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Incorporating Digital Media Platforms to Enhance Sustainability Insights in the UI GreenMetric World University Rankings Network

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Abstract. Conventional ways of delivering sustainability content often fail to capture the breadth and dynamism of university challenges. To overcome the issue, UI GreenMetric has proposed a new way of delivering content by using digital media. This study investigates the integration of digital media including Instagram, YouTube, Facebook, and Website to augment sustainability insights within the UI GreenMetric World University Rankings Network. This study analyzes the results, effects, and further implications of UI GreenMetric's practices in incorporating user-generated content from those digital media platforms into the sustainability assessment framework to leverage the ubiquity and the richness of the content. The analysis is conducted for various activities, such as podcast/live discussions, event streaming, posts and videos related to sustainability initiatives. The findings show that integrating digital media has significantly boosted sustainability outreach within the UI GreenMetric network. UI GreenMetric not only drives the transformation of individuals, communities, and universities toward sustainability but also extends its impact through dozens of online events, such as webinars, workshops, courses, live discussions, and podcasts throughout the year. These efforts have successfully reached a wider audience, leading to meaningful behavioral changes as participants engage in campaigns and actively contribute to rankings and events.

Keyword:
Digital Media, Social Networks, Sustainable University, UI GreenMetric, World University Rankings

1. Introduction

In recent years, sustainability has become an increasingly critical focal point for university institutions worldwide. As concerns about environmental conservation and sustainable

development intensify, universities are increasingly expected to play a leading role in addressing these challenges. University institution serves as pivotal hubs for promoting sustainability across various dimensions. Through their academic programs and research initiatives, universities equip students and faculty members with the knowledge and skills needed to address pressing environmental challenges. By fostering creativity, critical thinking, and collaboration, universities drive innovation and develop sustainable solutions that benefit society and the environment alike. Universities have a particular impact of communicating sustainable development outcomes and challenges around the world. Expanding growth of networks and websites which are based on information technology development ensure attractive opportunity to communicate and disseminate university institutions sustainability awareness (Katiliute and Daunoriene, 2015).

The UI GreenMetric World University Rankings plays a crucial role in benchmarking universities' sustainability performance and facilitating global dialogue on environmental stewardship, and UI Greenmetric networks stands as a testament to this growing emphasis on sustainability within the academic sphere and seeks to advance the efforts of its members and contribute to global society within three priorities; (1) Shaping global university and research in sustainability, as universities serve as centers for education and research, providing a platform to study, understand, and address pressing environmental challenges through various academic programs, research initiatives, and interdisciplinary collaborations, (2) Creating global sustainability leaders, universities play a crucial role in preparing future leaders and professionals who will drive progress towards sustainability in their respective fields and communities, and (3) Partnering on solutions to sustainability challenges, universities as integral parts of their communities, serve as hubs for dialogue, outreach, and engagement. By bridging local and global efforts, universities play a crucial role in advancing sustainability both within their communities and on a broader, international stage. Within this context, the significance of sustainability in university institutions cannot be overstated. Universities serve as hubs of knowledge generation, innovation, and societal transformation, making their commitment to sustainability in shaping future generations of leaders and professionals.

Recognizing the interconnectedness of environmental, social, and economic sustainability, universities are compelled to adopt holistic approaches that integrate sustainability principles across their academic, research, and operational domains. However, it is essential to acknowledge that sustainability involves diverse dimensions beyond quantitative metrics such as environmental, cultural and social behaviour, economic, technological, health and well-being, political and government, and resilience and adaptation. In the realm of sustainability, no exceptional, university also facing several challenges, such as meeting the needs of all, providing the access to resources for all, ensuring fairness, and inclusion to make educational practice more sustainable. Given the complexity and uncertainty inherent in global sustainability issues, effective communication processes among the various stakeholders are crucial for developing a mutual understanding of the necessary actions. This recognition underscores the growing need for more dynamic assessment methods (Filho et al, 2024; Newig et al, 2013). Thus, UI GreenMetric World University Rankings has decided to leverage digital media platforms as an effective means of communicating and disseminating knowledge about sustainability issues, particularly within campus environments.

Amidst this evolving landscape, the role of digital media emerges as a powerful catalyst for advancing sustainability objectives within university. Digital media platforms serve as

dynamic channels for disseminating information, fostering dialogue, and mobilizing action around sustainability issues. Through the strategic use of social media, websites, and online campaigns, universities can amplify their sustainability messaging, engage diverse stakeholders, and cultivate a culture of environmental consciousness within their communities. Expanding growth of networks and websites which are based on information technology development ensure attractive opportunity to communicate and disseminate university institutions sustainability issues. World Wide Web, Facebook, Twitter and other internet resources are used as organizational self-presentation tools to present information about sustainable development issues but not as active tools to move on dialogue with all societies (Katiliute and Daunoriene, 2015).

This paper explores the potential of leveraging digital media platforms, to enhance Sustainability Insights in the UI GreenMetric World University Rankings Network. The rest of this paper is organized as follows; Section 2 provides an overview of the background and the paper's placement within existing literature. Section 3 outlines our chosen research methodology. Our discoveries are detailed in Section 4, followed by an analysis of the results and conclusions in Section 5.

2. Digital Media Platforms and University's Sustainability Efforts

In recent years, the integration of digital media platforms in university institutions has become increasingly prevalent, offering new avenues for communication, collaboration, and knowledge dissemination. Simultaneously, universities worldwide are prioritizing sustainability efforts to address environmental challenges and promote responsible practices. University institutions have a key responsibility regarding the sustainable development of society, particularly in the education of future leaders and in the public awareness of sustainability (L. V. Trevisan et al, 2023). This paper examines the intersection of digital media platforms and university sustainability initiatives, exploring how digital technologies are leveraged to enhance sustainability awareness, engagement, and action within university communities.

Digital media platforms, encompassing social media, online learning platforms, institutional websites, and mobile applications, have revolutionized communication and interaction in university settings. These platforms facilitate information sharing, community building, and resource accessibility, enabling universities to connect with diverse stakeholders and disseminate sustainability-related content effectively, as the university institution also represent a crucial stakeholder in the promotion and implementation of the United Nations (UN) 2030 Agenda for sustainable development and the digitalisation of society by producing knowledge for new technologies and social innovation (Vallez et al, Carayannis & Morawska-Jancelewicz, 2022).

Through websites, blogs, and social media channels, institutions can share updates, initiatives, and success stories related to sustainability efforts. From the perspective of information systems research, the role of digital plat forms in reaching the target audience and the impact it has on the said target audience has increasingly raised interests of researchers across the world (Jha & Verma, 2023). Moreover, digital platforms enable real-time engagement and feedback mechanisms, fostering dialogue and collaboration among students, faculty, staff, and external partners.

In the situation of a 'new normal', university should be able to respond to the digitalisation in sustainable ways (Filho et al, 2024). Universities could utilize digital media platforms to integrate sustainability education into curricula and extracurricular activities,

such as online learning management systems and multimedia resources provide accessible channels for delivering courses, lectures, and educational materials on sustainability topics. Digital media platforms could also facilitate stakeholder engagement and collaboration in university sustainability efforts. Online forums, crowdsourcing platforms, and collaborative tools enable students, faculty, staff, alumni, and community members to share ideas, participate in decision-making processes, and co-create solutions to sustainability challenges. Social networking platforms or usually we called social media can be uses for campaigns and virtual events to raise awareness about environmental issues, sustainability practices, and campus initiatives, empowering individuals to make informed decisions and adopt sustainable behaviours. The widely used social media platforms, such as Instagram, Facebook, and YouTube allow institutions to engage with a diverse range of stakeholders and forge immediate connections. Through these platforms, stakeholders can access instant information and feedback, initiate discussions, and actively contribute to content creation rather than merely consuming it (Arora et al. 2019; Bonsón Ponte et al. 2015; Linvill et al. 2012; Bellucci and Manetti, 2017).

In the context of sustainability, digital media serves as a powerful tool for promoting cultural change toward greater awareness and sustainable behavior. By influencing how people perceive themselves and the world, digital media networks enable individuals to recognize the consequences of unsustainable practices and inaction. This awareness fosters the development of sustainable habits. Furthermore, as people become more conscious of sustainability, they are motivated to share, post, and repost eco-friendly messages, creating a chain reaction that reaches a broader audience and supports the adoption of new sustainable practices (Chalmeta & Barbeito-Caamaño, 2024; Chang et al., 2023; Nguyen et al., 2023; Wang et al., 2020).

Although digital media platforms offer various advantages, they also introduce challenges to university sustainability initiatives. These challenges encompass issues such as the digital divide, data privacy concerns, information overload, and ensuring digital sustainability. It's important to understand the broad scope of technical proficiency required for utilizing digital media, alongside the foundational practical and intellectual skills needed for individuals to thrive in the digital information society (Tejedor et al., 2020). Therefore, addressing these challenges requires strategic planning, stakeholder engagement, and ongoing evaluation of digital communication strategies. Nonetheless, digital media platforms offer immense opportunities for universities to amplify their sustainability messages, engage diverse audiences, and drive positive change at local, national, and global levels.

UI GreenMetric World University Rankings as a beacon of sustainability within the global academic community, playing a pivotal role in influencing the transformation and behavioral changes of individuals, communities, and universities toward more sustainable practices. While the impact of UI GreenMetric's initiatives is widely recognized, there remains a critical need to analyze the specific role of its digital platforms in driving these changes. Unlike other sustainability rankings and initiatives, UI GreenMetric's digital platforms offer unique opportunities to disseminate sustainability knowledge, foster engagement, and create a global dialogue on environmental stewardship. However, the effectiveness of these platforms in achieving tangible transformations and behavioral shifts has not yet been thoroughly examined.

To understand the true impact of UI GreenMetric's digital presence, it is essential to assess how these platforms contribute to raising sustainability awareness, shaping attitudes, and encouraging sustainable actions among its diverse network of stakeholders. Such an

analysis will not only provide insights into the effectiveness of UI GreenMetric's digital strategies but also highlight areas for improvement, ensuring that the platform continues to serve as a powerful catalyst for sustainability in higher education and beyond.

3. Methodology

In this research, the usage of digital media platforms is discussed to scrutinize the activities and effectiveness of sustainability initiatives as conducted by the UI GreenMetric World University Rankings Network. Our study encompasses data spanning from 2022 to the present, sourced primarily from UI GreenMetric's social media channels, particularly Instagram, Facebook, and YouTube, which serve as pivotal conduits for disseminating information and engaging with a global audience.

At the outset, we gathered and analyzed data from UI GreenMetric's Instagram, Facebook, and YouTube account, The collected dataset underwent rigorous analysis to extract invaluable insights into user engagement patterns, content preferences, and the efficacy of communication strategies employed by UI GreenMetric. Utilizing an array of analytical tools, we meticulously scrutinized metrics such as likes, comments, shares, views, and follower growth trajectories over time.

Moreover, our analysis extended to the impact assessment of UI GreenMetric's Online Course, a commendable initiative that has conducted nine classes since its inception in 2022, facilitating digital online learning in the realm of sustainability. Furthermore, we underscored the significance of online events and preparatory meetings, seamlessly conducted via platforms like Zoom, facilitating global participation and engagement.

Recognizing the transformative potential of digitalization, we adopted Giesenbauer and Müller-Christ (2020) method, who emphasize the imperative of leveraging digital tools to propel sustainability agendas forward. Indeed, digitalization emerges as a pivotal catalyst for effecting behavioral transformations and fostering sustainable development, as underscored by Filho et al. (2024) and Giesenbauer and Müller-Christ (2020).

Our research methodology is underpinned by a conceptual framework delineated in Figure 1, elucidating the intricate interplay between digitalization, transformational endeavors, and the overarching objectives of UI GreenMetric.

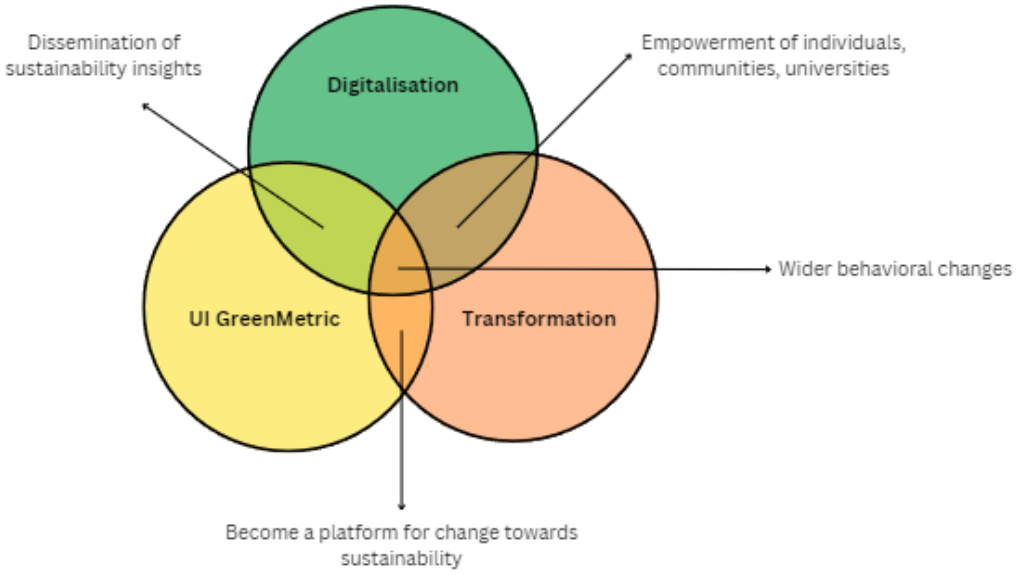

Figure 1. Behavioral Transformation Concept

The figure above illustrates how UI GreenMetric, through digitalization, can significantly enhance the dissemination of sustainability insights to a broader audience. By leveraging its extensive network of national and international partners, UI GreenMetric is positioned to reach a wider community, extending its influence beyond previous limitations. The figure also highlights UI GreenMetric's potential as a transformative agent of change, offering a platform that fosters sustainability at various levels. This transformation has the potential to guide individuals, communities, and universities toward achieving a more sustainable future.

Digitalization not only facilitates the spread of information but also drives meaningful transformation by empowering these groups through digital platforms. This empowerment enables individuals, communities, and universities to adopt sustainable practices and behaviors more effectively. Consequently, as depicted in the figure, UI GreenMetric is poised to foster widespread behavioral change on both national and international scales through its comprehensive rankings and diverse programs, further solidifying its role in the global sustainability movement.

It becomes abundantly clear that digital technologies serve as enablers, facilitating the transition from conventional paradigms towards a more enlightened approach to sustainability. By empowering individuals, communities, and academic institutions with pertinent insights and resources, digitalization emerges as a potent force driving sustainable development agendas forward.

This study will underscore the transformative potential of digital media platforms in advancing sustainability agendas, with UI GreenMetric serving as a beacon of innovation and progress in this regard. As we navigate the complexities of the digital age, harnessing the power of technology becomes paramount in effecting positive change and fostering a more sustainable future for generations to come.

4. Result and Discussion

In this section, we delve into the significant role of the UI GreenMetric digital platform and its diverse online initiatives, including online courses, virtual events, and live podcast sessions. These efforts have been pivotal in amplifying sustainability insights within the UI GreenMetric World University Rankings Network and expanding their reach to a broader public audience. This study highlights how UI GreenMetric’s collaboration with communities and universities has created a robust platform for enhancing sustainability awareness. Through live podcast sessions and virtual events, conducted in partnership with universities, communities, and individuals, UI GreenMetric effectively disseminates sustainability knowledge. Additionally, the development of online courses through the Moodle system, in collaboration with universities, ensures that students have easy access to comprehensive sustainability education. The detailed explanation will sequentially cover various social media platforms; Instagram, Facebook, YouTube, and the website, culminating with an in-depth look at the online sustainability courses. Each section will illustrate how these digital tools contribute to spreading awareness and fostering engagement in sustainability practices within the UI GreenMetric network.

4.1. UI GreenMetric Social Media (Instagram, Facebook, YouTube)

In response to the growing importance of sustainability initiatives within the academic community, the UI GreenMetric World University Rankings Network launched its official social media accounts on Instagram, Facebook, and YouTube in 2020. The spread of COVID-19 that year posed significant challenges to conducting in-person events. Recognizing the

pandemic's impact on traditional forms of engagement, UI GreenMetric identified social media as the optimal solution for disseminating information widely and tracking activities. AlMazmi and AlAli (2020) describe the utilization of social media as a straightforward and effective approach for information dissemination during the COVID-19 pandemic. Due to the internet's affordability, user-friendly nature, and vast user base, social media has also emerged as a powerful tool for facilitating interpersonal communication during quarantine periods.

This decision also stemmed from the recognition of the need for a dynamic and accessible platform to showcase the network's activities. Instagram Live discussions and webinars were organized to engage with other universities and environmental stakeholders, fostering dialogue on environmental issues. Leveraging the popularity and reach of Instagram, the UI GreenMetric team embarked on a journey to establish a robust online presence. The creation of the UI GreenMetric social media accounts marked a significant milestone in the network's outreach efforts. Through strategic planning and content development, the accounts quickly gained traction, attracting followers interested in sustainability and the university network's initiatives. Their commitment to transparency and responsiveness has strengthened trust and credibility within the online community.

This section will be divided into three parts to provide an in-depth explanation of the impact of UI GreenMetric's social media strategy. We will explore how UI GreenMetric utilizes Instagram, Facebook, and YouTube to disseminate sustainability insights, becoming a platform for university towards sustainability, empowering both the community and universities, and drive wider behavioural changes.

4.1.1. Instagram

As the UI GreenMetric Instagram account enters its fourth year of operation, it stands as a testament to the power of social media in advancing sustainability goals, boasting a commendable follower count of 5,565. Over this period, the account has disseminated 306 pieces of content, encompassing a diverse array of media formats, including posts, stories, and reels. These pieces of content encapsulate various facets of sustainability endeavors, ranging from environmental awareness campaigns to updates on university rankings.

Instagram has become a particularly effective platform for UI GreenMetric due to its capacity to facilitate live discussions, which are essential for the dissemination of sustainability insights, promoting behavioral changes within the community, and empowering universities. In this study shown that UI GreenMetric through digitalization could have a power to disseminate sustainability insights to the Instagram users. One of the cases that UI GreenMetric conducted regularly is Instagram Live Discussion. Instagram Live feature allows for real-time engagement through discussions, webinars, and Q&A sessions focused on sustainability topics, ensuring timely and relevant insights are shared with a global audience. The platform's visual nature enhances the communication of complex sustainability concepts, making them more accessible through engaging visuals, infographics, and videos. Additionally, the ability to save and share live sessions as IGTV videos or stories extends the reach and longevity of these valuable discussions.

In the Instagram Live Discussions, UI GreenMetric employs a strategy to facilitate universities worldwide in sharing their experiences on managing sustainability efforts within their areas. UI GreenMetric regularly aligns the discussion topics with the six indicators of UI GreenMetric: (1) Setting & Infrastructure, (2) Energy & Climate Change, (3) Waste, (4) Water, (5) Transportation, and (6) Education & Research. Each discussion provides an in-depth one-hour talk, accessible to an audience ranging from 200 to 10,000 viewers. This approach has

proven effective in disseminating sustainability insights, as digital platforms like Instagram enable UI GreenMetric to reach wider communities, sharing their efforts to support universities worldwide in achieving sustainability.

Moreover, Instagram's broad reach and accessibility ensure that sustainability insights are disseminated widely, reaching students, faculty, and administrators from various universities. This widespread dissemination keeps universities informed and inspired by global best practices in sustainability. Below is figure 2, the average of the numbers of times the 25 Live Discussions per each month has been access or views, which conducted in the past two years, showcasing the impactful role of digital platforms in promoting sustainable development across academic institutions and environmental organizations.

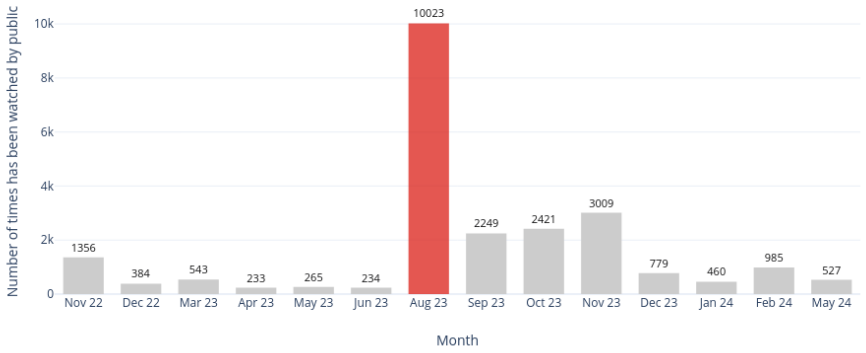

Figure 2. Number of times of the Instagram live video watched by public

Figure 2 illustrates the fluctuating viewership of Instagram Live videos from November 2022 to May 2024. A dramatic decline in viewership follows an initial peak in November 2022, with subsequent months showing minor variations. This pattern suggests potential correlations with platform algorithm changes, content trends, or external factors influencing audience engagement. Possible factors contributing to the significant viewership spike in August 2023 including increased content creation, successful collaborations, or algorithm updates favoring live video content.

From this figure, we can see that each Instagram Live discussion has attracted a varying number of viewers, indicating a notable diversity in viewership across the 25 sessions in the past 14 months conducted by UI GreenMetric. These discussions have drawn audiences from various communities, with the number of viewers depending on the collaboration partner, whether it be a national or international university, an environmental community, or a non-governmental organization.

Despite the variations in viewer numbers, these live sessions have successfully engaged individuals from different demographic and professional backgrounds, highlighting the widespread interest and relevance of the topics discussed. The discussions have attracted environmental enthusiasts, academic professionals, university students, and policymakers, each contributing unique perspectives and insights. This diverse viewership not only enriches the dialogue but also underscores the inclusive nature of UI GreenMetric's outreach efforts, fostering a broader understanding and collaborative approach to sustainability issues.

In addition to viewer numbers, we can observe that disseminating sustainability insights through live discussions has led to an increase in followers of the UI GreenMetric Instagram account. The growth in followers since 2023 is shown below in Figure 3, illustrating the positive impact of these engagements on the network's online presence.

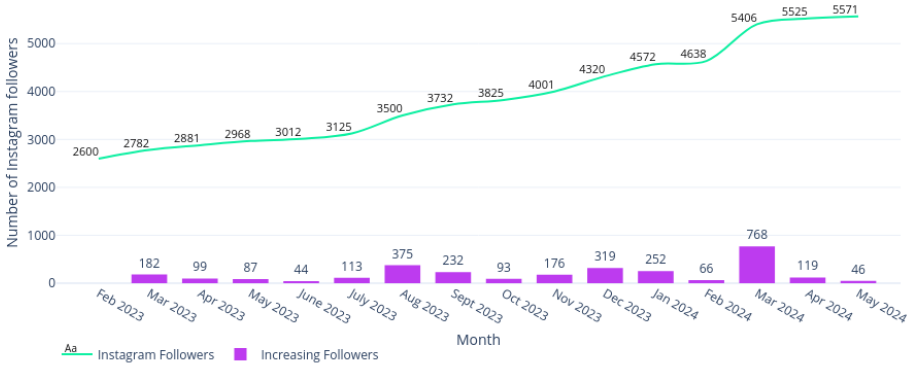

Figure 3. Rising Followers of UI GreenMetric Instagram Account

Figure 3 shows the trend in Instagram follower growth from February 2023 to May 2024. The steady increase in followers over this period, with notable spikes in August 2023, December 2023, and March 2024, highlights the effectiveness of targeted campaigns or promotional activities during these months. The most significant rise in March 2024 suggests a particularly successful initiative that resonated with the audience. These spikes suggest the potential impact of successful content strategies or external factors driving increased audience engagement during these periods. Overall, the consistent upward trajectory of follower growth reflects ongoing engagement and successful strategy execution, culminating in a total of 5,571 followers by May 2024.

The growth of the UI GreenMetric Instagram account's followers has seen a significant rise over the past year, largely due to the appeal of their live discussions that effectively disseminate sustainability insights. These discussions offer valuable information on topics such as environmental conservation, renewable energy, and ethical consumption, attracting followers who seek to learn more about sustainability. Real-time engagement during live sessions allows viewers to ask questions, share thoughts, and participate in conversations, fostering a sense of community and connection. This interactive format makes followers more likely to stay engaged and return for future discussions. Additionally, by raising awareness and advocating for sustainable practices, UI GreenMetric aligns with the values and interests of a broader audience, drawing in followers passionate about environmental issues. The content shared during live discussions can inspire viewers to adopt eco-friendly habits, support ethical brands, or get involved in environmental initiatives, encouraging them to follow the account for ongoing guidance and encouragement. Regularly hosting sustainability-focused live discussions also helps build a community of like-minded individuals interested in environmental stewardship, creating a sense of belonging and shared purpose that motivates followers to stay connected and consistently engage with the content. The significant increase in followers since 2023, as illustrated in Figure 3, underscores the positive impact of these efforts on the network's online presence. Therefore, from this study, we can see that the increase in followers can be attributed to several factors: (1) educational value, (2) engagement and Interaction, (3) awareness and advocacy, (4) inspiration and motivation, and (5) community building.

Educational value in sustainability discussions means providing followers with valuable insights and information on topics such as environmental conservation, renewable energy, and ethical consumption. Followers seeking to learn more about sustainability are likely attracted to the UI GreenMetric account for its rich educational content, available

during live sessions as well as in regular posts and stories. Beyond educational content, these live discussions encourage real-time engagement, allowing viewers to ask questions, share their thoughts, and participate in conversations. This interactive format fosters a sense of community and connection, making followers more inclined to stay engaged and return for future discussions.

As sustainability issues become increasingly important to a growing audience, raising awareness and advocating for sustainable practices during live sessions allows UI GreenMetric to align with the values and interests of a broader audience. This alignment attracts followers who are passionate about environmental issues. The content shared during live discussions can inspire viewers to adopt eco-friendly habits, support ethical brands, or get involved in environmental initiatives, motivating them to follow the UI GreenMetric account for ongoing guidance and encouragement.

Moreover, hosting regular sustainability-focused live discussions helps build a community of like-minded individuals interested in environmental stewardship. This sense of belonging and shared purpose can be a strong motivator for followers to stay connected and engage consistently. The combined effect of educational value, real-time engagement, awareness-raising, inspiration, and community building has led to a significant increase in followers, highlighting the positive impact of these efforts on UI GreenMetric's online presence.

In addition to its power to disseminate sustainability insights, Instagram Live Discussions can serve as a platform for universities worldwide that subscribe to the UI GreenMetric Service Package. This service package enables universities to collaborate with UI GreenMetric to host sustainability-related events. The UI GreenMetric Service Package is designed to help universities enhance their sustainability practices and improve their ranking performance. One of the benefits for subscribing universities is the opportunity to host events, including Instagram Live Discussions.

Figure 4 illustrates an example of a university collaborating with UI GreenMetric to host such events. These collaborations not only provide a platform for discussing sustainability topics but also enhance the university's visibility and engagement within the global academic community.

Figure 4. Collaborating Universities with UI GreenMetric in Instagram Live Discussion as Part of the UI GreenMetric Service Package

In 2023 and 2024, UI GreenMetric significantly expanded its reach and impact through a series of dynamic initiatives aimed at promoting sustainability in higher education. Over this period, the organization hosted 13 Instagram Live Discussions, engaging a diverse and global audience. These live sessions served as a vibrant platform for dialogue and knowledge exchange on pressing sustainability issues, featuring insights from experts and thought leaders in the field.

Moreover, UI GreenMetric collaborated with 21 universities that subscribed to its comprehensive Service Package. This collaboration underscores the growing recognition and trust in UI GreenMetric as a pivotal resource for advancing sustainability goals within academic institutions. By partnering with these universities, UI GreenMetric facilitated the sharing of best practices, innovative strategies, and successful case studies, fostering a collaborative environment conducive to sustainable development.

Through these engagements, UI GreenMetric not only disseminated valuable knowledge but also inspired tangible actions towards sustainability on campuses worldwide. This period marked a significant step in positioning UI GreenMetric as a leading force in the global sustainability movement within the academic sector, empowering universities to implement effective and lasting environmental practices.

As UI GreenMetric becomes an increasingly influential platform for promoting sustainability, like we mentioned before, it also empowers universities by providing them with visibility for their sustainability initiatives through participation in or co-hosting of live discussions. This visibility not only highlights their contributions but also encourages other institutions to adopt similar practices. Furthermore, Instagram facilitates networking and collaboration among universities and environmental stakeholders through interactive features, strengthening the collective impact of sustainability efforts across the academic sector. This paper examines how UI GreenMetric's Instagram Live Discussions effectively spread awareness, foster community engagement, and enhance the sustainability efforts of universities worldwide.

The need for innovative platforms that facilitate knowledge sharing and collaborative action towards sustainability is critical in addressing global environmental challenges. UI GreenMetric has emerged as a significant player in this realm by utilizing Instagram Live Discussions to foster an interactive and far-reaching dialogue on sustainability issues. These sessions empower universities, individuals, and communities by providing a dynamic platform for sharing best practices, innovative strategies, and expert insights. This paper explores the multifaceted impact of these live discussions on advancing sustainability across the academic sector and beyond. This is proven by many indvidiuals, communities, and university want to take part and asking for collaboration or invite UI GreenMetric to be their Media Partner, a collaboration within two or more organization to promote and share content, providing mutual benefits through increased visibility and publicity. From this figure 5 below we can see the collaboration with Integral University of Lucknow, India, the Indonesian International Student Mobility Awards (IISMA) students, and two organizations which invited UI GreenMetric as Media Partner.

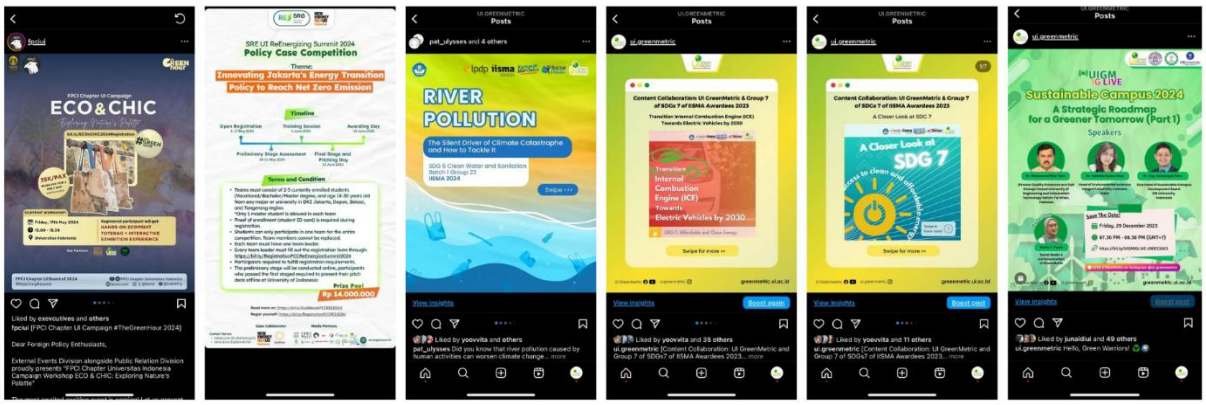

Figure 5. UI GreenMetric Collaboration with Indvidual, Organization, and University

From the figure, it is evident that UI GreenMetric's role as a platform extends beyond mere facilitation; it actively motivates universities and various organizations to seek collaboration with it. This growing interest and engagement underscore the widespread recognition of UI GreenMetric as an impactful organization in the field of sustainability. Institutions around the world view UI GreenMetric as a valuable partner capable of sharing critical knowledge and expertise on sustainable practices. Its influence and reputation empower it to disseminate sustainability principles on a global scale, fostering a network of committed stakeholders dedicated to creating a more sustainable future. This recognition not only highlights UI GreenMetric's effectiveness in promoting environmental stewardship but also demonstrates its ability to inspire and mobilize a diverse range of entities towards collective action in sustainability.

Beyond the UI GreenMetric's empowerment, the use of Instagram has led to several notable behavior changes among university communities. For instance, when universities share their GreenMetric achievements and initiatives on Instagram, students and staff are more likely to participate in eco-friendly practices. For example, after seeing posts about successful campus recycling programs and their positive impact, students might become more diligent in sorting their waste and reducing plastic use. Moreover, awareness campaigns about energy conservation, highlighted through Instagram stories and posts, have encouraged faculty and students to adopt habits like turning off lights and electronics when not in use. Additionally, the visibility of university-led sustainability projects, such as tree planting events or the installation of solar panels, often inspires similar actions in personal lives, such as planting home gardens or considering renewable energy sources.

These behavior changes collectively contribute to a more environmentally conscious campus culture, showcasing the powerful influence of social media in promoting and reinforcing sustainable practices. One notable example of behavioral change from UI GreenMetric's Instagram activity is illustrated through their E-Waste Campaign. As depicted in Figure 6 and 7, to commemorate International Electronic Waste Day, UI GreenMetric launched a campaign inviting universities worldwide, participating in the UI GreenMetric rankings, to collect their electronic waste and report their efforts. This initiative not only highlights the universities' responsibility and commitment to effective waste management but also underscores the role of UI GreenMetric in fostering a global culture of sustainability through proactive social media engagement.

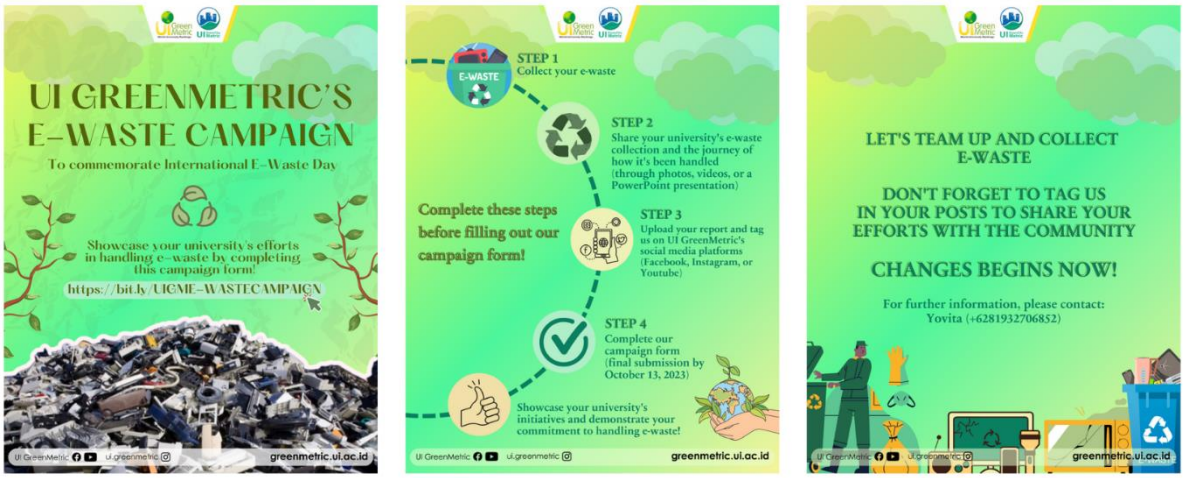

Figure 6. The Invitation for UI GreenMetric's E-Waste Campaign

UI GreenMetric's e-waste campaign, with form responses collected between October 5 and 21, 2023, delves into the management of e-waste within universities. 57 universities from 23 countries participated, including 29 from Asia, 11 from Europe, 10 from Latin America, 4 from North America, and 3 from Africa. In response to the global challenge of e-waste management, universities have taken proactive steps to address this issue. These efforts involve raising awareness among students, faculty, and staff about the importance of proper e-waste disposal and recycling. Furthermore, universities have set up convenient collection points for electronic waste on their campuses, making it easy for the academic community to participate in responsible e-waste disposal. By doing so, these institutions are not only fulfilling their social and environmental responsibilities but also setting an example for their students and the broader community in adopting sustainable practices.

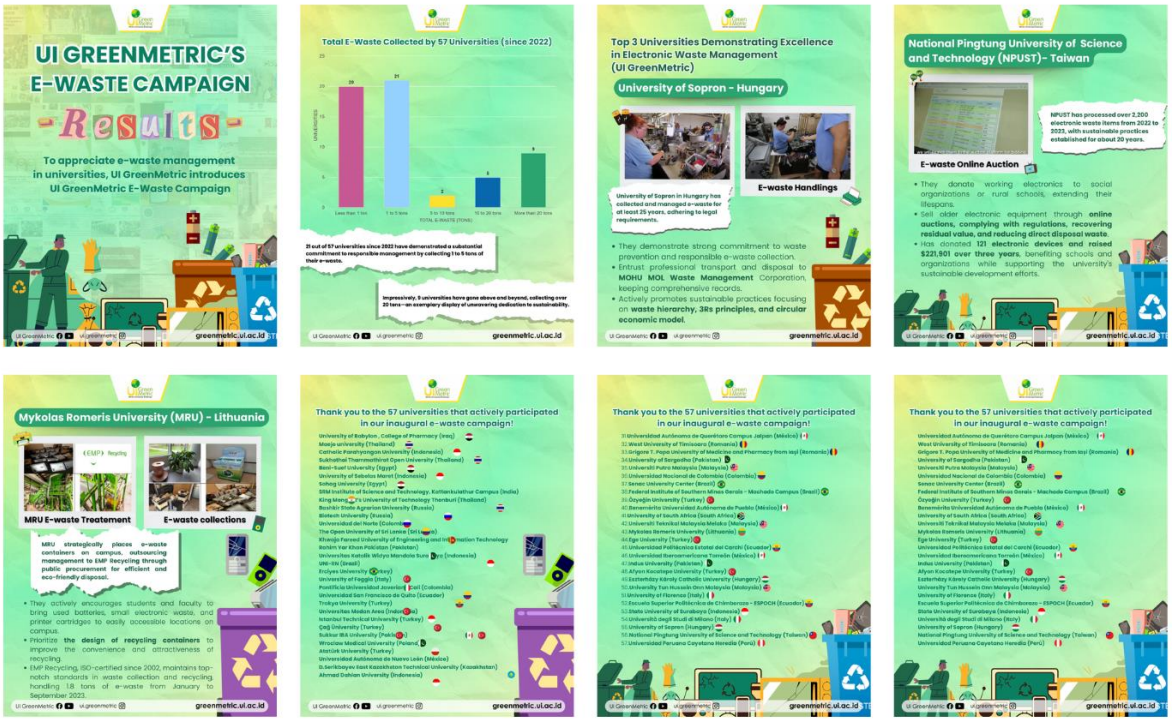

Figure 7. Results of UI GreenMetric's E-Waste Campaign

Utilizing Instagram as a platform to promote this campaign can influence and create behavioral change within universities. By leveraging Instagram's visual and interactive capabilities, the campaign can effectively reach and engage a broad audience, especially younger generations who are active on social media. Showcasing successful initiatives, sharing impactful stories, and highlighting the positive outcomes of proper e-waste management can inspire other institutions to adopt similar practices. With the right communication strategy, the Instagram campaign can play a crucial role in driving the desired change in behavior towards sustainable e-waste management in universities.

4.1.2. Facebook

In alignment with its robust engagement on Instagram, UI GreenMetric also upholds a notable presence on Facebook. While the follower count on Facebook currently registers at 1,117, significantly fewer than its Instagram counterpart, the platform still plays a vital role in spreading sustainability insights. Figure 8 depicts a marginal increase in UI GreenMetric's Facebook followers, indicative of its evolving influence and outreach efforts on this platform.

Figure 8 below illustrates the monthly increase in Facebook followers from February 2023 to May 2024. From February 2023 to May 2024, Facebook followers grew steadily, starting from 1,007 in February 2023. Initial small increases were followed by minor fluctuations, including a slight drop in May 2023. Growth resumed in June 2023, with a notable rise toward the end of 2023 and early 2024. Significant increases occurred in December 2023, January 2024, and February 2024, with the highest growth of 27 followers in February 2024, reaching a total of 1,107. By May 2024, the follower count had increased to 1,117, indicating an overall positive trend despite occasional decreases.

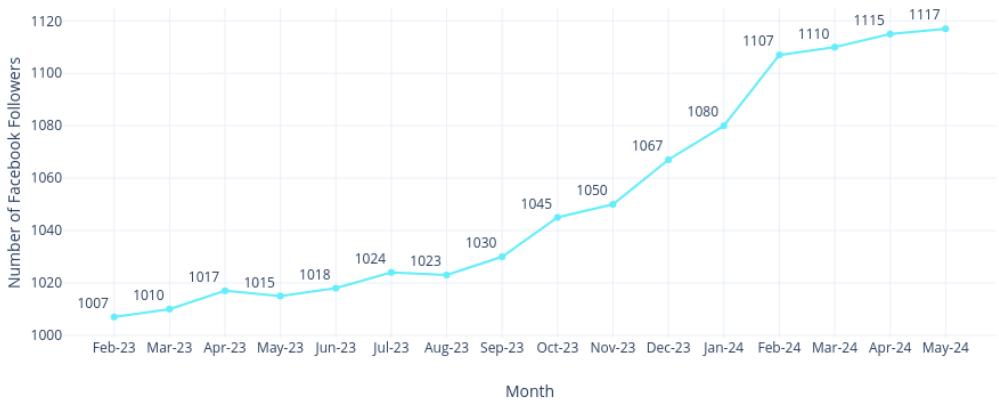

Figure 8. Rising Followers of UI GreenMetric Facebook Account

Besides Instagram, this platform enables UI GreenMetric to become a catalyst for change, empowering individuals, communities, and universities, and fostering behavioral shifts towards sustainability. Despite the growing popularity of Instagram, a considerable number of people continue to use Facebook as their primary social media platform for disseminating and sharing information. Recognizing this, UI GreenMetric remains active on Facebook to engage participants who may not be reachable through Instagram. The continued presence on Facebook ensures that sustainability messages and campaigns can reach a broader and more diverse audience.

Moreover, Facebook's new features enhance its utility as a platform for spreading sustainability insights and hosting events. The presence of synchronization features between Instagram and Facebook simplifies the publication process. Posts and stories shared on

Instagram can be seamlessly propagated to Facebook, ensuring that UI GreenMetric's content reaches members who prefer Facebook as their social media outlet. This integrated approach maximizes outreach and reinforces the impact of UI GreenMetric's initiatives across multiple social media platforms.

Therefore, UI GreenMetric's engagement on Facebook, despite a lower follower count compared to Instagram, remains significant for spreading sustainability insights. The steady increase in followers from February 2023 to May 2024, as depicted in Figure 8, demonstrates the platform's evolving influence. This strategic presence ensures that sustainability messages reach a diverse audience, leveraging Facebook's unique features and synchronization capabilities with Instagram to maximize outreach and impact. By maintaining robust activity on Facebook, UI GreenMetric effectively empowers individuals, communities, and universities, fostering behavioral shifts towards sustainability.

4.1.3. Youtube

UI GreenMetric's YouTube account has emerged as a formidable platform, sharing 335 videos, including event streams and recent forays into online podcasting, garnering a commendable subscriber base of 1,585. UI GreenMetric leverages its YouTube channel to disseminate sustainability insights through live-streamed events, offering a significant opportunity for individuals to watch and participate online, even if they cannot attend in person. This platform enables a broader audience to engage with important discussions and initiatives remotely, breaking geographical barriers and fostering a more inclusive approach to sustainability education. The live streaming of events ensures real-time interaction and engagement, while also allowing viewers to benefit from the rich content and expert perspectives shared during these sessions. This active subscriber base reflects the community's commitment to remaining informed about sustainability initiatives and highlights the importance of regular content updates to maintain high levels of engagement.

Figure 9. Total Subscribers of UI GreenMetric YouTube Account

Figure 9 depicts a steady growth in YouTube subscribers from April 2023 to April 2024, with an overall increase from 1,311 to 1,578 subscribers. Key growth periods include notable rises in June 2023, September 2023, and December 2023, reflecting successful engagement strategies during these times. Despite minor fluctuations, the consistent upward trend throughout the year underscores ongoing positive momentum in subscriber acquisition.

UI GreenMetric's YouTube channel also attracts a diverse audience, with a significant portion of its traffic coming from external sources. These external sources dominate the

traffic landscape, driving a substantial number of views and interactions. This indicates that the channel's content is widely shared and accessed through links on other websites, social media platforms, and external recommendations. Such dominance of external traffic sources underscores the effectiveness of UI GreenMetric's outreach efforts and the broad interest in its sustainability-focused content.

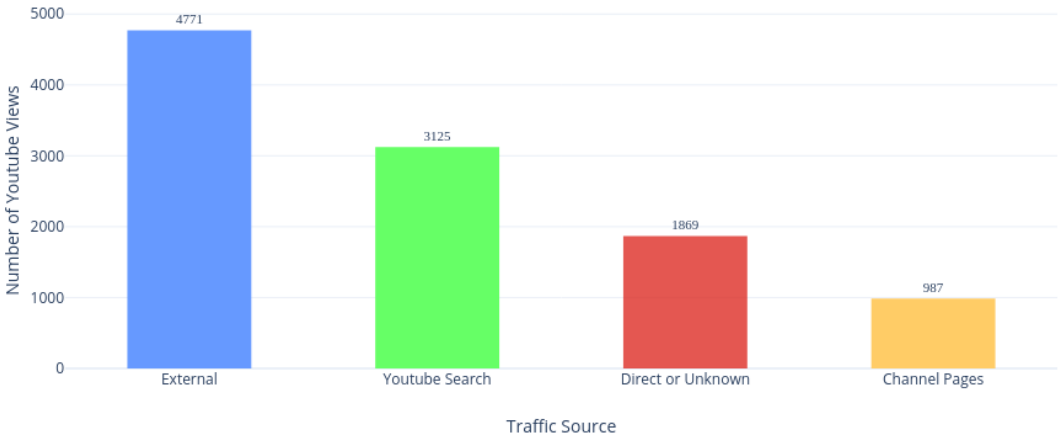

Figure 10. UI GreenMetric YouTube views by Traffic Source

Figure 10 shows YouTube views by traffic source from May 2023 to May 2024. The analysis reveals interesting insights into audience engagement and content discovery methods. Among the different traffic sources, external links contributed the highest number of views with 4771, indicating the importance of collaborations, referrals, or shared content across various platforms. YouTube search closely follows with 3125 views, suggesting the significance of optimizing video content for search engine visibility. Direct or unknown sources accounted for 1869 views, highlighting the need for further investigation into audience behavior or tracking methods. Channel pages contributed 987 views, showcasing the importance of maintaining an engaging and informative channel for attracting viewers. Understanding these traffic sources provides valuable information for content creators to strategize and tailor their content distribution efforts, aiming to reach a wider audience and enhance engagement on the platform.

One key benefit of utilizing YouTube is that videos can be saved and rewatched at any time, providing lasting access to valuable content. This feature ensures that the knowledge and insights shared are available for future reference, enhancing the educational impact. As illustrated in Figure 11, the percentage distribution of the most-watched YouTube content highlights the engagement and reach of UI GreenMetric's video materials. This data underscores the effectiveness of YouTube as a tool for extending the reach of sustainability messages, ensuring that they resonate with a diverse and global audience.

Figure 11 shows YouTube views by content from May 2023 to May 2024. The analysis reveals varying levels of viewership for different content types. "Pengumuman dan Pemberian Anugerah UI GreenMetric World University Rankings 2023" garnered 1,114 views, followed by "UI GreenMetric World University Rankings Results and Awards 2023" with 2,030 views, indicating significant interest in updates and award ceremonies related to the UI GreenMetric rankings. Additionally, other content such as the UIGM 2023 Info Session, UI GreenMetric Video Profile 2023, and Festival Eco-Enzyme 2023 also attracted viewership,

with 520, 538, and 556 views respectively. This indicates a diverse range of topics and events covered within the UI GreenMetric initiatives.

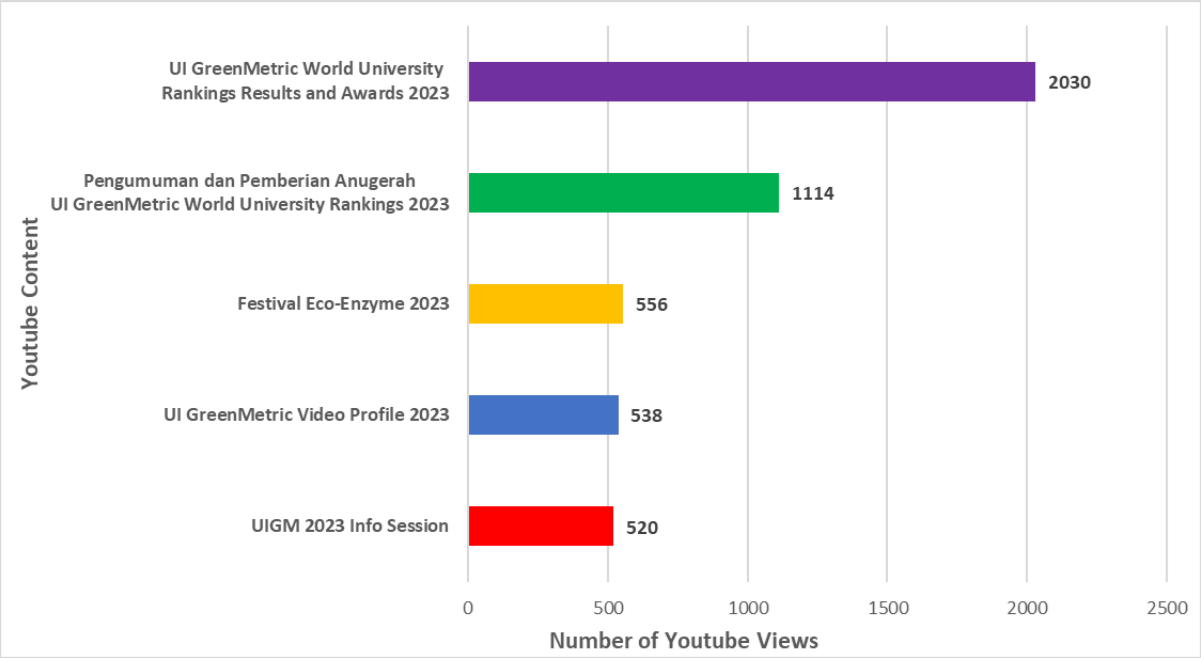

Figure 11. UI GreenMetric YouTube views by Content

With the establishment of its YouTube platform, UI GreenMetric is seizing the opportunity to also launch podcast sessions. These podcasts provide a platform for sharing and discussing best practices in sustainability, showcasing successful participation in UI GreenMetric initiatives. This new feature has established UI GreenMetric's YouTube channel as a vital resource for sustainability insights. It is also aimed to deepen the audience's understanding of sustainability topics and increase awareness about UI GreenMetric's initiatives. By offering these insightful podcast sessions, UI GreenMetric hopes to reach a wider audience, fostering a greater appreciation and knowledge of sustainability issues. This initiative is expected to enhance the visibility of UI GreenMetric and its efforts to promote sustainable practices globally. Therefore, UI GreenMetric provide a platform for sharing and discussing best practices in sustainability, showcasing successful participation in UI GreenMetric initiatives. This new feature has established UI GreenMetric's YouTube channel as a vital resource for sustainability insights.

4.2. UI GreenMetric Website

The most crucial aspect of any institution in the digital age is its website. The website serves as the face of the institution, representing its values, mission, and offerings to the global audience. It is the primary platform that enables members and visitors to access the latest and most detailed information about the institution's activities, achievements, and updates. In today's interconnected world, a well-designed and informative website is essential for maintaining transparency, fostering communication, and building a strong online presence.

The features on the UI GreenMetric website are continually updated to keep pace with the latest web technology developments. This proactive approach ensures that the website remains user-friendly, responsive, and efficient in delivering content. One significant advancement is the integration of social media links, allowing seamless connectivity between the website and various social media platforms. This integration enhances the reach and

engagement of UI GreenMetric, making it easier for users to share and interact with the content.

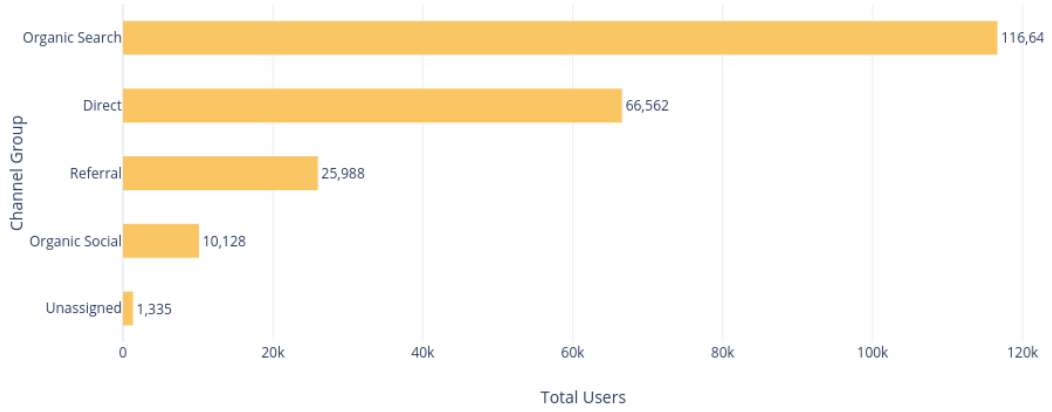

Figure 12. Users Visit UI GreenMetric Website by Channel Group

During the period from April 1, 2022, to May 28, 2024, a total of 212.361 users visited the UI GreenMetric website. Figure 12 shows UI GreenMetric website users by channel group, highlighting the five leading sources of traffic. Organic Search is the predominant channel, contributing 116,642 users, which accounts for approximately 55% of the total traffic and underscores the effectiveness of search engine optimization efforts. Direct traffic follows with 66.562 users, representing around 31% of the total, indicating a strong base of returning visitors who access the site directly. Referral traffic accounts for 25.988 users, comprising approximately 12% of the total, reflecting the impact of external links from other websites. Organic Social channels contribute 10.128 users, making up roughly 5% of the total, showcasing the role of social media in driving traffic. Lastly, the Unassigned category brings in 1.335 users, representing less than 1% of the total traffic.

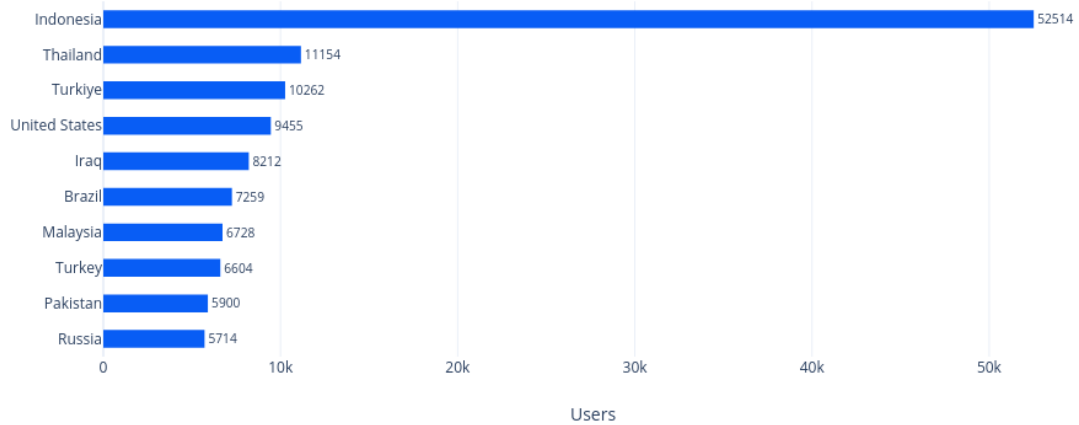

Figure 13. Users Visit UI GreenMetric Website by Country

The UI GreenMetric website attracts visitors from around the world, reflecting its global influence and reach. These visitors include university leaders, key personnel, and administrators who are interested in registering their institutions or staying updated on

GreenMetric information. The website also serves as a valuable resource for undergraduate, graduate, and doctoral students conducting research related to sustainability data and issues. The diverse audience underscores the website's role in disseminating knowledge and fostering a global community committed to sustainability.

Figure 13 illustrates the demographic distribution of UI GreenMetric website users by country. The data indicates that Indonesia has the highest number of users, with 52.514 users, accounting for approximately 24.7% of the total users, highlighting strong domestic engagement. Thailand and Turkiye follow with 11.154 and 10.262 users, respectively, representing approximately 5.3% and 4.8% of the total users. The United States also shows substantial participation with 9.455 users, constituting about 4.5% of the total. Other notable contributors include Iraq (8.212), Brazil (7.259), Malaysia (6.728), Turkey (6.604), Pakistan (5.900), and Russia (5.714). This diverse international user base underscores the global appeal and reach of the UI GreenMetric initiative.

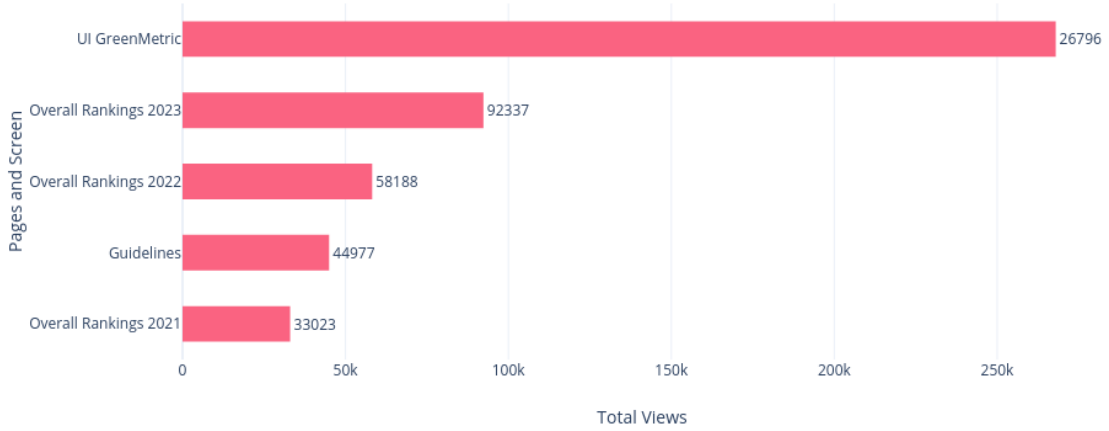

Figure 14. Users Page Visits on UI GreenMetric Website by Page Title and Screen Class

The website also serves as a platform for UI GreenMetric to distribute overall rankings every year, questionnaires and their accompanying guidelines. These resources are crucial for institutions participating in the GreenMetric rankings and for researchers seeking detailed information about sustainability practices and alsoe their position in the rankings to evaluate themselves in the future rankings. The user distribution graph reveals significant engagement from users to access the UI GreenMetric website, overall rankings and downloading or accessing the UI GreenMetric guidelines, whether for data entry or research purposes. This feature enhances the website's utility as a comprehensive information hub.

During the period from April 1, 2022, to May 28, 2024, the UI GreenMetric website received a total of 958,665 views. Figure 14 presents the UI GreenMetric website views by page title and screen class, highlighting the five most viewed pages. The homepage, "UI GreenMetric," leads with a significant 267.965 views, indicating its central role as the main entry point for users. The "Overall Rankings 2022 - UI GreenMetric" page follows with 92.337 views, reflecting strong interest in the rankings for that year. The "Overall Rankings 2023 - UI GreenMetric" page has 58.188 views, showing continued engagement with the latest rankings. The "Guidelines - UI GreenMetric" page, with 44.997 views, suggests that users are keen to understand the criteria and methodology about the rankings. Lastly, the "Overall Rankings 2021 - UI GreenMetric" page garnered 33.023 views.

Furthermore, the website's design and functionality are geared towards ensuring that

information is easily accessible and navigable. The clear categorization of content, intuitive navigation menus, and search functionalities contribute to a positive user experience. Users can quickly find the information they need, whether it's about registration, events, guidelines, or research data. This ease of access is particularly important for fostering continuous engagement and maintaining the website's relevance. The comprehensive documentation and accessibility of information on the website make it an invaluable resource for anyone interested in sustainability practices and data. The website not only provides updates and news but also acts as an educational tool, offering insights and resources that support the global sustainability agenda. By maintaining a dynamic and interactive online presence, UI GreenMetric ensures that it remains at the forefront of sustainability discussions and initiatives.

Therefore, the UI GreenMetric website not only represents the institution's face in the digital realm but also functions as a dynamic tool for engagement, research, and information dissemination. Its ability to adapt to technological advancements, integrate with social media, and cater to a diverse audience reinforces its global impact on sustainability. The website stands as a testament to UI GreenMetric's commitment to transparency, education, and continuous improvement in the field of sustainability.

4.3. UI GreenMetric Online Course on Sustainability

As part of our digitalization and transformation strategy, UI GreenMetric has proposed an online introductory class for undergraduate student titled "The UI GreenMetric Online Course on Sustainability: Global Practices of Sustainable D evelopment Goals" since 2021. UI GreenMetric Online Course on Sustainability is an online undergraduate-level introduction to the most challenging question facing our generation: *"how can the world evolve in ways that are socially inclusive, environmentally durable, and financially viable?".* The course is aligned with the second UI GreenMetric Thematic Priority: Creating Global Sustainability Leaders. It discusses the complex interplay between the economy, social life, and planet's physical environment, as well as the consequences of human activities on the planet's environment and the solutions to face them. It contextualizes these challenges in different countries.

The course has three main objectives: by the end of the course, students are expected to have learned different theories and practices of sustainability in various countries, met students and experts from different countries, and been inspired to lead and practice sustainability in their own contexts. The course is arranged in 17 weeks (13 weeks for the classes, 1 week for the opening, and 3 weeks for project seminars), with different materials for each week (recorded videos, reading materials, quizzes). To progress from week-to-week, the students must follow the outline, and develop the proposed activities during the week. Students have the given week to explore the materials in detail and search the internet for other key documents. The materials for each week will be available from the starting day of that week up to the end of the course. The course outline is described in Figure 15.

Building upon the resounding success of the past two years, this program has expanded its collaborations to include universities from Brazil, United Arab Emirates, Colombia, Ecuador, Hungary, Indonesia, Tunisia, and is this year extending to Taiwan, Thailand, Turkey, and Egypt. It gives students an understanding of the key challenges and pathways to sustainable development in Taiwan, Indonesia, Thailand, the Republic of Türkiye, Hungary and Egypt.

Week	SDGs	Theme
1		Course Materials What is Sustainable Development
2		A Short History of Economic Development
3		The History of Inequality
4		The Sustainable Development Goals and the End of Extreme Poverty; Sustainable Food Supply and the End of Hunger
5		Growth within Planetary Boundaries
6		**Project Workshop**
7		Human Rights and Gender Equality
8		Higher Education
9		Culture, Good Health ad Well Being
10		**Project Workshop**
11		Sustainable Cities
12		Understanding Climate Change
13		Saving Biodiversity
14		The Green Industry agenda (The Future We Want)
15		Sustainability Governance
16		The Sustainable Development Goals, Global Partnership, and the Roles of Students
17		**Project Workshop**

Figure 15. The course outline of UI GreenMetric Online Course on Sustainability

The course has been conducted over the past two years, with two classes in the first year and three classes in the second year. Team 1 consists of 7 universities: University of Sao Paolo, Brazil; Universitas Indonesia, Indonesia; El Bosque University, Colombia; University of Szeged, Hungary; University of Sharjah, UAE; Escuela Superior Politécnica de Chimborazo, Ecuador; and University of Sousse, Tunisia. Team 2 also consists of 7 universities: National Pingtung University of Science and Technology, Taiwan; Mahidol University, Thailand; Universitas Negeri Yogyakarta, Indonesia; University of Pécs, Hungary; Zonguldak Bulent Ecevit University, Turkey; Universitas Diponegoro, Indonesia; and 6th of October University, Egypt. Team 3 consists of 3 universities from Indonesia: Universitas Diponegoro, Universitas Padjadjaran, and Institut Teknologi Sepuluh Nopember. Additionally, Team 3 includes participants from Universitas Syiah Kuala, Telkom University, Universitas Pattimura, Universitas Palangka Raya, Universitas Lampung, Universitas Negeri Surabaya, Institut Teknologi Nasional Bandung, Universitas Sam Ratulangi, Universitas Gadjah Mada, Universitas Pancasila, Universitas Islam Negeri Jakarta, Universitas Sebelas Maret, Universitas Sriwijaya, and Universitas Muhammadiyah Malang. Figure 16 shows the distribution of participating universities among the three teams. There are 327 enrolled students from the 2023 batch, indicating a consistent growth in participation in the online course. For the 2024 batch, we expect at least three more universities to join the course.

We evaluate the students' feedback about the course to understand digital media impact in disseminating sustainability courses. We ask the participating students in batch 3 how they feel about the quality of course materials and the quality of the task given. Figure Figure 17 presents three pie charts depicting student feedback on various aspects of course materials, i.e. how often the students access the Moodle, quality of the lecture videos, and quality of the reading materials. The first chart shows that most students access Moodle frequently, with 36% accessing it more than 17 times. The second largest group, 28%, accesses it 10-14 times, and 25% access it 15-17 times. Only 11% of students access it 5-9 times. This suggests that students are highly engaged with the course materials provided on Moodle.

Regarding the quality of lecture videos, nearly half of the students (48%) agree that the lecture videos are good, while 36% remain neutral. A small portion of students disagree (13%) or strongly disagree (3%). This indicates that the majority of students are satisfied with the quality of the lecture videos, but there is room for improvement. When it comes to the quality of reading materials, more than half of the students (55%) agree that the materials are good, and 24% remain neutral. A smaller percentage of students disagree (12%) or strongly disagree (9%). This suggests that the reading materials are generally well-received, with a significant portion of students finding them satisfactory.

Figure 16. Participating Universities of UI GreenMetric Online Course on Sustainability

Overall, the feedback towards the course materials indicates a positive sentiment, with high engagement levels as evidenced by frequent access to Moodle. Most students find both the lecture videos and reading materials to be of good quality. However, the presence of neutral and negative responses suggests there is room for enhancement, particularly in improving the quality of lecture videos and reading materials to meet the expectations of all students. Addressing the concerns of the minority who disagreed or strongly disagreed could involve gathering more specific feedback on the aspects they found lacking and implementing targeted improvements. Ensuring that the content is clear, engaging, and accessible could further enhance the learning experience and reduce the number of neutral and negative responses.

Figure 18 presents three pie charts depicting student feedback on the quality of different tasks within the course: Synchronous Presentation, Reflection Journal, and Project Report. In terms of the synchronous presentations, a significant majority of students (67%) agree that the quality is good. Only a small percentage of students strongly disagree (3%) or disagree (7%), with 23% remaining neutral. This indicates a high level of satisfaction with the quality of the synchronous presentations, suggesting that students find these sessions

effective and valuable. For the reflection journal task, 61% of students agree that the quality is good. A slightly higher percentage of students disagree (10%) or strongly disagree (3%) compared to the synchronous presentations, and 26% are neutral. While the majority view the reflection journals positively, there is a notable minority that does not find them as satisfactory, which may indicate areas for improvement in this aspect of the course. The feedback for the project report is identical to that of the reflection journal, with 61% of students agreeing on the quality, 26% remaining neutral, and 13% (combining strongly disagree and disagree) expressing dissatisfaction. This similarity in feedback suggests that students perceive the quality of these tasks in a comparable manner.

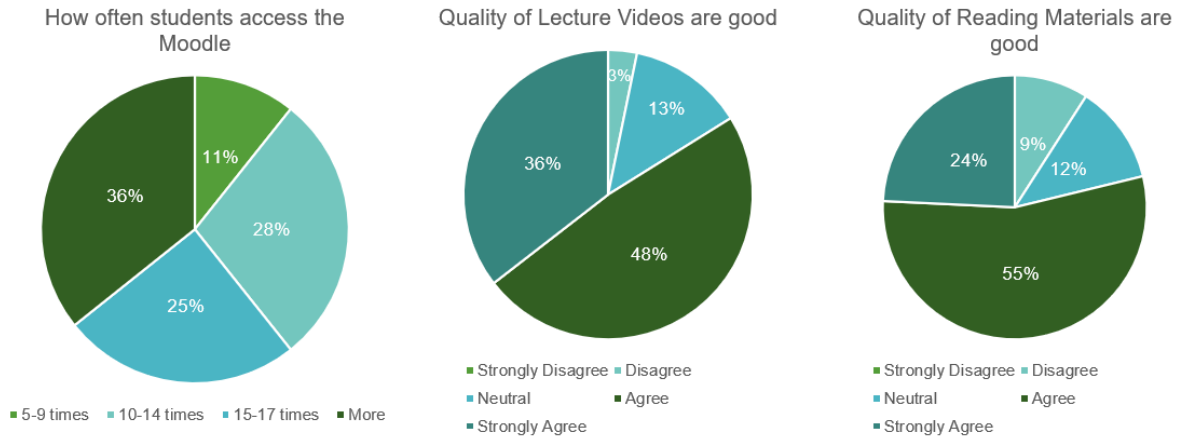

Figure 17. Students' feedback: quality of course materials

We believe that the mostly positive feedback regarding the quality of course materials and tasks from the students is due to the way we have designed the course features. The course is designed with several features to accommodate diverse learners. It is offered 100% online, allowing students to start instantly and learn at their own pace within their university environment. The course is free for students from member universities; they only need to register through their own institution. With approximately 30 hours needed to complete the course, students can study according to their own schedules. Upon completion, participants will receive a UI GreenMetric Certificate of Participation. Additionally, credit transfer is possible, subject to the terms and conditions of the student's university. The primary teaching language is English, but some videos may be available in other languages with English subtitles provided.

Furthermore, we capture the sentiment of students' experiences in conducting the group project in the course. The sentiment about working in groups in the course is reflecting the diverse experiences of participants. On the positive side, many students appreciated the opportunity to work with peers from diverse backgrounds. This diversity brought vibrant perspectives to group discussions, enriching their understanding of the sustainability subject. Participants recognized that each group member contributed a unique set of skills and knowledge, which enhanced the collective expertise of the group. This recognition fostered a collaborative learning environment where students felt respected and acknowledged for their specific competencies. Additionally, the topics of the group projects were well-aligned with weekly assignments, covering almost all the materials. This alignment helped participants learn practical and applicable actions that they could use soon. The presence of supportive tutors who provided guidance and assistance whenever doubts arose was also highly valued, as it helped maintain motivation and confidence among students. However, some

participants found the course more challenging than any other course in their program due to the complexities of group work. They highlighted difficulties in coordinating with group members because of time differences and individual schedules, which made working in groups particularly challenging. The challenge of aligning schedules, agreeing on tasks, and ensuring equal participation added layers of complexity to the learning process.

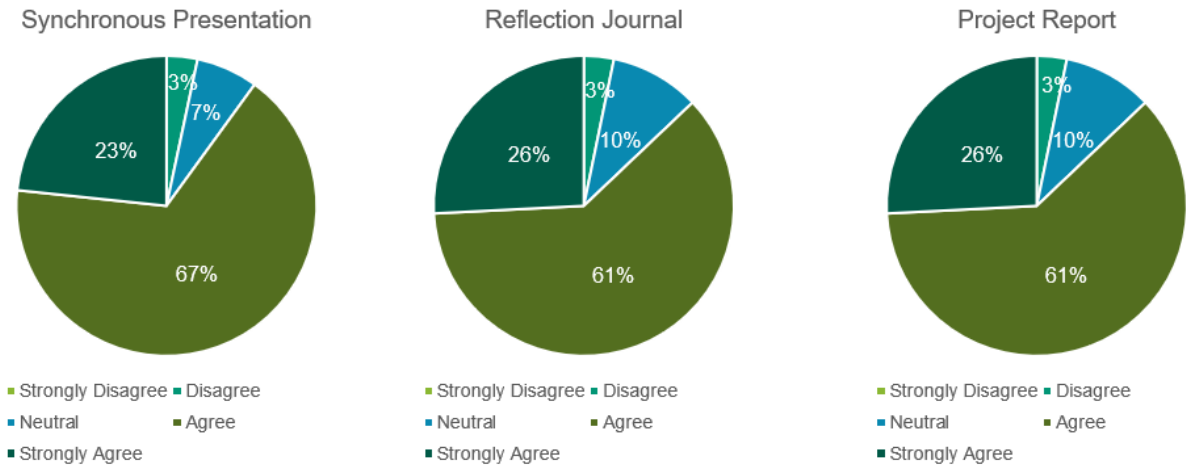

Figure 18. Students' feedback: quality of the tasks

The positive feedback about diverse perspectives, unique skills, comprehensive project topics, and supportive tutors highlights the benefits of well-structured group work. Diversity in groups can lead to richer discussions and more innovative solutions as students bring different viewpoints and experiences to the table. The recognition of individual contributions fosters a sense of community and collaboration, making the learning process more engaging and effective. Furthermore, the alignment of group projects with weekly assignments ensures that students are consistently applying what they learn in a practical context. The assignments reinforce theoretical knowledge and enhances problem-solving skills and prepares students for real-world challenges. The role of tutors is crucial; their support helps mitigate the challenges of group work by providing guidance, resolving conflicts, and maintaining motivation. On the other hand, the negative feedback underscores the logistical and interpersonal challenges of group work. Time zone differences and conflicting schedules can create significant barriers to effective collaboration.

5. Conclusions

This study provides a comprehensive analysis of how digital media can be leveraged to enhance the dissemination and engagement of sustainability insights within the UI GreenMetric World University Rankings Network. By examining the various platforms and their impacts, we uncover five key aspects of behavioral transformation facilitated by digital media.

Firstly, the dissemination of sustainability insights is markedly enhanced through UI GreenMetric's active social media presence. Instagram, for example, serves as a dynamic platform where viewer participation in live videos has led to a noticeable increase in followers. This indicates a heightened interest and engagement from the audience. Instagram's visual and interactive nature makes it an ideal tool for capturing attention and fostering a community interested in sustainability. The active participation of viewers during live sessions demonstrates the platform's effectiveness in engaging users and spreading sustainability messages.

In addition to Instagram, Facebook offers an alternative for those who may not use Instagram, ensuring broad accessibility to similar content and information. Facebook's inclusive nature allows it to reach a wider audience, including those who might be less tech-savvy but still interested in sustainability. The steady growth of followers on Facebook also highlights its role in disseminating sustainability insights. By providing similar content as Instagram, Facebook ensures that no segment of the audience is left out, thus maximizing the reach and impact of the information shared. YouTube further extends the reach of UI GreenMetric by enabling the live streaming of events. This platform offers a significant opportunity for individuals to watch and participate in sustainability-related events online, even if they cannot attend in person. The visual and auditory elements of YouTube make it a powerful tool for conveying complex sustainability concepts in an accessible and engaging manner. The ability to archive live-streamed events also ensures that these valuable resources remain available for future reference, extending their impact beyond the live audience.

The UI GreenMetric website remains the primary source of comprehensive information about the institution's activities, achievements, and updates. As the central hub, the website provides detailed and up-to-date information, making it an essential resource for members and visitors. The website's structured and accessible layout ensures that users can easily find the information they need, whether they are looking for specific data or general updates about UI GreenMetric's initiatives. This centralized platform plays a crucial role in maintaining transparency and accountability. Online courses on sustainability offered through UI GreenMetric reach students around the world, further extending the institution's educational impact. These courses provide valuable knowledge and skills, empowering students to engage in sustainability practices. By offering courses online, UI GreenMetric ensures that education is accessible to a global audience, breaking down geographical barriers and fostering a worldwide community of sustainability-minded individuals. The interactive nature of online courses also allows for active engagement and collaboration among students from diverse backgrounds.

Secondly, UI GreenMetric's digital platforms have proven to be effective tools for fostering sustainability initiatives. Instagram, for example, facilitates collaborations between universities by hosting sustainability-related events. These events not only raise awareness but also provide a platform for universities to showcase their efforts and learn from each other. The interactive features of Instagram, such as comments and direct messaging, enable real-time communication and collaboration, further enhancing the impact of these events.

Facebook supports the promotion and sharing of event posters, enhancing the visibility of sustainability initiatives. By providing a space for universities to publicize their events, Facebook helps to ensure that these initiatives reach a wider audience. The platform's ability to create events and invite participants also facilitates better organization and higher attendance. This increased visibility and participation contribute to the overall success of sustainability initiatives and encourage more universities to get involved. YouTube serves as a streaming platform for live events, offering an interactive experience for viewers. The live chat feature allows for real-time engagement, enabling viewers to ask questions and participate in discussions. This interactive element makes YouTube a valuable tool for fostering a sense of community and engagement around sustainability issues. The ability to stream events live also ensures that these important discussions are accessible to a global audience, further extending their reach and impact.

The website promotes university collaborations by providing a centralized platform for

information sharing. Universities can use the website to share their achievements, best practices, and upcoming events. This transparency and openness foster a collaborative environment where universities can learn from each other's successes and challenges. The website's comprehensive and accessible layout ensures that all relevant information is easily available, facilitating better communication and collaboration among institutions. Online courses offer students the opportunity to earn extra credits and gain foundational knowledge in sustainability from international lecturers, fostering a global learning community. These courses provide a structured and comprehensive education in sustainability, covering a wide range of topics and practical skills. By bringing together students from different countries and backgrounds, online courses promote cross-cultural understanding and collaboration. This global perspective is essential for addressing the complex and interconnected challenges of sustainability.

Thirdly, these digital platforms empower individuals, communities, and universities to actively participate in sustainability actions. Social media channels such as Instagram, Facebook, and YouTube, along with online courses, encourage active engagement and participation. The interactive and accessible nature of these platforms makes it easier for individuals and institutions to get involved and act. This empowerment leads to broader behavioral changes, increasing awareness and proactive engagement in sustainability efforts.

Instagram's interactive features, such as live videos and stories, enable users to actively participate in sustainability discussions and initiatives. By providing a platform for real-time communication and engagement, Instagram empowers users to take an active role in promoting and participating in sustainability actions. This active engagement helps create a sense of community and shared purpose, further motivating individuals to act. Facebook's inclusive nature and event creation features make it a valuable tool for organizing and promoting sustainability initiatives. By allowing users to create events and invite participants, Facebook facilitates better organization and higher attendance. The platform's ability to share and promote these events also ensures that they reach a wider audience, further enhancing their impact. This increased visibility and participation contribute to the overall success of sustainability initiatives.

YouTube's live streaming and archival features make it a powerful tool for disseminating sustainability knowledge and fostering engagement. The ability to stream events live and archive them for future reference ensures that valuable information is accessible to a global audience. The interactive elements of YouTube, such as live chat, enable real-time engagement and discussion, further enhancing the impact of these events. This broad reach and interactive nature make YouTube an essential tool for promoting sustainability. Online courses provide a structured and comprehensive education in sustainability, empowering students with the knowledge and skills they need to engage in sustainability practices. By offering courses online, UI GreenMetric ensures that education is accessible to a global audience, breaking down geographical barriers and fostering a worldwide community of sustainability-minded individuals. The interactive nature of online courses also allows for active engagement and collaboration among students from diverse backgrounds.

Finally, this study demonstrates that digital media significantly enhances the dissemination and engagement of sustainability insights within the UI GreenMetric World University Rankings Network. By leveraging platforms like Instagram, Facebook, YouTube, and the UI GreenMetric website, the network has successfully fostered behavioral transformation, facilitated collaboration, and empowered individuals, communities, and universities to actively participate in sustainability initiatives. These digital tools not only

amplify the reach of sustainability messages but also create a global community committed to sustainable practices. The integration of digital media within UI GreenMetric's strategy proves to be a vital component in driving meaningful change and ensuring a sustainable future.

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