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Artificial Intelligence In Higher Education: Fostering Sustainable Practices In Men's Grooming And Green Entrepreneurship Education – A Systematic Review

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Abstract *– This research presents a systematic literature review that explores the intersection pf AI driven education, green entrepreneur-ship and sustainable consumer behavior with a focus on Male Grooming patterns and Purchasing Decisions. The review aims to synthesize current knowledge on how AI (Artificial Intelligence) and Emerging Technologies are transforming higher education, particularly in promoting Green Entrepreneur-ship Education. The literature review was conducted using the WOS (Web of Science) and Scopus databases including the keywords related to Green Entrepreneur-ship, Technology, Male Grooming and purchasing pattern. This research simultaneously explores how educational initiatives aimed at raising sustain-ability awareness impacting the habits for grooming and eco-conscious purchasing behaviours. Utilizing research from prominent databases like WOS and Scopus and sticking to PRISMA methodology which means review uncovers key themes such as the role of AI in education the use of technology to cultivate green business skills and evolving trends in male consumer preferences for sustainable products. The primary findings highlight how higher education institutions can play a significant role in fostering behavioural and environmental change by fusing technological innovations with curricula that emphasise entrepreneur-ship. the relationship between environmental ethics, consumer psychology, and education, which adds to the expanding multidisciplinary discussion on sustain-ability . Additionally, integrating technology into educa-tional frameworks raises youth awareness of environmental issues and equips them to succeed in a changing business environment. The study concludes by emphasising the role that technology plays in promoting sustainable entrepreneur-ship and aiding in the shift to a greener economy, particularly when it comes to the consumption of male grooming products.*

Keywords *– AI in higher education, Green Entrepreneur-ship Education, Male Grooming Behaviour, Sustainable Consumer Behaviour, Buying Patterns*

I. INTRODUCTION

The rapid evolution of AI (Artificial Intelligence) is significantly reshaping the landscape of higher education, introducing transformative changes in both pedagogy and learning outcomes. AI-powered systems such as intelligent tutoring platforms, learning analytics and immersive virtual simulations have made it possible to deliver personalized, adaptive and scalable learning experiences tailored to individual student needs. [17], [13]. These technologies are particularly valuable in entrepreneur-ship education where the cultivation of rea world problem solving skills, critical thinking and creativity is essential [12],[14]. By integrating AI-driven tools into

academic curriculum, institutions of higher learning are not only improving student engagement and performance but also aligning education with the demands of an innovation-driven, sustain-ability -conscious global economy.

Moreover, these technological advancements are increasingly being leveraged to support broader societal objectives, particularly environmental sustain-ability . As sustain-ability becomes a central concern across industries, universities have a unique opportunity and responsibility to use technology enhanced education as a vehicle for promoting environmental awareness and responsible business practices among future entrepreneurs.

Significant changes in consumer behaviour, especially among men, are being driven by recent educa-tional advancements. Although they have historically been ignored in discussions about sustain-ability , male consumers are now playing a significant role in the eco-conscious movement. As once regarded as a niche-market, the male grooming industry is currently going through a significant transition. The sustain-able practices are becoming mainstream with increasing consumer demand for products that prioritize environmental friendliness ethical sourcing, cruelty free testing and transparent branding[1]. Because men's personal care decisions are now more closely aligned with broader eco-logical and ethical consi-derations, this trend indicates a larger shift in male identity and values.

Although the despite of advancements, academic research continues to largely ignore the relation-ship between sustain-able entrepreneur-ship education and male grooming practices. This disparity is a lost due to chance because understanding male consumers' preferences, motivations, and behaviours is essential to bridging the gap between sustain-able product development and actual market adoption. The grooming offers a unique context for analysing how environment-al values influencing the consumer choices because it is intimat-ely related to their personal identity, lifestyle, and self-expression.

The researcher's and educator's can be better understandable that how to incorporate sustain-ability into entrepreneur-ship education in ways that reflect changing consumer values due to investigating this inter-section. For using this strategy, universities can also act as catalysts for behavioural change and develop a new generation of tech-savvy entrepreneurs who are dedicated to social and environment-al respons-ibility. In the end, this type of inter-disciplinary inte-gration can foster scholarly creativity and hasten the transition to a more ethical and sustain-able economy.

An increasingly important component of sustain-able development is green-entrepreneur-ship education. Its main objective is to equip upcoming corporate executives with the abilities and know to how required to adopt creative and ecologically conscious business practices. This educational approach greatly increases student engage-ment and deepens their understanding of sustainable business models by utilising cutting-edge technologies like virtual learning environments (VLEs), augmented reality (AR), and artificial intelligence (AI). The students are better able to understand and apply the funda-mentals of green-entrepreneurship in practical methods appreciating to this type of technologies to which can be promote an interactive and experiential-learning.

As with the focus on the potential to impact sustainable consumer-behaviours, this research paper examines how AI-enhanced higher-education can significantly contribute to the development of green-entrepreneurial skills. The research study focusses especially on the male-grooming industry, where consumer choices are being influenced by environmental concerns. This study explores the relationship between educational technology, sustain-ability education, consumer psychology, and changing buying habits through a thorough literature review grounded in the "PRISMA" methodology. The offering insights into that how technology-driven learning can be promote environment-ally conscious entrepreneur-ship and more sustainable lifestyle choices among consumers is the priority aim.

II.RESEARCH OBJECTIVES

- This research study aims to examine how Artificial-Intelligence-(AI) is being integrated into the teaching and learning of green-entrepreneur-ship.
- It explores how AI-supported educa-tional experiences which are influencial for male perspectives on sustain-ability, mainly in relation to their purchasing behaviors.
- This research seeks to identify existing gaps in the literature and also made to analyse the emerging themes which are connecting education with environ-mental sustain-ability, and also shifts in consumer day to day basis habits.

III. THEORETICAL BACKGROUND

In this section, the high-lights the pedagogical and techno-logical developments in green-entrepreneur-ship education, which presents the conceptual-framework supporting the integration of artificial intelligence-(AI) in higher education, and looks at how male grooming behaviour is changing in the context of sustainable consumerism. The research framework provides a foundation for examining how technology-driven education can be influencing the consumer choices and entrepreneurial endeavours which is ultimately leading to more sustain-able results to the examining this type of interrelated domains.

A. AI and Higher Education Transformation

The providing of facilitating scalable teaching methods, intelligent content delivery, and personalised learning experiences, artificial intelligence-(AI) is completely changed in higher-education. The AI-driven platforms customise learning experiences to fit the needs, speed, and performance of individual-learners for utilising data analytics and adaptive algorithms. Also by providing real-time feed-back and personalised support, technologies like Intelligent Tutoring Systems(ITS), chatbots driven by artificial intelligence(AI), and learning analytics tools which helps in improving the learning outcomes and retention of the students. [8]

The AI-(Artificial Intelligence) also makes educa-tion more accessible world-wide bringing in features like digital-assessment tools(DAT), virtual-classrooms,(VC) and auto-mated language translation(AMLT). Through this inclusivity the high-quality learning opportunities developments help break down linguistic and geographic barriers and also establishing AI(Artificial Integration) as a potent force in democratising educa-tion and promoting global sustain-ability [12].

Also, incorporating AI into education presents a unique set of difficulties. Careful consideration must be given to ethical issues like algorithmic bias, data privacy, and the openness of auto-mated decision-making. Moreover, especially in under-served or rural areas, the digital divide which results from unequal access to technology can exacerbate already-existing educational disparities[10]. Pro-actively addressing these disparities is crucial to ensuring that AI supports just and moral educational transformation.

B. Green Entrepreneur-ship Education

The main goal of green-entrepreneur-ship education is to develop entrepreneur-rial mindsets and skill-sets which are environment-ally conscious. It also places a strong emphasis on making business models which address pressing environment-al concerns like pollution, climate change, and the depletion of natural resources in adding to creating economic value[10]. The main objective is to give students the information, morals, and practical abilities they need to create sustainable businesses that promote long-term ecological sustain-ability and the circular economy.

The impact and delivery of green entrepreneur-ship education have been significantly improved by the use of cutting-edge technological tools. Virtual-reality (VR) and augmented-reality (AR) are two examples of technologies which offer immers-ive, practical learning experiences to mimic actual sustain-ability issues. The curriculum design is morely enhanced with artificial intelligence (AI) which also makes it possible to extract entrepreneurial insights from massive-datasets. More-over, the real-time monitoring is to maximise resource utilisation in sustain-able business operations which is made possible by Internet of Things (IoT) Applications.[3], [8]

In addition to improving students conceptual knowledge this type of technology-driven teaching approaches encourage moral and emotional involvement of consumers. It also enables students to internaly analyse the concepts of social-responsibility, environmental-stewardship, and green-innovation [11].

C. Male Grooming Behaviour and Sustainable Buying Patterns

The male grooming industry has grown significantly over the last decade due to changing in consumer preferences which shows a greater emphasis on self-care, and the changed cultural norms. The male grooming is once thought of as a niche within the larger personal care industry and has grown to be a multibillion dollar global market. The growing demand among male consumers for skin-care, hair-care, and beard-care products is indicative in expansion of brands [6] [17].

On the Basis of behavioural science, the men's grooming decisions are influenced by a variety of psycho-logical elements such as self-perception (SP), self-hygiene awareness (SHA), and sociocultural elements (SC) such as peer pressure(PP), media representations (MR), and expectations of masculinity (EoM). The Social-media and educa-tional background also having an impact on how one perceives themselves and also which affects how they view a product's picture, efficacy, and aesthetic.

The male consumers who really care about the environ-ment have increased prevalently in recent years. [1] When choosing grooming products, these individuals value sustain-ability , ethical and responsible sourcing, and biodegradability. This change is a component of a broader movement towards sustainable consumption, wherein personal hygiene practices take health and environmental preservation into account.[18].

Men continue to be underrepresented in discussions pertaining to sustain-ability . Therefore, combining green entrepreneur-ship education with male grooming habits serves as a novel approach to promoting responsible consumption. This approach could also assist in designing sustainable products aligned with the ideals and preferences of this emerging market.

Fig. 1. Conceptual Framework-Intersecting Themes of AI, Sustainability Education and Male Consumer Behaviour

The above fig 1 depicting the conceptual framework based on the theme that how AI, Sustainability Education and Male Consumer Behaviour are integrated with each other an how impacting the market insights curriculum.

IV. RESEARCH METHODOLOGY

This section outlines my qualitative research design on the role of AI in higher education and its impact on sustainable consumption of men's grooming products and green entrepreneur-ship education. The analysis is grounded in a systematic review of literature drawn from reputable databases, thematically and chronologically. The literature review was conducted using specific inclusion criteria which, for this case, considered only articles published between 2019 and 2025 and discussed AI's impact on education, sustain-ability , and entrepreneur-ship. Studies published outside of these years or irrelevant to the main focus were removed.

Fitting an educational timeline to AI innovations was essential for capturing teaching method and curriculum pacing shifts, offering context for changes in sustainable men's grooming product consumption. This review documents a consumer's historical behavior trend towards sustain-ability in men's grooming, indicating an amplified inclination towards eco-friendly product and brand choices. The thematic analysis revealed important aspects of AI technologies and their contribution to sustainable entrepreneur-ship, such as enhancing teaching methodologies, developing student competencies at levels geared towards sustain-ability , and fulfilling the market need for socially responsible business engagement. On the other hand, the information gathering stage of the study was narrowed by some constraints, such as the lack of focus on the intersections of AI and sustain-ability , particularly in relation to green entrepreneur-ship. These gaps emphasize the need for further inquiry in this rapidly evolving field.

TABLE I. CRITERIA OF EXCLUSION AND INCLUSION

Criterion	Eligibility	Exclusion
Literature type	Journal Articles	Journal (review), chapters in a Book, Book, series of Book
Language	English	Non-English
Time-line	2019 till 2025 (6 year)	Before 2019
Context	Global	
Subject Area	Management, Environment Sciences	

	ecology and social sciences, computer science technology	All others except mentioned

Such a systematic approach guarantees that the selected literature addressed particular criteria and focused on the integration of technology within the entrepreneurial green educational frameworks in Table 1.

V.RESULT AND DISCUSSIONS

The current section recounts the outcomes of the systematic literature review that focused on the application of artificial intelligence (AI) within the context of higher education relating to sustainable consumption of men's grooming products and green entrepreneur-ship education. The analysis underlines the pivotal role of AI in teaching. With the advent of AI tools, instruction has shifted from being one-size-fits-all to one that caters to the unique requirements of each student. As a research result, such modified instruction which has led to majorly improved educational outcomes for students [17]. The study also showed how the lack of sophisticated techno-logy is essential for proper instructional delivery which can be a barrier to educational opportunities for high standard results. Regardless, technology has a great deal to offer in the improvement of entrepreneur-ship education within a green context.

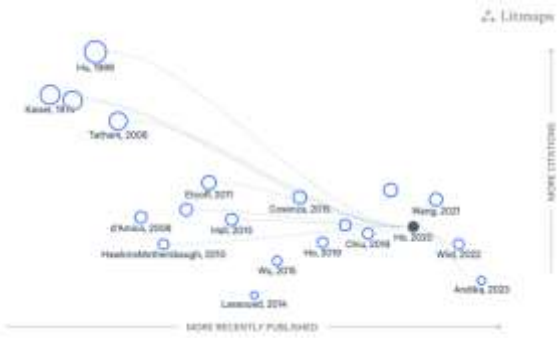

Fig. 2. Source Litmaps [2]

The above fig 2 represent a visual citation map of research papers and indicating how one research paper connecting with different authors research paper.

Men's grooming products now show patterns of sustain-able consumption alongside the increasing integration of artificial-intelligence in education. This trend shows a wider customer taste for companies stressing ethical values and sustain-ability . The research results show that consumer buying decis-ions in this market are greatly shaped by elements including authenticity, trustworthiness, relatability, and engagement due to social media influencers. More of these traits are important indicators of how social-media influencers affect purchasing behaviour.

The grooming business's alignment of artificial intelligence integration with sustainable practices points to a noteworthy trend. Educa-tional programs preparing students for entrepreneur-ship have similarly changed as brands answer consumer needs for sustain-ability and openness. This convergence of data emphasises how important artificial intelligence is in creating chances for sustain-ability -oriented business. The literature does, however, also point up gaps and restrictions on the pedagogical effects of artificial intelligence in this field. These revelations point to future directions of research, especially in investigating how changing artificial intelligence applications in education will keep influencing green entrepreneur-ship. This paper thus stresses the part artificial intelligence plays in motivating change in sustainable consumer behaviour and teaching strategies.

The search results show that AI-Artificial Intelligence is specifically effective at improving educational outcomes in contexts that are focused on sustain-ability. Personalised learning experiences that increase student engagement and achievement are made possible by AI-powered technologies, which also help to align educational practices with sustain-ability objectives. Also, as educational frameworks integrate these technological advancements, they enhance learners' practical skills and environ-mental aware-ness.

The changing of sustain-able consumption patterns in the men's grooming industry are indicative of a larger shift in entrepreneur-ship. In response to customer-expectations, businesses are adopting more sustainable and transparent practices. Although there are still some obstacles to overcome, technology integration offers

significant chances to improve green entrepreneur-ship education and promote sustain-able business models. The future businessman is better preparing themselves to take advantage of the growing momentum surrounding sustain-ability thanks to this alignment between educational content and market-trends.

The Higher-education stake-holders can take benefit from AI-Artificial Intelligence integration in a different ways, like improved teaching techniques and the capa-city to modify-curricula in real time in response to student performance data. With the help of these tools, educators can create more engaging and market-driven green entrepreneur-ship programs. In reply of this, the grooming sector is adjust-ing through AI-driven instructional approaches, moving towards sustain-ability and meeting customer-needs.

The certain drawbacks of systematic-literature-review, specifically when it comes to accurately calculating the range of AI's effects on sustain-ability and entrepreneur-ship education. Filling in the gaps in the literature requires ongoing research that challenges preconceived notions about AI's impact on future market trends in addition to critically analysing recent studies. There are many chances for additional research to expand understanding in this dynamic and changing field as long as educa-tional institutions keep investigating this intersection.

VI. CONCLUSION

The analysis highlighting a number of trends which are significantly found in the literature, especially with regard to the connection between both the advancement of sustain-ability oriented practices and the incorporation of AI (Artificial Intelligence) in educational frameworks. The main key finding of these research is that while using AI resources effectively improves teaching methods and equips students to adjust to the quick changes in consumer behaviour towards sustain-ability .

Research shows that changing consumer preferences especially for environmentally friendly grooming products inevitably affect the frameworks used in education about green entrepreneur-ship. This interaction suggests that educational establishments need to be agile, incorporating the most up-to-date material and technologies that reflect consumer preferences. Crucially, social media influencers have had a huge impact on consumer behaviour; as mentioned, consumer purchasing behaviour influenced by social media influencers is significantly predicted by authenticity, trustworthiness, relatability, and engagement level. This pattern implies that in order to empower aspiring business owners; educational programs need to take these consumer dynamics into account.

The results also point to certain technologies that need more research. Predictive analytics and AI-powered tests have the potential to greatly improve how educa-tional systems assess and raise student achievement and engagement. As stated, "Techno-logical integration into green entrepreneur-ship education is essential for fostering sustainable business practices and preparing students for the changing labour market." In order to successfully modify pedagogical approaches, it is crucial to highlight under-represented areas and make sure that curricula on green entrepreneur-ship include a variety of viewpoints and creative approaches. Finally, the implications of these findings go beyond the study's immediate purview and point to a number of future research avenues aimed at deepening our understanding of how AI intersects with sustain-ability and higher education. Examining these aspects will enhance the discussion of utilising AI's transformative potential to promote sustainable business practices that are in line with the quickly changing global economy.

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