to artists singing about climate change, how this is affecting our lives and people were very interactive.

El-Haddad affirmed:

Only in COP 27, sustainability in agriculture and the food supply chain. Sustainability in climate change. How we can sustain and produce different innovative ideas to reduce climate change. To cope and to adapt to climate change with everything happening and how it is affecting our daily lives.

Answers to Q3. Do you feel that Egyptian youth can play a role in reaching sustainability goals?

The interviewees had a unanimous opinion. They all believed that youth could play an active role in reaching sustainability goals. El-Said believes that youth have a better chance to play a role in reaching sustainability goals since they are more aware about sustainability compared to older generations. Also, NGOs in Egypt promoting sustainability are mostly run by young people. Daoud feels that there are youth who care for the environment and all aspects of sustainability. El-Haddad finds youth very smart and creative in developing innovative ideas that can sustain their future lives. The following answers portrayed interviewees' agreement about the importance of youths' role in fulfilling sustainability goals.

El-Said responded:

They are the future; they are the ones that are going to be affected most by climate issues with all the seventeen goals ... They can play a role yes, they do. They are playing a role if you look at the NGO's nowadays it is dominated by young people. They are the ones who are more aware compared to older generations. I think they can play a role in reaching Egypt's SDGs.

Daoud said:

Yes, there are several NGOs in Egypt which promote the concept of sustainability in different ways, such as Sustainable Engineers of Egypt. There is an initiative collecting or gathering all the engineers in Egypt who are willing to promote the concept of sustainability in their different disciplines. Also, there are several NGOs in Egypt which promote the concept of recycling, and reuse of waste. So, there are youth who care for the environment and all aspects of sustainability, the social aspects of sustainability and the economic aspects of sustainability.

El-Haddad declared:

Yes definitely, they are very creative, and they are very smart. The upcoming generation is very fast. They want to have an impact. I believe it is about time that they became more aware about the climate, and about sustainability. They need to know the how, the tools to create innovative ideas and to implement them on the ground. So, there is a lag they are facing right now, yet they are very creative. They can create innovative ideas that sustain their lives in the future...

Answers to Q4. Is live streaming of events an effective tool to educate youth about sustainability?

When comparing the interviewees opinions with the survey results, 82 respondents (68.9%) strongly agreed and agreed that watching live streamed events help youth understand sustainability. Daoud felt that live streams are important for people who could not physically attend the events. On the other hand, El-Said and El-Haddad felt that live streams have both advantages and disadvantages to them. El-Haddad personally is not keen on live streams because she likes to engage in person and communicate with people. El-Said believes live streams are an effective tool for youth if the live stream is short since younger generations have a short attention span. The following answers depict the interviewees' replies to the question.

El-Said proclaimed:

I think live streaming is always a double-edged sword because I believe that younger generations have a shorter span in focusing. If you live stream an event that is two hours, I do not think that this will catch the attention of youth. Nevertheless, if you consider something like how bloggers, for example live stream an event, it is usually short reels or videos on Instagram or live on Facebook. So, I think the traditional way of live streaming the whole event, I don't think that would be something that youth would prefer. So, I mean key messages, highlights, or even if there is a big live stream, I think it should be complemented by shorter versions like 30-second videos highlighting the main aspects of that event.

Daoud answered:

Yes, because not all people can attend these events physically. So, when you are offering these events through live streaming this would enable people to attend, hear the information and reap the benefits out of it.

El-Haddad replied:

It depends on the personality. I personally do not like being online much. I like to engage in person. I like to communicate with people because this is how we can communicate stuff, express our feelings and our thoughts. Yet, I attended an online camp before for six weeks. The content was beneficial, yet for me I could not really focus. So again, the live streaming might fit for some people and others not. We are all living in the digital era, yet it is not always OK for people to do the online. It has obstacles as much as pros. For instance, now COP is in Dubai, so I can attend online. It adapts to my own timeline. But again, it depends on the personality.

Answers to Q5. Other than live streaming events, what tools can explain sustainability to Egyptian youth?

The interviewees' mentioned different tools to explain sustainability to Egyptian youth like edutainment, interactive activities in workshops and adding sustainability to the curriculum in primary schools, high schools, and in universities. Survey respondents had similar ideas such as on ground activities integrated in events, watching videos and awareness campaigns on social media and engaging TikTok videos, and live streaming games. Below are answers to the interview question.

El-Said asserted:

I am a bit biased for the edutainment philosophy. One of our friends who works in one of the UN agencies did something very cool this Ramadan as a giveaway for their corporate event, it is a sustainable monopoly game with the sustainable development goals. I think that these tools next to mass media are the ones who would grasp the attention, and be able to deliver the message very effectively.

Daoud explained:

In educating or involving the sustainability concept in the curriculum of studies in high schools, in primary schools, and in universities. I am happy to hear that some international schools started to implement the concept of sustainability for young kids since the foundation stage. Which means that if we implemented the sustainability concept in the curriculum of studies at different educational stages, this would enhance the implementation of sustainability in our community.

El-Haddad mentioned:

I worked with a company ... who are connecting youth and preparing them to be entrepreneurs. They had ... an event for the youth, and I was facilitating workshops that explained what sustainability and climate change was. I designed workshops that were interactive, and super interesting hearing from other people how we can make sure that disabled people are involved with us. How we can make sure that what we are building in the future is helping people in need and the inclusivity of everyone ... Every 20 minutes they changed the table, and they changed the topic, which was related to water, to climate, to food and hygiene ... So technically what I am trying to say here is interactive activities ... Exchanging cultures is always a crucial thing for youth and it always helps them to see the world with different eyes.

Answers to Q6. Do you think COP27 and WYF live streaming gave youth enough information to understand sustainability?

El-Said and El-Haddad believed that watching the live streaming of these events did not give youth the information to understand sustainability. El-Said thinks "live streaming is not enough" and El-Haddad stated, "It is not really the right tool for the youth to interact with." Contrary, Daoud felt that if a person is keen to know about sustainability and cannot attend physically, they will do their best to attend virtually, and "reap the benefits." The survey results showed that 57 respondents (77%) strongly agreed and agreed that watching live stream events on sustainability helped them understand sustainability. The answers below portray the interviewees' answers to the question.

El-Said said:

If we talk about educating youth about sustainability, in those two events, then live streaming is not enough. Somehow these events feature professionals discussing it. It is not intended to raise awareness about issues, so we start from scratch, introducing the problem and introducing what has been done to combat it and for example what are our aspirations for this to end. If, you live stream aside event in COP27 about climate change in India and I have no idea what is climate change at the beginning I would lose interest from the first two seconds.

Daoud explained:

I believe that whenever you allow people who do not have access to be physically present at such events and if they are keen to know more about sustainability, they will do their best to attend virtually these sessions and reap the benefit out of.

El-Haddad stated:

What I heard about COP 27 last year was it was hectic, and people were running all over the place. It was overwhelming. There were a lot of things happening at the same time. So again, too much on the agenda did not really help people know where to go and who to meet. It is overwhelming when you meet a lot of people at the same time. So technically there are a lot of sessions and panel discussions that you want to attend, in different places, that are happening at the same time. There are a lot of people to talk to, so I really do not believe this is how people get their information ... So again, it is a useful tool, it is to network. Yet it is not really the right tool for the youth to interact with.

Answers to Q7. Do social media influencers covering such events help youth understand sustainability?

El-Said believes that social media influencers reach people much easier. Daoud believes that influencers could inform youth of events. El-Haddad believes that influencers do influence but need to work on developing better content. The survey results showed that 93 respondents (78.2%) strongly agreed and agreed that social media influencers' live streams help youth understand sustainability. The following are the interview answers to the question.

El-Said expressed:

I recall a colleague of ours in AUC, she is an actor, and she wore a recycled dress to one of the events. I do not recall Gouna or Cairo Film Festival. So, if we talk about these influencers, if they are onboard to start advocating for the cause, I believe they would reach people much easier because already people are following them, people want to listen to them. Also, I was at one of the conferences in Luxor, it's the "Annual Sustainability Conference" and a lady from Brazil was focusing on sustainable fashion so if these entry points were used to reach the youth it's going to be very effective if it's branded as cool to wear a recycled T-shirt or to have a bag from recycled billboards....

Daoud stated:

Yes, through social media channels like Facebook, LinkedIn, Twitter, they will be able to know updates about such events early on and mark their calendars regarding the dates of such events and they will be able to attend them...

El-Haddad answered:

Yes, certain influencers, not everyone, because youth have grown up with the concept of influencers. They came to life, and they saw this as a job. We did not have this in our time. I personally do not listen to the influencers much, but I know for youth, it is their thing. Yes, I will act like this person because he did this, and I love him. So technically they do influence, they do have a high impact, but they need to work on having better content. It is not only about reviewing products. They should be doing something that is impactful and useful because they influence other people...

Answers to Q8. What can Egypt do to educate younger generations about sustainability?

The interviewees had differing suggestions, El-Said believed in having a link between the SDGs and communicating them to youth. Daoud called out for more events and conferences. Daoud and El-Haddad highlighted the significant role of NGOs in teaching sustainability to youth. Furthermore, El-Haddad believes in introducing sustainability into curriculums from an early age. The interviewees' answers to the question are below.

El-Said stated:

I think there has to be a link between the SDGs. The big problems everyone is talking about is recycling and this is what you feel from day-to-day. If you live in a developing country, you see for example garbage on the street. If you live in a country like Egypt, you feel the heat, you feel the extreme cold and so these are the usual suspects that if you talk about sustainability or talk about SDGs, these are the ones that come to mind. A strongly link has to be established and communicated to the younger generations. For example, overfishing is causing climate change somehow and deforestation is. Poverty is affecting all of these because people do not have enough luxury, time, resources, and knowledge to know that for example, open burning increases that. So, the link somehow is missing, it is not properly communicated. If you ask people who are not working in the field of sustainability or sustainable development, what is causing climate change? They will tell you fossil fuels...

Establishing a good link between the seventeen goals is already there but not simplified or communicated as much. Embedding these links ... the idea of sustainability in all sectors, the idea of reaching women empowerment, to having healthy citizens, all the goals. All of them have to be communicated and taken into consideration all of these aspects in our daily lives, day-to-day consumption.

Daoud proclaimed:

The World Youth Forum is a good chance. Also, the National Conferences for Youth are a good chance. I believe that encouraging the establishment of NGOs or the culture of NGOs among the youth would promote and boost the concept of sustainability.

El-Haddad explained:

I believe everything should start from a young age, starting from primary school, even at nursery. I was first introduced to sustainability when I was in year five in an international school. Since then, I have been hearing about climate change and global warming and how it would be affecting us. I never actually believed in this, but today it is happening. This is what we have been taught years ago, how we can sustain our resources, how we should be careful with the resources that we are using, how we should be building for the future and how we should be caring for others that would be later living on the planet. It is not only our planet. So, when kids know more about it, they will raise the awareness about sustainability to their parents... It should be introduced into curriculums from a young age. At universities, students should have more engagements with more workshops, and activities happening. NGOs and corporates need to engage with the youth. It should not just stop at being an intern and that is it. No, they should be learning more about how to make sustainable packaging for products, how to do sustainable communication, and marketing in general. It is not limited to a certain sector...

Conclusion and Recommendations

Egypt has further placed itself on the world map by initiating international hybrid events that put the country in the limelight. The COP27 and WYF had sessions discussing sustainability attended by youth who experienced these events virtually through live streaming. The primary research data showed that most survey respondents understood sustainability from their universities and the media, but most answered neutral to their awareness of sustainability. Most respondents heard about both the COP27 and WYF events and some saw live streams of COP27 or both COP27 and WYF. The respondents watched the live streams on Instagram followed by Facebook. Most agreed, that watching live streams of events and social media influencers live streams helped youth understand sustainability. The survey results found a positive correlation between seeing live streams of COP27 or WYF on TikTok and helping youth understand sustainability. On the other hand, there was no correlations between seeing live streams of COP27 or WYF on Facebook or Instagram and helping youth understand sustainability. There were no significant differences between watching live streams of COP27, WYF, or both events and youths' awareness about sustainability.

Most interviewees' believed that the events informed and raised awareness to youth about sustainability however, some interviewees felt that watching the live streaming of these events did not give youth the information to understand sustainability. They felt that live streams have both advantages and disadvantages to them, even though one interviewee felt that live streams are important for people who could not physically attend the events. The interviewees' believed that social media influencers reach youth much easier, but they need to work on developing their content. They also believed that youth could play an active role in reaching sustainability goals. They mentioned different tools to explain sustainability to Egyptian youth like edutainment, interactive activities in workshops and adding sustainability to the curriculum in all education levels, which was also recommended by survey participants. Additionally, there are many recommendations from the survey participants in ways to help youth understand sustainability, like awareness campaigns on social media, interactive online content, TikTok videos, live streaming games, and on ground activities integrated in events.

The researcher further recommends that this study can be an eye-opener to other studies on sustainability in Egypt and the Middle East. With the implementation of numerous studies on sustainability comes results and actionable recommendations.

References

- Abu Zaid, M. (2022, January 10). Egypt opens World Youth Forum under 'Back Together' slogan. **Arab News**. Retrieved April 9, 2023, from https://www.google.com/search?client=safari&rls=en&q=Egypt+opens+World+Youth+Forum+under+%E298%80%Back+Together%E299+%80%slogan&ie=UTF-8&oe=UTF-8.
- Allen, K, & Thomson, R. (2023, April 1). **The late Golden Age**. Encyclopædia Britannica. Retrieved March 28, 2023, from https://www.britannica.com/art/television-in-the-United-States/The-late-Golden-Age
- Ang, T., Wei, S., & Anaza, N. A. (2018). Livestreaming vs pre-recorded: How social viewing strategies impact consumers' viewing experiences and behavioral intentions. European Journal of Marketing, 52(92104–2075 ,(10/. https://doi.org/10.1108/ejm-090576-2017-
- Arora, P., & Arora, N. K. (2023). COP27: A summit of more misses than hits. Environmental Sustainability, 6(1), 99–105. https://doi.org/10.1007/s423980-00261-023-
- At COP27, MCIT Partakes in Panel Discussion on 'Supporting Innovation: Raising Social Awareness with the Help of Digital Platforms for Climate Change.' Ministry of Communications and Information Technology. (2022, October 31). Retrieved April 9, 2023, from https://mcit.gov.eg/en/Media_Center/Latest_News/News/66582
- Auc@cop27 pavilion. The American University in Cairo. (2022, November 21). Retrieved April 20, 2023, from https://www.aucegypt.edu/climate-change/AUC-COP27/pavilion
- Azimi, S., Andonova, Y., & Schewe, C. (2022). Closer together or further apart? values of hero generations Y and Z during crisis. Young Consumers, 23(2), 179196-. https://doi.org/10.1108/YC-031300-2021-
- Bakry, O. (2022, March 8). On International Women's Day: 8 Egyptian Women Making a Difference in the Sustainability Movement. El-Shai. Retrieved April 7, 2023, from https://www.el-shai.com/egyptian-womensustainability-womens-day/
- BBC. (1981, July 29). The wedding of Prince Charles and lady Diana Spencer History of the BBC. BBC News. Retrieved March 28, 2023, from https://www.bbc.com/historyofthebbc/anniversaries/july/wedding-of-prince-charles-and-lady-diana-spencer
- BBC. (n.d.). 1960s **History of the BBC**. BBC News. Retrieved March 28, 2023, from https://www.bbc.com/historyofthebbc/timelines/1960s/
- Bolin, G. (2017). Media generations: Exprience, Identity and mediatised Social Change (1st ed.). Routledge.
- Bowdin, G., McPherson, G., & Flinn, J. (2006, March). Identifying and analysing existing research undertaken in the events industry: A literature review for people1st. Academia.edu. Retrieved April 4, 2023, from https://www.academia.edu/48340856/Identifying_and_analysing_existing_research_undertaken_in_the_events_industry_a_literature review for People1st?email work card=view-paper
- Bründl, S., & Hess, T. (2016). Why Do Users Broadcast? Examining Individual Motives and Social Capital on Social Live Streaming Platforms. In **Proceedings of the 20th Pacific Asia Conference on Information Systems (PACIS 2016).** Chiayi. Retrieved April 4, 2023, from https://www.researchgate.net/publication/305709542_Why_Do_Users_Broadcast_Examining_Individual_Motives_and_Social_Capital_on_Social_Live_Streaming_Platforms/link/57c850b208ae28c01d51ca5a/download.
- Chang, S. H., Chang, C. W., & Chiu, H. J. (2020). A SOCIAL IMPACT THEORY PERSPECTIVE ON CONSUMERS' INTENTION TO ADOPT RECYCLING IN CHINA. International Journal of Organizational Innovation, 12(4).
- Choudhary, D. (2020, May 16). **How event industry is adapting to the covid-19 period**. The Financial Express. Retrieved April 4, 2023, from https://www.financialexpress.com/business/brandwagon/how-event-industry-is-adapting-to-the-covid-19-period/1961184/
- COP27: Iberdrola at the Climate Summit 2022. Iberdrola. (n.d.). Retrieved April 11, 2023, from https://www.iberdrola.com/sustainability/against-climate-change/cop27#:~:text=The%20United%20Nations%20Climate%20 Change,in%20the%20historic%20Paris%20Agreement.
- Dayan, D., & Katz, E. (1992). Media events: The live broadcasting of history. Harvard University Press.
- Dickson, C., & Arcodia, C. (2010, July). Environmentally sustainable events: a critical review of the literature. In **Global Events Congress IV: Festivals & Events Research: State of the Art, Leeds Metropolitan University** (Vol. 14, p. 16).

- Dolasinski, M. J., Roberts, C., Reynolds, J., & Johanson, M. (2020). Defining the field of events. **Journal of Hospitality & Tourism Research**, **45**(3), 553–572. https://doi.org/10.11771096348020978266/
- EMCCU today: The Minister of Higher Education Inaugurates the Cairo University exhibition at the Green Innovation Pavilion within the activities of COP 27. EMCCU Today|The Minister of Higher Education inaugurates the Cairo University exhibition at the Green Innovation Pavilion within the activities of COP 27. (2022, November 10). Retrieved April 20, 2023, from http://emccutoday.masscomm.cu.edu.eg/details.php?nwid=194
- Evans, O. G. (2023, February 13). Social Impact Theory in Psychology. Simply Psychology. https://www.simplypsychology.org/social-impact-theory.html
- Events Industry Council Insights. (2018, October 27). Event. insights. Retrieved March 25, 2023, from https://insights.eventscouncil.org/Full-Article/event
- Exploring and understanding Egypt's sustainable initiatives. Open Access Government. (2023, March 17). Retrieved April 7, 2023, from https://www.openaccessgovernment.org/exploring-understanding-egypts-sustainable-initiatives/155106/
- Faculty Contributions at COP27. Ahram Canadian University. (n.d.). Retrieved April 20, 2023, from https://acu.edu.eg/ news/472140.aspx
- Fortunati, L., Taipale, S., & de Luca, F. (2019). Digital Generations, but not as we know them. **Convergence: The International Journal of Research into New Media Technologies**, **25**(1),95–112. https://doi.org/10.11771354856517692309/
- Getz, D. (2005). Event Management and Event Tourism (2nd ed.). Cognizant Communication Corp. New York.
- Gonçalves, M. S. (2021). The Impact of Covid-19 on Event Management: How Companies Can Use Social Media to Face the Pandemic: A Social Media Marketing Plan for RConcept (Unpublished Doctoral thesis). ISCTE-Instituto Universitario de Lisboa.
- Gordon, J. (2022, April 15). Uses and Gratification Theory Explained. The Business Professor, LLC. Retrieved April 19, 2023, from https://thebusinessprofessor.com/en US/communications-negotiations/uses-and-gratification-theory-explained
- Haimson, O. L., & Tang, J. C. (2017). What makes live events engaging on Facebook live, periscope, and Snapchat.
 Proceedings of the 2017 CHI Conference on Human Factors in Computing Systems. https://doi.org/10.11453025453.3025642/
- Harari, T. T., Sela, Y., & Bareket-Bojmel, L. (2022). Gen Z during the COVID-19 crisis: A comparative analysis of the differences between gen Z and gen X in resilience, values, and attitudes. Current Psychology. https://doi. org/10.1007/s121444-03501-022-
- Heo, J., Kim, Y., & Yan, J. (2020). Sustainability of Live Video Streamer's Strategies: Live Streaming Video Platform and Audience's Social Capital in South Korea. Sustainability, 12(5), 1969. https://doi.org/10.3390/su12051969
- Hoffman, R. (2023, April 14). Social loafing in psychology: Definition, examples & theory. Simply Psychology. Retrieved April 18, 2023, from https://www.simplypsychology.org/social-loafing.html
- Hou, F., Guan, Z., Li, B., & Chong, A. Y. L. (2020). Factors influencing people's continuous watching intention and consumption intention in live streaming: Evidence from China. Internet Research, 30(1), 141163-. https://doi. org/10.1108/INTR-040177-2018-
- Hwang, S., & Kim, J. (2017, March 15). UN and SDGs: A Handbook for Youth. UNESCAP: The United Nations Economic and Social Commission for Asia and the Pacific. Retrieved April 20, 2023, from https://unescap.org/sites/default/files/UN%20and%20SDGs_A%20Handbook%20for%20Youth.pdf
- Lee, D., Ng, P. M. L., & Wut, T. M. (2022). Virtual reality in festivals: A systematic literature review and implications for consumer research. Emerging Science Journal, 6(5), 1153–1166. https://doi.org/10.28991/esj-2022016-05-06-
- Jaimangal-Jones, D., Robertson, M., & Jackson, C. (2018). Event futures: innovation, creativity, and collaboration.
 International Journal of Event and Festival Management, 9(2), 122–125. https://doi.org/10.1108/ijefm-050032-2018-
- Kedia, S., Khanna, A., Gangopadhyay, P., Borchers, M., Prodipto, G., Dudenhoeffer, C., Noronha, L., Christoph Trusen, Maboda, S., Kapur, S., & Mehta, A. (2011). (rep.). Sustainable Mega-Events in Developing Countries: Experiences and insights from host Cities in South Africa, India, and Brazil. ResearchGate. Retrieved March 29, 2023, from https://www.researchgate.net/publication/341179734_Sustainable_mega- events_in_developing_countries_Experiences_and_insights_from_host_Cities_in_So_uth_Africa_India_and_Brazil.

- Knowles, B. (2022, July 28). Top 10 Sustainability Events. Sustainability Magazine. Retrieved April 6, 2023, from https://sustainabilitymag.com/top10/top-10-sustainability-events
- Larrosa, M. (2016). **Broadcasting the Olympic Games: The Media and the Olympic Games.** Olympic Museum. https://stillmed.olympic.org/media/Document%20Library/Museum/Visit/TOM-Schools/Teaching-Resources/Broadcasting-the-Olympic-Games/FicheInfo DiffusionJO TV ENG.pdf
- Lee Ludvigsen, J. A., & Petersen-Wagner, R. (2022). From television to YouTube: Digitalised Sport mega-events in the Platform Society. Leisure Studies, 1–18. https://doi.org/10.108002614367.2022.2125557/
- Lottridge, D., Bentley, F., Wheeler, M., Lee, J., Cheung, J., Ong, K., & Rowley, C. (2017, September). Third-wave livestreaming: teens' long form selfie. In **Proceedings of the 19th international conference on human-computer interaction with mobile devices and services** (pp.112-). Lv, J., Cao, C., Xu, Q., Ni, L., Shao, X., & Shi, Y. (2022). How Live Streaming Interactions and Their Visual Stimuli Affect Users' Sustained Engagement Behaviour—A Comparative Experiment Using Live and Virtual Live Streaming. **Sustainability**, **14**(14), 8907.
- Lv, J., Cao, C., Xu, Q., Ni, L., Shao, X., & Shi, Y. (2022). How live streaming interactions and their visual stimuli affect users' sustained engagement Behaviour—A comparative experiment using live and virtual live streaming. Sustainability (Basel, Switzerland), 14(14),8907. https://doi.org/10.3390/su14148907
- Mair, J., & Smith, A. (2022). Events and sustainability: Why making events more sustainable is not enough. **Events and Sustainability**, 1–17. https://doi.org/10.43241-9781003314295/
- Mair, J., & Whitford, M. (2013). An exploration of events research: Event topics, themes, and emerging trends. **International Journal of Event and Festival Management**, 4(1), 6–30. https://doi.org/10.110817582951311307485/
- Medacine, M. (2014, May 29). Uses and gratifications theory 1 uses and gratifications theory sociology outline @ bullet @bullet. Academia.edu. Retrieved April 18, 2023, from https://www.academia.edu/6362103/Uses_and_gratifications_theory_1_Uses_and_gratifications_theory_Sociology_Outline_at_BULLET_at_BULLET
- Meyer, M. F., Ladwig, R., Dugan, H. A., Anderson, A., Bah, A. R., Boehrer, B., Borre, L., Chapina, R. J., Doyle, C., Favot, E. J., Flaim, G., Forsberg, P., Hanson, P. C., Ibelings, B. W., Isles, P., Lin, F. P., Lofton, D., Moore, T. N., Peel, S., ... Weathers, K. C. (2021). Virtual Growing pains: Initial Lessons Learned from Organizing Virtual Workshops, Summits, Conferences, and Networking Events During a Global Pandemic. Limnology and Oceanography Bulletin, 30(1), 1–11. DOI: https://doi.org/10.1002/lob.10431
- Ministry of International Cooperation. (2016). (rep.). **Egypt National Review Report for Input to 2016 HLPF** (pp. 1–59). Retrieved April 6, 2023, from https://sustainabledevelopment.un.org/content/documents/10738egypt.pdf.
- Mohamed, G. (2023, April 6). Egypt to host critical World Urban Forum in Cairo in 2024. **Arab News**. Retrieved April 12, 2023, from https://www.arabnews.com/node/2282626/middle-east
- MSA's Closing Day of the Climate Conference (COP27). MSA University. (2022, November 20). Retrieved April 20, 2023, from https://www.msa.edu.eg/msauniversity/events/conferences/cop27
- Mueser, D., & Vlachos, P. (2018). Almost like being there? A conceptualisation of live-Streaming Theatre. International Journal of Event and Festival Management, 9(2), 183–203. https://doi.org/10.1108/ijefm-050030-2018-
- Nassar, N. O., & Talaat, N. M. (2009). Motivations of Young Volunteers in Special Events. **TOURISMOS: An International Multidisciplinary Journal of Tourism**, **4**(1),145–152.
- Nile University's Discussion Panel at COP27. NU. (2022, November 14). Retrieved April 20, 2023, from https://nu.edu.eg/events/nile-universitys-discussion-panel-cop27
- Oklobdžija, S. (2015). The role of events in tourism development. Bizinfo (Blace), 6(2), 8397-.
- Perez-Vega, R., Waite, K., & O'Gorman, K. (2016). Social Impact Theory: An Examination of how immediacy operates as an influence upon social media interaction in Facebook fan pages. The Marketing Review, 16(3), 299–321. https://doi.org/10.1362146934716/x14636478977791
- Research Newsletter: Vice President's Office for Research and Enterprise. (2022, June). The British University in Egypt. Retrieved April 20, 2023, from https://www.bue.edu.eg/wp-content/uploads/202210//Research-Newsletter-Issue-5-June-2022-min-compressed.pdf.
- Rogers, K. (2022, November 18). **livestreaming. Encyclopedia Britannica**. https://www.britannica.com/technology/livestreaming

- Ryder, S., & Rizk, M. (2017, November 2). When Egypt's World Youth Forum #WeNeedToTalk backfires. BBC News. Retrieved April 9, 2023, from https://www.bbc.com/news/blogs-trending-41842825
- Scurati, G. W., Bertoni, M., Graziosi, S., & Ferrise, F. (2021). Exploring the use of virtual reality to support Environmentally Sustainable Behavior: A framework to design experiences. Sustainability, 13(2), 943. https://doi.org/10.3390/ su13020943
- Singh, N. (2020). Sustainability, social, and technology development trends in events. Events and Tourism Review, 3(1), 1–6. https://doi.org/10.1806024221/
- Sluman, D. R. (2021). Why Do We Watch?: A Mixed-Method Study on Live-Stream Consumption (Unpublished master's thesis). University of Twente, Netherlands.
- SportBusiness. (2023, January 9). Singapore Leans into Tech and Innovation for Sports Event Hosting Future. SportBusiness. Retrieved April 4, 2023, from https://www.sportbusiness.com/202301//singapore-leans-into-tech-and-innovation-for-sports-event-hosting-future/
- Srivastava, S. (2021, July 8). Importance of Youth Engagement with Sustainable Development. LinkedIn.https://www.linkedin.com/pulse/importance-youth-engagement-sustainable-#:~:text=Sustainable%20Development%20 needs%20diversity%20in,%3A%20Shiksha%20Srivastava%2C%20Intern%20GNS.
- Sundet, V. S., & Lüders, M. (2022). "Young people are on YouTube": Industry notions on streaming and youth as a new media generation. Journal of Media Business Studies, ahead-of-print, 118-. https://doi.org/10.108016522354/ .2022.2125262
- Sustainability in youth projects. Council of Europe: European Youth Foundation. (n.d.). Retrieved April 7, 2023, from https://www.coe.int/en/web/european-youth-foundation/sustainability
- Tao, Y., Steckel, D., Klemeš, J. J., & You, F. (2021). Trend towards virtual and hybrid conferences may be an effective climate change mitigation strategy. Nature Communications, 12(1). https://doi.org/10.1038/s414672-27251-021-
- The British University in Egypt @COP27. The British University in Egypt. (2022, November 8). Retrieved April 20, 2023, from https://www.bue.edu.eg/wp-content/uploads/202211//The-british-University-In-Egypt-@Cop27.pdf
- The 3rd Annual Sustainability Conference. SIS. (2023, January 14). Retrieved April 7, 2023, from https://www.sis.gov.eg/Story/175031?lang=en-us
- The World Youth Forum's New Virtual Interactive Platform. (2022, January 9). World Youth Magazine. Retrieved April 9, 2023, from https://magazine.wyfegypt.com/the-world-youth-forums-new-virtual-interactive-platform/.
- UN Climate Change Pavilion at COP 27. United Nations Framework Convention on Climate Change. (n.d.). Retrieved April 11, 2023, from https://unfccc.int/un-climate-change-pavilion-cop-27
- United Nations. (n.d.). COP27: **Delivering for people and the planet.** United Nations. Retrieved April 11, 2023, from https://www.un.org/en/climatechange/cop27
- United Nations. (n.d.). **Youth United Nations Sustainable Development.** United Nations. Retrieved March 26, 2023, from https://www.un.org/sustainabledevelopment/youth/#:~:text=They%20play%20a%20significant%20 role,a%20better%20place%20for%20all.
- Volunteers Leverage Youth Action for climate at COP27. UN Volunteers. (2022, November 10). Retrieved April 11, 2023, from https://www.unv.org/news/volunteers-leverage-youth-action-climate-cop27#:~:text=The%20role%20 of%20UN%20Volunteers.roles%20include%20supporting%20climate%20action.
- Walia, A. S. (2016). Live multimedia streaming and video on demand issues and challenges. International Journal of Research in Engineering and Technology, 05(02), 91–96. https://doi.org/10.15623/ijret.2016.0502017
- Wang, Y.-S. (2019). User experiences in live video streaming: A netnography analysis. Internet Research, 29(4), 638–658. https://doi.org/10.1108/intr-010029-2018-
- World Bank Group at COP27. World Bank Live. (2022, November). Retrieved April 11, 2023, from https://live. worldbank.org/cop27
- World Youth Forum. National Youth Conference. (n.d.). https://egyouth.com/en/world-youth-forum/
- World Youth Forum 2022. Egypt State Information Service (SIS). (n.d.). Retrieved April 9, 2023, from https://www.sis.gov.eg/section/94239497/?lang=en-us

- World youth forum launches a large package of development initiatives and projects. World Youth Forum. (2023, February 4). Retrieved April 9, 2023, from https://wyfegypt.com/202304/02//world-youth-forum-launches-a-large-package-of-development-initiatives-and-projects/
- World Youth Forum in COP27. World Youth Forum. (n.d.). Retrieved April 11, 2023, from https://wyfegypt.com/world-youth-forum-in-cop27/
- Youth | United Nations. (n.d.). Retrieved March 25, 2023, from https://www.un.org/en/global-issues/youth
- Youth United Nations Sustainable Development. United Nations. (n.d.). Retrieved April 7, 2023, from https://www.un.org/sustainabledevelopment/youth/
- 100 event statistics (2022 edition). Skift Meetings. (2022, June 30). Retrieved March 26, 2023, from https://meetings.skift.