

The Grassroots Innovation Scouting Approach in Ghana Towards the Achievement of the Sustainable Development Goals

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Abstract: The sustainable Development Goals 2030 shows that developing countries need to focus programs to enhance knowledge and skills of the people. However, it is difficult for most of the young people in Sub-Sahara African countries to achieve a basic standard of living with large number of these countries struggling with poverty and limited opportunities to descent life for the people. Innovation has been identified as potential economic growth and development with new discoveries in developing new products using new ways to increase productivity of improve the basic life of the people. It is also a catalyst for economic growth and development, with new discoveries in developing new products and solutions using new ways to increase productivity.

Grassroots innovations is the bottom-up approach to promote inclusive innovation among diverse youth populations, especially young people who do not usually benefit from traditional innovation initiative (atypical actors), and marginalized groups including women, persons living in rural communities and persons with disabilities. This study examined the demographics characteristics of grassroots innovators in Ghana and their sectors of innovations toward the achievement of sustainable development goals in Ghana. The study applied questionnaire for 731 innovators scouted by PHG Foundation from four Regions of Ghana for the Young African Innovates Program in Ghana. The study finding revealed that the grassroots innovators in Ghana are atypical people with low education background, youth between the ages of 18-35 and from the rural communities of Ghana. Further, the study identified 16 sectors of innovations under the health innovation, education and Science, Technology, Engineering and Mathematics (STEM) innovation, agricultural innovation and women and Persons with Disability (PWD) support innovation to enhance the achievement of 8 sustainable development goals in Ghana. The study suggested the need for grassroots innovation education in Ghana to enhance the socio-economic development at all levels.

Keyword: *Grassroots Innovation, Sustainable Development Goals, Sectors of Innovation.*

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I. INTRODUCTION

The 17 Sustainable Development Goals (SDGs) set in 2015 by the United Nations 2030 agenda for global development towards sustainable economy, society and environment (UNDP, 2018). Governments all over the world are working towards the achievements of these 17 SDGs through various engagements with stakeholder at the grassroots levels (Dana et al., 2021; Smith, 2007). However, it is challenging to meet the SDGs at the national level without the involvement local stakeholders at the bottom of the pyramid (Bal et al., 2013; Sarkar, 2018). This is why the adoption and implementation of the SDGs required local grassroots approaches to innovation (Moallemi et al., 2020).

There are two approaches to innovation, and these are top-down approach and bottom-up approach (Gupta, 2012; Singh et al., 2020; Seyfang & Smith, 2007). The top-down approach to innovation is where innovations are created by, credited to and benefited to big organization or corporations with the aim of to capture untapped market opportunity at the bottom of the pyramid or grassroots level by exploring the fortune at the bottom of the pyramid (Boyles, 2005; Church, 2005; Gupta, 2020). On the other hand, the bottom-up approach to innovation is where innovation is created by, credited to and benefited to the grassroots community with the objective to create opportunities for development of grassroots community to create fortune at the bottom of the pyramid (Gupta, 2012, 2023; Seyfang & Smith, 2007). This is referred to as grassroots innovation (Gupta, 2013, 2020; Sarkar, 2018; Singh et al., 2020).

Grassroots innovations as proposed by Bhaduri and Kumar (2009, p.3) as “individual innovators, who often undertake innovative efforts to solve localized problems, and generally work outside the realm of formal organizations like business firms or research institutes”. According to Seyfang and Smith (2007, p.585), grassroots innovations is networks of activists and different organizations designing innovative bottom up solutions that respond to the local community situations taken into consideration the interests and values of the communities for sustainable development. Thus, grassroots innovation is conceptualized as innovation by grassroots innovators (Gupta, 2016) with human potential and capabilities of artisan skills, learning, attitude, and aptitude (Bhaduri & Kumar 2011; Sarkar, 2017).

Grassroots innovation is powerful for the growth and development of national economies, particularly in emerging economies where majority of the people live under difficult

economic conditions (Singh et al., 2020). This is where grassroots innovators play a key role in the economic development, employment generation and improvement of the livelihood of the people in the grassroots communities (Gupta, 2013; Sarkar, 2018; Singh et al., 2020). Further, other scholars (Church & Elster, 2002; Devine-Wright, 2006; Seyfang & Smith, 2007) have grouped the benefits of grassroots innovations into intrinsic and diffusion. The intrinsic benefits are the personal, social and environmental benefits which include self-esteem and confidence, training and skills, job creation, health improvement and social capital to human. On the other hand, the diffusion benefits are expressed as a more important is placed on environmental awareness, increase in education and promotion quality, the development of sustainable development strategies and attitudes by the government (Fressoli et al., 2014; Gupta et al., 2013).

Grassroots innovation movements such as the Social Technologies Network (Brazil) and the Honey Bee Network (India) found in Brazil and India have support the idea of grassroots innovations in these countries. For instance, the Social Technology Network (STN) was initiative and originated in Brazil in the 2000s. The STN is a group of academics to activists, unions, government representatives, funding agencies, non-governmental organizations (NGOs) and community groups (Fressoli et al., 2014; Gupta, 2011). Most of these institutions, including several national ministries such as the Ministry of Science and Technology and semi-public companies considered mainstream Science Technology Innovation institutions. The STN was a mixture of grassroots and mainstream Science Technology Innovation of fostering a more democratic process of innovation for development by turning isolated initiatives into broader public policies and application (Miranda et al., 2011). The STN believed that innovation as a tool for local development with particular emphasis on empowerment as part of the goal of the interaction between communities and technology developers (Fressoli et al., 2011). Also, the Honey Bee Network was founded by Anil Gupta in 1988 in India as a social justice initiative to fix the letdowns of top-down development initiatives led by the government. The Honey Bee Network (HBN) is an informal network that acts as a body for grassroots innovation among people with little formal training, traditional or indigenous knowledge for inventions and innovation (HBN, 2013) through the use of scouting, documentation of innovations and traditional knowledge based on different actions (Sone, 2012)

Africa is the second largest continent in the world with enormous human and natural resources but Africa remains poor because of its inability to tap into these resources and make

useful out of it. This is due to the lack of innovation and creativity among African individuals and organizations at all levels and that innovation (Rasmus et al., 2021). This is why the Agenda 2030 for sustainable development recognizes that eliminating extreme poverty remains the greatest challenge across the globe and that efforts are being made to ensure that vulnerable groups are not left behind (United Nations, 2018). The situation is not different in Ghana, a developing country in the sub-Sahara African strive to become a developed country as a results of the sustainable development goals.

There are few research works in the area of grassroots innovations in Ghana. For instance, Adusei-Nsowah et al. (2025b) examined the Grassroots Innovation Scouting Approach developed by the PHG Foundation during the Young African Innovates program organised by the United Nations Development Programme (UNDP) in Ghana. The study findings revealed that grassroots scouting of community zoning and mapping, community engagement, workshop, durbar and innovation clinics as the strategies to that enhance the inclusivity of innovation for sustainable development goal. However, the study did not take into consideration the demographic characteristics of innovators and their various sectors of innovation. This remains a gap in literature and unexplored. Moreover, the study fails to identify how the demographics of the innovators are linked to their grassroots innovation. Further, Adusei-Nsowah et al. (2025a) study of grassroots innovation scouting: an inclusive approach for persons with disability revealed a participation of 12.7 % of PWD's with different solutions in the sectors of agriculture, technology, manufacturing, processing energy and training, and the study identified financial difficulties, further training, product development, Food and Drugs Board certification process as the major challenges facing the PWD's innovators. The study was specifically for PWD's without all other innovators, and the sample size was small. When it comes to innovators' demographics, the various sectors of innovation and relationship to the achievement of the SDGs in Ghana remains a gap and no specific research has been conducted in this area in Ghana. This study therefore fills this gap by exploring the demographics characteristics of the grassroots innovators in Ghana, the sectors of innovation and how these sectors enhance the achievement of the 17 SDGs in Ghana.

This study contributes to policy implication in Ghana, as the characteristics of grassroots innovators can serve as the bases for some policy recommendations towards the achievement of the sustainable development goals. Again, this study contributes by making data available from grassroots innovators in order to explore other demographics of the grassroots innovators in the Ghanaian context, and further contribute to grassroots innovation literature to influence policy formation in Ghana.

➤ Research Questions

- What are the demographics characteristics of the innovators identified during the grassroots innovation scouting in Ghana?
- What are the various sectors of innovations addressed by the grassroots innovation scouting towards the achievement of the Sustainable Development Goals in Ghana?

II. LITERATURE REVIEW

Hilmi (2012) argued that grassroots innovation refers to an innovative product or process created at the bottom of the pyramid, due to necessity, hardship, and challenges. Bhaduri and Kumar (2011) describe grassroots innovators as 'individual innovators who often undertake innovative efforts to solve local problems, and generally work outside the realm of formal organizations'. Bhaduri and Kumar (2009) view grassroots innovations as 'a complex set of socio-political and economic aspiration of people who rely on their skills and practical experience, rather than the formal technical knowledge to carry out technological activities. Kumar and Bhaduri (2014) also argue that grassroots innovators are individual innovators who undertake innovative activities to solve local problems by working outside the realms of the formal structure. However, Smith, Fressoli, and Thomas (2014) identified three determinants of grassroots innovation: (1) The capacity of grassroots innovation to solve local problems with wide diffusion; (2) Suitability to the existing environment, eventually seeks to transform; and (3) The ability to work with project-based solutions motivated by structures of economic and political. Seyfang and Longhurst (2016) study identified six characteristics of grassroots innovations that makes it different from the mainstream innovations as follows: the driving force of grassroots innovations is a social need instead of rent seeking; grassroots innovations are based on ideological commitment instead of profit seeking; grassroots innovation are created by values and culture; grassroots innovations are established in a communal ownership; grassroots innovations depend on voluntary labour grants or mutual exchange and operate in a social context. Further, Singh et al. (2020) in-depth exploration and analysis of various aspects of related to grassroots innovation in the Indian context using questionnaires and interview revealed three determinants of grassroots innovations as new grassroots learning; local solutions, and networking capabilities in the Indian context. Ghadimi et al. (2023) investigated the state of the arts and nature of grassroots innovations and innovators in the Iranian context indicated that grassroots innovations are identified based on the following features. These are utilization of local input, low construction cost, absence of the need for a laboratory or technological changes, provision of simple solutions to everyday problems and no government support.

III. METHODOLOGY

This study applied questionnaire for 731 innovators identified in the four regions of Ghana during the Young African Innovate Program in Ghana.

➤ *Study Participants*

A total of 731 innovators participated in the study. These innovators were purposively selected from the four regions (that is, Ashanti, Bono, Bono East and Ahafo) of Ghana using the scouting model of the top-down and bottom-up approaches (Adusei-Nsowah et al., 2025). The top-down approach is where participants are selected through workshops with the various district assemblies in the selected four regions of Ghana. The workshops are organized by PHG Foundation and various district assemblies about the grassroots innovation scouting project. The participants for the workshop are women group, disability group, community information centre representation, community radio representation, Zongo community representation, artisans, and the core leadership of the district assembly (that is, the District Chief Executive, Presiding Member, the Administrator, Planning Officer, Social Welfare and Community Development Officer, Agriculture officers). The participants were informed of their participation in this study (see Table 1 for details).

The second approach is the bottom-up where members who are not invited by the district assembly for the workshop in the community such as the chief, community-based groups and youth groups are invited to community durbar to explain the aims and purposes of the Young African Innovate (YAI) program to the people at the grassroots level. The selection of the participants was from rural communities in the four selected regions of Ghana. The selection of Ashanti, Bono, Bono-East and Ahafo regions of Ghana was part of the pilot study for this program. The program took place in the 71 districts/municipalities across the four regions as follows: Ashanti (42 districts), Bono (12 districts), Bono-East (11 districts) and Ahafo (6 districts). The scouts contacted the participants personally and explained the aims and objectives of the YAI program to the participants, and consented to take part, and it was voluntary. These participants were the first piloted study of the Young African Innovates program after which it was rolled to other 12 regions in Ghana.

➤ *Instrument*

The questionnaire was the instruments for the data collection. The questionnaire was developed by expert from UNDP, who are the organizers of this program with sub-partners such as PHG Foundation, National Entrepreneurship Innovation Program, Ministry of Education and Fastnetlink. The questionnaire which was made up of 22 items of which 17 were open-ended and 5 closed ended questions was designed in two parts. Part A was on the demographic information of individual participant such as name, age, gender, disability status, educational level, employment status, region of location, district and the locality type (that is Urban, peri-urban and rural).

The part B was developed based on the purpose and the aims of the program of UNDP and the Young African Innovate (YAI). The part B of the questionnaire was made up of 11 items with emphasis on challenges the solution is addressing, personal experience of the challenges, causes of the challenge, people experiencing the challenge, the solution to the challenge, level of the solution, expectation, time availability for training, participation in similar event and how did you the program. Based on the atypical nature of the people, the questionnaires were explained to the participant in their local languages and were later translated to English by the solution scouts volunteers for this study. The Cronbach's alpha to check the internal consistency of the instruments (DeVellis, 2012), shows a high correlations for reliability of 0.71.

➤ *Ethical Considerations*

The wider study from which this paper is drawn received ethical approval from the United Nations Development Program (UNDP) and the selected Districts/Municipals Assemblies in the four regions before the data collection. This study forms part of a larger program established in Ghana and Nigeria as a result of partnership between the United Nations Development Program (UNDP) and the MasterCard Foundation with the purpose of empowering young people, especially the margined and overlooked to address developmental challenges in their communities and countries at large. The program took place in the 71 districts/municipals across the four regions as follow: Ashanti (42 districts), Bono (12 districts), Bono East (11 districts) and Ahafo (6 districts). The scouts contacted the participants personally and explained the aims and objectives of the YAI program to the participant and consented to take part and it was voluntarily.

IV. DATA ANALYSIS

The data were entered and analysed using the Statistical Package for the Social Sciences (SPSS), version 27. Research Question 1 was answered by using frequency and percentages to determine the demographics such as age, gender, educational level and locality of innovators identified during the grassroots innovation scouting approach in Ghana. The research question 2 was also answered by using frequency and percentages to determine the various sectors of innovations identified during the grassroots scouting in Ghana. Finally, for research question 3, characteristic of the grassroots innovators with data normally distributed because of the large sample size (Field, 2013).

V. RESULTS

➤ *Research Question 1:*

What are the demographics characteristics of the innovators identified during the grassroots innovation scouting in Ghana?

The study findings indicated that the following demographics characteristics of the innovators scouted during the grassroots innovations in Ghana. First, for gender, the study

revealed that 63.1 % of the innovators are males and 36.9 % are females. This implied that there were more males than females. In terms of age, 59.4% of the innovators identified are between the ages of 18-35 years, 29.9 % are above 35 years and 12.6 % are below 18 years. This indicated that the innovators identified are mostly youth. For education level, 41.7 % of the innovators have Junior high school education, 37.1 % have tertiary education, 14.8 % have tertiary education and 6.4 % have no formal education. For locality, the study indicated that a large number of innovators are from the rural areas with few innovators identified from the peri-urban and urban centres of

Ghana. These finding aligns with previous study of Gupta et al. (2013) where majority of the grassroots innovators suffer from poverty and unemployment and knowledge is acquired through local communities to enhance the livelihood of the people within the communities. However, the finding is contrary to previous study of Sharma (2022) where the demographic characteristics of the grassroots innovators showed that majority of innovators in India are above 50 years of age (64.6%) with 99% male and 83 % located in rural parts of the country who are pre-graduate (see Table 1 for details).

Table 1 The Demographics Profile of the Grassroots Innovators from the Four Regions of Ghana.

Items	Frequency (f)	Percentage (%)
Gender		
Male	461	63.1
Female	270	36.9
Total	731	100
Age in Years		
Below 18 years	93	12.6
10- 35 years	439	59.4
Above 35 Years	199	29.9
Total	731	100
Educational Level		
No Formal Education	47	6.4
JHS	305	41.7
SHS/TVET	271	37.1
Tertiary	108	14.8
Total	731	100
Locality Type		
Urban	87	11.9
Peri-Urban	194	26.5
Rural	450	61.6
Total	731	100

Source: Field Survey, 2024

➤ Research Question 2

The study findings revealed 16 sectors of innovations of agro-processing; robotics and IoT education technology; artistic skills for designing, recycling and communication; electronic and machinery; agro-mechanization; plastics recycling and ecological wears; transport/automobile; agro-organic fertilizer and weedicides; nutrition and fortified meals; women ad PwD social skills support and Training; renewable and solar–energy solution; health and environment; digital platforms and learning project; PwD mobility assistive wears, guide and learning platform; alternate recycling plastics and biofuel, and health technology.. In addition, the study indicated that the agro-processing sector has the highest number of innovations followed by robotics and Internet of Things Education Technology innovations. However, the lowest number of innovations was from the alternate recycling plastics and bio-fuels and health technology innovations (see Table 2 for details).

Table 2: Showing the 731 Innovators and 16 Sectors of Innovation

Sector of Innovations	Frequency	Percentage
Agro-processing Innovation	218	29.80
Robotics and IoT EdTech Innovation	59	8.10
Artistic Skills for designing recycling and communication Innovation	57	7.80
Electronic and Machines (Home appliances, electric energy-generated gadgets	55	7.50
Agro Mechanization Innovation	52	7.10
Plastic Recycling and Ecological Wears Innovation	51	7.00
Transport and Automobile (Cars, drone	41	5.60
Agro-organic fertilizers and Weedicides innovations	37	5.10
Nutrition and Fortified Meals Innovation	31	4.20
Women and PWD Social Skills Support Training	29	4.00
Renewable and Solar-Energy Solutions Innovation	28	3.80
Health and Environmental Innovation	24	3.30
Digital Platforms and Learning Projects	21	2.90
PWD Mobility Assistive Wears, Guide and Learning Platforms Innovation	18	2.50
Alternate Recycling Plastics and Bio Fuels Innovation (Diesel, Petrol and Gas Production)	6	0.80
Health Tech Innovation	4	0.50
Total	731	100

Source: Field Survey, 2024

VI. DISCUSSION

The study findings revealed that large percentage of grassroots innovators in Ghana are from the rural communities. The findings is in line with Singh et al. (2019) study of grassroots technological innovation from different rural section in Indian revealed that grassroots innovators in India are from the rural areas with the aim to promote socio-economic development of grassroots communities by improving the lives of people within the rural areas for sustainable life. Further, the study findings showed more male innovators than female which is in coherence with previous study of Nair et al. (2017) study where evidence from grassroots innovators in India are dominated by male innovators (91%) with formal education and are self-funded. However, the study findings is contrary to Ghadimi et al. (2023) study of grassroots innovations and innovators, the case of Iran indicated that majority of Iranian grassroots innovators (67%) possess a higher educational background and are involved in high-skill occupations unlike Ghanaian innovators with low education level. In terms of female representation in the grassroots innovations, the study findings indicated that 36 % of the Ghanaian innovators are females higher than Ghandimi et al. (2023) study where it was indicated that grassroots innovators in Indian are made up of 15% of females.

The study findings revealed 16 sectors of innovations as agro-processing; robotics and IoT education Technology; artistic skills for designing, recycling and communication; electronic and machinery; agro-mechanization; plastics recycling and ecological wears; transport/automobile; agro-organic fertilizer and weedicides; nutrition and fortified meals; women ad PwD social skills support and Training; renewable and solar-energy solution; health and environment; digital

platforms and learning project; PwD mobility assistive wears, guide and learning platform; alternate recycling plastics and biofuel, and health technology. The finding is similar to previous study of Ghadimi et al. (2023) grassroots innovators in India produced different products in the areas of electricity, textile, physics, transportation, metallurgy and human necessity. However, the study findings is contrary to previous study of Hossain (2018) research of comprehensive studies of 87 articles state of the art into grassroots innovation and the dominants sectors of grassroots innovations show that energy, agriculture, organic food, cohousing and community currency are the sectors of innovation.

The 16 sectors of innovations were categorized as agricultural related innovations, STEM related innovations, health related innovation and Women and PwD empowerment. These are discussed as follow:

➤ *Agricultural Support Related Innovations*

There a number of innovations identified which support the agriculture industry. These innovations are in the area of organic fertilizer by using plants such as neem tree, teak leaves, saw dust, waste cassava leaves and poultry dropping for making local fertilizer for farmers with the community. Other innovations which added value to existing agriculture products in Ghana. For instance, the development of machines which support farming by redesign of tricycle using four tyres to enable easy transporting of food items for farmers from areas which are difficult for food items to be carried to market. Further, innovations in the area of mushroom production using rice husk, saw dust and other local materials to produce mushroom, mushroom drinks and mushroom bread which are beneficial to the heath. This innovation also served as a

recycling place where waste substances were turned into useful products to create employment for people in Ghana.

➤ *Women Person with Disabilities (PWD) Empowerment Innovations*

There were number of innovations identified which were predominantly for male dominant areas without women were penetrated by women. For example, the weaving of kente in Ghana is a predominantly male area without women. However, the innovations identified some women who have penetrated this area by using different tool approach to weave the kente. Most women identified were of social support by training other women in the area.

Moreover, there were innovations identified for PWD's who are doing innovations in their perspective areas. The study identified physically challenged, visually impaired, speech problems and epilepsy that were doing innovations which are not comparable to person without disabilities. Their innovations are substandard which are not comparable to ordinary persons. The PWD innovations identified were to solve their own basic problems. For instance, a physically challenge person designed a car to be used by PWD to solve the problem of mobility and easy movement for their own people. Other PWD's sees themselves as independent and agent of change for negative perceptions people have about PWD's and they see themselves as agent of change.

➤ *Education and STEM Related Innovations*

There are a number of innovations in the technology such as construction of machine spare part, UPS and other alternative solutions in the technology using local materials. There were a number of innovations in the area of robotics industry where robotics kids tool box were assembly by innovators to enhance easy of children in this area. In addition, recycling and circular economy such as plastic rubbers where recycled into fuel and other useful spare parts. For instance, the use of sachet rubber (recycling waste) for sewing school bags, rain coats and dresses, huts for students and other people within the community and sells it to school children within the community and beyond. The design the raincoat for companies and social support created out of picking sachet rubber and training of those picking the rubbers. This has created jobs for women and other PWD's to pick the rubbers as a source of employment. The waste pieces of fabrics are used for making door mats and training centres for female in eco fabrics, the use of waste plastics, scharpene glass bottles for making flower pot for beautification of items, There were also innovations from school children within the ages of 10-16 who were very creative. Most of their creativity was on the use of paper and other materials to do MP3, drawing, excavators, and building designs. These are not innovations but creativity at the younger age and with guidance and coaching, they can develop it better as they grow up. Another innovation is in the area of art where many art designs identified to be creative. The problem with the art design was that it very creative but not innovative. The arts creativity were mentored and coached to use their arts to solve

basic problems in the society since a number of social issues, cultural industry and clothing industry may apply arts in the community. Finally, a number of innovations in the area of renewable energy and solar panels were developed from individuals to support the energy industry in Ghana and also to produce electricity in rural areas where there is no light.

➤ *Health Related Innovations*

There are a number of the innovations identified in the health sector solving problems at the hospitals at the community levels. This includes the production of manual nebulizer for asthmatic patients at the hospital and the community, trolley for emergency child care for effective resuscitation to prevent neonatal death, redesign of color coded maternal and obstetric early warning sign chart and modified new born examination form originally made by mebci program into color codes.

These sectors of innovation identified achieved 8 of the 17 sustainable development goals. These are in the area of poverty (goal 1), zero hunger (goal 2), good health and well- being (goal 3), quality education (goal 4), gender equality (goal 5), decent work and economic growth (goal 8), industry, innovation and infrastructure (goal 9) and reduced inequality (goal 10). Ghana is one of the developing countries which needs development in the area of agriculture, health, Education especially in the area of STEM, women and PWD involvement in the innovation to develop the country by creating employment to eliminate poverty, protect the planet to ensure that by 2030, all people enjoy peace and prosperity (UNDP, 2015).

VII. CONCLUSION AND RECOMMENDATIONS

In summary, the study contributes to the literature on grassroots innovation by examining the demographics characteristics of grassroots innovators in Ghana and their sectors of innovations toward the achievement of sustainable development goals in Ghana using questionnaire for 731 innovators scouted by PHG Foundation from four Regions of Ghana for the Young African Innovates Program in Ghana. The study indicated that atypical people with low education background, youth between the ages of 18-35 from the rural communities of Ghana. The findings revealed that grassroots innovators in Ghana have demographics characteristics low educational level, more males than females, mostly located in the rural areas of Ghana and with low technological solutions developed by individuals with low incomes is different from grassroots innovators in Iran where the majority of grassroots innovators are located in urban areas, have higher educational backgrounds, and are engaged in highly skilled occupations. This evidence is an indication of the importance of exploring the local context when studying innovation. The study therefore provides insights into their characteristics to enable policymakers in Ghana to implement more effective policies to support grassroots innovators as many developing countries have innovation policies at the centre of their national policy frameworks to enhance innovation programs (UNESCO, 2021). For instance, the innovation approach geared towards female

and PWDs involvement is a high potential for nurturing the next generation of female and PWD's innovators in Ghana.

The study further revealed 16 sectors of innovations under the health innovation, education and STEM innovation, agricultural innovation and women and PwD support innovation through the grassroots innovation in Ghana. This called for the need for partners and sub-partners to look at the Young Africa Innovates (YAI) Inclusivity and Atypical success metrics and develop alternate interventions to ensure, they are achieved the grassroots innovators who do not use English language, and cannot write and speak English language and that support in the form of facilitator should use the local language to attract more innovators who fit for the program. Also, there is a need for developing different community sensitive handholding Support and approach to meet innovators with different social inclusivity preference which has nothing to do with their innovation and enterprise development potential. Finally, for the sustainability of the program, there should be more grassroots innovation scouting organizations empowered to offer further local sensitivity and inclusive capacity building activities for the innovators, aside the scouting through their community engagement approaches.

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➤ Conflict of Interest Statement

No potential conflict of interest was reported by the authors.

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