(Editorial)

The Diverse Programs at Egyptian Russian University Reveal Their Potential through a Focus on Sustainable Development

The Egyptian Russian University (ERU) boasts a unique academic landscape with eight distinct faculties, each offering programs designed to equip students with the knowledge and skills for success, all while keeping a focus on the United Nations Sustainable Development Goals (SDGs). Here's a glimpse into the diverse range of programs available at ERU, highlighting how they can contribute to a more sustainable future:

1.Faculty of Engineering: This faculty offers a variety of programs in engineering disciplines critical to modern society. Students can specialize in Construction Engineering, Mechatronics and Robotics Engineering, Architectural Engineering, or Telecommunication Engineering. The programs emphasize sustainable practices, ensuring graduates can contribute to building a resilient future SDG 11 (Sustainable Cities and Communities) and SDG 9 (Industry, Innovation and Infrastructure).

2. Faculty of Pharmacy: ERU's Pharmacy program focuses on the science and practice of preparing and dispensing medications. Graduates can pursue careers as pharmacists, researchers, or pharmaceutical industry professionals, contributing significantly to public health complying with SDG 3, (Good Health and Well-being). ERU's faculty offers Pharm D and Pharm D clinical programs for undergraduate students. Besides, the faculty offers a MSc program of Biochemistry and molecular biology, and two diploma programs of nutritional and medicinal trends of natural products pharmaceutical technology.

3. Faculty of Oral & Dental Medicine: This faculty prepares future dentists with a comprehensive understanding of oral health, hygiene, and disease treatment. By promoting good oral health practices, graduates can contribute to SDG 3 (Good Health and Well-being).

4. Faculty of Artificial Intelligence (AI): This cutting-edge faculty equips students with the knowledge and skills to develop and implement AI solutions with a focus on sustainability. The curriculum delves into machine learning, deep learning, robotics, and the ethical considerations of AI

development. Graduates are prepared to lead the way in this rapidly evolving field and address sustainability challenges through AI innovation, contributing to goals like SDG 7 (Affordable and Clean Energy) and SDG 9 (Industry, Innovation and Infrastructure).

5. Faculty of Management, Economics and Business Technology: This faculty equips students with the knowledge and skills needed to excel in the business world, with a focus on responsible and sustainable practices. Programs in Management, Economics, and Business Technology provide a strong foundation in business administration, finance, marketing, and entrepreneurship. Graduates can pursue careers in various industries, fostering responsible and sustainable business practices (SDG 8: Decent Work and Economic Growth), and promoting inclusive economic development (SDG 10: Reduced Inequalities).

6. Faculty of Applied Arts: This faculty nurtures creativity and technical skills in students passionate about visual communication and design. While not directly linked to a specific SDG, the faculty can play a role in promoting sustainable practices through design thinking and eco-friendly product development.

7. Faculty of Fine Arts: For those with a passion for artistic expression, the Faculty of Fine Arts offers programs in Painting, Sculpture, and Printmaking. While not directly linked to a specific SDG, the arts can inspire action and raise awareness on critical sustainability issues.

8. Faculty of Al-Alsun and Technical Languages: This faculty provides intensive language learning programs in English, German, and Russian. Students gain fluency in these languages, opening doors to international collaboration on sustainability initiatives (SDG 17: Partnerships for the Goals). Additionally, the faculty offers programs in technical translation, preparing graduates to bridge the communication gap in international sustainability efforts.

ERU's diverse range of programs caters to a wide range of interests and career aspirations, all fostering a culture of sustainability. By combining strong academic foundations with a focus on innovation and problem-solving for a sustainable future, ERU empowers its graduates to become leaders and changemakers in their chosen fields.

Reagrding ERURJ April 2024 issue, fifteen articles were published and linked to several sustaibnale development goals. The review by Abd Allah et al [1] focused on tinea pedis, or athlete's foot as a common fungal infection causing discomfort and reduced quality of life. This review highlights the challenges in treating tinea pedis, including the difficulty in delivering antifungal drugs effectively to the skin. To address these challenges, researchers are developing innovative drug delivery systems. These new methods aim to improve drug penetration, reduce side effects, and enhance treatment efficacy. The review discusses both traditional and advanced delivery techniques, emphasizing the potential for optimizing treatment and preventing recurrence of this persistent fungal infection. It is linked to SDG 3: Good Health and Well-being: By developing effective treatments for tinea pedis, this research contributes to improving overall health and reducing discomfort caused by the infection. Additionally, SDG 10: Reduced Inequalities as the access to effective and affordable treatments for common skin conditions like tinea pedis can help reduce health disparities. SDG 12: Responsible Consumption and Production: by developing drug delivery systems with minimal environmental impact, the research can promote sustainable practices.

The review by Awad et al [2] addressed Fast Disintegrating Tablets (FDTs) as a new type of medication that quickly dissolves in the mouth without needing water. These tablets are especially helpful for people who have difficulty swallowing, such as children and elderly individuals. FDTs improve patient compliance and drug absorption compared to traditional pills. It discussed different methods to create FDTs and the factors to consider when evaluating their quality. It aligns with SDG 3 by improving drug delivery and patient compliance, FDTs can enhance overall health and well-being, especially for vulnerable populations like children and the elderly and SDG 10 as FDTs can help reduce health disparities by providing easier access to medication for people with swallowing difficulties.

The review by El-khamissy and Abdo [3] discusses the growing concern over viral hemorrhagic fever diseases, particularly Ebola, Marburg, and Dengue fever, which are prevalent in tropical and subtropical regions. The focus is on the increasing risk of these diseases in Egypt due to environmental factors, non-primate reservoirs, and the ease of global travel. The review highlights the importance of prevention, early detection, and control measures to mitigate the spread of these diseases. It is linked to SDG 3 by addressing the threat of viral hemorrhagic fever

diseases, this research contributes to improving global health and reducing mortality rates. Also, it goes along with SDG 17: Partnerships for the Goals where the collaboration between countries and health organizations to prevent and control these diseases highlights the importance of global partnerships.Also the review by Reda et al [4] discussed the importance of combined nasal medications, particularly Azelastine hydrochloride (AZH) and Fluticasone propionate (FLU), in treating allergic rhinitis, especially in the context of potential confusion with COVID-19 symptoms. The main focus is on providing a comprehensive overview of analytical methods for quantifying AZH and FLU in various samples, including pharmaceutical formulations and biological fluids. This information aims to support future research in this area. It is aligned with SDG 3 by providing a foundation for accurate analysis of medications used to treat allergic rhinitis and improved diagnosis, treatment, and management of respiratory conditions, ultimately enhancing overall health and well-being.

The research article by Saeed et al [5] The study investigated the potential neuroprotective effects of valsartan on rats with Alzheimer's disease (AD) induced by aluminum chloride. Results showed that valsartan improved behavioral impairments, reduced oxidative stress, inflammation, and brain tissue damage caused by aluminum. These findings suggest that valsartan could be a potential treatment for AD. It is associated with SDG 3 by exploring potential treatments for Alzheimer's disease, this research contributes to improving brain health and quality of life for individuals with neurodegenerative conditions.

The short communication by El-Ghazali [6] discussed the importance of occlusal vertical dimension (OVD) in restorative dentistry and its potential for modification to improve aesthetics and function. It challenges the traditional view of OVD as a fixed value, suggesting instead that it can be adjusted within a physiological range. The abstract presents a clinical case where OVD was successfully increased using a combination of dental prosthetics and composite fillings, resulting in improved aesthetics and function. The patient was monitored for three months to assess the adaptation of the temporomandibular joint to the new OVD. It comes along with SDG 3 as improving oral health and function contributes to overall well-being.

Additionally the article by Mohamed and Kamh [7] investigated the impact of charcoal toothpaste on the durability of different dental filling materials. It compared charcoal toothpaste to

conventional toothpaste by measuring the hardness and roughness of three types of dental fillings: nanofilled resin composite, microhybrid resin composite, and resin-modified glass ionomer.The results indicated that charcoal toothpaste decreased the hardness and increased the roughness of all three filling materials compared to the conventional toothpaste. While all materials were affected, the resin-modified glass ionomer showed the most significant changes in hardness and roughness. It is linked to SDG 3 by studying the impact of dental products on the durability of fillings, this research can contribute to improving oral health outcomes.

As for the engineering section, the review by Ibrahim [8] discusses the challenges of improving wind turbine efficiency by addressing flow separation and dynamic stall on rotor blades. It compares active and passive flow control methods, favoring passive methods due to their simplicity and cost-effectiveness. The importance of Computational Fluid Dynamics (CFD) in designing and optimizing wind turbine blades is highlighted. This article aligns with several SDGs *viz.*, SDG 7: Affordable and Clean Energy: By improving wind turbine efficiency, this research contributes to increasing the use of renewable energy sources. Also, SDG 9: Industry, Innovation, and Infrastructure through the development of advanced CFD tools and the optimization of wind turbine designs contribute to technological advancement and infrastructure improvement. SDG 13: Climate Action by enhancing wind turbine performance and reducing energy losses, this research supports efforts to mitigate climate change.

The minireview by Mahmoud [9] explores the significance of urban plazas in enhancing urban environments and fostering social interaction. It emphasizes the importance of human-centered design in creating inviting public spaces. The review investigates the impact of spatial configuration and user preferences on plaza design, analyzes successful case studies, and calls for further research to refine design approaches. It is aligned with SDG 11: Sustainable Cities and Communities where urban plazas contribute to creating inclusive, safe, resilient, and sustainable cities and communities. SDG 3**:** since well-designed plazas promote physical and mental well-being through opportunities for social interaction and green spaces. Moreover, SDG 10 as inclusive plaza design can contribute to reducing social inequalities by providing accessible public spaces for everyone.

The minireview by Mehrez et al [10] addresses the challenge of overvoltage in electrical distribution networks caused by the increasing integration of distributed generation units, such as solar power. This issue arises due to bidirectional power flow, unlike traditional grids with unidirectional power flow. To address this, the authors propose a centralized Volt/VAR regulating strategy. The effectiveness of this strategy is evaluated using MATLAB Simulink on a standard IEEE-15 bus system. The results demonstrate the superiority of the centralized approach compared to decentralized methods. This research aligns with several SDGs namely SDG 7 by addressing the challenges of integrating renewable energy sources into the grid, this research contributes to the transition to a sustainable energy system, SDG 9 via the development of advanced voltage control strategies and the use of simulation tools like MATLAB contribute to technological innovation and infrastructure improvement, and SDG 13 by addressing the challenges of renewable energy integration is crucial for mitigating climate change and reducing greenhouse gas emissions.

The review by Mohamed et al [11] highlights the transformative impact of the Fourth Industrial Revolution on engineering. Key areas covered include advanced design and manufacturing techniques, sustainability, transportation, and smart cities. The paper emphasizes the importance of addressing challenges related to digitalization and ethics while embracing the potential of Industry 4.0 for a brighter future. This research is associated with several SDGs as SDG 9 where the focus on advanced manufacturing, digitalization, and infrastructure development directly contributes to this goal. SDG 11 since the discussion of smart cities and sustainable urban development aligns with this SDG. SDG 12 due to the emphasis on reducing waste and optimizing productivity through additive manufacturing supports this goal. SDG 13 by integration of renewable energy and carbon capture technologies demonstrates a commitment to addressing climate change.

The article by Khaled et al [12] presents a novel approach to combat the COVID-19 pandemic by developing a computer-aided diagnosis system using convolutional neural networks (CNN). The system aims to automatically detect the presence of COVID-19 in CT scan images, assisting healthcare professionals in rapid and accurate diagnosis. The proposed method demonstrates high accuracy, sensitivity, and specificity in classifying CT images as COVID-19 or non-COVID-19 cases. It is linked to SDG 3 by developing a tool to improve the accuracy and

speed of COVID-19 diagnosis, the research directly contributes to better health outcomes. SDG 9 since the development of a computer-aided diagnosis system represents a significant technological advancement in healthcare.

The article by Raouf [13] examines the economic consequences of the COVID-19 pandemic on government and private sector spending. It highlights the significant economic disruptions caused by lockdowns and social distancing measures, leading to declines in manufacturing, trade, and employment. The study employs panel regression analysis to analyze data from 37 OECD countries between 2019 and 2021. The findings reveal that the pandemic, as measured by the World Uncertainty Index (WUPI), positively impacted government spending while negatively affecting private consumption. It is linked to several SDGs as SDG 8: Decent Work and Economic Growth: The study investigates the impact of the pandemic on economic activity, employment, and government policies to mitigate its effects. SDG 9 where the research indirectly touches on the impact of the pandemic on supply chains and economic infrastructure. SDG 16: Peace, Justice, and Strong Institutions as the study examines government policies and their role in responding to economic crises.Additionally the article by Saad [14] examines the relationship between public spending and inclusive growth in developing countries. It employs a multidimensional measure of inclusive growth encompassing education, healthcare, income equality, and environmental sustainability. Using econometric analysis, the study finds that targeted public investments in education, healthcare, and public goods positively impact inclusive growth. However, high unemployment rates are identified as a significant obstacle to achieving inclusive growth. This research aligns with several SDGs: namely SDG 1: No Poverty: By focusing on education, healthcare, and income equality, the study contributes to poverty reduction. SDG 3 as the emphasis on healthcare access is directly linked to this goal. SDG 4: Quality Education where the importance of education in achieving inclusive growth is highlighted. SDG 8: The study addresses the challenge of unemployment and its impact on inclusive growth. SDG 10 since the focus on income equality and inclusive growth directly relates to this goal. SDG 11 as the mention of environmental sustainability contributes to this goal.

The article by Abdel-Rahman et al [15] investigates the prevalence of anxiety among university students, exploring factors such as academic field, gender, and academic stage. The study found higher anxiety levels in students from scientific colleges compared to theoretical

colleges, and in females compared to males. Additionally, early-stage university students reported higher anxiety levels than advanced-stage students. Interestingly, no correlation was found between family alienation and anxiety levels. This research aligns with the SDG 3: by investigating the prevalence of anxiety among university students, the study contributes to understanding and addressing mental health challenges. Also, it is linked to SDG 4: as it highlights the importance of considering students' mental health within the educational context. Understanding the factors contributing to anxiety in university students can inform the development of targeted interventions and support services to promote mental well-being and academic success

In this context, the published artilces in this issue where linked to 12 SDGs out of the seventeen goals (Figure 1). The rise in the representation of Sustainable Development Goals (SDGs) can be attributed to the interdisciplinary nature of ERURJ and the diverse array of published articles.
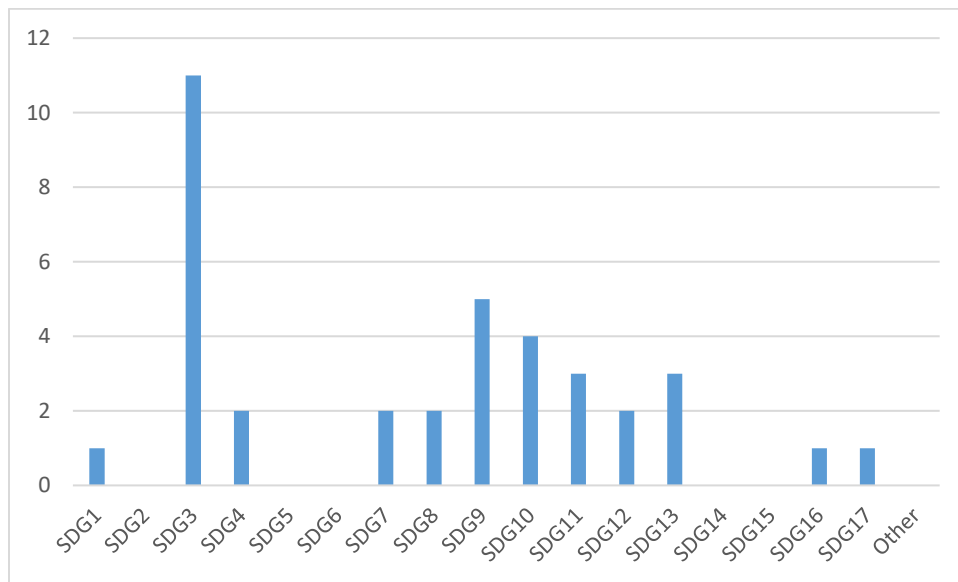

Figure 1: Articles Published in ERURJ April 2024 issue and their relation to SDGs

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References

1.   Abdalla A, El-Sawy HS, Ramadan AA. Emergence of Advanced Antifungal-Delivery Approaches for the Treatment of Tinea Pedis. ERU Research Journal. 2024;3(2):1058-89.

2.   Awad HA, Sultan AA, El Maghraby GM, Fetouh MI. Fast-disintegrating tablets : a novel approach in pharmaceutical preparation. ERU Research Journal. 2024;3(2):1151-72.

3.   El-khamissy TR, Abdo MR. The Problematic Diseases of viral Hemorrhagic Fever: Insights into Ebola, Marburg, and Dengue Fever Viruses. ERU Research Journal. 2024;3(2):1090-110.

4.   Reda A, Saleh H, Bahgat EA, Fawzy MG. Analytical methods for determination of azelastine hydrochloride and fluticasone propionate in different matrices: A mini review. ERU Research Journal. 2024;3(2):1173-87.

5.   Saeed NM, Esmail MM, Abdel-Rahman H, Elgindy AM. Valsartan ameliorated cognitive decline, oxidative stress and inflammation in AlCl3-induced Alzheimer's disease in rats. ERU Research Journal. 2024;3(2):1038-57.

6.   El-Ghazali MM. Restoring the Vertical Dimension in Case with Missed Posterior Teeth and Severe Attrition: A Case Report. ERU Research Journal. 2024;3(2):1200-8.

7.   Mohamed EAF, Kamh RAh. The Effects of Charcoal Toothpaste on Microhardness and Surface Roughness of Nanofilled, Micro hybrid Resin Composite and Resin Modified Glass Ionomer. ERU Research Journal. 2024;3(2):1188-99.

8.   Ibrahim WM. Review of Improving the Performance of Horizontal Axis Wind Turbine Using Passive Flow Control. ERU Research Journal. 2024;3(2):1007-18.

9.   Mahmoud AM. Review for Urban Plazas design approach. ERU Research Journal. 2024;3(2):1019-37.

10.   Mehrez SE, Morgan MY, El-sobki MS. Centralized and Decentralized Reactive Power Control of PV Inverter Connected To Distribution Systems: Comparative Study. ERU Research Journal. 2024;3(2):993-1006.

11.   Mohamed MG, Ahmed Ibrahim O, Hamed HF, Abdelnaby SFM. Engineering's Next Leap: How Fourth Industrial Revolution is Shaping the Future of the Industry. ERU Research Journal. 2024;3(2):970-92.

12.   Khaled M, Mofreh A, Hamdy H, Mohamed A. COVID-19 Classification Based Deep Convolutional Neural Network Using CT Scans. ERU Research Journal. 2024;3(2):1209-22.

13.   Raouf E. The Impact of Coronavirus Pandemic on Private and Public Consumption Expenditure. ERU Research Journal. 2024;3(2):1223-41.

14.   Samir Saad S. Unravelling the Public Spending-Inclusive Growth Nexus: A PCA-GMM Analysis in Developing Economies. ERU Research Journal. 2024;3(2):1242-58.

15.   Abdel-Rahman H, Samir S, Ebid N. Anxiety and its Relationship to Some Variables Among a Sample of University Youth. ERU Research Journal. 2024;3(2):1259-92.