Ecopreneurship For Students: A Systematic Literature Review

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Abstract: Ecopreneurship focuses on environmental aspects and aims to create a profitable business. It may not necessarily address social issues. Ecopreneurship is a multidimensional concept incorporating entrepreneurial, environmental, social, and profit-driven dimensions. It involves the development of sustainable business practices while addressing societal concerns related to the environment and social welfare. Ecopreneurs strive to balance economic growth with ecological conservation by adopting innovative resource utilization and waste reduction strategies. Ecopreneurs contribute significantly to creating a greener economy that prioritizes sustainability over short-term gains through their initiatives. Educating students about ecopreneurship can foster a culture of sustainability and social responsibility in young minds, encouraging them to address the current environmental challenges. We aim to determine ecopreneurship for students. The PRISMA guidelines comprehensively reviewed the literature to synthesize insights about the topic. The primary objective of this systematic literature review was knowledge consolidation. To illustrate the link between major categories and their corresponding trends, the authors used VOSviewer scientific software. Recommendations for future research endeavors are proposed.

Index Terms – education, systemic literature review, ecopreneurship, ecopreneur

I. INTRODUCTION

Ecopreneurship has emerged as a critical concept in the context of sustainable development (Purnomo & Raharja, 2020). It aims to address environmental challenges and create innovative business models that prioritize sustainability (Gunawan, van Riel, et al., 2021). Ecopreneurship is a multidimensional concept requiring entrepreneurs to consider their businesses' environmental, social, and profit-driven aspects (Pudak & Bokan, 2020). Educating students about ecopreneurship can foster a culture of sustainability and social responsibility in young minds, encouraging them to become environmentally-aware entrepreneurs (Ali, 2021). In recent years, many studies have been conducted on ecopreneurship for students, highlighting its potential benefits in the long-term development of individuals and the economy (Ljungkvist & Andersén, 2021; Nikolaou et al., 2018; Prado et al., 2022; Rodríguez-García et al., 2019; Setyawati et al., 2018).

Nowadays, ecopreneurship is one of the fast-growing fields of education globally (Nikolaou et al., 2018). The fields highlight the significance of ecopreneurship in the economy of a community (Prado et al., 2022). An implicit assumption linked providing ecopreneurship and promised economic growth, generating employment opportunities, and enhancing economic development (Negi & Srigyan, 2021). Many researchers examined this assumption, and some evidence supported it (Guleria & Kaur, 2021).

Academic and business circles engage in a discourse regarding the feasibility of imparting ecopreneurship skills (Andruk & Altinay, 2022). Ecopreneurship is often considered an innate skill that cannot be learned (Kummitha, 2021). However, the same can be said for professions like engineering and medicine, widely recognized as necessary subjects to teach students (Setyanti et al., 2021).

At the same time as this debate, there is an established recognition of the increasing demand for ecopreneurship (Li et al., 2023). Therefore, to maintain stability, Alawamleh, et al. discussion should shift focus from the teachability of ecopreneurship to addressing fundamental questions in education science (Alawamleh et al., 2023). These include determining what the program entails, how it will be taught, whom it is intended for, why it is important, and what expected results from its implementation (Suparno et al., 2019).

This discourse's progression may facilitate the development of ecopreneurship programs that aid in systematizing teachable course content for eco-entrepreneurs, including skills such as marketing, team management, and product creation (Menon et al., 2018). Additionally, addressing educational science inquiries can help design effective ecopreneurship courses that align with practices endorsed by successful entrepreneurs (Manning et al., 2020). These programs should also be tailored to accommodate student resource limitations and scheduling constraints (Abdelkafi & Hansen, 2018). Systematizing course content and tailoring programs according to student resource limitations and scheduling constraints is essential to create effective ecopreneurship courses (Rastogi & Sharma, 2018). The research question of this research is to determine ecopreneurship for students (Abidin & Hariyono, 2020).
II. METHODOLOGY

In research methods will use PRISMA and VOSviewer. PRISMA primarily focuses on the reporting of reviews evaluating the effects of interventions but can also be used as a basis for reporting systematic reviews with objectives other than evaluating interventions (Page, Moher, et al., 2021). VOSviewer is a scholarly software application that facilitates creating and presenting bibliometric networks. Such networks may comprise various elements, such as scientific journals, scholars, or specific publications (Nees Jan van Eck & Ludo Waltman, 2023). Their formation is contingent upon diverse relationships like citation connections, bibliographic coupling links, co-citation patterns, and collaborative authorship associations. This scholarly article intends to address the areas of "what" and "how," which have been identified by numerous researchers as being neglected in previous studies. The objective is to create a comprehensive guide, mapping out prevalent and effective practices for teaching ecopreneurship at the tertiary level.

Additionally, this study aims to relate these findings with recommendations from established ecopreneurs on best practices for implementing eco-friendly entrepreneurship initiatives. By doing so, it seeks to fill the gap in current research on course content and instructional methodologies within this field of study. The field of study needs further in-depth description to contribute to extracting the best ecopreneurship program practices.

III. RESULTS AND DISCUSSION

The systematic review was conducted as per the PRISMA guidelines (Page, McKenzie, et al., 2021). The database searched are Scopus, Google Scholar, and CrossRef, using the search terms “ecopreneurship”. Citation tracking of the included articles was also performed. Studies only in English included. The study inclusion criteria were based on the following PICO (population, intervention, control, and outcomes) model. Exclusion criteria were as follows: non-related subject, only citation, and the full text cannot access. Articles were screened according to their titles and abstracts.

![Diagram Flow of PRISMA](image-url)

Figure 1. Diagram Flow of PRISMA
VOSviewer with Scopus database with keyword ecopreneurship coupling by 6 clusters. Cluster one is the circular economy, country, entrepreneurship, green entrepreneurship, India, and sustainable development. Cluster 2 is characteristic, ecopreneurship, green innovation, and success. Cluster 3 is business, ecopreneur, and environment. Cluster 4 is an exploratory study, framework, and sustainability. Cluster 5 is motivation, practice, and value. Cluster 6 is community and tourism. Ecopreneurship for students is rare to implement. The ecopreneur still focuses on the original business sector. India is one of the ecopreneur countries. Ecopreneur is deeply related to sustainability, green entrepreneur, and the environment. The systematic literature review identified a gap in research on the best practices for teaching ecopreneurship at the tertiary level. Furthermore, the review revealed limited research on instructional methodologies and course content to enhance students' interest in ecopreneurship.

In overlay visualization, the domination year in 2016-2018. It is the opposite of recent ecopreneur development. Publications about ecopreneurship are still rare. The current research about ecopreneurs is ecopreneurs with community, ecopreneur value, and practice in ecopreneur. Based on the studies reviewed, it was identified that university and senior high school students reportedly have positive attitudes toward ecopreneurship. However, the review also identified a need for more research on effective instructional methodologies and course content to enhance students' interest in ecopreneurship.
VOSviewer with Google Scholar database with keyword ecopreneurship coupling by 4 clusters. Cluster 1 is environmental entrepreneur, green entrepreneur, green entrepreneurship, India, and opportunity. Cluster 2 is the community, eco-innovation, ecopreneurship concept, entrepreneurship, practice, and sustainability. Cluster 3 includes entrepreneurship education, environmental problems, Nigeria, sustainability entrepreneur, and sustainable development. Cluster 4 is chemistry, environmental toxicology, platform, and society. Ecopreneurship in google scholar is not the main keyword. It means that ecopreneurship is still part of entrepreneurship. Two countries that are mentioned are India and Nigeria. Still have many opportunities to other country develop Ecopreneurship.

In overlay visualization, the domination year in 2016-2018. The ecopreneur is not present. Entrepreneurship is still the main keyword. Publications about ecopreneurship are still rare. The current research about ecopreneurs is ecopreneurs with community, practice in ecopreneur, green entrepreneurship, and environmental problem.
Figure 6. Ecopreneurship in CrossRef Database Network Visualization

VOSviewer with Google Scholar database with keyword ecopreneurship coupling by 3 clusters. Cluster 1 is eco-brick, Indonesia, instrument, outcome, product, program, student, and training. Cluster 2 is the community, ecopreneur, entrepreneurship, originality value, and practice. Cluster 3 is awareness and sustainability.

Figure 7. Ecopreneurship in CrossRef Database Overlay Visualization

In overlay visualization, the domination year is 2017-2021. The current research about ecopreneurs is ecopreneur product, ecopreneur and student, and ecopreneur outcome. Ecopreneurship is closely related to sustainability, green entrepreneurship, and the environment. Ecopreneurship is a relatively new field of entrepreneurship that focuses on creating businesses that help to mitigate environmental problems and promote sustainability.

Despite being a relatively new field, ecopreneurship has gained attention recently, especially in countries like India and Nigeria. However, the research on ecopreneurship is still limited and mainly focuses on community engagement, eco-innovation, entrepreneurship education, and environmental problems. There is a need for more research on ecopreneurship, especially in other countries, to promote the development of sustainable and environmentally friendly businesses. Additionally, it is worth noting that the chemistry and environmental toxicology field plays a significant role in ecopreneurship.

Incorporating ecopreneurship into learning, particularly in biology, is an effective way to develop entrepreneurial interest, build ecopreneurship skills, and is still concerned for sustainable development among students. Moreover, project-based and problem-based learning models have been found to contribute to the entrepreneurial spirit of high school students in various aspects, such as cooperation, discipline, responsibility, communication, confidence, tenacity, creativity, and innovation (Afum et al., 2023; Muposhi et al., 2023; Putri et al., 2019; Skoglund & Berglund, 2018). Efforts to promote ecopreneurship among students through education and training have also shown positive outcomes. For instance, the problem-based learning model has increased the potential for ecopreneurship and character-building among students (Dickel, 2018; Domańska et al., 2018; Sindhu et al., 2022).
Another important aspect of promoting ecopreneurship is raising awareness and educating individuals on environmental responsibility (Haldar, 2019a, 2019b; Kardos et al., 2019). Ecopreneurship can be achieved by providing information on sustainable practices and innovative ideas that help to mitigate environmental problems (Potluri & Phani, 2020; Renfors, 2019; Shah, 2018). Furthermore, developing accurate and timely weather forecasts is essential to promoting ecopreneurship efforts that target environmental needs (Galkina, 2021; Saleem et al., 2018; Wang et al., 2022). A study conducted among university students also suggested positive intentions towards ecopreneurship, which can be capitalized on by promoting entrepreneurship education and providing training on sustainable practices (Bertella & Vidmar, 2019; Guleria & Kaur, 2022; Saludung, 2018). In summary, ecopreneurship is an important area of research and development, especially in promoting sustainable and environmentally friendly businesses (Abdul et al., 2023; Thananusak, 2019; Zuhriyah et al., 2018). To further promote the development of ecopreneurship, more research is necessary, particularly in other countries (Henriksson et al., 2019; S. Moon & Lee, 2021; Strydom et al., 2021). Additionally, incorporating ecopreneurship into learning and training programs, such as through project-based or problem-based models in chemistry and biology, can help develop an entrepreneurial mindset among students and build their skills in environmental sustainability (Martini et al., 2018; Schaltegger et al., 2018; Vlasov et al., 2021).

Moreover, effective learning media, such as worksheets, can significantly enhance students' achievement and scientific literacy in the field of ecopreneurship (Contreras Cruz et al., 2022; Diale et al., 2021; Piwowar-Sulej et al., 2021). Therefore, educators and policymakers must acknowledge the significance of ecopreneurship education and incorporate it into their curriculum, training, and policies to build an environment that promotes sustainable practices and entrepreneurship (Gunawan, Essers, et al., 2021; Saludung et al., 2019; Verma, 2021). Furthermore, students must also be encouraged to develop a strong sense of environmental responsibility and ethical behavior through their involvement in community-based activities (Forouharfar, 2018; C. Moon et al., 2019; Santini, 2020). A strong sense can help inculcate the values and character traits necessary for successful entrepreneurship. In conclusion, ecopreneurship has the potential to address environmental problems while fostering economic growth (Juma et al., 2022). To achieve this, developing and implementing effective strategies that promote environmental sustainability, equitable economic growth, and social well-being is critical (Alawamleh et al., 2023; Verma, 2021).

Additionally, it is important to recognize the importance of accurate and timely weather forecasts in supporting ecopreneurship efforts targeting environmental needs. Furthermore, there is a need for collaboration between academia, industry, and government to promote the development of ecopreneurship. Through interdisciplinary efforts and a systematic literature review, scholars can propose research models that are fit for purpose to explore the benefits of ecopreneurship and ultimately support sustainable and environmentally friendly businesses. Therefore, ecopreneurship education should be emphasized as essential to learning and training programs in various fields, including science, technology, environment, and social sciences, to create a generation of innovative and responsible entrepreneurs who can effectively contribute towards achieving sustainability goals.

IV. CONCLUSION

A systematic literature review was conducted to investigate the current state of research on ecopreneurship for students. The review used the PICO model, excluding non-related subjects, citations only, and inaccessible full texts. A systematic literature review using the PICO model and VOSviewer with the Scopus database found that ecopreneurship for students is a rare practice. The current research on instructional methodologies and course content to enhance students' interest in ecopreneurship is limited. Clusters of research focused within ecopreneurship were identified, including sustainability and green innovation.

However, there is a need to further explore ecopreneurship education as an essential component of learning and training programs in various fields. With positive intentions from university students towards ecopreneurship and evidence that the problem-based learning model can increase the potential for ecopreneurship and character building, it is evident that there is a strong foundation to build. Moreover, intensified efforts to inform, raise awareness and educate on environmental responsibility positively impact ecopreneurship initiatives. Collaboration between academia, industry, and government is necessary to promote the development of ecopreneurship. Ultimately, ecopreneurship education should be emphasized across various fields of study to create a generation of innovative and responsible entrepreneurs who can effectively contribute towards achieving sustainability goals.

V. REFERENCES


(37) PLOS Medicine, 18(3), e1003583. https://doi.org/10.1371/journal.pmed.1003583


