

## FOSTERING GREEN ENTREPRENEURSHIP THROUGH EDUCATIONAL EXTENSION SERVICES: AN ANALYSIS OF STUDENT PARTICIPATION AND ENTREPRENEURIAL INTENTIONS IN KERALA

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### Abstract

During this epoch of climatic changes and resource diminution sustainability is the key to rescue the mother nature. Being the torch bearers of future, students have a big role to play. The various extension services offered in schools including the National Service Scheme (NSS), Environmental Clubs, and Career Cells are the medium in this endeavor. These programmes can further its efforts by instilling eco-friendly entrepreneurial skills. Here this paper tries to assess participation of students in Extension services, students' intention to engage in green entrepreneurship and the relation between entrepreneurial skill and programme participation. This study used survey data complemented by students and other stakeholders of schools of Thiruvananthapuram, Kerala. The study shows that there is moderate participation in NSS and Environmental Clubs, with the most participation being noted in Career Cells. However, intentions for green entrepreneurship are positive, analysis with ANOVA and regression reveals that engagement in these services does not affect skills or intentions in terms of extension participation. The report stresses on increasing the number of practical activities organized by extension services. Finally, it suggests higher level of collaboration with industries to improve students' entrepreneurial perspectives and aspirations.

**Keywords:-** Green Entrepreneurship, Educational Extension Services, Entrepreneurial Skills, Educational Programmes, Sustainable Business.

The modern world is characterized by active development and constant changes, during which environmental problems have become exceptionally acute and natural resource depletion

has become a primary concern that requires the transition to sustainable development. The struggle between economic development and environmental protection has not been intense.

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Green entrepreneurship, the culture and practice of launching businesses that center on environmental sustainability, has come to the forefront as a leading solution to these issues. Regarding the nature of business activities and their relationship with sustainable development as well as with the environment, this entrepreneurial model aims for sustainable innovation and development that can be supervised by rules of environmentally sustainable business development, as well as by the tendencies to present economic opportunities. Green entrepreneurship is considered an important factor in decreasing waste, utilizing resources, and increasing the utilization of resources such as renewable energy.

## 2. Literature Review

Green entrepreneurship is a relatively new field in which businessmen and women focus on preserving the environment and, thus, creating new economic opportunities in fields such as agriculture and the manufacturing sector (Mathur & Tandon, 2016). Schools are the future of the nation's economy and have great potential for building sustainable green entrepreneurs.

Environmental Clubs and National Service Scheme (NSS) play a very useful role in sensitizing students about environmental and quality issues and motivating them to practice environmentally friendly behaviors. These efforts provide students with opportunities to explore best practices that can be applied in environmental management, green technologies, and entrepreneurial ventures to address environmental issues such as climate

change, pollution, and sustainable environmental management. The process of developing green entrepreneurship through educational institutions is therefore very important since it empowers every student to be a change maker in society and over the world (Srivastava & Gulati, 2023)

Green entrepreneurship opens up interesting prospects for greenish business people to cultivate and sell products such as natural healings, ecological beauty, and health products. Furthermore, the agro-climatic region has vast tracts of fertile soil for supporting spice, tea, and coffee production, which can be beneficial for adopting environmentally sound production and sustainable business practices (Kumar et al., 2020).

In this regard, club activities such as the Environmental Clubs and NSS provide face-to-face education to the students in addition to training them in sustainable development and entrepreneurship. These programs aim to sensitize students to environmental conservation, encourage the use of environmentally friendly products and technologies, and take part in activities that affect the natural environment. To promote a sustainability perspective within students, environmental clubs and NSS programs can be effectively integrated into the learning processes. These programs facilitate practical activities that include tree-planting exercises, proper waste disposal and management, organic farming, and encouraging the use of sustainable products. In addition, the students stand to benefit from guidance and mentorship by professional green entrepreneurs and environmentalists who

offer practical lessons on how to translate the students' environmental insights into viable business strategies (Srivastava & Gulati, 2023).

This study explores how the integration of Environmental Clubs and NSS programs within schools of Kerala can equip students with the necessary entrepreneurial skills to succeed in a growing green economy. By fostering environmental consciousness and providing tools to engage in green entrepreneurship, these programs can nurture the generation of eco-conscious entrepreneurs who are well-equipped to contribute to sustainable industries. Specifically, this research focuses on how these programmes can be leveraged to develop Green entrepreneurial skills.

### 3. Research Gap

From the Literatures reviewed it is clear that a lot of studies have been conducted on different clubs and programmes promoting environmental education but no in-depth studies has been taken place regarding initiatives of different extension services that stimulates students' entrepreneurial intentions, mainly in the context of green entrepreneurship. Also, how these school initiatives mold the entrepreneurial skills and decisions were not studied adequately. In this instance a gap has be identified and hence the study.

### 4. Statement of Problem

Based on the research gap, it is evident that there is limited study on the extent to which the educational extension services influence students' entrepreneurial intentions, particularly in the context of green entrepreneurship. Hence this study

aims to identify and assess student participation in Extension Services offered in schools, students' intention to engage in green entrepreneurship and the students' entrepreneurial skills by participation in these programmes. Hence the paper titled "Fostering Green Entrepreneurship through Educational Extension Services: An Analysis of Student Participation and Entrepreneurial Intentions in Kerala" encompasses all the above-mentioned facets.

### 5. Scope of Study

The scope of this study lies in its potential to inform educational policies and frameworks aimed at promoting green entrepreneurship in Kerala, and beyond. By highlighting the link between environmental education, entrepreneurial skill development, and sustainable business practices, this study offers valuable insights into how educational institutions can play a critical role in shaping the future of green business. Furthermore, the study aims to contribute to the growing body of literature on green entrepreneurship in India, particularly in relation to Kerala's unique entrepreneurial ecosystem, which blends traditional knowledge with modern sustainable practices (Kerala Naturals, 2021) The need for sustainable entrepreneurship has never been greater, as environmental challenges intensify, demand for eco-friendly products and sustainable business models is increasing. Green entrepreneurship offers a promising solution for this. Through initiatives such as Environmental Clubs and NSS programs and Career Cells students can be introduced to these entrepreneurial opportunities and become equipped with the skills needed to thrive

in a green economy. Here in this paper the relevant data were collected based on the opinion of students of educational extension services in the schools of Trivandrum, Kerala.

## 6. Objectives of the Study

1. To assess the student participation and School Extension Services.
2. To study the Students' intention to pursue Green Entrepreneurship and Participation is School Extension Services.
3. To evaluate the relation between entrepreneurial skill and programme participation.

## 7. Hypotheses

H01: There is no significant difference in Students' intention to pursue Green Entrepreneurship and participation is School Extension Services.

H02: There is no significant relation between entrepreneurial skill and programme participation.

## 8. Methodology of Study

A descriptive cum analytical study has been conducted using Sample Survey method. The school students of Thiruvananthapuram district, Kerala constitute universe for this study. This study uses both quantitative and qualitative research to understand the relevance of extension services to green entrepreneurship among students in the schools of Thiruvananthapuram, Kerala. The extension services include Environmental Clubs, National Service Scheme (NSS) and Career cells are the

Independent variables and Green entrepreneurship is the Dependent variable. The study seeks to determine the effectiveness of these programs in enhancing the entrepreneurial attributes of students. (Srivastava & Gulati, 2023).

For qualitative Data Collection in-depth interviews, has been conducted with those in relevant departments or offices of schools, NSS coordinators, the coordinators of environmental clubs and faculty members of the Schools pursuing/involved in extension services, and local green entrepreneurs. 15-20 stakeholders in various educational establishments in Trivandrum, Kerala have been selected as participants.

For quantitative data collection a well-structured questionnaire has been constructed to obtain data from students of schools. NSS, Environmental Clubs, and Career cells are a few examples of extension services in which the questionnaire will determine the level of students' participation in addition to measuring the level of intending entrepreneurship and green entrepreneurship among the students. The questionnaire consisted of both confirmatory questions with finite responses and Likert-scale questions about students' attitudes toward their green entrepreneurship skills, such as managing sustainability, planning, and developing products (Flick, 2014).

The sample is sourced from students of different schools of Thiruvananthapuram, Kerala. To select participants from diverse institutional types, we used stratified random sampling. By using Cochran's equation

sample size has been found out as 400. A pilot study is conducted with 60 students as respondents. From this reliability, validity and normality of the questionnaire were examined. To test the internal consistency of the survey instrument, Cronbach's alpha has been being applied. The values of the test are greater than 0.7. Thus, with the prepared questionnaire further proceeded for extensive data collection. Several statistical methods have been used to analyze the hypotheses. The test includes Mean, Frequency, ANOVA and Multiple Linear Regression.

9. Result and Analysis

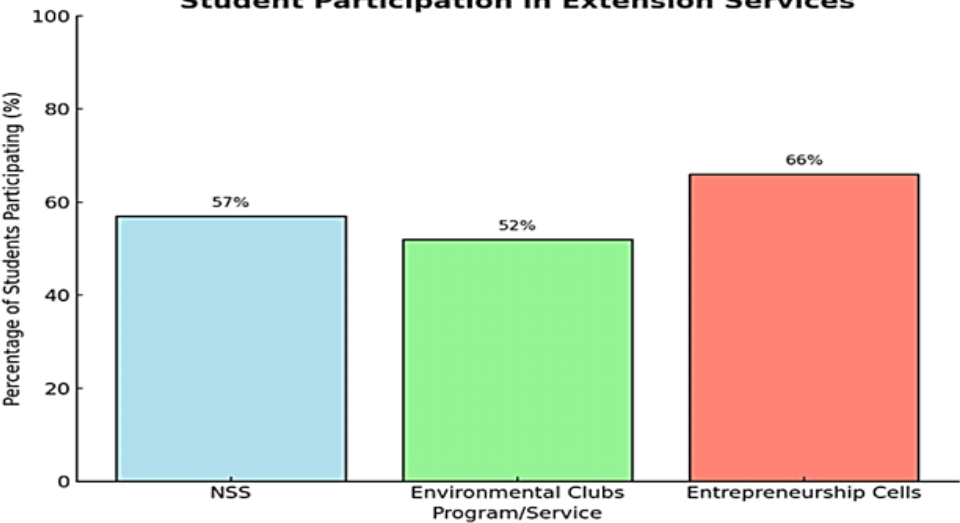
The findings of the study, looking at the various extension services offered in schools like NSS, Environmental clubs, and Career Cells, on the perception of students on green entrepreneurship and their future intentions.

9.1 Extension Services and Participation by Students

This study intended to prove the level of student interaction within diverse extension services to promote green entrepreneurship and environmental sensitivity. The NSS is a program for which students get involved in community service and social responsibilities as students with 57 per cent strength participated. 52 per cent of students were involved in Environmental Clubs, which organize themselves towards the promotion of environmental conservation/sustainability activities. The highest percentage (66 per cent) was recorded in Career Cells since the organizations provide training to students who intend to venture into the business world.

These findings imply that despite a high level of student interest in

Figure 1  
Student Participation in Extension of Services  
Student Participation in Extension Services



Source: Primary data

entrepreneurial activities in training such as those provided by Career Cells, there is still a lot of activity in environment-related programs such as NSS and Environmental Clubs. However, it should be noted that although the principles of environmental sustainability and the need for businesses to adopt green entrepreneurship are high, actual engagement in environmental programs is comparatively lower than that of business-oriented programs.

9.2 Testing of Hypothesis 1

- H01: There is no significant difference in Students’ intention to pursue Green Entrepreneurship and participation is School Extension Services.
- H1: There is significant difference in Students’ intention to pursue Green Entrepreneurship and participation is School Extension Services.

The research used the multiple regression analysis procedure to test the effects of the independent variable, extension services on the dependent variable, green entrepreneurship intention.

The overall finding of the study was the intention to perform green ventures, with an  $r = 0.5610$  relationship between Career cell participation and students’ inclination. Nevertheless, the statistical significance at 0.05 level of this coefficient was not observed ( $p\text{-value} = 0.818$ ); Hence the Null Hypothesis is accepted at 5 per cent level of significance. Therefore these results suggest that students’ participation in these programs does not predict their intentions towards green entrepreneurship.

The above analysis also shows that the R-squared value is equal to 0.005, meaning that the given model can explain only half a per cent of the variation in students’ intention to engage in green entrepreneurship. This means that other factors, including mentorship, financial support, and industry links from the real world, seem to play a larger role than education in deciding the entrepreneurial intentions of students. These findings are by the existing literature indicating that even though education for entrepreneurship is effective, factors such as capital, networking, and practicality are crucial in nurturing efficient green business people (Carter and Jones-Evans, 2018).

Table 1  
Regression for Intention to Pursue Green Entrepreneurship

Variables	Coefficient (β)	Std. Error	t-Value	p-value
Intercept (constant)	65.8661	2.719	24.228	0.000
Participation in NSS	-1.6401	2.336	-0.702	0.483
Participation in Environ Club	-2.4259	2.315	-1.048	0.296
Participation in Career Cell	0.5610	2.436	0.230	0.818

Source: Primary data

9.3 Testing of Hypothesis: 2

- H02: There is no significant relation between entrepreneurial skill and programme participation.
- H12: There is significant relation between entrepreneurial skill and programme participation.

This study used ANOVA to determine the extent to which there were differences in entrepreneurial skills, given the involvement in several extension services. The results of the analysis returned a p-value of 0.6715, 0.5342 and 0.3449 which are higher than 0.05. Hence Null Hypothesis is accepted at 5 per cent level of significance. This implies that there is no significant difference among participation of students in NSS, Environmental Clubs and the Career Cells in terms of disposition to entrepreneurial skills.

However, the finding of no increased entrepreneurial skills from the extension services is as follows: The NSS and Environmental Clubs may not offer practical training in entrepreneurship; hence, students who received these extension services did not capture increased entrepreneurial skills. On the other hand, Career Cells, which involve business generation and the green

economy, can be a little more relevant to students’ competencies for entrepreneurship. The conclusions indicated that although NSS and Environmental clubs teach students about environmental issues, they are unlikely to be as effective in teaching practical business skills, as Career Cells are intended to focus on business planning.

10. Major Finding:

- The findings of this study indicate that extension services such as Career Cells, NSS, Environmental Clubs may offer students meaningful opportunities for involvement in social and/or environmental issues, but these extension services themselves do not seem to have a direct influence on students’ entrepreneurial competencies and their intentions to engage in green entrepreneurship.
- The study reveals that there is positive relationship between Environment Club membership and a student’s intentions toward green entrepreneurship supports this notion because it has been shown that even practical entrepreneurial programs are beneficial for stimulating interest in environmental

Table 2  
ANOVA -Entrepreneurial Skills Based on Program Participation

Educational Extension Services	F- Value	P-Value
Environmental Clubs	0.3985	0.6715
National Service Scheme (NSS)	0.4897	0.5342
Career Cells	0.2376	0.3449

Source: Primary data

entrepreneurship solutions that provide business skills, mentorship, and exposure to the commercial market.

- The study also shows that a positive relationship was established between participation in the Career Cell and students' proclivity to practice green entrepreneurship, although the results did not achieve statistical significance when analyzed through the regression medium. This could be due to a number of issues that are outside the model, such as financial constraints, lack of access to networks of entrepreneurs, or the general challenges thrown in by the idea of green business.

## 11. Suggestions

- The percentage return for participation in Career Cells was significantly higher than in the NSS and Environmental Clubs, which is consistent with the increasing trend of business-related organizations. This proves that courses in **\*\*entrepreneurship-oriented\*\*** are preferred over a course that emphasizes community services or the environment.
- Schools should incorporate more practical engagement/exposure in the delivery of extension outreach, especially those targeting green entrepreneurship.
- Mentorship and collaboration and industry engagement of local businesses, entrepreneurs, and green initiatives may help students obtain the practical experience required

before they engage in entrepreneurial ventures.

- More Skill development programmes to be integrated in the academic curriculum.

## 12. Conclusion

The results of this study indicate that, as organizations such as NSS, Environmental Clubs, and the Career Cells are involved in creating environmental consciousness, concern, and entrepreneurial intentions, they do not on their own adequately enhance students' personal entrepreneurial capabilities or their prospects of success in green entrepreneurship. The moderate participation levels and low levels of entrepreneurial skills can be interpreted as students' interest in committing themselves to sustainable business initiatives but lack exposure to realistic training and experience. The positive finding signifies that the intention to venture into green entrepreneurship increases with participation in course-based Career Cell. Nevertheless, it is more important to note that the roles of other factors-financial support, mentors, and partnerships may be more significant in influencing students' entrepreneurial profiles than the effects produced by extension services on their own.

To strengthen green entrepreneurship, the concept must be complemented with effective instruction in practical business competencies, engagement with the industry, and expertise from successful entrepreneurs. Other areas that schools should consider include deeper industrial linkages that offer students opportunities for practical engagement in sustainable



business projects. If educational institutions are to widen the above-mentioned programs that only offer business ideas to create more supportive entrepreneurial features, then more individuals will be

prepared for actual business in an advancing green economy. Subsequent studies should examine how external factors complement enterprise education to boost program viability.

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