

The Eurasia Proceedings of Educational and Social Sciences (EPESS), 2025

Volume 43, Pages 115-122

ICRESS 2025: International Conference on Research in Education and Social Sciences

Strategic Research Initiatives for Elevating Young Universities

Serhan Hakgudener

The American University of Kurdistan

Abstract: Emerging universities encounter distinct challenges and opportunities in their pursuit of attaining elevated standards of academic excellence within the swiftly transforming domain of higher education. Whereas conventional educational frameworks have predominantly concentrated on pedagogical methods, an institution such as The American University of Kurdistan must incorporate comprehensive research initiatives that not only bolster its academic standing but also contribute to the corpus of global knowledge. By emphasizing interdisciplinary inquiry, cultivating partnerships with industry leaders and established academic entities, and allocating resources to cutting-edge research facilities, AUK can establish an invigorating milieu that fosters innovation and critical analysis. This study investigates two strategic research initiatives that possess the potential to advance the Department of Architectural Engineering at AUK, highlighting the crucial importance of scientific inquiry in promoting educational progress. This methodology not only enhances the academic journey for students but also positions the university as a key contributor to societal advancement. The results accentuate the imperative for nascent universities to reconcile their educational objectives with a profound dedication to research, thereby ensuring enduring growth and long-lasting success within the competitive landscape of academia.

Keywords: Research initiatives, Young universities, Educational excellence, Post graduate education

Introduction

Young universities encounter distinctive challenges and opportunities in their quest for academic excellence, particularly in the integration of research into their fundamental operations. These entities, typically marked by their responsiveness and flexibility, occupy a favorable position to innovate and address global challenges. Nevertheless, they must traverse structural, financial, and cultural impediments to realize their objectives. This discourse examines these challenges and opportunities, with an emphasis on the integration of research and its implications for education and society. A principal challenge confronting young universities is the insufficiency of resources and infrastructure. Established institutions frequently benefit from decades of investment in research facilities, libraries, and faculty expertise, which emergent institutions may lack. For instance, the absence of cutting-edge laboratories, research funding, and seasoned faculty can impede the capacity of young universities to compete on an international level. Moreover, financial limitations may restrict their capability to attract premier talent, both among faculty and students, thereby intensifying the challenge of cultivating a robust research environment (Lim & Boey, 2014). Young universities may also encounter institutional obstacles that impede the incorporation of research into their academic missions. Such obstacles may encompass rigid administrative frameworks, a deficiency in interdisciplinary collaboration, and an emphasis on teaching rather than research. For example, the conventional delineation of academic disciplines can complicate the promotion of multidisciplinary research, which is vital for addressing intricate global challenges (Amey et al., 2002). Furthermore, the lack of a vigorous research culture can dissuade faculty and students from participating in innovative scholarship. Another critical challenge for young universities is the equilibrium between their dual mandates of teaching and research. While teaching often serves as the predominant focus, especially in institutions with constrained resources, neglecting research can impede academic excellence and institutional reputation. Research-intensive universities are frequently accorded higher rankings in global assessments, imposing pressure on young universities to prioritize research without compromising the quality of teaching. This balancing act necessitates strategic

⁻ This is an Open Access article distributed under the terms of the Creative Commons Attribution-Noncommercial 4.0 Unported License, permitting all non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

⁻ Selection and peer-review under responsibility of the Organizing Committee of the Conference

planning and resource allocation to ensure that both mandates are effectively realized. Thus, the global higher education arena is exceedingly competitive, with rankings typically favoring older, more established institutions. Young universities must navigate this competitive landscape while cultivating their reputation and attracting international students and faculty. The pressure to ascend in rankings can induce a concentration on short-term metrics, potentially diverting focus from long-term strategic objectives such as establishing a robust research foundation.

Emerging universities possess the advantage of agility and the capacity to innovate expeditiously. In contrast to older institutions, which may be encumbered by tradition and bureaucracy, young universities can more readily adopt novel educational models, technologies, and research methodologies (Lee, 1997; Wowk et al., 2017). For instance, they can harness emerging technologies such as artificial intelligence and virtual reality to create innovative learning experiences and research opportunities. This agility equips them to respond swiftly to societal demands and global challenges. Additionally, young universities can gain from collaboration with industry, research organizations, and international institutions. These partnerships can furnish access to resources, expertise, and networks that might otherwise be inaccessible. For example, industry-university collaborations can enhance research capabilities, offer practical training for students, and stimulate innovation (Perkmann et al., 2013), (Schofield, 2013). Additionally, global collaborations can enhance the exchange of knowledge and the establishment of transdisciplinary research initiatives, effectively tackling intricate issues such as sustainability and public health. Emerging universities possess the potential to prioritize societal impact within their research and educational objectives. By concentrating on pressing real-world challenges, these institutions can substantiate their relevance and contributions to society. For instance, initiatives aimed at community engagement and outreach can cultivate trust and foster collaboration between universities and local stakeholders, resulting in more significant research outcomes (Pasque et al., 2005; Whitmer et al., 2010). This emphasis on societal impact may also attract funding, talent, and recognition, thereby further elevating the university's standing and academic distinction. Emerging universities can adopt interdisciplinary and transdisciplinary research as an integral component of their academic ethos. By dismantling disciplinary barriers and promoting collaboration across various fields, they can confront complex issues such as climate change, inequality, and technological disruption. This methodology not only enhances the caliber of research but also equips students with the interconnected realities of contemporary society (Roncancio-Marin et al., 2022). Moreover, emerging universities can spearhead the integration of sustainability and social responsibility within their curricula and research endeavors. By embedding the United Nations' Sustainable Development Goals (SDGs) into their academic frameworks, they can prepare students to confront global challenges and advocate for sustainable development (Killion et al., 2018), (Filho et al., 2015). This commitment to sustainability can further bolster the university's reputation as a responsible and progressive institution. The integration of research into educational paradigms can markedly enhance student learning and competencies. By participating in research initiatives, students cultivate critical thinking, problem-solving, and analytical abilities, which are indispensable for their prospective careers. For example, project-based learning and experiential research opportunities can furnish students with pragmatic skills and real-world applications of theoretical knowledge. Therefore, research opportunities can instill a sense of curiosity and inquiry, equipping students to become lifelong learners in an ever-evolving world.

The integration of research can also stimulate innovation and entrepreneurship among students. By exposing students to pioneering research and collaborative projects, universities can inspire them to engage in creative thinking and develop inventive solutions to societal issues. Thus, partnerships between industry and academia can provide students with avenues to tackle real-world challenges, nurturing entrepreneurial mindsets and preparing them for future employment (Sanno et al., 2019).

By incorporating research into the educational framework, young universities can furnish students with the knowledge, skills, and mindset requisite for navigating these challenges. For instance, interdisciplinary research initiatives can offer students a broad understanding of complex issues, enabling them to devise holistic and innovative solutions (Harris, 2010). The integration of research can propel innovation and economic development by fostering synergies among universities, industries, and government entities. For instance, collaborations between industry and university research can culminate in the creation of new technologies, services, and products, thereby contributing to economic growth and competitiveness (Woolcott et al., n.d.). Furthermore, research-intensive universities can function as innovation hubs, attracting investment and talent to their respective regions.

Department of Architectural Engineering Initiatives

The Department of Architectural Engineering in the College of Engineering at The American University of Kurdistan was founded in the fall of 2016 to offer a five-year Bachelor of Science degree in Architectural Engineering that provides students with a background in structural engineering and construction management skills necessary to be a successful architectural engineer. The curriculum is more extensive than traditional architectural engineering programs. The program aims to graduate productive members and leaders within the profession who can contribute to society by furthering the quest for a safe, healthy environment and a more sustainable surrounding economy (AUK, 2024).

AUK Towards Sustainable Energy Production Initiative roots back to a 2019 study. The study explores the potential for renewable energy production in Duhok, Kurdistan Region, Iraq, focusing on the feasibility of microhybrid power stations that combine solar and wind energy. Thus, the data shows the photovoltaic (PV) power generation potential in Duhok ranges from 1600 kWh to 1900 kWh average in a year, and the mean wind speed varies between 3 m/s to 7 m/s at 50 meters above ground level. Since 2019 until today, the region's limited national electric grid has not fulfilled the power requirement, and this situation has pushed the residents to continue to use diesel generators, which also foster significant air and noise pollution. Fortunately, the region has the full potential of solar and wind power. On-site energy production might be a way of resolving these issues (Hakgudener & Prvanov, 2019). Therefore, increasing power demand naturally mapped the framework of the first initiative, which is titled "AUK Towards Sustainable Energy Production: Solar and Wind." The initiative is proposed on September 4, 2022. Currently, solar panel installation and energy production at the campus project have been adopted.

The second initiative is titled "Framework for Establishing the Center for Sustainability at the American University of Kurdistan." This center aspires to concentrate on pioneering research and development in the domain of sustainable technologies and methodologies. Consequently, the center intends to accommodate multiple state-of-the-art research laboratories, each developed to a distinct aspect of sustainability. These laboratories may be outfitted with sophisticated apparatus, hardware, software, and testing instruments to promote high-caliber research and innovation with the following aims:

- 1. Promote sustainable practices in architectural engineering: Implementing sustainable design principles such as a healthy environment, durability and longevity, adaptability, energy efficiency, water conservation, and the use of renewable materials.
- 2. Develop innovative solutions for energy efficiency and environmental conservation, focusing on advancements in renewable energy technologies, smart grids, and eco-friendly materials.
- 3. Enhance research capabilities in sustainable technologies: Leveraging interdisciplinary methodologies and stakeholder collaboration to drive technological advancements.
- 4. Collaborate with industry partners to implement sustainable solutions: Engaging with businesses, NGOs, and government entities to drive collective action towards sustainability goals.

The establishment of the Center for Sustainability at the American University of Kurdistan represents a significant step forward in the field of sustainable technologies and practices. By focusing on cutting-edge research and development, the center aims to promote sustainable practices in architectural engineering, develop innovative solutions for energy efficiency and environmental conservation, enhance research capabilities, and collaborate with industry partners to implement sustainable solutions. The center aimed to house several state-of-the-art research labs, each dedicated to a specific area of sustainability and equipped with advanced equipment, software, hardware, and test instruments. These labs can facilitate high-quality research and innovation in areas such as lighting design and analysis, solar and wind turbine studies, acoustical design, electromagnetic wave propagation studies, healthy HVAC design, and sustainable plumbing solutions.

AUK's 2021-2026 Strategic Plan and Operational Map

The strategic plan of the American University of Kurdistan is developed in line with its vision and mission statements. The University aims to provide an environment that nurtures the future leaders of the community by offering a high-quality education. Furthermore, the plan focuses on enriching the student experience and heightening the quality of campus life (AUK, 2025). The following Operational Map outlines the progress and updates on various initiatives aimed at enhancing AUK's campus facilities, academic programs, community engagement, student support, faculty and staff recruitment, communications, financial operations, advancement activities, and assessment and accreditation processes.

Table 1. AUK institutional strategic plan operational map 2024-2025

JK institutional strateg				plan opera			.024-2	202 ≥□
Complete the plan for an upgrade of instructional and virtual meeting technologies		Develop an IT plan outlining the establishment of an Al the and Optenecumiy Lub, Lub and Optenecumiy Lub, as well as upgrades to the data center, frees all, and campus ophericamity	Develop an IT plan outfining the establishment of an AI Lab and Cybensocurity Lab, as well as upgades to the data contex, frewall, and campus cybersecurity	Esabilida a bing-berning the Cell Dean, CSD declicated to sold energy via the involution and sumagraem of volar juncia axuagraem of volar juncia axi a clean alternative and as axi a clean alternative and as axi a clean alternative and as students and the community	Implement green initiatives to further compos recycling effores, environmental awarenes, and energy efficient initiatives	Proceed with the design and implementation of the Master Utility Plan	Proceed with the construction of the Men's Residence Facility and Sports Complex	Action Priority
Resident Engineer,	7	- R	g Provost, Colleges, IT	th Coff Dess, CSD	Legal Office, CoAS	d CoE Dean, CSD	CuE Desis, CSD	Responsible Unit
To reduce water consumption, minimize maintenance costs, and ensure the campus generary can three with varieble climatic conditions. Over time, this will contribute to the campus's overall	To appraie instructional exclusivagies and tools to exable international colaborations in the classroom.	To machinic the data center and appeals ferwalls to strengthen the Uniters (F) if it determent. For improve overall campus cybenecurely to sufigued data and operations.	To create state-of-the-art labs in AI and Cybenocusing to support advanced research, four- intensities, and advance backeler's and momen's courses and programs.	To reduce the fixed out of the diesel generators and Ox- implement factors energy searcing. To provide the para- surbates with a fiving Accounty to the Control of the Control surbates with a fixed parasing the delicated to seek or energy to demonstrate the aspect of encountered on the operational and newtonemental count of the University and region.	month ATS of the beding actor in the region coding for the Universal Sustainable deputed Guals (SDAs).	To provide the campus with moster utility main lines including electricity; gas, sewer, storm drain, and water lines in addition to a robust transportation of an	To provide students with one-enques accommendation for men and fitness center, ministive will support regional student recruitment efform.	Objective (what you hope to accomplish long-term)
Identifying and marking the specific area that requires design or redesign (ie. assessing the sie's current condition, measuring	Forem at least distillation Consideration system to regist. Sometim horsest and/or distinuous oppops also Con- chaneous, highwant Witches a subschiptation for visitus despiesces. Frobla was det mode on distinue on d'alterna- cheux, fourby marriage, sor. Dann authorisati expirenta. Which is tracking and coldocution. distinuous suppris for appaled deligenation systems.	Associa fecuenta dia cristi foi capicio pai perferianza cali, indiretta estable circe si devica diamento le residuat, appare, implement accade cere visionis and signate consig, pore roysema, and associa, l'oppare fermadio i sociale time decessiva and espose soveram furbani and petencentry dei associamento accossi di sucherito prossus, l'appearenci più attendo esposita, promote con permittente promite capitale capitale por mantenente training foi establica capitale ophenociaris paramento training foi estali and administra.	Design and our pic ters that with advanted evolutations, mexicacy. At hardware (e.g., OPTA, several, subhave (e.g., marked haveing florenessed, and date sex, optionsocial) software seats. Grandia, harming describes upstems, and took for orbital backing and attented defense making.	"To short de final out of the final present and One serve of Shalling from 3nd Grass is remaind, created the regions of the serve composition of present the production and to charling the Grass is and other serve makes with a finite planning the decistate is seld most of two holdings and camps our makes requires produce comps to homosome the impact of the decision to the disciprosional and enterminated count of the Unimarily and again.	Campign na del Gampas for les (N SOS, schaffen insing shocies to notice compt. Ensure the contexts of Oxforsia Sories compties with the contextual obligation concerning water management. With the expansion of the hashesping with the management. With the Comptions of the hashesping with the addition of the Mark To-Ensure, does to Indextop design genalitie to Exal speech, seasonability, and immined water usage. Excludat design years disputement to mark place bottle. In judace officities water management publics and practices.	Set a full plan for the construction of the moster utility and transportation plans, hopefully with alignment with LEED standards	Collect offers for the construction of the RPM. Fundraise for the construction of the Sport Complex.	Objective (what you hope to accomplish hotg-term). Tactics (the step-by-step initiatives to be implemented)
Short term: Completion of the landscaping plan, including species selection and design layout. Long term: Development of a campus outdoor space capable of thriving under higher temperatures and reduced water assalability.	Stort-erm increated smaler of charcons capityted with Caco subspectors, Faculty and sufficience on efficience and where its exclusing and confinement Weller its exclusing and confinement	Societiem Cost data entre topplanic (sorre expansio, eshanted preschooling) quema to confedent la pelementario de ser Fernal si di preschooling preschoi. Optionosally missell prepara lacatical confedentario preschoi, Portico comp presidentario control and a related from the preschoi preschoi preschoi presidentario control and a related from the preschoi prescho	Remark a Microsoft meseth prijest, under regisjenst sid oblevnices a bit inder på decke planne. Deser paperiekte of oblevnices av bit inder på objevnices på, meseta (privesse) projekter, gåtanet en sampa, sad opperimente for (privesset) professet, gåtanet staken i projekte, better staken i projekte oblevnices (prijesset) oblevnices by a bitter, sad å bjeler ennibuter san is iT-elsend fekk.	Shelenn: Fresker jam fer sadling fer sider parké and hetro jacks or Musich Brazus Budling. France Braidere, and empleye pridaing kt. Laupeum Chaladas nounced fresso personal, deed out-parkeria in come, noise and air Aprilation. Students to usuage find hespieramiquit, ordere and major date on emerge may, and dreie mengin for community education.	Sheft was Base the communities' awarene of the read praising ordernouscal laters and refe for Uneverly calls to committy on talk. Long-term implement structures and procedures to manage exemplary environmental describing.		8	To develop a university compus that meets the Desired Outcomes/Outputs (short-term and lang-term for tactics needing
Design proposals should be received and ready for review	Cue abpresenc devices are insulad in superd claurous; Versord differentiese applied to appet diply-quilby visual communicates without technical source, Facaby making posteres conducted.	Net data unter appalas cospetal (see Fresh, songe skicker, Abaced serios). Errad dispelas on melaste data shanker skicker for de errod. Aladi (shorocurly a seemes prigma implemental compa-artic.	Two labers set up this did accessey harbours and software, Students and facility start using the lab resources.	The earth Princip fails to including a the princip of the princip of the SQ cylindic, Valley conduced, entire should, and includes stands and found from all Stands from a Stands from the Stands for the Stands of the Stands for the Sta	Conductions completes, one one-compan and one off-compan, trothe defroncise to ALX.	Stateam Conjete the implementation by the end of this yeat, concurrent. Here the full plan, may and plaigs of the system such The construction of the with construction of Merich Textifence.		To develop a unisonity campus that meets the needs of carrest and fisure students, floraby, and staff as well as serves as a model the higher education across Karlistan behaviorm and harp-term for saction mediag. Expectation of Progress by July 31, 2025 Assessment Mechanisms to Gauge
Documented meetings with multiple landscape companies or specialists, ensuring thorough study.		Das Centre A French Monthly manistring synton on syntem profinances, over uption, and from A breach assignance, Quarter Jo- cockly and had placement used for the appelled fee-ad. Computer provision, and intelligent profits in the Proposition for provision, and intelligent profits in the Pro-th operation surveys to measure exploraceurly awareness among soff and malation.	Turky completes of the surps, prepays reports, menting statistics. Number of inducts and finally using the last decreases, serveds, or moning Frederick from macrous and feedly on the quality and functionally of the Al and O hemorously Labs.	AE Chair to sendor de process, Final constructes plans package compleien nete.	Sureys to maken communities' knewlege of environmental issues and the strangestwoks available to address these issues.	AUX's Resident Engineer to meet with the designers on a regular basis. Final construction plans completion rate.	RFM. Construction to start in September or October and controlled by AIR's team held by AIR's Resident Engineer. SC Progress report on the fundamining.	for higher education across Kurdistan Assessment Mechanisms to Gauge Progress
ge companies or specialisms. Landicape architect, CSD, ATK Resident Engineer, Budget.	If self for installation and configuration, DoS funds for purchasing stallingual Cox on belomence devices and related lamburer, Funding for Weber Kenner and platform matericianse.	Data Chaser. Capital for sever agenths, preserviceling enhancements, and Elevand procurement. Optionscaring Studies for security software, coupling trading, and measuring to secure.	NA	DoS families	Software fault to enable the sound off compan compage, enders volumers, and finds to inche software to compan.	Design and construction costs; Resident Engineer.	8	Human and Fiscal Resources Needed for Implementation of Tactics
RFP package developed, Bidding process to be initiated after funds identified.	Ciso Telepronas complete in the O their meeting mon, Tuget 10%, Webec: Assisting the recomplete of Del Trading.	Dat Cheer Cheplest, who ask and calle height are approximately 25 on Taget 1999, Septimized 2 Complest, Taget 1999, Capital Cheplest, Taget 1999, Capital Cheplest, Taget 1999, Capital Cheplest, Taget 1999, Capital Chep	Eductural generalist conces, largegies with Six to emplect Orage Wickpress The All-to scaleback Formal proposal habetes proposal for submission to Kord Trickson to matchin Optococcus y adu.	Development of eacher and adventising for with halted due to DoS superation of activities.	Programme for the conseque and dear manuschility midself perform as is program. Commande for orderine services an empirity with common, Project for standing water depresent is being considered for 6th 2025.	Master Utility Plan is expected to be finished and partially implemented by July 31.		Mile) car Updates

The first initiative, which is Solar Energy Production on site, is a part of the Campus Master Plan Development, and it is an ongoing process. Arer Enerji developed the power plant layout plan (Arer Enerji, 2025). The scope of work is to reduce the use of AUK's two generators, which are to run during the power outages. One of these generators is in the Mustafa Barzani Building (Main Building), which is 2MW, and the other one is in the Residence Facility for Women, which is 1.25MW. These generators normally run for three hours at night when the national power goes out. AUK aims to install lithium-iron phosphate batteries to store energy to use during the three hours of power outage. The batteries must be enough to supply power to run several AC units and emergency lights in addition to the data center of MBB and RFW. The plan is to have the lithium iron phosphate batteries that will save energy from the solar system, also acting as UPS batteries. During the daytime, the whole solar system will be on the grid.

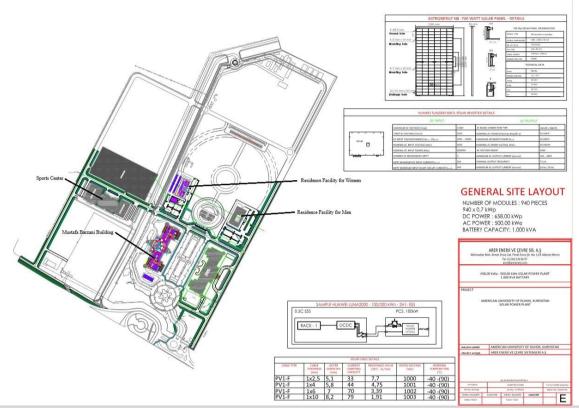


Figure 1. Solar panel locations plan by author

Figure 1 distinctly illustrates and delineates the specifically proposed locations that have been selected for the roof areas associated with each building within the architectural layout, thereby providing a comprehensive visual representation of the intended solar panel placements.

Methodology for Sustainable Architectural Engineering Initiatives

The comprehensive methodology employed for the advancement of Sustainable Architectural Engineering Initiatives at AUK is intricately structured, effectively blending educational, research-oriented, and practical dimensions to foster a robust framework for sustainability. The elaboration provided herein delineates the systematic approach adopted to establish correlations among these diverse yet interconnected initiatives. For instance, the following Venn diagram in Figure 2 clearly shows these dimensions between the variables.

The initial phase of this methodology was centered around the critical task of identifying the fundamental components that constitute the two initiatives, notably the Department of Architectural Engineering, which is resolutely committed to providing an extensive education in the specialized field of architectural engineering. In addition, the AUK Towards Sustainable Energy Production Initiative is strategically focused on the exploration, assessment, and subsequent implementation of innovative renewable energy solutions that can significantly contribute to the sustainability agenda. Lastly, the establishment of the Center for Sustainability is dedicated to advancing research and development initiatives that specifically target the creation and enhancement of sustainable technologies, thereby addressing pressing environmental concerns.

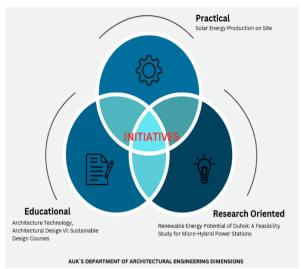


Figure 2. Department of architectural engineering's unified strategy by author

To gain a deeper understanding of the specific objectives associated with each component, the goals and strategies of each initiative were extracted and analyzed. For instance, the Educational Objectives set by the Department of Architectural Engineering are designed to equip students not only with fundamental knowledge but also with practical skills in structural engineering and construction management, thereby preparing them for future professional endeavors. Furthermore, the Renewable Energy Projects initiative specifically emphasizes the feasibility studies and practical implementation strategies for harnessing solar and wind energy solutions, which are pivotal in the transition towards sustainable energy practices. Lastly, the Research and Development efforts spearheaded by the Center for Sustainability aim to establish cutting-edge research laboratories while simultaneously promoting best practices in sustainability across various sectors.

The final stage of this methodological framework involved the summarization and integration of all identified elements into a cohesive and comprehensive methodology. This synthesis was achieved by thoughtfully combining educational, research, and practical aspects, which collectively contribute to the formulation of a unified strategy aimed at promoting sustainability within the realm of architectural engineering. Through the systematic organization and correlation of the gathered information, the methodology has been developed, which is meticulously aligned with the overarching goals of sustainable architectural engineering. This structured approach not only ensures that the initiatives at AUK are effectively interwoven but also underscores a focused commitment to promoting sustainability through a triad of education, research, and practical implementation strategies.

Results and Discussion

The methodological framework serves the purpose of advancing the course AENG5302 Architecture Technology, which rigorously investigates the multifaceted aspects of building construction through a comprehensive lens that encompasses not only the critical dimensions of health and life safety—such as zoning ordinances, fire safety regulations, and adherence to the international building code—but also extends to considerations of security, various building service systems including HVAC (which comprises plumbing, electrical systems, heating, air conditioning, and ventilation), vertical circulation, and fire protection measures. Furthermore, this framework delves into the principles of sustainability, scrutinizes the selection and application of materials, assesses structural components, conducts life-cycle analyses, evaluates accessibility, and engages with the technical documentation and outline specifications necessary for effective architectural practice, while also incorporating POE (postoperative evaluation) methodologies. Concurrently, the course AENG4304 Architectural Design VI: Architecture Sustainability is designed to build upon and synthesize knowledge acquired in previous studios, as well as current coursework focused on Green Buildings, and challenges students to conceptualize and design intricate architectural projects that are situated within demanding contexts, taking into account a variety of factors including the programmatic requirements, climatic conditions, cultural influences, site characteristics, and the overall representation of the architectural work. In addition to the anticipated deliverables that are typically associated with architectural projects, the final undertaking necessitates the incorporation of digital animation and active engagement with the public in order to emphasize critical themes of sustainability, assess environmental impacts, and promote equity within the design process (AUK, 2023). Moreover, a collaborative partnership has been

established with Arer Energy, in conjunction with the College of Engineering at AUK, aimed at fostering innovative approaches to architectural design. The initial results of this collaborative initiative are currently in the execution phase and can be deemed a success, as noted in reports from AUK dating back to 2023. The subsequent initiative is also poised to represent the next stage of the integrated strategic plan formulated by the department, further reinforcing the commitment to advancing architectural education and practice. Consequently, these initiatives are anticipated to serve as pivotal catalysts that not only propel the pursuit of academic excellence but also enhance practical knowledge and foster a positive impact on society as a whole.

Conclusion

Emerging institutions of higher education, often referred to as young universities, encounter a multitude of formidable challenges that significantly hinder their pursuit of achieving a high standard of academic excellence. These challenges encompass a range of factors, including but not limited to defined financial resources, existing institutional barriers that may impede progress, and an ever-increasing level of competition on a global scale from more established universities. Nevertheless, it is imperative to recognize that these young universities also possess distinct and unique opportunities that enable them to innovate in their approaches, foster collaborative efforts across various disciplines, and maintain a concentrated focus on the societal impact of their educational initiatives. By adeptly integrating rigorous research endeavors into the very core of their institutional activities, young universities stand to significantly enhance the learning experiences of their students, stimulate an environment conducive to innovation and entrepreneurship, and proactively address some of the most pressing global challenges that confront society today. Ultimately, the capacity of these institutions to effectively navigate the complex interplay of challenges and opportunities that they face will play a crucial role in determining their overall success in not only achieving academic excellence but also in making a profound and meaningful impact on the realms of education and society at large. Since the year 2019, the Department of Architectural Engineering at AUK has diligently pursued this innovative path. It has begun to observe the positive ramifications of these efforts, particularly in relation to the experiences of their alumni as well as the broader local industry. Therefore, the initiatives undertaken by this department exemplify how emerging universities can leverage their unique positioning to create beneficial outcomes for both their graduates and the communities they serve. Through continued commitment to these principles, young universities can aspire to redefine their roles in the global educational landscape while simultaneously contributing to the advancement of society as a whole.

Scientific Ethics Declaration

* The author declares that the scientific, ethical, and legal responsibility of this article published in the EPESS Journal belongs to the author.

Conflict of Interest

* The author declares that there is no conflict of interest.

Funding

* This research is supported by a grant from the American University of Kurdistan (AUK).

Acknowledgments or Notes

- * This article was presented as an oral presentation at the International Conference on Research in Education and Social Sciences (www.icress.net) held in Peja/Kosovo, on July 10-13, 2025.
- * I would like to express my gratitude to Dr. Randall Rhodes, President of AUK, Dr. Razaq Ferhadi, Dean of the College of Engineering, Ms. Zina Barjas, CSD Manager, and AUK staff for their support in advancing AUK's initiatives on Sustainable Energy Production and the establishment of the Center for Sustainability at the American University of Kurdistan.

References

- Amey, M. J., Brown, D. F., & Sandmann, L. R. (2002). A multidisciplinary collaborative approach to a university-community partnership: Lessons learned. *Journal of Higher Education Outreach and Engagement*, 7(3), 19-26.
- Arer Enerji. (2025, April 20). Oriont themes. Retrieved from https://arerenerji.com/
- AUK. (2023). Course descriptions. Retrieved from https://auk.edu.pdf
- AUK. (2024, February 7). *B.Sc. in architectural engineering*. Retrieved from https://auk.edu.krd/colleges/college-of-engineering/b-sc-in-architectural-engineering/
- AUK. (2025). AUK strategic plan 2021-2026. Retrieved from https://auk.edu.krd/about/auk-strategic-plan/
- Filho, W. L., Shiel, C., & do Paco, A. (2015). Integrative approaches to environmental sustainability at universities: an overview of challenges and priorities. *Journal of Integrative Environmental Sciences*, 12(1), 1–14.
- Hakgudener, S., & Prvanov, S. (2019). Renewable energy potential of duhok: A feasibility study for micro-hybrid power stationS (pp.95-107). In O. Ozturk (Ed.). Dakam Publishing.
- Harris, M. (2010). Interdisciplinary strategy and collaboration: A case study of American research universities. *Journal of Research Administration*, 41(1), 22-34.
- Killion, A. K., Sterle, K., Bondank, E. N., Drabik, J. R., Bera, A., Alian, S., Goodrich, K. A., Hale, M., Myer, R. A., Phung, Q., Shew, A. M., & Thayer, A. W. (2018). Preparing the next generation of sustainability scientists. *Ecology and Society*, 23(4), 39.
- Lee, Y. S. (1997). Technology transfer and public policy. Westport, CT: Quorum
- Lim, C. H., & Boey, F. (2014). Strategies for academic and research excellence for a young university: Perspectives from Singapore. *Ethics in Science and Environmental Politics*, 13(2), 113–123.
- Pasque, P. A., Smerek, R. E., Dwyer, B., Bowman, N., & Mallory, B. L. (2005). *Higher education collaboratives for community engagement and improvement*. Retrieved from www.thenationalforum.org
- Perkmann, M., Tartari, V., McKelvey, M., Autio, E., Broström, A., D'Este, P., Fini, R., Geuna, A., Grimaldi, R., Hughes, A., Krabel, S., Kitson, M., Llerena, P., Lissoni, F., Salter, A., & Sobrero, M. (2013). Academic engagement and commercialisation: A review of the literature on university-industry relations. *Research Policy*, 42(2), 423–442.
- Roncancio-Marin, J., Dentchev, N., Guerrero, M., Díaz-González, A., & Crispeels, T. (2022). University-Industry joint undertakings with high societal impact: A micro-processes approach. *Technological Forecasting and Social Change*, 174, 121223.
- Sanno, A., Oberg, A. E., Flores-Garcia, E., & Jackson, M. (2019). Increasing the impact of industry–academia collaboration through co-production. *Technology Innovation Management Review*, *9*(4), 37-47.
- Schofield, T. (2013). Critical success factors for knowledge transfer collaborations between university and industry. *Journal of Research Administration*, 44(2), 38-56.
- Whitmer, A., Ogden, L., Lawton, J., Sturner, P., Groffman, P. M., Schneider, L., Hart, D., Halpern, B., Schlesinger, W., Raciti, S., Bettez, N., Ortega, S., Rustad, L., Pickett, S. T. A., & Killelea, M. (2010). The engaged university: Providing a platform for research that transforms society. *Frontiers in Ecology and the Environment*, 8(6), 314–321.
- Woolcott, G., Keast, R., & Pickernell, D. (2020). Deep impact: Re-conceptualising university research impact using human cultural accumulation theory. *Studies in higher education*, 45(6), 1197-1216.
- Wowk, K., McKinney, L., Muller-Karger, F., Moll, R., Avery, S., Escobar-Briones, E., Yoskowitz, D., & McLaughlin, R. (2017). Evolving academic culture to meet societal needs. In *Palgrave communications* (Vol. 3, Issue 1). Palgrave Macmillan Ltd.

Author Information

Serhan Hakgudener

The American University of Kurdistan College of Engineering Department of Architectural Engineering, Zakho Rd. 42003 Sumel, Duhok, Kurdistan Region of Iraq, Iraq.
Contact e-mail: serhan.hakgudener@auk.edu.krd

To cite this article:

Hakgudener, S. (2025). Strategic research initiatives for elevating young universities. *The Eurasia Proceedings of Educational and Social Sciences (EPESS)*, 43, 115-122.