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THE GRASSROOTS INNOVATION SCOUTING: AN INCLUSIVE INNOVATION APPROACH FOR PERSONS WITH DISABILITY

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Abstract:
African countries are far behind their Asian counterparts who gained independence during the same period in terms of development, industrialization and economic growth due to the innovation started by the Asian countries. Innovation has been identified as a potential economic growth and development with new discoveries in developing new products using new ways to increase productivity. In Ghana, persons with disability (PWD) are not actively involved in the innovation program. However, the Young Africa Innovates program has included a large number of PWD innovators with different solutions and challenges using a sequential explanatory approach, where questionnaires were answered by 39 PWDs drawn from the four Regions of Ghana, followed by

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interviews for 15 PWDs. The finding shows a percentage of 12.7 % participation of PWDs in different solution areas of agriculture, technology, manufacturing, processing energy and training. The study identified financial difficulties, further training, product development, and the Food and Drugs Board certification process as major challenges facing the PWD innovators. The study recommended workstations and mentorship support in the communities for PWDs to explore their potential in society.

Keywords: grassroots, innovation, scouting, persons with disabilities

1. Introduction

Innovative solutions are the basis for the development of every nation's economic productivity for rapid growth, for technology and smart cities, health care and telecommunications (Ghadimi *et al.*, 2023; Seyfang & Smith, 2007; Smith *et al.*, 2014). The 2030 Sustainable Development Goals (SDGs) aim to recognize and address issues related to poverty, climate change, environmental degradation, inequality and justice (United Nations, 2015) with innovative solutions as one of the key areas to achieving these goals. Innovative solutions which applied Science, Technology and Innovation (STI) have become the key drivers to accelerating Colombia's energy transition and for Colombia meeting its 2050 carbon reduction goals by Ernesto José Gutierrez de Piñeres Digital, Vice President, Ecopetrol Science (World Intellectual Property Organisation, 2022, p.14). In addition, according to Mustafa Gültepe, President, Turkish Exporters' Assembly, said "*the recent advances in future technologies hold enormous potential for sustainable development and productivity growth*" (WIPO, 2022, p.14). It is for this reason that innovation brings new discoveries in developing new products, using new ways of doing business, attaining reputation, responding to pressures from other firms in the market, responding to government regulations and finding solutions to community problems.

According to the United Nations Environment Programme Report (2018), Africa is the youngest continent with an alarming youth unemployment rate. The report observes that Africa needs to create at least one million jobs every month to balance the scales. In addition, about 60 % of the continent's population is below the age of twenty-five, which contrasts with a mere 27 % of Europeans in the same age bracket. Although notable strides have been made towards access to clean water in Africa, and Sub-Saharan Africa in particular, still lags behind in comparison to other regions of the world (Economic Report on Africa, 2013; World Bank, 2016). Africa is the second largest continent in the world, which accounts for 20 % of the world's population (UN-DESA 2019a, 2019b) with enormous human and natural resources, but Africa remains poor because of its inability to tap into these resources and make use of it (Abiodun, 2023).

This is due to the lack of innovation and creativity among African individuals and organizations at all levels, and the lack of innovation among African universities and the communities to raise a generation of leaders who can compete and perform locally and

internationally (Mayfield & Mayfield, 2008). In addition, Ball Swain and Yaung-Wallentin's (2020) study on quantifying and prioritizing the sustainable development goals and their impact on sustainable development for developed and developing countries shows that developing countries need to focus on the economic factors as the most significant impact on sustainable development. This is because it is difficult for most of the young people in these countries to achieve a basic standard of living. The study also revealed a large number of developing countries struggling with poverty and limited opportunities to a decent life for the people. The study recommended that developing countries focus on sustainable development goals on basic essential needs to help people achieve the realization of living a healthy life. The study further recommended policies on social, economic and environmental issues to achieve sustainable development for the people in the country.

There are about 1 billion people living with some disability (World Bank, 2021), and the highest number of these people lives in developing countries (Hannass-Hancock *et al.*, 2017). The World Health Organisation estimated that about 80% of Persons With Disabilities (PWDs) live in developing countries. It is estimated that 8% of Ghana's population are persons with disabilities (Ghana Statistical Service, 2021) and these are the minority group in the society who experiences unfavorable condition of service such as education, health care, employment, finance, and innovations, inaccessible physical structures, transportation, information as well as inadequate social security, which impede their inclusion and effective participation in mainstream society (Badu *et al.*, 2016; Braun & Naami, 2019; Naami, 2019; World Bank, 2021). In Ghana, there are a number of legislations and policies which directly address disability issues in Ghana such as Persons with Disability Act (Act 715) which was passed in 2006, the Convention on the Rights of Persons with Disabilities (CRPD), which Ghana ratified in 2012, and the existence of the allocation of 3% of the District Assembly Common Fund (DACF) to PWDs in Ghana and other social protection programs such as the Livelihood Empowerment Against Poverty (LEAP), the digital innovation initiative introduced in Ghana by the German government in partnership with the Bank of Ghana, Ministry of Finance, National Insurance Commission and Ghana Federation of Disability Organizations to provide innovative digital solutions for the financial inclusion of persons with disabilities (Digital Times Africa, 2022). However, these policies do not meet the needs of PWDs (Opoku *et al.*, 2019), resulting in families struggling to support their members with disabilities (Agyire-Tettey *et al.*, 2019) since the support is mostly inadequate and cannot be relied upon for a sustainable livelihood (Opoku *et al.*, 2015). In addition, PWDs, whether in developed or developing countries, have limited access to financial services, including traditional and alternative banking, online payment services and financial transactions, as well as mobile banking (Yeo & Moore, 2003). 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, such as PWDs, are not left behind (United Nations, 2018).

In Ghana, disability is "*both a human rights concern and a developmental issue due to its strong links to exclusion, discrimination, and poverty*" (Asuman *et al.*, 2021, p. 633). The inclusion of PWDs in all aspects of life in Ghana continues to be challenging, especially due to the negative perceptions and attitudes directed towards them, which are typically rooted in Ghanaian socio-cultural beliefs, traditions and practices (Howard & Rhule, 2021; Kassah, 2008; Mills, 2018; Naami, 2015). For example, PWDs in Ghana have consequences on their socio-economic and financial well-being, which hinder their right to education and employment as compared to their counterparts without disabilities (Naami, 2015; WHO, 2011). Several studies have highlighted the high rate of unemployment among PWDs, due to society's unpreparedness to invest in them (Kassah, 2008; Naami *et al.*, 2012). For example, a study by Asuman *et al.* (2021) in Ghana affirms that there are extra costs associated with having a disability, which could make households with persons with disabilities more vulnerable to poverty. This was based on the standard of living approach, where Asuman *et al.* (2021) estimated an additional cost to households with a person with disability to be 26% of annual household consumption expenditures, which is likely to increase poverty among households with a person with disability.

Further, research by Naami *et al.* (2023) on financial capability and asset building for persons with disabilities, the role of social workers indicated that improving the financial stability and security of PWDs contributes to no poverty (SDG 1) to support "*Leave No One Behind*". It also support the inclusion and asset building marginalized populations (United Nations, 2018) such as PWDs to achieve zero hunger (SDG 2), good health and well-being (SDG 3) and means to afford basic needs such as food, health care services, lived healthy lives, quality education (SDG 4), gender equality (SDG 5), decent work and economic growth (SDG 8) and reduced inequalities (SDG 10) when the financial well-being becomes one of the prioritized programs for PWDs.

One of such programs to empower PWDs in Ghana is the Young Africa Innovates (YAI), aims to promote inclusive innovation among diverse youth populations, especially young people who do not usually benefit from traditional innovation initiative (atypical actors), and marginalized young people including women, persons living in rural communities and PWDs.

Anil Gupta defined grassroots innovation as "*innovations that emerge when existing systems and practices fail to serve the people's needs through systematic experimentation, trial and error, or combining solutions in new ways*" (Gupta, 2013: 19). The Grassroot Innovation Scouting (GrIS) in Ghana engaged the youth living in rural and per-urban communities with much emphasis on women, PWDs and those in marginalized groups. One of the key highlights of this initiative is the commitment to inclusivity and empowerment by actively engaging with atypical individuals, including women, PWDs, and rural communities to ensure their talents are recognized, and their innovations served pathways for economic opportunity, social inclusion, and community resilience to ensure the development of the people involved.

Further study by Naami *et al.* (2023) on financial capability and asset building for PWDs in Ghana recommended three levels of interventions for PWDs, and these are micro–level which targeted the financial education and coaching for PWDs; the mezzo-level is the financial capability building with financial institutions and stakeholders in disability, and the macro-level deals with the awareness of disability and advocacy as intervention at all levels. These are addressed through the development of innovative solutions for PWDs, and addressing the challenges facing PWDs by designing alternative solutions to improve the lives of PWDs, which remains a gap in the literature in Ghana. The study contributes to the literature by identifying the number of PWD innovators in Ghana, the challenges facing these innovators and drawing up sustainable programs for these innovators through the Young African Innovators programme to achieve Sustainable Development Goals 2030. This study addresses the following research questions.

1) What percentage of PWD innovators were scouted through the grassroots innovations scouting approach?
2) What sector of innovations are the PWD innovators' solutions addressing?
3) What challenges are faced by the PWD innovators scouted through the grassroots innovations scouting approach?

2. Methodology

Pragmatists advocate for the use of mixed methods as a practical way to understand human behaviours (Kivunja & Kuyini, 2017). In addition, pragmatism is suggested as a suitable paradigm for the present research because it is problem-centred and is oriented to real-world practice, consistent with the study's research questions (Mackenzie & Knipe, 2006). Moreover, it incorporates both quantitative and qualitative data to enable a better understanding of the social realities, focusing on what works best to answer the research questions (Ary *et al.*, 2019, p.517). Using pragmatism as a research paradigm, the study applied a mix of quantitative and qualitative methods in a sequential way. This study used a sequential explanatory method where quantitative data in the form of questionnaires were collected from 39 PWDs in the four regions of Ghana, followed by an interview with 15 selected PWDs who took part in the first phase. The method for this study involves two phases, which are described as follows:

2.1 Study Participants

A total of 39 PWDs (20 males and 19 females) participated in the study. The PWDs were purposively selected from the four regions (that is, Ashanti, Bono, Bono-East and Ahafo) of Ghana. The researchers contacted the participants for this study personally using the scouting model of the top-down and bottom-up approaches. The top-down approach is where PHG Foundation, one of the sub-partners of the program, in conjunction with the various district assemblies in the selected four regions of Ghana, organized workshops

with the various district assemblies. The district assemblies were informed about the grassroots innovation scouting through the workshop. The participants for the workshop include 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) for the workshop. The participants were informed of their participation in this study.

The second approach was the bottom–up whereby PHG Foundation contacted other group members who were not invited by the district assembly for the workshop. These are opinion leaders in the community, such as the chief, community-based groups, youth groups, etc. In this process, a community durbar was organized with the chiefs within the community to explain the aims and purposes of the Young African Innovate (YAI) program to the people at the grassroots level, and participants were invited.

The selection of the participants was from rural communities in the four selected regions of Ghana. This is because the target for the project was to focus on the atypical communities in these regions. The selection of Ashanti, Bono, Bono-East and Ahafo regions of Ghana was part of the pilot study for this program, after which it was extended to the other 12 regions of Ghana. 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. In all, 731 participants qualified for the YAI program. Out of 731 innovators, 39 innovators were PWD. All 39 questionnaires were for the data analysis. The 39 participants who took part in the study, based on regional distribution, gender, educational level, locality type, disability type, employment status and age, are shown below (see Table 1 for details).

Table 1: Demographic Information of the Participants

Items	Frequency	Percentage
Regional Representation of Innovators		
Ashanti	20	51.3
Bono-East	10	25.6
Bono	5	12.8
Ahafo	4	10.3
Total	**39**	**100**
Gender		
Male	20	51.3
Female	19	48.7
Total	**39**	**100**
Age in Years		
Below 18 years	1	2.6
10- 35 years	27	69.2
Above 35 Years	11	28.2

Total	**39**	**100**
Educational Level		
No Formal Education	9	23.1
JHS	16	41.0
SHS/TVET	14	35.9
Tertiary	0	0
Total	**39**	**100**
Locality Type		
Urban	24	61.5
Peri-Urban	10	25.6
Rural	5	12.8
Total	**39**	**100**
Disability Type		
Physical	24	61.5
Visual	7	17.9
Hearing	2	5.1
Multiple disabilities	6	15.4
Total	**39**	**100**
Employment Status		
Unemployed	4	10.3
Self-employed	35	89.7
Total	**39**	**100**

2.2 Instrument

The instrument for the data collection was developed by an expert from UNDP, who are the organisers of the program with sub-partners such as PHG Foundation, National Entrepreneurship Innovation Programme, Ministry of Education and Fastnetlink. The instrument was in two parts. Part A was on the demographic information of individual participants 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 second part was developed based on the purpose and the aims of the program of UNDP and the YAI. This section is made up of both open and closed ended questions of 11 items on challenges the solution is addressing, personal experience of the challenges, causes of the challenges, people experiencing the challenges, the solution to the challenges, level of the solution, expectation, time availability for training, participation in similar event and how did you hear about the program. In all, the questionnaire was made up of 22 items of both open and closed-ended questions.

Based on the atypical nature of the people, the questionnaires were explained to the participants in their local languages and were later translated into English by the scouts for this study. The Cronbach's alpha to check the internal consistency of the instruments (DeVellis, 2012), shows high correlations for reliability of 0.81.

For the interview, the PHG Foundation scouts explained the objectives of the study to the PWDs. For fair representation of the different category of PWD's, 8 physical challenge, 3 visually impaired, 2 hearing impaired and 2 multiple impaired were selected.

In all, the 15 PWDs were invited by the PHG Foundation scout and voluntarily consented to participate in the study (see Table 2 for details). The interview protocol was then explained to the PWDs prior to the interview. Participation was voluntary, and the participants were informed that they could withdraw from the study at any time without consequences. The participants were assigned a code based on their disability type. For example, physical challenge was coded as PC, Visually Impaired was also coded as VI, hearing impaired as HI and multiple disability as MD. This implied that a physical challenge to be interviewed first was coded as PC-1, with visually impaired to be interviewed first was VI-1, hearing impaired interviewed first was also coded as HI-1, and that of multiple disabilities interviewed first as MD-1 and so on. The interviews were conducted in the local language (that is, Twi) and were later interpreted into English language. The interview was conducted from March 2024 to June 2024 by the PHG Foundation scouts. The duration of the interviews ranged from 20 minutes to 35 minutes, and the total duration for the interview was 350 minutes (6 hours and 50 minutes).

The PHG Foundation designed one set of semi-structured interview questions to reflect the key participant groups, which captured the diverse views, challenges and expectations of the program. The interview guide was viewed by consultants of the grassroots innovation scouting project, and their comments were added and included in the study. The interview questions were organised in two areas: the background of the participants, the challenges and expectations of the PWDs concerning the Grassroots innovation scouting. The instrument was made up of open-ended questions to enable the research team to ask follow-up questions for clarity and rich data for analysis. The interviews were the audio-recorded and were transcribed verbatim by the PHG Foundation scout. In order to ensure the accuracy of transcription, other consultants were allowed to transcribe the recorded data for comparison. Transcripts from the three translations were compared to ensure that nothing was missing during the transcription. The transcribed interviews were sent back to the participants via WhatsApp for their views on the key ideas emerging from the interviews.

2.2.1 Ethical Considerations

The wider study from which this paper is drawn received ethical approval from the UNDP and the selected Districts/Municipal 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 a partnership between the UNDP) and the MasterCard Foundation with the purpose of empowering young people, especially the marginalised and overlooked, to address developmental challenges in their communities and countries at large.

2.3 Data Analysis

The data were entered and analysed using the Statistical Package for the Social Sciences (SPSS), version 27, using a pie chart and percentages. Research Question 1 was analysed using a pie chart and percentages to find out the percentages of PWD innovators scouted

by the PHG foundation, with data normally distributed because of the large sample size (Field, 2013). Research Question 2 was analysed using a pie chart and percentages to determine the sector of innovation PWDs' solution addressing.

In addition, Research Question 3, all interviews were conducted and recorded in English and later transcribed, coded, and analyzed inductively for patterns, themes, and relationships. All the interview recordings were transcribed into a Microsoft Word document. Subsequently, a line-by-line examination of each transcribed information for the creation of quotations, emergence of categories, underlying coding, selective codes, and development of the themes. In achieving this, a three-step approach was implemented. First, a constant engagement with data comparison aided in the development of axial and selective codes. A proliferation in the initial codes after analyzing the first six transcripts was witnessed. Therefore, attention was focused on more abstract coding following the guiding principles of Charmaz (2006). This aided in reducing the initial codes significantly.

Second, axial codes were developed. Here, the data was reorganized for an examination of linkages in the initial codes in order to categorize similar codes. This was conducted with the recourse to Gioia *et al.* (2012), a coding technique involving context, interactional strategies, conditions, and consequences. Typically, the axial coding helped in illuminating the connection and interactions between the categories, which led to the identification and establishment of larger categories that were used to describe the broader themes that emerged from the data. The latter phase of the data analysis constituted selective coding.

Selective coding comprises establishing central themes relative to the axial codes. In establishing the selective codes, the same strategy for the development of the axial codes was adopted. To this end, the selective codes represent the overall objective of the study and form the basis for our theoretical framework. Moreover, to establish a chronological recounting in the study, personal notes were kept throughout the data analysis stage. This documentation further aided in the transparent interpretation of the data. All transcribed data was initially coded manually and structured under three themes of financial difficulties, further training and development and Food and Drugs Board process.

Table 2: Profile of the interviewees

SN	Interviewee Code	Disability Type	Gender	Region	Sector of Innovation
1	PC-1	Physical Challenge	Female	Ashanti	Processing
2	PC-2	Physical Challenge	Female	Ashanti	Processing
3	PC-3	Physical Challenge	Female	Bono	Manufacturing
4	PC-4	Physical Challenge	Male	Bono	Manufacturing
5	PC-5	Physical Challenge	Female	Bono-East	Energy
6	PC-6	Physical Challenge	Male	Bono-East	Manufacturing
7	PC-7	Physical Challenge	Male	Ahafo	Processing
8	PC-8	Physical Challenge	Male	Ashanti	Agriculture
9	VI-1	Visually Impaired	Male	Ahafo	Agriculture

10	VI-2	Visually Impaired	Male	Bono	Processing
11	VI-3	Visually Impaired	Male	Ashanti	Energy
12	HI-1	Hearing Impaired	Female	Ashanti	Manufacturing
13	HI-2	Hearing Impaired	Male	Ashanti	Energy
14	MD-1	Multiple disability	Male	Ashanti	Agriculture
15	MD-2	Multiple Disability	Female	Bono-East	Training

3. Results

3.1 Phase 1

The summary of the demographic information obtained from the PWDs shows that out of the 39, 20 are from Ashanti (representing 51.3%), 10 from Bono East (representing 25.6%), 5 from Bono (representing 12.8%) and 4 from Ahafo (representing 10.3%). There 20 males (representing 51.3% of the total respondents) as compared to 19 females (representing 48.7% of the total respondents). Concerning the nature of the disability type, 24 were physically challenge, (representing 61.5%) 7 visually impaired (representing 17.9%), 6 multiple disabilities ((representing 15.4 %) and 2 hearing impairment (representing 5.1 %). On age, 27 PWD's are between the ages of 18-35 years (69. 2%), 11 are above 35 years (representing 28.2 %) and 1 PWD is below 18 years (representing 2.6%). In terms of academic qualification, 16 PWD's have Junior High School certificate (representing 41%), 14 PWD's have Senior High School Certificate (representing 35.9%) and 9 have no formal education (representing 23.1% of the total respondents. On employment status, 35 PWD's were self-employed (representing 89.7% of the total respondents and 4 were unemployed (representing 10.3% of the total respondents) (see Table 1).

Research Question 1: What percentage of PWD's innovators was scouted by PHG Foundation for the grassroots innovations scouting program?

This was answered by determining the total number of innovators who were identified as PWD in relation to the total number of innovators scouted by the PHG Foundation. In all, 39 PWD's innovators were scouted by PHG Foundation out of the 731 innovators scouted across the four regions. This percentage of innovators identified as PWD was 5.3 % of the total innovators scouted (See Table 3 for details).

Table 3: Showing the percentage of PWD's innovators scouted

Innovators Identified	**No. of Innovators**	**Percentages**
PWD Innovators	39	5.3
Non–PWD Innovators	692	94.7
Total	**731**	**100**

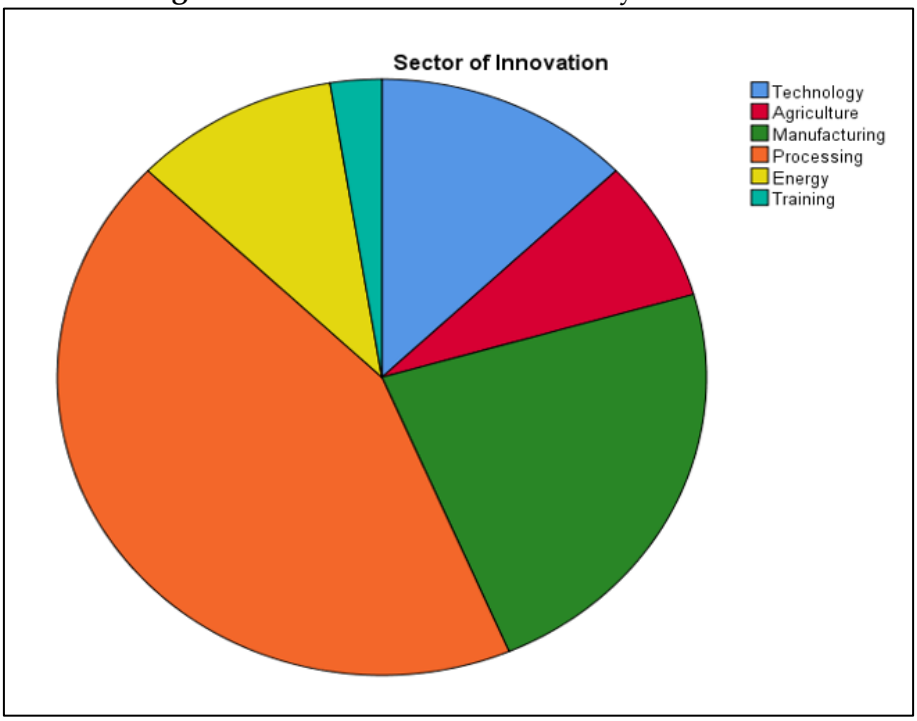
Research Question 2: What sector of innovations are the PWD innovators' solutions addressing? This was answered by determining the kind of innovations produced by the PWDs and the area in which their solutions were addressing, based on the Sustainable

Development Goals. In all, there were six sectors of innovation that the PWD innovations addressed. These are processing, manufacturing, energy, agriculture, technology and training (see Table 4).

Table 4: The sector of innovation by PWDs

Sector of Innovation	Frequency	Percentage
Processing	17	43.6
Manufacturing	9	23.1
Technology	5	12.8
Energy	4	10.3
Agriculture	3	7.7
Training	1	2.6
Total	**39**	**100**

Figure 1: The sectors of innovation by the PWDs



Research Question 3: What challenges do the PWD innovators face, as scouted by the PHG Foundation?

The finding from the participants shows that financial support, further training and food and drug board registration were the major challenges facing the PWD innovators scouted. These challenges are discussed as follows:

On the financial support, the PWD's innovators were of the view that they need financial support in terms of money to buy enough materials for large production of their products and hire additional people to support them. Two participants were of the view that they need financial support to expand the business, relocate to new areas and buy a

new plot for more production and also to relocate to a different place to produce more of the products. Others also need financial support for the various registration processes, such as business registration and Food and Drugs Board (FDA) processes (Participant 5 and Participant 7).

On further training and development, ten of the PWDs were of the view that they need training to promote the products and expansion of the shops and also to train more people, especially PWDs, in this area. They also need training through mentoring and coaching to improve their products, and hands-on practical training on the job. A participant suggested that they need training to produce more of the products and to increase production for market sustainability (Participant 8).

On the FDA registration, all fifteen participants were of the view that the FDA registration process was a challenge to their innovation production. The participants explained that they find it difficult to get access to information on the registration process for their products. A participant narrated the storyline as follows:

> *I applied for the registration of my product at the Food and Drugs Authority office. But upon payment of the process, I found out that their office was on the top floor, which was difficult for me as a person with physical challenges to continue the process* (Participant 1)

Another participant explained that:

> *"…the process involved in the registration is tedious and requires a huge amount of money, which is even more than my capital for production."* (Participant 13)

4. Discussion

The finding shows that there is a low percentage of PWDs' involvement in the innovation projects in Ghana. This is in coherence with the previous research of Uromi and Mazagwa (2015), where PWDs do not participate in the innovation project. However, this finding shows that there are high comparative numbers of PWD Innovators scouted to be involved in the Young Africa Innovates (YAI) project in Ghana. This suggests that there is reduced inequality of PWDs' involvement in the innovation programs, which is one of the target areas of Sustainable Development Goal 10, which aims at reducing inequality in the innovation programs in the country. Thus, the need for designed programs on innovations for PWDs to explore their creativity to create employment, thereby reducing poverty and unemployment in the country.

The findings of the study show that, the major sectors of innovation of the PWDs are processing, technology, energy, manufacturing, agriculture and training which is contrary to the previous studies 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. Similar studies by Smith (2006) and Longhurst (2017) also show similar findings. However, these are the key sectors for sustainable development (White & Sterling, 2013). Ghana is one of the developing country which needs development in the area of agriculture, energy, processing of agriculture products, manufacturing industries and technology to build the economy of the country to eliminate poverty of the people in the country key target area of the Sustainable Development Goals (SDG's) one, where aimed at having no poverty by the year 2030.

The finding of the study also shows that PWDs find it difficult to access financial support to support their innovative products. This finding is similar to Goodman *et al.* (2017), where traditional banks do not want to serve people with disability-related obstacles, and households with disability have different relationships with banks than those without disability. A study by Lewis (2004) examines the multiple barriers facing women with disability in businesses that wish to obtain microfinance services in Zambia and Zimbabwe. The author notes that women with disabilities are perceived as 'bad risks', and as such are refused loans by banks, micro-lenders and peer-lending groups. This situation makes women with disability financially vulnerable. Further study by Cramm and Finkenflügel (2008) found that people with disabilities are often also excluded from microfinance schemes, even though the purpose of microfinance is to extend small loans and other non-financial services to low-income individuals or those excluded from traditional banking institutions.

5. Conclusion

Engaging Persons With Disabilities (PWDs) in the Grassroots Innovation Scouting (GrIS) project has provided valuable insights, including the need for flexibility in project design, that are crucial for informing future initiatives. PwDs possess an untapped creativity level that solves real-life issues within their communities. However, despite their high creativity, many PWDs lack the necessary support and resources to transform their ideas into sustainable enterprises. This includes access to funding, mentorship, and technical assistance. This section details the key learnings from working with PWDs, highlighting their unique challenges, strengths, and the effective strategies employed to foster their inclusion and support.

PWDs often demonstrate remarkable creativity with unique perspectives and problem-solving skills, leading to innovative solutions that can benefit not only their immediate community but society at large. Their innovations mostly focus on providing solutions to issues faced by the PWD community, and in some cases, the larger community. Many PWDs harbour a general mistrust towards individuals and institutions, often due to past experiences of discrimination or neglect. This mistrust can hinder their willingness to engage with new initiatives or support systems. Building trust

is essential among PWD's and Non-PWD's stakeholders. It requires consistent, transparent, and respectful engagement. Ensuring that commitments are honored and that PwD's feel heard and valued is critical to fostering trust.

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Conflict of Interest Statement
No potential conflict of interest was reported by the authors.

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Fred Adusei Nsowah (PhD) from the University of Tasmania, Australia, specializing in Mathematics Teachers' Assessment for Learning (AfL) practices to support students' learning, STEM-based knowledge assessment and research in the learning circles focusing on teacher-students learning impact, youth, girls & PWDs employability development and community behaviour learning within the Ghanaian Communities. Fred Adusei Nsowah has 20 years of teaching experience at both Ghana (7 years at the basic school, 10 years at senior high school and 3 years at the University College) and a casual academic staff at the University of Tasmanian, Australia. Fred Adusei Nsowah has worked with PHG Foundation Africa on the Young Africa Innovates Programme funded by MasterCard Foundation and United Nations Development Programme (UNDP), where he scouted and mentored innovators in the rural areas of Ghana for grants to develop their innovations and to create employment with their innovations for the people in their areas. He worked as a Monitoring, Evaluation, Learning, and Behaviour Researcher Lead for PHG Foundation Africa in the four regions of Ghana. He has a number of publications in the area of teachers' assessment for learning practices, STEM education, inclusive education, PWD and grassroots innovation scouting.

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