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Editorial

2020 Open Call for Special Issues: Editor-in-Chief's Note

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Beginning from 2014, the Journal of Advocacy, Research and Education [JARE] has built an image as a promising scientific journal from Ghana. Sticking to our core goal of offering Open Access publishing with free publishing and subscription rights to all our authors and readers respectively, we have attracted both young and experienced researchers worldwide. Though our submission-acceptance rate now stands at 45 %, we have still maintained rigorous peer reviews and free editing offers to all our accepted papers.

To keep growing, the JARE Team will also like to announce its 2020 Open Call for Special Issues. Themes/topics for proposals must denote a scope that is important and critical for issues that affect present global development. This should also be in line with JARE's interest in multidisciplinary approaches.

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Outline for the proposal should include, but not limited to:

1. complete names, affiliations, and addresses [including emails] of the guest editor[s];
2. maximum of 8,500 words [including tables, figures, and references];
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4. 10 - 15 potential reviewers.

All completed proposals should be sent as a single PDF document to the Editor-in-Chief of JARE [[✉ kad@africamail.com](mailto:kad@africamail.com)].

Thank you and hoping to receive your brilliant proposal.



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Articles and Statements

Teaching Children with Albinism in Nigerian Regular Classrooms: An Examination of the Contextual Factors

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Abstract

The visual and dermatological conditions of children with albinism (CWA) demand that special attention is given to them to enable them to cope with their studies and daily living. In spite of the fact that they have equal intellectual abilities with their counterparts, a good number of them perform poorly in school and are likely to drop out of school. This study examined the belief/knowledge of teachers and educational practices adopted in Nigerian public secondary schools for CWA. One hundred and six (106) teachers from 12 secondary schools in Anambra State that teach CWA participated in the study. Major findings showed that regular classrooms were not albinism-friendly with regards to the provision of facilities; a good number of the respondents had faulty beliefs and poor knowledge about albinism, and teachers reported that they adopted albinism-friendly instructional and assessment practices. Teachers encountered a number of challenges in teaching CWA such as inadequate instructional facilities, difficulty getting their classmates to accept them in class and inadequate time to attend to them. There was no significant difference in the hypotheses tested except in the school location and instructional practices of teachers. Based on these, recommendations and limitations of the study were highlighted.

Keywords: Albinism, Assessment Practices, Children, Inclusion, Instructional Practices, Nigeria, Regular Classroom, Teaching.

Introduction

CWA are considered as special needs children, given the fact they have low vision and dermatological conditions that affect their general wellbeing (Ashley, 1992; Lund, 2001). Albinism is often associated with visual problems resulting from nystagmus (involuntary eye movements) and photophobia, squinting and astigmatism which are congenital and lifelong, although not progressive (Lynch, Lund, 2011). Their lack of melanin exposes them to problems that are physiological and socio-psychological in nature (Lund, Gaigher, 2002). At the plane of physiological problems, they are vulnerable to skin cancer and eye problems (Phatoli et al., 2015) while at that of socio-cultural and psychological problems, they are stigmatized, discriminated against, dehumanized, and sometimes maimed (Ikuomola, 2015; Lund, Gaigher, 2002). Although

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some authors have stressed that there is a controversy about whether albinism is a disability or not (Mswela, 2018), it is considered a disability in Africa (Ojedokun, 2018).

Globally, the international community is making efforts to make sure that no child is left behind in accessing quality education (Rieser, 2012). These efforts have led to serious advocacy for all-inclusiveness in the school setting (Walton, 2018). In many developing nations, inclusive education has not been implemented in such a way that children irrespective of race, gender and abilities can benefit maximally from educational programmes (Global Partnership for Education, 2018). Research has shown that in most developing nations, schools are inaccessible for persons with disabilities (Drame, Kamphoff, 2014; Yarfi et al., 2017). Many of them have been excluded from schools because of the perceived difficulties in handling them. Some CWA have reported that in school, they are treated like outcasts, bullied and avoided by their peers (Lund, 2001). This implies that CWA are among persons with disabilities that are neglected and most of the time excluded in schools in Africa (Franklin et al., 2018).

Africa has a high incidence of albinism with estimates of prevalence ranging from one in 5000 to one in 15,000 (Frankline, Lund, 2017; Phatoli et al, 2015) with approximately 6 million persons living with albinism in Nigeria out of which 40% are children (Federal Ministry of Education, 2012). It must be noted that in Africa, statistics on the number of persons living with albinism vary from the report of one body to the other because there are insufficient epidemiological studies documenting persons with albinism (Frankline, Lund, 2017). In Nigeria and Africa as a continent, a number of researches have been conducted on the experiences of CWA (Pooe-Monyemore et al., 2012), and beliefs and stereotypes on albinism (Phatoli, et al, 2015; Bradbury-Jones et al., 2018), psychological challenges and coping strategies of persons with albinism (Nzelwa, 2016), health and education of persons with albinism (Lund, 2001), and violence against and displacement of persons with albinism (Ntetema, Ash, 2014). Nonetheless, there has been a research gap in looking at how CWA are instructed and assessed in the classrooms and the challenges teachers face in classrooms while teaching CWA.

Lynch and Lund (2011) recommended that information about albinism and strategies to improve the education and wellbeing of CWA should be disseminated across Sub-Saharan Africa given the fact that there is a high incidence of albinism, general misconceptions, and insufficient training of teachers in handling such cases. In Nigeria, it appears that there is little research evidence exists on the education of CWA in schools even though Nigeria came up with the first National Policy on Albinism in 2012 (Federal Ministry of Education, FME, 2012). This document tried to specify how CWA should be educated in a regular classroom taking into considerations their unique needs in the learning environment. For proper education of these children, there is a need to investigate what goes on in schools where they are mainstreamed. For example, there are no special schools for them in Nigeria. Rather, they are educated alongside their classmates which is somewhat complicated since inclusive education is yet to be comprehensively adopted in Nigeria. Although research regarding how CWA are taught in regular classes will contribute essentially to knowledge in special needs education, we found no research that examined the instructional and assessment practices of regular classroom teachers for CWA.

The purpose of this study was to examine how students with albinism are taught in regular classes with the view to ascertaining teacher training profiles on albinism, teachers' beliefs/knowledge on albinism, availability of albinism-friendly facilities, instructional and assessment practices of regular teachers and teachers' challenges in teaching them. Specifically, the following research questions were asked: (a) What is the regular teacher training profile on albinism? (b) What albinism-friendly school facilities are provided for CWA? (c) What are the regular teachers' beliefs/knowledge of albinism? (d) What instructional practices are adopted for CWA? (d) What assessment practices do regular teachers adopt for CWA? (e) What challenges do regular teachers encounter in teaching CWA in a regular classroom?

Method

Research Design

The quantitative descriptive survey method was used to collect data from participants. This enabled the researchers to reach out to a representative sample of the teachers involved in teaching in the two Educational Zones in Anambra State.

Setting

This study was conducted in Anambra State. Anambra State is one of the Southeastern states in Nigeria. It was created in 1991 and has 21 Local Government Areas. There are 259 public secondary schools and 129289 secondary school students in Anambra State (Data from Post Primary School Service Commission, Anambra State).

Population and Sample

Participants in this study were 106 regular classroom teachers who have CWA in their classes in public schools in two Education Zones in Anambra state. These Zones are Akwa and Onitsha Education Zones given the fact that they are host to two major cities in Anambra State, including Awka, the state capital, and Onitsha, which is the largest commercial centre in the East of the Niger. Awka Education Zone has 61 public secondary schools with 1494 teachers (193 male, 1301 female) while Onitsha Education Zone has 54 public secondary schools and 1282 teachers (595 male, 1171 female) (Data from Post Primary School Service Commission, Anambra State, 2017/2018 academic session).

Two sampling techniques were used in recruiting participants. First, the researchers adopted the non-probability purposive sampling technique in which only teachers who have CWA in their classes constituted the sample size. These teachers were purposively sampled since those who have directly instructed and handled CWA have experiences of how such children taught in their respective schools. The second sampling technique adopted is the snowball sampling technique which assisted the researchers to contact relevant participants through referrals. Summary of participants' characteristics is depicted in [Table 1](#).

Table 1. Sample Characteristics of Regular Teachers Teaching CWA

Variables	Characteristics	%(n)
Gender	Male	13.2 %(14)
	Female	86.8 %(92)
Marital Status	Married	63.2 %(67)
	Single	24.5 %(26)
	Divorced	4.7 %(5)
	Widowed	7.5 %(8)
Highest qualification	NCE	8.5 %(9)
	B. Ed/BA/B. Sc	73.6 %(78)
	M. Ed/MA/M. Sc	15.1 %(16)
	PhD	0.0 %(0)
	Missing Value	2.8 %(3)
Area of specialization	Arts Education	34.9 %(37)
	Social Science Education	27.4 %(29)
	Science Education	22.6 %(24)
	Business Education	13.2 %(14)
	Missing Value	1.9 %(2)
School location	Urban	67.0 %(71)
	Rural	29.2 %(31)
	Missing Value	3.8 %(4)
Years of Experience	low experience (0-12 yrs)	52.8 %(56)
	Moderate experience (13-21 yrs)	21.7 %(23)
	High experience (22-32 yrs)	14.2 %(15)
	Missing value	11.3 %(12)

Procedure

In line with the Helsinki Declaration and guidelines, approval for the conduct of the research was obtained from the Faculty of Health Science and Technology, College of Health Sciences Ethical Review Committee. The reference number of the approval letter is

ERC/FHST/NAU/2018/2077. More so, the researchers obtained informed consent from the respondents, and an assurance of the confidentiality of the information obtained was given to them. It was explained to them that the exercise was only for research purposes.

Practically, the lack of records on CWA and the schools where they could be found made it a little difficult for the researchers. The researchers visited public secondary schools and asked the principals if they had CWA in their schools. When they agreed, the list of teachers that teach them was released to the researchers and the questionnaire was distributed to them. To facilitate this approach the researchers had to employ the use of social media (WhatsApp). The researchers sent a text message to the English language teachers' WhatsApp group urging them to indicate schools that have CWA. This WhatsApp group was used because the English Language is a compulsory subject in secondary schools in Nigeria and each secondary school was likely to have a representative in the group.

Twelve secondary schools were identified in all through this referral and visits to schools. The copies of the questionnaire were distributed to the teachers in their schools. One hundred and twenty copies of the questionnaire were distributed. During the screening of the returned questionnaire, the researchers observed that 14 copies were not properly filled in. Thus, these were not included in the analysis.

Instrument

The instrument used for data collection was a researcher-developed questionnaire based on an extensive literature review on albinism studies around the globe. Items generated were later validated and suggestions given were taken into considerations in drafting the final copy of the questionnaire. The questionnaire was tagged 'practices in integrating CWA in classroom questionnaire' (PICACQ). It consisted of two sections. The first section consisted of the items ascertaining the biographic data of the respondents and instructions on how to respond to the questionnaire. It also contained the training profiles on teaching CWA of the teachers. The second section consisted of five sub-sections which have to do with the albinism-friendly school facilities provided for CWA (12 items); teacher beliefs/knowledge about albinism/CWA (15 items); instructional practices for students with albinism (11 items); assessment practices for students with albinism (11 items); and challenges teachers encounter in teaching CWA in regular classroom (9 items) respectively. The reliability coefficients of the instrument were ascertained. Cronbach's Alpha was used for sub-sections (1, 3, 4, 5) at interval scales. These clusters yielded high-reliability coefficients of 0.92, 0.80, 0.90 and 0.78 respectively. The reliability coefficient of cluster two was determined using Kuder-Richardson 20 statistic because the items were scored dichotomously and it yielded a high coefficient of 0.98.

Data Analysis

The data collected were analyzed using IBM SPSS version 22 (IBM Corp, 2013). Before the data were analyzed, the researchers went through the filled-in questionnaire to discard those that were not properly filled. Also, questionnaires that had conflicting responses were discarded. For example, if a respondent said he/she had received no training on how to handle CWA and went on to fill spaces provided for avenues teachers received training on how to handle CWA, such respondents were not included in the analysis.

Frequencies, percentages, means, and standard deviations were used in answering the research questions while *t*-test statistic and Analysis of Variance (ANOVA) were used to test the hypotheses. In order to take decisions in mean responses, real limits were adopted: strongly disagreed (1-1.44); disagree (1.45-2.44); agreed (2.45-3.44); strongly agreed (3.45-4.00). These were abbreviated respectively as SD, D, A, SA.

Results

Table 2 showed that the majority of regular teachers have not received any training on how to handle CWA in regular classes. Only 34 % of regular teachers have received training on teaching CWA. Government organized workshops constituted the most rated platform used in training teachers on how to teach CWA followed by the pre-service training and workshops organized by colleagues in their schools. The least avenue for training was online/personal readings.

Table 2. Training Profile of Regular Teachers Teaching CWA

Variables		%(n)
Received Training on Albinism	Yes	34.0 %(36)
	No	62.3 %(66)
	Missing Values	3.8 %(4)
Training Platform	Government Organized Workshop	16.0 %(17)
	NGO Organized Workshop	8.5 %(9)
	Workshops organized in school by colleagues	9.4 %(10)
	Online workshop/personal readings	5.7 %(6)
	Pre-service Training (Colleges of Education/universities)	10.4 %(11)

Table 3 showed that approximately 70 % of teachers responded that the listed facilities were never provided for CWA. Only about 20 % of the regular teachers said these facilities were inadequately provided while less than 10 % of the teachers responded that those facilities were adequately provided.

Table 3. Teachers' Percentage Responses on Albinism-friendly School Facilities Provided for CWA

S/N	These facilities were provided for CWA in my school:	Never provided	Inadequately provided	Adequately Provided
1	Enlarged text prints (textbooks)	63.2 %	22.6 %	13.2 %
2	Audio tapes/Recorders	69.8 %	21.7 %	8.5 %
3	Magnifiers (stand or hand-held magnifiers)	74.5 %	13.2 %	7.5 %
4	Bookstands to allow the student to bring his/her reading material closer to their eyes	73.6 %	16.0 %	8.5 %
5	Adaptive computer software (such as text to speech software)	71.7 %	21.7 %	5.7 %
6	Improvised bookstands in the form of putting a large book under student's reading material	66.0 %	29.2 %	4.7 %
7	Paper which has extra-dark lines	68.9 %	21.7 %	8.5 %
8	Note books with large space for writing	64.2 %	25.5 %	9.4 %
9	Acetate sheets or sheets of coloured film or plastic	74.5 %	19.8 %	5.7 %
10	Visors or eye shields	68.9 %	27.4 %	2.8 %
11	Ball caps for outdoor games	69.8 %	24.5 %	4.7 %
12	Yellow balls and coloured bases for ball games	76.4 %	17.0 %	6.6 %

***Incomplete percentage values result from missing values

Table 4 showed the belief/knowledge of regular teachers on albinism/CWA. Regular teachers had poor/shallow knowledge/belief on 8 items out of the fifteen items listed above. This was more pronounced when it comes to the workings of the sight of CWA. More than 60 % of regular teachers had poor knowledge of the workings of the sight of CWA. They have good knowledge of the genetic basis of the problem. Teachers also believed that CWA can learn in regular classrooms.

Table 4. Regular Teachers' Beliefs/Knowledge on Albinism/CWA

S/N	I have the following beliefs about albinism/CWA:	True	False	Don't know	Remarks
1	Their sights get worse as they grow older and they may likely become blind with age	28.3 %	37.7 %	31.1 %	Poor knowledge
2	CWA have a different way of reasoning from the way children without albinism reason.	18.9 %	70.8 %	6.6 %	Good knowledge
3	It is a neurological problem affecting the brain	21.7 %	46.2 %	29.2 %	Poor knowledge
4	Albinism could be contagious	6.6 %	75.7 %	14.2 %	Good knowledge
5	CWA cannot learn in a regular classroom	11.3 %	72.6 %	10.4 %	Good belief
6	CWA have a genetic problem that has to do with colour pigmentation	60.4 %	14.2 %	21.7 %	Good knowledge
7	CWA have normal vision	12.3 %	72.6 %	11.3 %	Good knowledge
8	CWA can learn in regular classrooms even without any form of modifications	50 %	36.8 %	8.5 %	Wrong belief
9	CWA are usually slow learners	35.8 %	50.9 %	10.4 %	Wrong belief
10	Even when adequate intervention is given to CWA, they still achieve little in school	19.8 %	70.8 %	6.6 %	Good belief
11	The needs of CWA are the same	34.9 %	48.1 %	14.6 %	Poor knowledge
12	CWA have no flare for games/sports	25.5 %	47.2 %	20.8 %	Poor knowledge
13	The severity of visual problem of CWA is based on the type of albinism the child has	54.7 %	20.8 %	20.8 %	Good knowledge
14	The involuntary rapid eye movements of some CWA make objects look like they are constantly moving	32.1 %	19.8 %	45.3 %	Poor knowledge
15	CWA find it difficult to understand whether objects are still or moving	25.5 %	32.1 %	38.7 %	Poor knowledge

Table 5 showed evidence of good instructional practices by regular classroom teachers on teaching CWA. All the items had mean scores of more than 2.5 and the standard deviation showed that responses are clustered around the mean.

Table 5. Instructional Practices Regular Teachers Adopted in Teaching Students with Albinism

S/N	I adopted the following instructional practices in handling students with albinism in my class:	Mean	SD	Remark
1	Encouraging CWA to sit at the front of the classroom so that they can see the chalkboard	3.75	0.45	SA
2	Providing large print sheets for CWA	3.07	0.89	SA
3	Writing in bold, clear, letters on the chalkboard	3.47	0.71	SA

4	Making a good contrast between the symbols or letters on the board and the background when teaching CWA in my class	3.19	0.80	SA
5	Reducing glare by making sure light sources come from behind or from the side	2.89	0.83	A
6	Allowing close viewing when teaching CWA	3.44	0.80	SA
7	Encouraging hands-on experience whenever possible	3.14	0.78	SA
8	Making sure that CWA are monitored during my teaching	3.47	0.74	SA
9	Bringing out extra-time to teach CWA	2.85	0.96	A
10	Interfacing with parents of CWA on how they can help them learn	3.08	0.97	SA
11	Allowing them extra-time to copy notes on the chalkboard	3.30	0.82	SA

***SA=strongly agreed; A=agreed

Table 6 showed evidence of good assessment practices since almost all the items with the exception of item 2 had mean ratings of 2.5 and above. Item 1 and 2 had the highest mean scores. Standard deviation showed that responses clustered around mean except in items 5 and 11 which had higher standard deviations than other items. It appears that regular teachers' responses in these items are not similar.

Table 6. Assessment Practices Adopted by Regular Teachers in Teaching CWA

S/N	I adopted the following assessment practices in handling students with albinism in my class:	Mean	SD	Remark
1	Giving them more time during testing	3.38	0.76	SA
2	Making alternative tests for them (e.g., oral test/examination) when there is a significant visual problem	3.12	0.92	SA
3	Allowing them to type rather than write manually if need be	2.46	0.89	A
4	Typing their tests rather allowing them to copy from handwritten material if need be	2.63	0.97	A
5	Giving them visual rest breaks as they write tests	2.77	1.00	A
6	Communicating assessment criteria on time to students with albinism	2.80	0.91	A
7	Informing students with albinism how grades are to be assigned	2.61	0.95	A
8	Providing written or oral feedback to CWA	2.87	0.93	A
9	Incorporating the efforts of students with albinism in the calculation of their grades	2.64	0.87	A
10	Incorporating CWA's classroom behaviors in calculating their grades	2.57	0.90	A
11	Producing their tests in large prints	2.91	1.00	A

***SA=strongly agree; A=agreed

Table 7 showed the challenges regular teachers face in teaching CWA. Items 2, 8 and 9 had the highest mean scores as the challenges teachers face in teaching CWA. This shows that the

greatest challenges teachers have in teaching CWA are instructional and institutional facilities; and inadequate time to attend to their individual needs. Others are difficulty in making their fellow students accept them, inadequate training and difficulty in getting them motivated in class.

Table 7. Challenges Faced by Regular Teachers in Teaching CWA

S/ N	I encountered the following challenges in handling students with albinism in my class:	Mean	SD	Remark
1	Difficulty in making their fellow students accept them	2.76	0.91	A
2	Inadequate instructional materials in teaching them	3.23	0.74	SA
3	Difficulty in getting them motivated in my class	2.59	0.82	A
4	Difficulty in assessing their performance in class	2.31	0.73	D
5	Difficulty in integrating them in my teaching	2.52	0.85	A
6	Difficulty in finding a suitable strategy to teach them	2.49	0.81	A
7	Inadequate training in handling them in a regular class	2.65	0.79	A
8	Inadequate time to attend to their individual needs	2.89	0.84	A
9	Inadequate albinism-friendly school facilities	2.96	0.94	A

*** SA=strongly agree; A=agree; D=disagree

Table 8 showed that there was no significant difference in the scores for male ($M=35.29$, $SD=4.66$) and female teachers ($M=35.88$, $SD=5.23$) on instructional practices for CWA; $t\text{-cal} < t\text{-crit.}$ ($t\text{-cal} = -.396$, $df = 93$, $\alpha = 0.05$). Therefore the null hypothesis was not rejected. There was no significant difference in the scores for male ($M=29.80$, $SD=6.51$) and female teachers ($M=30.62$, $SD=7.26$) on assessment practices for CWA; $t\text{-cal} < t\text{-crit.}$ ($t\text{-cal} = -.338$, $df = 86$, $\alpha = 0.05$). This hypothesis was not rejected. Significant difference did not occur in the scores for male ($M=26.00$, $SD=3.46$) and female teachers ($M=24.14$, $SD=4.53$) on challenges they faced in teaching CWA; $t\text{-cal} < t\text{-crit.}$ ($t\text{-cal} = 1.456$, $df = 98$, $\alpha = 0.05$). The hypothesis was rejected.

Furthermore, table 8 showed that there was a significant difference in the scores for teachers in the urban area ($M=36.40$, $SD=4.97$) and those in rural areas ($M=34.04$, $SD=5.36$) on the instructional practices for CWA; $t\text{-cal} > t\text{-crit.}$ ($t\text{-cal} = 2.042$, $df = 89$, $\alpha = 0.05$). The hypothesis is therefore rejected. There was no significant difference in the scores of teachers in the urban area ($M=30.75$, $SD=7.10$) and those in the rural area ($M=28.42$, $SD=6.39$) on the assessment practices for CWA; $t\text{-cal} < t\text{-crit.}$ ($t\text{-cal} = 1.399$, $df = 82$, $\alpha = 0.05$). The hypothesis was not rejected. Also, there was no significant difference in the score of teachers in urban areas ($M=24.06$, $SD=4.47$) and those in the rural areas ($M=25.07$, $SD=4.52$) on the challenges they face in teaching CWA; $t\text{-cal} < t\text{-crit.}$ ($t\text{-cal} = -1.016$, $df = 95$, $\alpha = 0.05$). This hypothesis is also not rejected.

Table 8 showed that there was no significant difference in the scores of those who received training on handling CWA ($M=37.24$, $SD=4.58$) and those who did not receive training ($M=35.05$, $SD=5.18$) on the instructional practices for CWA; $t\text{-cal} < t\text{-crit.}$ ($t\text{-cal} = 1.985$, $df = 89$, $\alpha = 0.05$). The hypothesis was not rejected. On assessment practices, table 8 showed that there was no significant difference in the score of teachers who received training ($M= 32.37$, $SD=6.53$) and those who did not receive training ($M=29.44$, $SD=7.37$) on assessment practices of CWA; $t\text{-cal} < t\text{-crit.}$ ($t\text{-cal} = 1.822$, $df = 83$, $\alpha = 0.05$). Also, there was no significant difference in the scores of teachers who received training ($M= 24.09$, $SD=4.34$) and those who did not receive training ($M=24.61$, $SD=4.55$) on challenges they face in handling CWA; $t\text{-cal} < t\text{-crit.}$ ($t\text{-cal} = -.531$, $df = 94$, $\alpha = 0.05$). The hypothesis was not rejected.

Table 8. t-test Table of Mean Differences of Respondents on Instructional and Assessment Practices and Challenges (N=106)

Source		Mean	SD	t	df	Sig	Remark
Gender x instructional practices	Male	35.29	4.66	-.396	93	.693	Not sig
	Female	35.88	5.23				
Gender x assessment practices	Male	29.80	6.51	-.338	86	.736	Not sig
	Female	30.62	7.26				
Gender x challenges	Male	26.00	3.46	1.456	98	.149	Not sig
	Female	24.14	4.53				
School location x instructional practices	Urban	36.40	4.97	2.042	89	.044	Sig
	Rural	34.04	5.36				
School location x assessment practices	Urban	30.75	7.10	1.399	82	.166	Not sig
	Rural	28.42	6.39				
School location x challenges	Urban	24.06	4.47	-1.016	95	.312	Not sig
	Rural	25.07	4.52				
Training received x instructional practices	Yes	37.24	4.85	1.985	89	.050	Not sig
	No	35.05	5.18				
Training received x assessment practices	Yes	32.37	6.53	1.822	83	.072	Not sig
	No	29.44	7.37				
Training received x challenges	Yes	24.09	4.34	-.531	94	.596	Not sig
	No	24.61	4.55				

***Incomplete values result from missing values

***Not sig=Not significant; Sig=Significant

Table 9 showed the analysis of variance. There was no significant mean difference between teachers' qualifications and the instructional, assessment practices adopted by them and the challenges they face in teaching CWA since the p-values are greater than the α level = 0.05.

Table 9. ANOVA Table of Mean Differences of Respondents on Instructional and Assessment Practices and Challenges

Source		Sum of squares	df	Mean Squares	F	P	Remark
Highest Qualification x instructional practices	Between Groups	25.795	2	12.898	.489	.615	Not sig
	Within Groups	2349.118	89	26.395			
Highest Qualification x assessment practices	Between Groups	18.849	2	9.424	.182	.834	Not sig
	Within Groups	4292.639	83	51.719			

Highest Qualification x challenges	Between Groups	65.991	2	32.996	1.703	.188	Not sig
	Within groups	1821.782	94	19.381			
Years of experience x instructional practices	Between Groups	18.976	3	6.325	.234	.872	Not sig
	Within Groups	2458.813	91	27.020			
Years of experience x assessment practices	Between Groups	66.533	3	22.178	.426	.735	Not sig
	Within Groups	4377.421	84	52.112			
Years of experience x challenges	Between Groups	11.931	3	3.977	.198	.898	Not sig
	Within Groups	1932.259	96	20.128			

***Incomplete values result from missing values

***Not sig=Not significant; Sig=Significant

Discussion

This study examined how CWA are educated by regular teachers in public secondary schools in Anambra State, Nigeria. The scope included the facilities that are provided in schools for CWA, teachers' beliefs/knowledge on albinism, instructional and assessment practices of regular teachers in teaching CWA. In addition, the training profiles of the teachers were ascertained showing that only 34 % of the teachers had received some training on how to handle CWA. A good number of them had no training concerning how to handle CWA during their teacher training in colleges of education/universities. Researchers have earlier shown that little content on albinism is included in teacher curriculum in some countries in Africa (Lynch, Lund, 2011). This resulted in teachers lacking rudimentary skills and competences that could help them handle CWA. This study showed that the most available avenue for teachers to get information on albinism in Nigeria is the government organized workshops. This is likely to be a fallout of the recent National Policy on Albinism in Nigeria (FME, 2012).

More so, findings showed that schools were not albinism-friendly going by the required facilities that should be provided for CWA. Responses showed that none of the listed facilities were adequately provided. This will in a way make learning more frustrating for CWA and even the teachers who are handling them. There is a need that enlarged textbooks, book stands, notebooks with large space for writing, magnifiers, etc are provided for CWA to facilitate their learning. Lund (2001) in her earlier study found that over 60% of pupils used in the study perceived that there were no special provisions made for them, which buttresses the findings of this study in this regard. Lynch and Lund (2011) have noted that CWA should be provided with their own text/book even if it is not enough.

Regular teachers had poor/shallow knowledge /belief of some items presented to them. This was more pronounced when it came to the workings of the sight of CWA. More than 60 % of regular teachers had poor knowledge of the workings of the sight of CWA. They have good knowledge of the genetic basis of the problem. This finding confirms other studies carried out in other African countries. Lynch and Lund (2011) found that teachers' lack of understanding about the working of the sight of CWA made them teach CWA Braille believing that as CWA grow older that they may become blind. Regarding the genetic basis of the problem, teachers were found to have an understanding of the cause of the problem (Lynch, Lund, 2011). Also, the study conducted by Msomi (2014) revealed that teachers lack understanding about albinism. Teachers also believed that CWA can learn in regular classrooms.

Findings showed evidence of good instructional practices by regular classroom teachers on teaching CWA. They put up a form of special consideration in teaching CWA in their classes. Teachers encouraged CWA to sit in the front during classes, allowed them extra time to copy notes,

made a good contrast between symbols and letters on the board and the background, etc. when teaching CWA. Lynch and Lund (2011) found teachers in Malawi using effective strategies as found in the present study. This kind of strategy is considered good practices (Lynch, Lund, 2011). Hypotheses tested on gender, teacher qualification, and years of experience in instructional practices of teachers yielded no significant differences. Significant differences emerged in school location and instructional practices in which findings showed that teachers in urban areas are likely to possess better instructional strategies to handle CWA. This could be attributed to the possibility of those in urban areas to have access to more avenues for training like the internet.

Furthermore, the result showed that teachers reported good assessment practices in handling CWA. This included giving them more time during test, making an alternative test for them, giving them visual rest breaks, etc. This is in line with the National Policy on Albinism (FME, 2012) where it was categorically stated that extra 30 minutes should be given CWA during test. Hypotheses tested showed no significant difference even though those who received training reported higher mean assessment practices than those who did not receive any training. It is expected that they should have done much better than those who did not receive training. However, not accounting for significant differences in this direction might have been as a result of shallow content on information on albinism in teacher curriculum (Lynch, Lund, 2011). It could be said that there may be no systematic and conscientious approach in training teachers in assessing CWA. Teachers might have come up with good practices as a result of experience.

Teachers reported that they face some challenges in handling CWA in schools. Such challenges include inadequate facilities in teaching CWA, inadequate time to attend to their individual needs, difficulty in making their peers without albinism accept them, etc. There could be a challenge to teaching them when there is an inadequate provision of facilities in teaching CWA. Because of their visual problem, government and concerned stakeholders should make available appropriate special facilities for them. Also, time could be a problem in regular schools in Nigeria since the student-teacher ratio is high in Nigeria. Classes have been reported to be over-crowded (Fabunmi et al., 2007). Also hypotheses tested in this direction did not show any significant mean difference. However, those who reported that they have received training on albinism reported lower mean scores on challenges than those who did not receive any training even though the difference was not significant.

Conclusion and Limitation

From the findings, it could be concluded that even though there were insufficient albinism-friendly facilities and poor knowledge about albinism among the sampled teachers, teacher-reported practices in assessment and instruction in educating CWA were in line with good practices. Equipping and educating these teachers will enable them to become more consistent and conscientious in educating children with disabilities. It is therefore imperative that training and retraining of teachers on the nitty-gritty of albinism and the best approach teachers that could be adopted to teach CWA be organized.

The study is limited by the fact that the sample size is small and did not cover all the education zones in Anambra State. This sample size is likely to restrict the generalization of the findings to the two zones studied. Furthermore, a mixed research method could have given a more robust insight into the education of these students. Therefore, the researchers suggest that future research in this direction should integrate both qualitative and quantitative designs.

Conflicts of Interest

The authors declare the work has no conflicts of interest.

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Strangers in the Night: A Comparative Study on the Socio-Legal Difficulties of Importing America's Bayh-Dole legislation to South African Universities

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Abstract

In 2008, the South African parliament passed the Intellectual Property Rights (IPR) from Publicly Financed Research and Development Act, which came into effect on 2 August 2010. In doing so, South Africa sought to replicate the apparent success of the United States of America's Bayh-Dole legislation. One of the express objectives of the Bayh-Dole Act is the increase in university-industry collaborations (U-I). Whilst U-I has not been expressly stated as a primary aim of the IPR Act, the legislative history has demonstrated that issues relating to U-I have permeated the political landscape from the inception of the IPR Act. It is therefore relevant – although hitherto unexplored – to consider whether South Africa's IPR Act might have the same supposedly positive effect on U-I experienced by the Bayh-Dole Act. In answering this question, this paper chooses to focus on two factors that may be considered particularly pertinent in light of South Africa's recent socio-legal landscape, namely (a) the lack of substantive patent examinations, and (b) government investment in higher education. To this end, it will be argued that the IPR Act will only serve to have a negative effect on U-I, if any at all.

Keywords: America, Bayh-Dole, Intellectual Property Rights, Patents, Publicly Financed Research and Development Act, South Africa, Universities.

Introduction

In 2008, the South African parliament passed the Intellectual Property Rights (IPR) from Publicly Financed Research and Development Act 2008 (henceforth 'IPR Act'), which came into effect on 2 August 2010 and remains to be the subject of in-depth academic critique. In passing the IPR Act, South Africa sought to replicate the apparent success of the United States of America's Bayh-Dole legislation. One of the express objectives of the Bayh-Dole Act is the increase in university-industry collaborations (henceforth 'U-I'). Whilst this is not an explicit aim of the South African legislation, this paper will ask how the IPR Act may impact U-I and whether it is likely to achieve a similar level of success in this regard as its American counterpart. Assuming the Bayh-Dole Act has increased U-I and in turn the numbers of patents registered by American publicly financed institutions, this paper will argue that such a result is not possible to replicate in the current South African social and legal climate.

In doing so, the paper shall firstly provide background information on the IPR Act and its application to South African publicly funded research institutions, focusing (as the Act itself does) on publicly funded higher education institutions such as universities. Secondly, it will examine the apparent success of the Bayh-Dole Act regarding patenting among publicly financed universities.

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In assuming some degree of success, a sample of the many factors that have played a part therein of the Bayh-Dole Act shall be examined and held up against the South African environment. These will include both legal aspects, namely the differing patent registration frameworks, as well as socio-political considerations, namely the differing culture of higher education investment by government. In concluding, it shall be argued that the current South African socio-legal landscape does not at present provide a rich environment in which legislation like the Bayh-Dole Act can flourish with regards to increasing U-I to a similar degree.

University-industry collaboration

The aims of the Bayh-Dole Act and the IPR Act are generally considered to be the increased commercialisation of research outputs by publicly funded research institutions, with a particular (although by no means limited) focus on patents. That patents are at the heart of the IPR Act can be seen on page 8 of the Department of Science and Technology's IPR from Publicly Funded Research Framework (upon which the IPR Act is based), where express reference is made to America's Bayh-Dole Act and the need to create similar legislation with an aim to increasing patenting by publicly funded research institutions (such as universities):

“Globally many nations have established legislative and/or regulatory frameworks to ensure better practice and returns from IP. This process started with the United States in the mid 80’s [...]. These changes are intended to provide a basis for higher levels of patenting to result from publicly financed research with the attendant potential for commercialisation or regulated public use. Such patents are used as a basis for licensing of the intellectual property, usually to businesses that use the IP to improve products and services, to create new businesses or to secure a basis to reduce costs of IP developed in other jurisdictions in strategic health research programmes for example.”

Furthermore, in defining the scope for such a policy framework, the framework points out on page 9 and 10 that:

“The scope of this policy framework, and the intended legislation is focused on and limited to Intellectual Property, i.e. patents and intellectual property forms that are integrally linked to the patented invention, protecting inventions made through work financed by public research funding. It deals with issues of ownership, benefit-sharing from licensing and use of the patents and intellectual property forms that are integrally linked to the patented invention and accountabilities of different role-players in the system of innovation.” [Not my emphasis]

This paper accepts that the main aims of both pieces of legislation are the increased commercialisation of research outputs by publicly funded research institutions and that this may take many forms (e.g. spin-offs, licensing agreements and so on). One way in which to achieve this aim maybe by encouraging U-I as a means of increasing patents granted solely or in part to publicly financed research institutions. Indeed, this has been an explicit objective of the Bayh-Dole Act, with Congress stating at the outset that the policy and objectives of the Act are to:

“[e]ncourage utilisation of research; to promote collaboration between commercial concerns and non-profit organizations including universities; to enhance the commercialisation and public availability of the inventions; to ensure that the Government obtains sufficient rights in federally supported inventions so as to meet the needs of the Government and protect the public against non-use or unreasonable use of inventions and to minimise the costs of administering policies in this area.” [Emphasis added]

The IPR Act does not make any such express declaration regarding increasing U-I. According to section 2(1):

“The object of this Act is to make provision that intellectual property emanating from publicly financed research and development is identified, protected, utilised and commercialised for the benefit of the people of the Republic, whether it be for a social, economic, military or any other benefit.”

The Act then proceeds to list additional express objects in section 2(2), such as ensuring that small enterprises and Broad-Based Black Economic Empowerment (BBBEE) entities, in particular, have preferential access to opportunities arising from the production of knowledge from publicly financed research and development and the attendant intellectual property. Although not one of

the express objectives of the IPR Act, the potential effect on U-I has clearly been a consideration in the legislative history of the IPR Act. As such, the question of what (if any) impact the IPR Act might have on U-I when compared with its American counterpart provides a solid and hitherto unexplored point of enquiry with regards to the wider implications of the IPR Act (and its potential limitations as applied to developing nations). In tracing said legislative history so as to evidence this common thread, one may go as far back as the original 1996 White Paper on Science and Technology, the objectives of which were stated as follows:

“[This Paper] is based on a view of the future where all South Africans will enjoy an improved and sustainable quality of life, participate in a competitive economy by means of satisfying employment and share in a democratic culture.”

It goes on to state that in order to obtain this vision, the following goal pertinent to the creative use and efficient management of innovation will have to be achieved:

“The establishment of an efficient, well co-ordinated and integrated system of technological and social innovation within which stakeholders can forge collaborative partnerships and interact creatively in order to benefit themselves and the nation at large.”

To this end, the White Paper proposed the creation of an ‘Innovation Fund’ to take the lead among government agencies in encouraging and enabling innovation projects between U-I on a large scale. The proposed Innovation Fund was to have as one of its principal objectives – the promotion of ‘increased networking and cross-sectoral collaboration within South Africa’s national system of innovation’. This is because, as identified within the Paper:

“Frameworks to promote linkages between universities, science, engineering and technology institutions (SETIs) and the private sector are needed with a view to sharing risks, resources and insights with respect to precompetitive research.”

The Innovation Fund established by the White Paper laid the foundational framework for the 2008 IPR Act. This can be evidenced in a 2012 Ministerial Review on Science, Technology and Innovation, where the following is stated:

“The operation of the Innovation Fund has been accompanied by its own innovations, such as institutional development involving staff capacity in intellectual property management, which laid the basis for the establishment of what is now the National Intellectual Property Management office (NIPMO), as well as the IPR capability of the new Technology Innovation Agency.”

This same Ministerial Review stressed that South Africa’s aim to move to a knowledge-economy would require ‘enhancing the interaction between business/industry and HEIs by strengthening and widening the incentive schemes operated by the DTI and TIA/DST’ in order to increase the number of patents held by publicly financed research institutions. The Review moves on to state that, in order to ‘move towards an economy driven by knowledge to a much greater extent than at present’, it will require in respect of the business sector:

“Much higher R&D expenditure by business/industry, probably as much as 50% more than at present. A greater degree of partnership between business/industry, and HEIs and science councils, representing the outsourcing rather than the performance of part or all of the R&D concerned.”

The 2008–2018 Innovation Plan - or ‘Ten Year Plan’ - created by the Department of Science and Technology proposed ‘targeting R&D towards solutions to key development challenges, in order to mobilise and target resources and incite collaboration between researchers and other actors within the national innovation system’. The Innovation Plan also proposed the creation of a new agency, namely the Technology Innovation Agency (TIA). It was envisioned that the TIA would oversee the work of certain agencies, including the Innovation Fund, and establish a network of centres able to identify opportunities for collaboration between the private sector and public research entities (Brant, Sibanda, 2018: 1).

In 2006, the Department of Science and Technology published the IPR from Publicly Funded Research Framework, the framework within which the IPR Act was borne. That creating links and collaborative relationships with private industry was intended within this framework can be gathered by the listed benefits to public research organisations in the granting of rights generated from the use of public funds, which include the ‘increased licensing and royalty revenues, more contract research and greater cross-fertilisation between entrepreneurial faculty and industry’,

as well as ‘the intangible benefits to an institution’s reputation and to the quality of its research that closer interaction with the private sector can generate’. On these benefits, it is further stated within the framework:

“In South Africa, within the National System of Innovation, businesses establish long-term partnerships with research councils and tertiary institutions. These positive and proactive relationships need to be incentivised and strengthened [...]. A key element of the capacity building will be the ongoing improvement in the quality of IP Management Offices at public research institutions. These IPMOs will perform essential functions in respect of the processing of invention disclosures, protecting patents, seeking commercial partners and monitoring the IP portfolios of their institutions and ensuring benefit sharing arrangements are in place and operational.”

In conclusion, whilst U-I has not been expressly stated as a primary aim of the IPR Act (unlike with America’s Bayh-Dole Act), the aforementioned legislative history has demonstrated that issues relating to U-I have permeated the political landscape from the inception of the IPR Act. It is therefore relevant and hitherto unexplored to consider whether South Africa’s IPR Act might have the same supposedly positive effect on U-I as experienced by the Bayh-Dole Act. In answering said question, this paper will consider what the primary hurdles to achieving this may be. In doing so, there are multiple considerations that might be considered but which would be outside the potential scope for this particular article. As such, this paper chooses to focus on two factors that may be considered particularly pertinent in light of South Africa’s recent socio-legal landscape, namely (a) the lack of substantive patent examinations, and (b) government investment in higher education.

The creation of the South African IPR from Publicly Financed Research and Development Act 51 of 2008 and its application to publicly financed higher education institutions

The IPR Act was borne of the 2002 National Research and Development Strategy which found that ‘given the poor state of intellectual property protection’, a need for the creation of new policy exists in order to ‘reduce the financial barriers experienced by institutions when they secure intellectual property from publicly financed research’. According to the Innovation Fund’s 2007 Special Report on the State of Patenting in South Africa, between the period of 1991 and 2005 South African publicly funded institutions accounted for a mere 4.37 percent of all patent applications. The Report concluded that there needs to be a drive towards establishing a ‘culture of patenting’ and the commercialisation of patents, particularly among publicly financed higher education institutions. In the IPR and Publicly Financed Research Policy Document from 2006, it is stated that ‘[p]atenting when established reflects a nation’s research and development and industrial specialisation’. As such, the IPR Act was borne.

The IPR Act is applicable to intellectual property developed after the Act’s commencement date (2nd August 2010) and created with the use of publicly financed research and development. The IPR Act defines intellectual property broadly as:

“[A]ny creation of the mind that is capable of being protected by law from use by any other person, whether in terms of South African law or foreign intellectual property law, and includes any rights in such creation, but excludes copyrighted works such as a thesis, thesis, article, handbook or any other publication which, in the ordinary course of business, is associated with conventional academic work.”

It should be noted that, whilst copyright works such as a thesis will be exempt from the Act, an invention that is the subject of the said thesis may still fall within the scope of the Act. The main focus of the IPR Act is on patents that have resulted from – as the title would suggest – public funds, and therefore its application is particularly pertinent with regards to publicly funded universities. These shall be the sole consideration of this paper, although it is not the sole research institution to be the recipient of public funds and thus effected by the IPR Act.

The IPR Act makes it compulsory for recipient institutions such as publicly funded universities to identify research outputs that could potentially be protected (primarily by way of patent registration), manage such research by way of applying for protection, and put in place mechanisms for the commercialisation of the intellectual property emanating from publicly financed research capable of being protected (sections 5–7). Per section 5(1)(b), this is to be done

before such research is made public (e.g. published in academic journals). Where an institution has failed to commercialise any intellectual property, it must report to the National Intellectual Property Management Office (NIPMO), with full reasons as to why this failure has occurred [section 5(1)(i)]. In such an event, the NIPMO will have the option of taking ownership of and registering a patent in its own name over said research [section 4(3)].

Delays experienced in bringing the Act into effect, creating the infrastructure for said Act (such as the NIPMO), the setting up of technology transfer offices in universities and so on has meant that, to date, there is a noted scarcity of information as to the IPR Act save for papers detailing its coming into effect and outlining the content of the Act. Literature as to the effect – if any – it is having within the higher education environment seems to be distinctly lacking, both from an academic perspective as well as from a political perspective. This means that the issue is still very much open for consideration as the Act remains to be ‘tested’, as it were. However, in April of 2017 the South African National Survey of Intellectual Property and Technology Transfer at Publicly Funded Research Institutions was produced by the Department of Science and Technology (DST), the Southern African Research and Innovation Management Association (SARIMA), the National Intellectual Property Management Office (NIPMO) and the Centre for Science, Technology and Innovation Indicators (CeSTII). This preliminary report is based on a survey sent out to all ‘institutions’ as defined in the IPR from Publicly Financed Research and Development Act (IPR Act), which are the 23 Higher Education Institutions (HEIs) and the 10 Schedule 1 institutions or Science Councils (SCs). Of the 24 institutions that responded, 23 indicated that they have either established a dedicated office of technology transfer (OTT), have dedicated TT individuals or are members of a regional office.

America’s Bayh-Dole Act and its relative success

As the South African IPR Act has been based on the Bayh-Dole Act, it is pertinent to deal briefly with said legislation. Prior to 1980, American federal agencies maintained inconsistent policies as to whether recipients of research grants (such as publicly funded higher education institutions) could take title to inventions that sprung from federally funded projects (Hemel, Ouellette, 2017: 286). This uncertainty, as well as increases in the costs of bringing pharmaceuticals in particular to market, led Congress to pass the Bayh–Dole Act of 1980. As with the South African legislation, the Bayh-Dole Act placed an obligation on public higher education institutions to obtain a patent on inventions derived from state funding (for example, see: Balut, Moschini, 2009: 123; Eisenberg, 1996: 1684-95; Jaffe, Lerner, 2011: 1 - 24). Unlike the case of South Africa’s IPR Act, the Bayh-Dole Act has generally been justified in terms of the so-called ‘commercialisation theory’ (for example, see: Moore, 2006: 155; *In re Roche Molecular Sys., Inc.*, 516 F.3d 1003 (Fed. Cir. 2008)*; *Board of Trustees of the Leland Stanford Junior University, Petitioner v Roche Molecular Systems, Inc., et al* 131 S. Ct. 2188 (SC); Sampat, Lichtenberg, 2011: 333), although there have recently been contending views. For example, Hemel and Ouellette (2017: 286) argue that the Bayh-Dole Act can be more convincingly justified in terms of what they call ‘the internalisation theory’. Under this theory, foreign consumers benefit from the inventions generated by federally funded research at US universities and when foreign consumers pay for these patented inventions much of this money flows back to the United States.

Similarly, Ayre and Ouellette (2017: 271) argue that if commercialisation theory is the justification for Bayh–Dole patents, then universities ought to be required to license patents to the party willing to commit to commercialisation for the shortest period of exclusivity so as to minimise the welfare loss from higher prices. Eisenberg (1996: 1669) explains that the commercialisation theory focuses not on the initial costs of making an invention but rather ‘the subsequent costs of developing an existing invention into a commercial product’, based on the assumption that ‘even after an invention has been made, further investment is necessary to refine it, test it, build the necessary facilities for production on a commercial scale, and find or create a market for it’. As such, the Bayh–Dole framework was intended to facilitate co-operation between university researchers and the private-sector firms capable of bringing the products of university

* *In re Roche Molecular Sys., Inc.*, 516 F.3d 1003 (Fed. Cir. 2008); *Board of Trustees of the Leland Stanford Junior University, Petitioner v Roche Molecular Systems, Inc., et al* 131 S. Ct. 2188 (SC).

research to market (Hemel, Ouellette, 2017: 286). To this end, the Bayh-Dole Act has seemingly been a success. In 1980 there were only 25 technology transfer offices, whereas in 2000 ‘virtually every U.S university had such an office’ (Balut, Moschini, 2009: 125; Nelson, 2001: 13; Poyago-Theotoky et al., 2002: 10). There has been an overall increase in the number of public higher education institutions taking out patents, with the number rising from 30 universities in 1965 to 150 in 1992; a 15-fold increase in patenting and 5-fold increase in the number of universities granted patents between the years of 1965 and 1992 (Balut, Moschini, 2009: 125; Henderson et al., 1998: 120). This has made the Bayh-Dole Act and its subsequent impact the subject of much economic debate (Balut, Moschini, 2009: 125; Henderson et al., 1998: 119; Jaffe, 2000: 531; Link et al., 2003: 1217; Mazzoleni, 2005: 499; Mazzoleni, Sampat, 2002: 234; Mowery et al., 2001: 99; Nelson, 2001: 13).

Whilst it would appear that the Bayh-Dole Act has been successful in that it has increased the amount of patenting taking place in publicly funded institutions such as universities, there has been a list of criticisms levelled against it. These include the effect on upstream technological development and the corresponding effect on downstream technological development (McManis, Yagi, 2014: 1050). By upstream innovation, what is meant is innovation that provides a basic-science research tool. In other words, as it is assumed that science and technological advancement is cumulative in nature (i.e. each new discovery relies on a body of discoveries that come before it), upstream innovation is a primary step towards the creation of further, downstream, patents (Bansi, Reddy, 2015: 185). Some of the other problems levelled at the Bayh-Dole Act have been that its policy is counterintuitive as it requires the public to pay twice for the same invention, namely once through the taxes used to fund such research, and again in the higher sales price and limited supply of the invention once it is sold to the public (Eisenberg, 1996: 1666; Mazzoleni, Sampat, 2002: 234). There is also the argument - arguably first put forth in the visionary 1945 article of Vannevar Bush - that public researchers are not incentivised to research for the sake of a profit motive, and therefore the traditional role of patenting (which is seen as a social cost endured in order to incentivise individuals to create) is absent (Bush, 1945: 1). This theory has since been the subject of much dispute (for example, see: Mazzoleni, Sampat, 2002: 246 – 247; Nelson, 2004: 455). Then there is the argument that whilst the number of university patents have risen since the introduction of the Bayh-Dole Act, the overall quality of such patents has drastically decreased. In other words, the aim of the Bayh-Dole Act is flawed in that it assumes all patents are created equally (Griliches, 1990: 1661; Henderson et al., 1998: 120; Jaffe, Lerner, 2011: 1 - 24; Link et al., 2003: 1223 - 1225; Sampat et al., 2003: 1371).

Whilst the above exhibits the fact that the Bayh-Dole Act’s success is highly contentious within the American context, this paper will assume that the benefits outweigh the pitfalls, substantial or otherwise. The reason for doing this is two-fold. Firstly, it is to avoid dealing with the question of desirability regarding implanting foreign legislation, particularly from an economy as different as South Africa. Secondly, it is to provide as fair a comparison as possible between the two jurisdictions and ensure that said comparison is limited to a critique not of the legislation itself, but of the applicability therein. In other words, even if the Bayh-Dole Act was a Herculean piece of legislation, it would not – in the form of the IPR Act - yield similar results in terms of U-I in South Africa as it did in the United States because of the differing legal and political environments within which the Act would need to function. No law is free-standing; it must operate within a specific context. Where this context differs, so too will the applicability of said law.

South Africa’s Patenting System

As a member of the World Intellectual Property Organisation (henceforth ‘WIPO’), South Africa is required to uphold minimum standards of Intellectual Property protection as defined by the International Agreement on Trade-Related Aspects of IPR (henceforth ‘TRIPS Agreement’). Under the TRIPS Agreement, South Africa is required to ‘make patents [...] available for any inventions, whether products or processes, in all fields of technology, provided that they are new, involve an inventive step and are capable of industrial application’ [Article 27(1)]. According to Article 29(1):

“Members shall require that an applicant for a patent shall disclose the invention in a manner sufficiently clear and complete for the invention to be carried out by a person skilled in the art and may require the applicant to indicate the best mode for carrying out the invention

known to the inventor at the filing date or, where priority is claimed, at the priority date of the application.” [Emphasis added]

This is encapsulated in the 1978 South African Patent Act 57 of 1978 where, at section 25(1), it is stated that:

A patent may, subject to the provisions of this section, be granted for any new invention which involves an inventive step and which is capable of being used or applied in trade or industry or agriculture. Regarding a substantive analysis of said patent, sections 25(5) and (6) combined state the following:

“An invention shall be deemed to be new if it does not form part of the state of the art immediately before the priority date of that invention. The state of the art shall comprise all matter (whether a product, a process, information about either, or anything else) which has been made available to the public (whether in the Republic or elsewhere) by written or oral description, by use or in any other way.”

Read together, it is clear that both Article 27 and Article 29 of TRIPS could be taken to indicate that there ought to be in place a process by which the country in which the patent is being applied for can carry out an examination of the prior state of the art, as well as carry out the invention in order to test its applicability to industry and the nature of the disclosure made by the patentee. Without a patent examination, it is at least arguable that the standards set by Articles 27 and 29 cannot be said to have been met, albeit not to the degree of rendering said country non-TRIPS compliant. On paper, South Africa abides by these standards through the wording of its patent legislation much the same as the United States of America. That said, the similarities begin to end when the paper moves into practice.

In South Africa, unlike the United States of America, the process of filing a patent is purely procedural as the depository system for filing patents is utilised. In other words, the person or organisation filing the patent simply needs to fill in the correct forms and pay the said fees in order to receive a patent; there is no examination as to whether or not the product or process for which the application is being lodged in actual fact does meet the patentability criteria in terms of the TRIPS Agreement and in turn the South African Patent Act. Therefore, due to the lack of consideration to the substantive aspects of the patent application, it has been suggested that the majority of patents granted in South Africa fail to meet South Africa’s patentability standards per section 25 (Pouris, Pouris, 2011: 1). As the TRIPS Agreement provides minimum standards for all signatories, failure to abide by its standards puts a country at a sub-standard level regarding patent protection, operating a patenting system that is below the standards of comparative economies.

In addition to the above, this lack of patent examination means there is no reliable way in which the substantive value of the patents being registered can be garnered. If registering a patent is a simple procedural step with no substantive enquiry or examination, this means that every completed application will be granted, therefore the quality of the patents being registered is dubious. Indeed, studies done as to the sheer quantity of patents granted in South Africa compared to other jurisdictions would seem to indicate this. For example, one study found that in Argentina 951 pharmaceutical patents were granted in 2000-2007; in Brazil, 278 patents were granted in 2003-2008; in Colombia 439 patents were granted in 2004-2008; in India 2347 patents were granted in 2005-2008; and in South Africa, 2442 patents were registered in 2008 (Correa, 2011: 1; Iskander, 2013: 95; Yale Global Health Justice Partnership, 2018: 1). While the time periods which are compared vary, the fact that South Africa granted more than double in a single year what any of the others did over a number of years speaks volumes. That this was down to the lack of a substantive examination procedure is supported by the fact that, between 2000 and 2002, South Africa granted 66 % more pharmaceutical patents than the United States of America and the European Union on identical patent applications (Tomlinson et al., 2015: 741). In 2014, the most South Africa granted two-thirds of the patent applications it received, with a grant rate seven times that of Brazil, almost five times that of India, and nearly triple that of China during the same period (Yale Global Health Justice Partnership 2018: 1). Of course, this does not mean that each and every patent granted does not meet international standards. It does, however, mean that, unless challenged in court, the quality of a patent remains uncertain and therefore there is a higher likelihood of more ‘unworthy’ patents within the system than if substantive patent examinations were to be put into place.

One of the criticisms levelled against the Bayh-Dole Act is that it has led to an increase in the volume of patents but a decrease in the quality of patents being registered (Griliches, 1990: 1661; Henderson et al., 1998; Jaffe, Lerner 2011: 11–12; Link et al., 2003: 1223–1225; Sampat et al., 2003: 1371). With this in mind, such criticism would seem to be particularly pertinent to South Africa as the quality of patents registered is compromised by the lack of a substantive examination process. Of course, that is not to say that there are no issues regarding the quality of patents granted in areas where there is a substantive examination therein. For example, a recent report made intellectual property news when, during a visit of the new Chair of the EPO Administrative Board to the Max Planck Institute for Innovation and Entrepreneurship Research in Munich, a group of patent attorneys lambasted what they believed to be ‘the deteriorating quality of patent examination at the European Patent Office as a result of the overworking of patent examiners’ (Schestowitz, 2017: 1). However, there can be no doubt that not having any examination procedure necessarily compromises the quality of all patent applications that have not had their voracity tested by the judiciary. This can be seen in the case of Bristol-Myers Squibb (BMS), who are the original manufacturers of entecavir, a drug used to cure Hepatitis B. Whilst the initial patent on entecavir expired in 2011, South Africa proceeded to grant three additional patents on entecavir that only expire between 2022 and 2026, while the third patent covers the process by which entecavir is manufactured (Fix The Patent Laws, 2014: 1). BMS had attempted to similarly evergreen its drug in the United States by filing for an identical patent to the one in South Africa pertaining to the process by which the drug is manufactured. However, this patent was subsequently overturned, with the decision on invalidity confirmed by the United States Court of Appeal in *Bristol-Myers Squibb Company v Teva Pharmaceuticals USA* No 13-1306 (United States Court of Appeals for the Federal Circuit, 2014) due to the obvious nature or lack of inventive step of said patent. The content of this patent has not been contested within South Africa, and as such BMS shall maintain its monopoly until such time as this is challenged in a court of law, should such a time ever come.

Whilst the lack of an examination procedure is undoubtedly troubling, the reasons for utilising a depository rather than substantive examination procedure is understandable (and perhaps arguably justifiable). Few developing nations conduct any form of substantive patent examination, mainly due to a lack of capacities and resources (Commission on Intellectual Property Rights, 2002: 1). Indeed, patent applications may contain many pages of technical data covering a wide array of technology fields, and substantive examination involves both professional/technical competence as well as access to the international patent information computer databases. All of this requires resources, both in terms of humans with the required expertise in said fields, as well as technical such as reliable access to efficient technology. While these challenges faced by developing countries have been well documented in academic literature spanning many years, few have offered meaningful solutions to the immediate problems posed by the absence of an examination procedure (for example, see: Commission on Intellectual Property Rights, 2002: 1; Deere, 2008: 314 – 320; Free Market Foundation, 2017:1; Pager, 2007: 755; United States Agency for International Development, 2003: 1; Tvedt, 2010: 277).

It should be noted that there has been a push to drastically change South Africa’s IP framework in general, including patents, which has yielded very recent and ongoing developments. On 24 May 2018, Cabinet released a statement approving the new Intellectual Property Policy Framework. The Intellectual Property Policy of the Republic of South Africa Phase I 2018 (henceforth ‘IP Policy’) in section 7.1 highlights the government’s commitment to the rolling-out substantive examination of patent applications at a national level to replace its current depository system. The government itself acknowledges on page 17 that, without substantive examinations, patents as a measure of innovation are less than ideal:

“The introduction of SSE will result in greater legal certainty for patent owners and ensure that the public interest is served by ensuring that the patent system truly promotes innovation. It is crucial to work toward the adoption of SSE. The underlying policy rationale of patents is to serve as an incentive to stimulate innovation, and SSE is a key tool to ensure this objective is met.”

However, the commitment to incrementally introducing substantive examinations of patent applications appears to be limited from the outset. The government makes it clear that it does not intend for all patents to receive substantive examinations; much time in the IP Policy is spent

justifying the approach of only intending to introduce substantive examinations for patents in a few 'strategic sectors', and abating any concerns this will doubtlessly create among various stakeholders. This can be seen on page 18, where the following is stated:

"[C]oncerns expressed by some stakeholders that patent applications in only one field of technology (namely pharmaceuticals) will be subject to full substantive examination are misplaced. The intention is to identify a range of strategic sectors for full SSE, including and beyond the health sphere, based on capacity within government, as well as development and public interest considerations [...]. The SSE Guidelines, to be developed in due course, pursuant to extensive consultations, will detail the precise modalities."

Also on page 18, the IP Policy seeks to justify the government's selective approach to substantive examinations of patents by arguing that:

"[I]t has previously been determined in the WTO dispute settlement process that Article 27.1 of the TRIPS Agreement permits differentiation among fields of technology for legitimate reasons, which would naturally include assessing patent applications for different subject matter areas in a manner appropriate to those areas."

The sole reference to support this argument put forward by the South African government in their IP Policy is to be found on page 18 in footnote 13 to the case of *Canada – Patent Protection for Pharmaceutical Products*, WT/DS114/R, which – as shall be discussed - is itself a weak source upon which to claim such an interpretation. This is a long and complicated case that covers a host of complex claims, but the IP Policy provides a pinpoint reference to paragraph 7.94 in its footnote, and therefore relates to one claim, in particular, namely the challenge lodged by the European Communities against section 55(2)(1) of the Canadian Patent Act. This section of the Canadian Act, known as the 'regulatory review exception', stated the following:

"It is not an infringement of a patent for any person who makes, constructs, uses or sells a patented invention in accordance with subsection (1) to make, construct or use the invention, during the applicable period provided for by the regulations, for the manufacture and storage of articles intended for sale after the date on which the term of the patent expires."

The European Communities alleged that this section of the Canadian Patent Act, by treating patent holders in the field of pharmaceutical inventions less favourably than inventions in all other fields of technology, violated its obligations under Article 27(1) of the TRIPS Agreement requiring patents to be available and patent rights enjoyable without discrimination as to the field of technology (para 7.94). The European Communities acknowledged that the words of the regulatory review exception of section 55(2)(1) did not limit its application to pharmaceutical products (para 7.95). However, they alleged that there was *de jure* discrimination against pharmaceuticals because these were the only products mentioned in Canada's 1991 legislative debates on the enactment of section 55(2)(1) (para 7.96). The Panel rejected this claim as it is trite that the legislative history does not confine the scope of the law itself once enacted, and there was nothing in the wording of the exception to justify such a limited interpretation (para 7.99). Furthermore, Canada had issued a formal declaration to the Panel that this exception was not intended to be limited to pharmaceutical inventions (para 7.99). In the alternative, the European Communities argued *de facto* discrimination in that the actual effects of section 55(2)(1) were limited to pharmaceutical producers (para 7.96). This was also rejected by the Panel as the European Communities could not provide any evidence as to the range of industries making use of section 55(2)(1), nor could it point to any practical considerations that would limit the scope of the section's application to the pharmaceutical industry (para 7.102). For these reasons, the Panel found there to be insufficient evidence provided by the European Communities to prove discrimination, either *de jure* or *de facto*, according to Article 27.

It is therefore submitted that instead of this case bolstering the claim that only providing substantive examinations of patents to a few choice areas would not conflict with Article 27(1) as it does not amount to discrimination, the case, in fact, leaves the door open for the alternative interpretation of Article 27. Had it been proven that Canada's regulatory review exception had either in interpretation or in effect been limited to pharmaceutical inventions, the Panel would surely have found there to be discrimination; whether or not they would have found said discrimination to be justified was never addressed as it was not necessary on the facts of the case. This alternative interpretation of the case is damning in light of its being the sole source upon which the IP Policy relies. For the areas that are not to be afforded substantive examinations in

South Africa, the above arguments relating to Article 27 will still hold true. For the areas that are granted substantive examinations, a comparator between South Africa and the United States will be limited in scope and many years into the future if one is to have enough reliable data from which to make any claims.

In examining the differing patent systems, various conclusions can be drawn. Firstly, because South Africa has and still does follow a depository system of patenting (and intends to continue doing so, at least for some industries), South Africa fails to meet the minimum standards used at an international level regarding the granting of patents. As stated above, it is arguable that as a result of patents being granted without any qualitative analysis, issues such as evergreening, duplicate patenting, patents being granted to various patentees and more have a higher likelihood to occur as well as go by unchecked until such a time as it is challenged in court (which itself gives rise to numerous access to justice issues beyond the scope of said paper). These limitations have been acknowledged by the government itself in its IP Policy. It, therefore, seems nonsensical to discuss patents as a marker for economic growth within this context in such a way as the IPR Act presupposes. Indeed, if the granting of a patent merely requires the filling in of paperwork and payment of a fee, then increasing the number of patents filed by higher education institutions would seem less an exercise in U-I and more an exercise in cutting administrative costs. Until South Africa adopts a substantive examination of patents filed prior to making a decision on whether or not to grant the application, there can be no meaningful dialogue about mechanisms for increasing the state of university research and resulting patents, and any such dialogue will at best be premature. Additionally, the conservative approach toward rolling in an examination procedure ought to be revisited in favour of a broader, more encompassing approach in light of the lack of evidence provided to support such a claim.

Government Investment in Higher Education Prior to Bayh-Dole legislation

The IPR Act seeks to regulate research that has been publicly funded. Whilst broad, the primary bodies effected by this legislation will be publicly funded universities within South Africa. This necessarily leads to the question of whether or not the IPR Act will encourage U-I in such a way that businesses will be enticed into investing resources in universities as an additional income stream. This was both a central aim of the American Bayh-Dole Act, as well as being an indirect rationale for the creation of the South African IPR Act.

Arguably, the Bayh-Dole Act has been successful in encouraging U-I. Whilst this is contentious, the majority of the literature would seem to favour such an interpretation of the legislation's effect. However, the legislation was created within a specific higher education environment which simply does not exist within South Africa. Looking at budget data available online from the United States Government Printing Office on government spending as a percentage of gross domestic product (GDP), it is clear that the United States had historically taken a much more 'investment-minded' approach to higher education in the post-war era. In 1950, spending was 0.37 percent of GDP on higher education, but this increased incrementally until, in the 1970s, higher education spending was 1.44 percent of GDP. In other words, during the three decades that preceded the creation of the Bayh-Dole Act, government spending as a percentage of GDP had just about quadrupled ([US Government Spending](#): 1). The background had been laid in which legislation to the effect of Bayh-Dole, which sought to encourage businesses to invest in collaborative research projects with universities, could have the maximum chance of success as these higher education institutions had, for decades, been able to foster their own research culture through government funding with which to attract industry investment.

Compare the above with the situation in South Africa post-democracy (by which it is meant the creation of the Constitution of the Republic of South Africa 1996 – which marked the official end to apartheid – to the present day). According to statistics and numbers available from the Council on Higher Education and Training (2016: 1), government spending as a percentage of GDP has been declining over the years, from 0.95 percent of GDP in 2006/7 to 0.92 percent in 2008/9 and 0.76 percent in 2010/11. For 2012, spending on higher education was lower than other comparable countries such as Ghana, Chile, Senegal and India ([Universities South Africa, 2016](#): 1). According to a 2006 Research Report for the Council on Higher Education, expenditure for 2001 on higher education as a percentage of GDP from the South African government was lower than the average value of 84 countries within the same year and the average value of 15 African states.

According to the Organisation for Economic Co-operation and Development's 2003 report, the average public spending on higher education as a percentage of GDP for 29 OECD countries in 2000 was 0.90 percent; South Africa fell well below this average, with a spend of 0.70 percent (OECD, 2003: 1). By contrast, the same source cites the United States as spending the highest percentage of GDP on higher education in the same period. This trend has continued to present day, with 0.7 percent of South Africa's GDP going to higher education in 2017 as opposed to an average of 1.3 percent in OECD countries and 1.1 percent in G20 countries (OECD, 2018: 1). Unlike in the United States, the South African government does not have a history of investing in higher education. As such, business investment in South Africa is and has been very low: if two-thirds of the unrestricted revenue comes from the government, and 30 to 40 percent comes from student fees, this leaves a paltry sum coming in from corporate investment (Universities South Africa, 2016:1).

The link between U-I and patents has been well-established, although it has not gone unchallenged. Most recently, the voracity of using such a link was questioned by Sterzi et al. (2019: 309). The authors undertook a longitudinal sample of Italian academic patents assigned either to universities or firms, and found that the lower value of university-owned patents versus firm-owned ones could be owing to lower technological importance of the inventions (i.e. the limited relevance or originality of the academic inventions that form part of universities' portfolios) and less effective exploitation of the related patents (i.e. the universities' lack of managerial and specialised skills in the managing and efficient use or commercialisation of patents within their portfolios). The authors argued that caution should be taken in pushing universities to expand their portfolio of patents and in using university-owned patents as indicators of wider technology-transfer activities.

However, the link between the two has been largely supported by writers and data alike. For example, in Japan the Act on the Promotion of Technology Transfers from Universities to Private Industries 1998 has seen the number of joint research projects nearly double, as well as the number of patents registered by Japanese publicly-funded higher education institutions rising sharply from 918 in 2003 to 5033 in 2009 (Japanese Ministry of Education, Culture, Sports, Science and Technology, 2010: 1; Motohashi, Muramatsu, 2012: 149 - 162). A study conducted by the World Bank of Chile and Colombia showed that collaboration with universities substantially increased the propensity of firms to introduce new products and to patent, as well as finding that 'collaboration with universities could increase the probability of patent activity in the firm by 37 percent or the probability of introducing a new product by 29 percent' (Marotta et al., 2007: 1). A study done by Balconi and Laboranti used patent data (particularly, the number of EPO and USPTO patents assigned to firms and comprising a university professor of electronics among the inventors) as an indicator of collaboration, to measure the extent and intensity of the ties of academic with industrial researchers. It found that strong U-I connections are associated with high scientific performance evidenced by way of resulting patents (2006: 1616).

At both national and sub-national levels support for university-industry linkages is presented as a means to achieve two objectives simultaneously: (a) facilitate technology transfer and increase technological intensity at the firm level; (b) create incentives for university research to address relevant practical problems, generating market value. This includes increasing the number of patents where at least one inventor is listed as a university. Regarding the question of whether a lack of U-I is problematic in terms of commercialising IP by higher education institutions, the 2018 study by Frederick R. Bezuidenhout sheds light on the current barriers to commercialisation within South Africa. His study found that, through analysing the mean values of each factor (which included interviews with stakeholders, literature review, and questionnaires), the top four measured factors that hindered commercialisation of IP in the public sector were university red tape, funding barriers, entrepreneurial orientation, and U-I disconnect. Of the four themes, U-I measured the highest when the interview, questionnaire, and literature data were considered and was therefore identified as the greatest perceived barrier. Bezuidenhout himself states this finding is in direct contrast with similar studies done in America, which indicated that U.S. TTOs in 1980 achieved success stories in closing the gap between university and industry. This might be an indication that U-I relationships was a relevant topic in the 1980s and still remains to be relevant within the context of commercialisation today.

What the above summations seek to display is that the South Africa government's investment in higher education is below comparable international standards. South African universities are and historically have been reliant on state support and student fees as a means of financial revenue, with corporate investment playing at best a minor role. In order to change this, universities need to find ways of attracting private industry to invest in them, and this can only be done by promulgating a research culture within which industry can see the potential value. The data relating to low levels of GDP directed towards higher education highlights the underfunding of higher education institutions both before the creation (2008) and after the bringing into effect (2010) of the IPR Act serves to evidence why such a research culture is not financially viable, yet it is – as per the example of the United States – a foundational truth for such legislation to operate successfully in terms of fostering U-I. The correlation between the need for government spending on higher education for the creation of a higher education research culture within which private industry wish to invest in cannot be underestimated, nor can it be replaced with legislative initiatives such as the IPR Act. South Africa has been plagued by violent student protests about, among other things, the need for greater government investment in higher education. In response, various political interest groups have called for the corporate sector to make up the shortfall, either voluntarily or by a legislative intervention (see the following news reports: [Biz News, 2015: 1](#); [ENCA, 2015: 1](#); [HTXT, 2016: 1](#); [Politics Web, 2016: 1](#)). Indeed, beyond an increase in patenting activity, increased investment by the government today might result in both a financial relief for the state coffers and an additional source of revenue for universities in the long-run (not to mention addressing issues of escalating student fees and such similar results of the current *status quo*). While South Africa does not and will never have the long history of investment in higher education that the United States does, this is no reason why the current government cannot create such a culture and therefore improve the educational - as well as economic - environment in the years to come.

Conclusion

It has been shown that, for both legal as well as policy reasons, the IPR Act is unable to replicate the (somewhat controversial) success it has seen in the American environment as the Bayh-Dole Act with regards to increasing U-I, at least for the immediate future. The long-standing pre-Act history of the United States investing heavily in higher education as a percentage of GDP means that the political landscape and university research culture within which the legislation was to operate was already one in which the Act could prove fruitful. In South Africa, the pre-Act and present-day investment by government in higher education institutions have not only been on an ever-declining level, but it has also dipped below comparative standards on an international scale. In addition to the political environment, patent legislation must operate within the said jurisdiction's legal framework. In the United States, it has been the long-standing position that substantive examination is required prior to the decision on whether or not to grant an application for a patent, which means that the value of said patents can be attested to, both inherently according to internationally recognised standards, and economically. In South Africa the depository system whereby every application will be granted if it is filled in correctly and fees are paid means that any discussion about the importance of patents as a measure for innovation or economic growth is at best premature by at least a decade or more, depending on when substantive examinations are to be introduced by the South African government and limited to whichever industries the government chooses to apply the procedure to. A patent within the current depository system is merely an empty vessel until the content therein is attested to by a substantive examination that can be held up to international standards, and even then there will many more years before comparable data can be accumulated in order to make such a comparison. For these reasons, until there is drastic reform within the South African environment that is proven to be both sustainable and positive, it will be impossible for the IPR Act to garner the same level of success with regards to U-I as its American counterpart.

Conflict of interest

This author declares no financial conflicts of interest.

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Alternative Livelihood Support for Reducing Poverty: Snail Project for Kwaprow Community in Cape Coast

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Abstract

The critical importance of employment for sustained poverty reduction and curbing rural-urban migration necessitated this action research. It was embarked to introduce snail farming as alternative livelihood support for reducing poverty in the Kwaprow community at the University of Cape Coast, Cape Coast. The participatory action research design was adopted. Ten perceived poor people were selected from the community with the assistance of the key informants and other participatory rural appraisal techniques. The results were compared and analyzed for emerging themes and patterns. From the research that was conducted, it could be realized that the nature of poverty in the Kwaprow community exists in terms of material deprivation, lack of voice and influence, low human and health development and vulnerability to shocks and disaster. The extent of poverty in the area could be said to be relatively high with indicators of poor housing facilities, poor drainage facilities, low employment, high household dependency ratio, poor road network, environmental pollution and low access to potable water. The causes of poverty were found to gender inequity, lack of access to financial capital for business and low access to land for farming activities.

Keywords: Alternative, Ghana, Livelihood, Poverty, Snail.

Introduction

Growing concerns about poverty have been a developmental concern for all governments, especially, African governments (Imoro, Nti, 2009). Between 1990 and 2001 the headcount ratio of poverty for all Least Developed Countries (LDCs) fell from 27.9 % to 21.1 %, but the ratio for Africa actually increased from 44.6 % to 46.4 %, leading analyst to doubt if Africa will achieve its target by 2015 (United Nations Development Programme, UNDP, 2000). In the specific case of Ghana, the Ghana Living Standards Survey (GLSS) in 1991 gave the poverty level as 51.7 % but there was a reduction in 1999 to 39.5 %. This dropped further to 28.5 % in 2005. Of these percentages, a large number of women have been seen to be more prone to poverty (Asamoah, 2009).

There are various views on the causes of rural poverty all over the world. According to Chambers (1983), poverty is deprivation; it is deprivation for the many and affluence for the few. Physical factors such as soils, environment, and population are used to satisfy the wants of the few while the many do not have even their basic needs. Also, Chambers (1983) holds the view that, in the political economy cluster, rural poverty is a consequence of processes that concentrate wealth and power. Poor rural people are usually tough, hard-working ingenious and resilient. They struggle against five inter-locking disadvantages which trap them in deprivation: poverty itself;

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physical weakness; isolation; vulnerability and powerlessness. According to Kunfaa (1999), poverty is much more prevalent in rural areas compared to urban areas. Demographic characteristics are also indicative of the extent of poverty in a community. For instance, the increase in household size is likely to place an extra burden on the household's resource base and this is positively related to the extent of poverty. Increased dependency ratios, the number of children and the presence of a third generation in a household are other demographic factors associated with poverty (Odozi, 2018).

The evidence of poverty in rural communities in Ghana cannot be ignored. According to Imoro and Nti (2009), the number of people living on less than US\$1 a day, defined as the poverty line, tells only half of the story. There are many who could be classified as chronically poor. Despite the presence of numerous poverty alleviation programmes, the poverty situation seems to be worsening in bounds and leaps. This is seen in the worsening degree of vulnerability, social exclusion, falling standards of living, limited employment opportunities, low income, failure of several kinds of basic capabilities, lack of power to command or exchange entitlements like goods and services, shelter, food, and other basic needs of life (Sen, 1999). The situation in Ghana does not deviate from this. The high rate of unemployment among the youth in Ghana has contributed to the high rate of poverty and insecurity in the country. It has compounded the problem of rural-urban migration (Cleveland, 1991).

Consequently, development must concentrate on improving the living standards of rural people. According to Norton et al. (2010), development implies more than economic growth. It also looks beyond the use of measures such as the Gross National Product (GNP) to measure the wellbeing of nations. In the wider context, it concerns itself with the quality of life; educational attainment, nutritional status, access to basic freedoms and spiritual welfare. A key emphasis is placed on sustainability which looks at making these developmental achievements last well into the future. In view of the critical importance of employment for sustained poverty reduction and curbing rural-urban migration, much attention has been placed on capacity building and human resource development in recent times (International Labour Organization, 2004). The researchers embarked on action research to introduce snail farming as alternative livelihood support for reducing poverty or tackling a developmental challenge in the Kwaprow community at the University of Cape Coast, Cape Coast. The purpose of this research was to study the community to find ways by which to help a household to generate income to supplement their livelihood.

Methodology

Research Design

In order to be able to undertake a comprehensive study on poverty in the Kwaprow community, the participatory action research design was adopted. Similarly, Anderson (1998) agreed that studying and interpreting human experiences in authentic settings cannot be best represented quantitatively and stated that qualitative research is a form of inquiry that explores phenomena in their natural settings and uses multi-methods to interpret, understand, explain and bring meaning to them. Considering these ideas, the most appropriate method for conducting a study on poverty-related issues is to use qualitative methodology. Using this design helped provide a means to understand the essence of the action research experience. Understanding the experience of action research helped to document the experience more precisely. The phenomena were interpreted and explained through both the participants' lens and through the theoretical framework of action research.

Context of the Research

Kwaprow is a community approximately 3 km from the Department of Agricultural Economics and Extension. The community shares boundary with the University of Cape Coast on its eastern side. It has students of the University residing there and commuting daily for campus activities. It has an estimated population of about 3,000. The predominant occupation in the community is farming. Other notable activities include petty trading, artisanry, transport services, and charcoal burning. The case of poverty pervades in the community in various forms; vulnerability to shocks and disaster, low level of education, material deprivation, powerlessness, isolation, physical weakness, low financial status, susceptibility to violence, and lack of access to clean water and sanitation.

Community Entry

In order to ensure that there was no breach of cultural and traditional norms in the community of study, community entry techniques were employed by the research team. This was done to understand the administrative structure of the community. Contacts were made with some traditional elders of the community and they were informed about the upcoming activities of the research team in the community. Permission was duly granted to commence the research activities in the community.

Sample Size and Sampling Procedure

The convenience sampling method was used to gather information from the community members. This was conducted bearing in view the willingness of the community members to participate. In total, about nine (9) males and six (6) females were engaged in the data collection process.

Sources of Data

The sources of data that were used for this action research were mainly primary data which was collected from the community members. Secondary data were also employed in this research. This was done through a comprehensive review of existing literature on poverty. An interview schedule was prepared and used during the interview sessions.

Data Collection Procedure

Key informant interviews were conducted among the participants selected for the research. This involved the use of one-on-one interaction with the participants. It was conducted to understand the nature of poverty in the community, the extent of poverty, the causes of poverty and the measures by which poverty could be reduced in the area. The participants included young people, school children, adults, and some aged community members. Seidman (1998) states that an interview provides a necessary and sufficient avenue to understand the meaning people involved in the community make of their experience.

In addition to the one-on-one discussion, the researchers conducted a transect walk through the Kwaprow community to understand and have a fair view of how the community looks like. All the structures, facilities and institutions in the community were noted. Other participatory methods such as the Problem Tree Analysis and Venn Diagram were used. Observations were conducted to gather supporting evidence for the research. Artifacts were used as evidence of common themes from field notes, observations and interviews. The field and observation notes helped the researcher to collect noted artifacts. Also, artifacts were collected in a spontaneous manner.

Data Analysis

The data collected from this action research were analyzed on an ongoing basis using the constant comparative method. This non-mathematical data analysis process was used to guide the researcher through identifying themes and patterns within the issues (Glaser, Strauss, 1967). In preparation for using Glaser and Strauss' constant comparative method, results from the participant interviews, observations, transect walk, problem tree analysis, artifacts were organized separately for each case. The data collected were organized and assembled by date, data collection method, study question, interview question. This helped the researcher to identify change and growth. These results were compared and analyzed for emerging themes and patterns.

The Intervention

On the basis of sustainability, the research group settled on ten households. The purpose of this was to be able to monitor the progress of livelihood alternatives even after the end of the semester. Secondly, previous intervention reports given by some of the community members indicate that students always come there to introduce an intervention but they are not able to sustain it. The project normally begins with a large group of people and in the end, only one person is found holding up the project. Thirdly, the availability of resources in terms of time availability of financial power also influenced the selection of the ten households. The research group believes that with ten households effective training could be done, effective monitoring and evaluation of the project could be conducted over a long period of time and effective follow-ups on the household could be done at an affordable cost. The expectation is that as the households benefit from this project, it can be used as a way to attract others unto the project and then it expands.

In all, four (4) meetings were held with the households to explain the project modalities and other important details. The eldest children (youth) were chosen as the leader of the teams. This

was a key measure to ensure the sustainability of the project. The parents (adults) were involved in the project as a way of monitoring their children to constantly work in order to supplement household income. The meetings were all organised in their houses. One of the research group members served as the resource personnel on the training of the household in snail production. Arrangements were made with COCOBOD (Agona Nyarkrom District) in acquiring initial breeding stock.

Findings and Discussions

Theme 1: Nature of Poverty in Kwaprow

Sub-theme 1: Material Deprivation

From the data that was collected, it was realised that there are lots of people in the community who hardly know of their next meal for a day. Hunger is a common phenomenon among most of the community members. One of the school children who was interviewed indicated, “When I leave for school early in the mornings, I don’t have any breakfast or lunch and in the evening I get a little supper and that is not enough” – a 9-year-old school child. For poor households, meeting their most basic needs in terms of provision of food, water, clothing, and shelter is a daily struggle in the community.

For those without access to land or the ability to grow their own food on other people’s land, access to dependable wage labour emerged as a major factor defining the nature of poverty in the community. Furthermore, it is rare for people to find a permanent source of employment. Most of the youth in the community engage in informal and casual labour to fend for themselves and their immediate households. The results of this research agree with a study in Cameroon where the poor were distinguished as people who had fewer meals a day. Poverty also includes areas such as malnutrition, inadequate living standards and lack of income (Alkire, Sumner, 2013).

Sub-theme 2: Low Human and Health Development

The nature of poverty in the Kwaprow community is such that it has led to a high rate of school dropouts. This has resulted in a low level of literacy rate among the community members. This has led to a high increase in unemployment among the youth in the community. They lack the needed employable skills that are acquired only through education. It is often difficult for families in the community to invest in their ward’s education. The sacrifices they make sometimes include, skipping meals to reduce household expenses so that children in the household can be able to attend school.

Community members dread serious illnesses. This is because they deprive people of contributing to the wage-labour of the household. In the course of interviews with key informants, it was observed that disease when followed by premature death, as the cause of extreme poverty. It is a devastating drain on the resources of the household. This probably explains why the community members mentioned poor health as a nature of poverty (Sayeed, Fernando, 2018). Poverty also includes areas such as ramshackle schools, poor health and lack of education (Alkire, Sumner, 2013).

Sub-theme 3: Vulnerability

The arable lands that are available for farming have lost their fertility. This has led hugely to low yields. This can be attributable to the indiscriminate bush burning activities and poor practices they use in managing their lands. The rampant construction of student hostels is rapidly reducing the spaces that could be available for farming activities. This situation has consequential effects on the livelihood security of the people as there is insufficient land for other development activities in the community.

The Kwaprow community was through observation found to be a flood-prone area. Whenever it rains, the roads are impassable. One-woman farmer the research group interviewed indicated that she does not have any savings to show for her hard work in farming. In another study, it was noted that during the rainy season villagers find themselves completely isolated from the more developed areas. The result is that the members of the unconnected villages remain effectively marginalized from virtually all educational institutions above the primary level, from adequate health care facilities and from important governmental and non-governmental institutions (Langmore, 2000). When the participants in the research were asked to identify their most vulnerable members in the community, they identified “children, orphans, single mothers,

unemployed youth, adolescent mothers, disabled, casual workers, the sick, men with large families” as the most vulnerable. They are always dependent on the aid that is provided by others.

Theme 2: Lack of Voice

The precarious situation that was also observed among the community members was that most of them lacked the voice to make meaningful influence or impact in the community. Their voices are not heard. Three of the adults the research group interacted with indicated that the poor people in the community often express a sense of hopelessness and powerlessness. A poor elderly man the research group interview said, “The forces behind poverty are so powerful today. So we now feel somewhat powerless. We cannot talk in society”. For those who are able to engage in subsistence farming, the rich people take advantage of their powerlessness by offering them low producer prices which they have no option than to accept. While they sometimes feel that there are corrupt people in authority in the community, they are unable to talk about it openly for fear of being victimized. They also have little influence over their political representatives such as the assemblyman or unit committee members. In rural areas, poverty is equated with the inability to adhere to local customs and norms. Such people do not make their voices heard in communal and political activities (Imoro, Nti, 2009).

Theme 3: Extent of Poverty in Kwaprow

According to a study by Kunfaa (1999), poverty is much more prevalent in rural areas compared to urban areas. This was indicative of the situation found in the Kwaprow community. The extent of poverty that exists in the area could be said to be very high. The location of the community (sharing boundary with the University of Cape Coast) could be a source of motivation to reduce poverty in the area but that was not the situation.

Housing facilities in the community are of poor nature. The designs are archaic and of poor quality. The settlements seem unplanned and scattered in the community. Most of the houses are closely built on crowded compounds. There are no clear cut roads or lanes demarcated for such a purpose. One could just bump into another’s house when walking on a perceived road. The houses erected by the indigenes are of low elevation. The status of the community is only improved by the presence of immigrants who have settled there and constructing various housing facilities such as student hostels.

Children are mostly found in scanty clothes and shabbily dressed. Most of the time, they are found playing in the sand. The young people are found gathered under trees and shades making conversations. The adults are mostly at home, either petty trading or resting. Household sizes are relatively large; ranging between 5 and 8 on average. According to OECD (2012), increased dependency ratios, the number of children and the presence of a third generation in a household are demographic factors associated with poverty. They further asserted that this is likely to place an extra burden on the household’s resource base and thereby increasing their level of poverty.

The roads are untarred. On a sunny day, it is very dusty while on a rainy day, it gets flooded and muddy, making vehicular movement quite a hectic task. The drainage system in Kwaprow is quite poor. By observation, the research group noted that the gutters are choked with refuse. There is no notable refuse dump community. This could mean that sanitation is very poor. Environmental pollution is not a rare phenomenon in the community. The air in certain sections of the community is heavily polluted with pendant odour from faecal waste and decomposed garbage. There were very limited public places of convenience. Only a few homes had their own toilet facilities but the majority did not. There is only one public toilet facility located in one extreme end of the community. Nearby bushes were mostly used as a ‘make shift’ toilet facility, a situation research participants indicated was a major cause of communicable diseases in the community. The outskirts of the community are heavily littered with non-degradable materials such as mineral water sachets and other plastic waste. There were also cases of human excreta being littered in some areas the research group visited.

Some of the community members were said to be working with the University but these were either security personnel or casual labourers. Some of them found other self-employable activities, worked for the students in order to get something to eat. Others are hawkers on the University premises selling fruits, plantain chips, mineral water, etc. Access to potable water in the community is a problem. The majority of them fetch water from the Kakum River that flows through the community. Subsistence farming is practiced by most of the people who claimed to be farmers. Their animals are reared on a free-range basis. It is easy to find goats, sheep and poultry

birds roaming carelessly in the community. The demographics as found in Kwaprow are indicative of the extent of poverty in a community

Theme 4: Causes of Poverty in Kwaprow

The causes of poverty as found in the community could be accounted for by many factors. The first is gender inequity. The gender bias found in the community is ingrained in the fabric of society. Women are really allowed to engage in active local politics although some of them manage to do. In the household, most of them were only good for the kitchen. Many decisions about access to, control over and the distribution of resources are made mostly by the men in the family. According to Langmore (2000), these disparities have serious consequences, not only for women themselves but also for their families and for society at large. The source of financial capital for business activities is rare. The available informal and formal sources of credit are also too costly for the poor who need it as a matter of urgency. This is a cause of poverty that is noted in the research. Because of this, they are not able to afford education above the basic school level, making their level of poverty very deep.

The inadequate access to financial capital, low saving rate, low domestic investment does not generate large enough increases in employment opportunities for the poor. The poor are denied access to credit to finance their small-scale enterprises and farming activities that generate employment and income and enhance household food security. Access to adequate land for farming activities was also found to be a major cause of poverty in the community. According to Perez-Bustillo (2003), indicators to determine if people lack access to productive land resources are lack of purchasing ability, distance to services, quality of services, etc. Some potential contributing factors for lack of access or unequal access are geographic marginalization, ethnicity and access, structural adjustment and debt, trade liberalization and globalization.

Conclusion

From the research that was conducted, it could be realized that the nature of poverty in the Kwaprow community exists in terms of material deprivation, lack of voice and influence, low human and health development and vulnerability to shocks and disaster. The extent of poverty in the area could be said to be relatively high with indicators of poor housing facilities, poor drainage facilities, low employment, high household dependency ratio, poor road network, environmental pollution and low access to potable water. The causes of poverty were found to gender inequity, lack of access to financial capital for business and low access to land for farming activities.

Recommendations: Implications for Agricultural Extension and Community Development

There is clearly the need to build new opportunities for social interaction that will generate trust and reciprocity among the people of Kwaprow. Voluntary organisations that provide effective leadership in addressing the challenges of young people will be more effective than they have been in the past.

Sustainable community development strategies need to identify strategies for overcoming isolation and segregation that arises because of the vulnerability of the people. Strong ties must be built which can alert development organizations and their agents about the availability and interest of such vulnerable people.

Development strategies that will ensure the community members against shocks such as bad health, inclement weather or government cutbacks and to pool their resources, such as food, credit or childcare will be helpful. In addition to enabling poor people to start up small enterprises by the provision of affordable loans, they could be aided to build informal relationships that will help their day-to-day survival.

Policies for sustainable livelihoods among the people of Kwaprow must cut across the conventional divides of government/political bureaucracy and professional specialisation. There must be a conscious effort to create and sustain livelihoods in the community. The promotion of agriculture and off-farm income generation activities will pay off highly.

Conflicts of Interest

The authors declare the work has no conflicts of interest.

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Preventing Electoral Violence in Ghana – the Security Sector Reform (SSR) Solution

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Abstract

Elections serve many important purposes in states across the globe, most especially as an important means of acquiring or retaining political power. This has led to violence as a characteristic of electoral politics in Africa and Ghana. This paper seeks to provide insights into electoral violence in Ghana, and offer Security Sector Reform as a means of curbing it. The paper also offers some complementary to preventing electoral violence.

Keywords: Africa, Elections, Electoral Violence, Ghana, Politics, Security Sector Reform.

Introduction

Elections serve many important purposes in states across the globe. Today, elections have become a marker of democracy as they grant legitimacy to governments and are often thought of as a means by which people make inputs into the governance of their countries (Frimpong, 2012; United States Institute of Peace, USIP, 2019). This makes elections an important means to an even more important end – acquiring or retaining political power. This importance also bestows on elections the quality of being a causative factor of political violence within states, more so in fragile, conflict-prone and oppressive societies (USIP, 2019).

Electoral violence is defined to include any threats of or actions that intimidate, physically harm or abuse stakeholders in order to influence electoral outcomes (Fischer, 2002). Electoral violence could occur in every stage of the electoral cycle even though some research suggests that most of the violence occurs before the elections (USIP, 2019). Electoral violence manifests in many ways the most notable of which are mass riots, clashes between opposing political parties, clashes with state security personnel, etc. It must be noted again that electoral violence points more to the breakdown of the electoral process rather than as the result of the electoral process (Fischer, 2002).

As an area of study and practice, Prevention of Electoral Violence (PEV) became important for two reasons; the growth of “prevention” as a norm preferable to all other reactionary solutions, and the appreciation of elections as a process rather than as an event that occurs only on the day of the poll (USIP, 2019). The logic of the PEV arena is for practitioners and scholars to analyze the sources of risk to elections and apply the most appropriate solution to the risks identified.

Electoral Violence in Ghana

African elections, especially, have often been characterized by violence. The most recent examples have been the Ivory Coast in 2010-2011, Nigeria in 2011 and Kenya in 2013 (Frimpong, 2012; Lynch et al., 2019; USIP, 2019). In each of these examples, presidential elections have led to

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violence either over the process of conducting the election or over the results generated by the election. In all of these, Ghana has been relatively peaceful and has become the poster-child of the international community in terms of the conduct of elections (Lynch et al., 2019).

It has been opined that violence has been a part of Ghana's elections especially since the year 2000, but that these acts of violence have seemed to be minor events for two reasons; scant media coverage or a possible under-reporting of the violence, and the International Community's desire to preserve Ghana's "poster boy" image as a bastion of peace and stability in an unstable continent (Amankwaah, 2013; Fischer, 2016). The danger this presents to Ghana lies in the tendency to refuse to address the causes of the violence, and hence puts Ghana at greater risk of an implosion (Amankwaah, 2013). Indeed, the violence at the Ayawaso West Wuogon Constituency by-election points to the risks Ghana faces in the conduct of its elections.

A survey conducted on incidents of electoral violence in Ghana from 1992 to 2012 turned out four key features of electoral violence in Ghana. First, the study found violent intimidation to be common in all elections in Ghana. It also found that the intimidation tactics were meant to disenfranchise political opponents. Opponents were found to be most at risk when campaigning or voting in the strongholds of their opposition. Public action tactics – such as the forceful takeover of state entities – were more favoured have the snatching of ballot boxes had declined considerably (Fischer, 2016).

The risk factors for electoral violence in Ghana seem to be varied. Violence is thought to arise from fierce political competition, the prospect of the loss or gain of political power and weaknesses within the election management body and the police in the provision of election security (Fischer, 2016). Other causes of electoral violence in Ghana include tribal or ethnic politics (where partisan politics finds expression in inter and intra-tribal differences), the complicity of "big men" in creating space for violence, and the ready availability of "macho" men (Amankwaah, 2013).

The 2008 Presidential and Parliamentary elections in Ghana are thought to be pivotal in terms of electoral violence. It is thought to be the most violent election in terms of the frequency and intensity of violent events. The frequency and intensity were motivated by the fact that the 2008 election was an open seat election (a president had concluded his term and could not run by law), compounded by a second-round vote between the two major political parties which heightened the zero-sum nature of the election, and the uninvestigated allegations of voter fraud (Fischer, 2016). It is contended that the Electoral Commission did not investigate the allegations of voter fraud so as not to open a can of worms it was not prepared to deal with, to save itself the limited resources of time and money, and possibly to keep up Ghana's external image as a stable democracy (Amankwaah, 2013).

In recent times – at least beginning in 2014 thereabouts – the space for and brazen unbridled support of political party militia groups or "vigilantes" by the two leading political parties in Ghana (NPP & NDC) represents a clear and present danger for electoral violence in Ghana. Coupled with this is the apparent structural weaknesses of Ghana's Police Service and other National Security groups, thus making it difficult for the state to deal properly with the newer threats of election-related violence in Ghana.

Preventing Electoral Violence in Ghana – The SSR Approach

Security Sector Reform refers to the transformation of the security sector – institutions with a formal mandate to ensure the safety of the state and citizens – to ensure that it is managed and operated "... in a manner that is more consistent with democratic norms and sound principles of good governance, and thus contributes to a well-functioning security framework" (OECD, 2005: 20). Viewed in the light of the concept of Peacebuilding as defined by Kenneth Bush, SSR is viewed as aiding the deconstruction of the structures of violence and building the structures of peace, with the aim of preventing an outbreak of, or a relapse into violence through a democratically controlled security sector (Bush, 2005). Wulf (2005) adds that the aim of SSR is not only the democratization of security but the development of effective civil oversight and institutions with the ability to provide security.

Aning (2001) discusses that Ghana's security sector contains three key elements;

- i. Statutory groups mandated with using coercive force (army, police and other paramilitary units)
- ii. Oversight institutions including NGOs to manage and monitor the security sector and

iii. institutions responsible for guaranteeing the rule of law including the judiciary, the ombudsman and the penal system.

The Statutory Groups – Reworking the appointment architecture

In carrying out an SSR to prevent electoral violence, the main action Ghana ought to undertake is reworking the structure of appointment of heads of the various frontline security institutions, mainly the police. As a frontline institution on internal security, the appointment structure serves to weaken the Police Service more and prevents it from taking action aimed at curbing electoral violence. Chapter Fifteen of Ghana’s 1992 Constitution is devoted to the Police Service. Article 201 provides for the creation of a police Council whose job includes, among others, advising the President on matters of internal security and the control and administration of the Police Service. Of the 9 persons who constitute the Police Council, 7 are appointed by the President except for the representatives from the Ghana Bar Association and the Retired Senior Police Officers Association. This makes the Police Council beholden to the President. The Inspector-General of Police (IGP) who functions as the head of the Police Service is also appointed by the President and the same constitution in Article 202(3) vests the power to appoint persons to any position in the Police Service in the President.

This arrangement has weakened the Police Service in the execution of its mandate when issues at play have to do with a current government. Intrinsic fears of losing their place in the service have meant that the Police have always pussyfooted on issues that have to do with members of the party of the current government. Issues such as electoral fraud and electoral violence have been seemingly no-go areas for the Police especially when the culprits belong to the governing party. Opposition parties have always voiced their lack of trust in the Police and have formed groups meant to provide them protection. In dealing with electoral violence conclusively, the Ghana Police Service needs to be independent. All ties with the President must be severed so as to guarantee their independence. This requires a constitutional amendment, and this must be done as part of the reform of the security sector.

Kwesi Aning (2008) summarizes the appointment structure in the table reproduced below;

Table 1. Security Sector Governance Actors in Ghana and their Mode of Appointment

Actor	Role	Mode of Appointment
President	Controls all security services. Appoints service chiefs and top commanders in consultation with Council of State and Service Councils	National Elections
Vice President	Chairs the Service Councils	President
National Security Advisor		President
Minister for National Security		President and Parliament
Council of State	Advise President on key appointments	President
Armed Forces Council	Advise President on policy, promotions, finance & budgeting	President, Armed Forces Act, 1962
Police Council		President, Police Service Act, (Act 350 of 1970)
Prisons Council		
Committee on Defence & Interior	Oversees the budget of Ministries of Defence and Interior	Parliament
Finance Committee	Examines the budget of the Office of the President including that of the NSC	Parliament
Public Accounts Committee	Considers the Report of the Auditor-General	Parliament

Judiciary		Consents to the issue of warrants for investigations and intercepts by intelligence agencies
Commission on Human & Administrative Justice	Investigates complaints on the Armed Forces, Police, and Prisons Services	Act of parliament, CHRAJ Act, 1993 Act 456
Ministry of Finance	Controls budgetary allocations	
Auditor-General	Audits all MDAs and reports to parliament	President

(Source: Aning, 2008)

The Oversight Bodies - Stricter Parliamentary Oversight

Parliamentary oversight is important to ensure the effectiveness and efficiency of the security sector, serve as a check on the power reposed in the security services, and as a means of popular participation in the affairs of the security services (Ebo, 2008). In Ghana, Parliament is the main body with oversight functions of the security forces. Articles 200 (2) and 210 (2) of Ghana's Constitution gives Parliament only, the powers to raise an army or police. Parliament exercises its oversight over the security sector through three of its committees; the Committee on defense and the interior, the Finance Committee and the Public Accounts Committee (Aning, 2008). In the history of Ghana, especially in fourth republican history, Parliament (through its Committee on Defence and the Interior) has always lived in the shadows of the Executive with regards to oversight of the statutory security institutions. This ought to change if Parliament is to properly exercise its oversight functions.

Stricter Parliamentary Oversight would happen if Ghana's Parliament would show and implement what Aning (2008) has called the "Triple-A of Parliamentary Oversight" namely Authority, Ability, and Attitude;

- Parliament must demonstrate its oversight authority beyond what it does currently through the Committee on Defence and the Interior – vetting the budgets of the ministries of Defence and Interior, and ensuring a regional balance of the Security Services. Parliament could demonstrate its authority by summoning staff of the statutory security forces and other stakeholders to testify at hearings and approve or reject strategy or doctrine (Ebo, 2008). Ghana also lacks a comprehensive security sector policy, and this makes Parliamentary oversight difficult. Dr. Benjamin Kunbuor – a former Defence Minister – asserts that Ghana lacks a comprehensive security sector policy, thus, the rules for engagement in the security sector were neither known, nationally-owned nor have any legitimacy (Yire, Amenyo, 2017). Stricter Parliamentary Oversight would be gained if Parliament would demand the creation of Ghana's Security Sector Policy, and monitor the implementation of same to ensure that security solutions being employed respond adequately to the threats and risks Ghana and Ghanaian face.

- Parliament must demonstrate its ability for oversight. The ability has been conceptualized as the capacity of Parliament to hold leaders accountable based on the resources available to it. Where Parliament lacks the technical ability, it could fall on security experts within Academia, Think Tanks and Retired Service Associations, so as to understand the sector and perform the needed oversight.

- Parliament and Parliamentarians need to demonstrate the right attitude towards oversight of the security sector. Excessive partisanship, and pandering to the whims of the Executive need to be greatly reduced so that Parliament could.

Complementary Approaches to Preventing Electoral Violence

This paper makes the argument that Electoral Violence in Ghana can be tackled through a thorough Security Sector Reform, specifically reworking the appointment architecture in the Police Service and ensuring stricter Parliamentary Oversight of the Security Sector. However, the paper concedes that these approaches are not exhaustive, especially when the objective is to secure long-

term peace in Ghana. The paper, therefore, suggests complementary means by which electoral violence may be prevented and lasting peace secured in Ghana.

Review and apply existing laws

Ghana's President has tried to introduce a new law – the Vigilantism and Related Offences Bill, 2019 – to combat political thuggery that often leads to electoral violence. Whilst the move looks great and well-intentioned, a critical opinion suggests that existing law in Ghana is able to deal with such phenomena and should be reviewed and applied. For example, section 200 of the Criminal Offences Act, 1960 (Act 29), as amended by the Criminal Offences (Amendment) Act, 2012 (Act 849) provides punishment for organized criminal groups. Section 255 of the same Act also states “A person who attempts to prevent, obstruct or disturb a public election by a kind of force, violence, or threat or by any act which is a criminal offense punishable under this act commits a misdemeanor”.

The problem with the provisions in the Act above is that it regards those infractions as misdemeanors. The law must only be amended so as to elevate the acts to felonies that command heavier sentences. Whilst working on an amendment, existing law should also be applied to tackle the phenomenon of electoral violence.

Empower Prosecutors

Prosecutors – both police and the Directorate of Public Prosecutions – ought to be empowered to prosecute cases of electoral violence in Ghana. The evidence is anecdotal that when the Police arrest an offender in electoral violence, they try to find a criminal offense under Ghana's criminal code to prosecute the person because they need the permission of the Attorney-General to prosecute electoral violence cases, and the Attorney-Generals are often unwilling to prosecute their party members who get arrested.

Amend Political Parties Act to proscribe Vigilantism/Electoral Violence

Ghana has a Political Parties Act that seeks to regulate the activities of Political Parties. The argument is for that law to be amended to proscribe acts of electoral violence. The catch is that the law should impose bans on Political Parties by disallowing a party from contesting in an area where its supporters engage in acts of electoral violence. This, it is thought, would make the political parties proactive in controlling their supporters, or denying people who engage in acts of electoral violence so they can be prosecuted.

Find jobs/skills for teeming unemployed youth

Ghana's National Commission for Civic Education, on numerous platforms, has often made the argument that Ghana can deal with electoral violence better if and when its teeming unemployed youth are provided skills training or job opportunities. The argument is that large numbers of unemployed people are easily recruited by political actors and engaged to undertake acts of electoral violence. When they are engaged, then it is less likely they will be easily recruited and made to engage in acts of violence.

Conclusion

Violence is becoming a staple in Ghanaian politics. In the history of the 4th Republic, there have been several acts of election-based violence. The causes of the violence have been put down mainly to fierce political competition. Research also shows that the violence has been given impetus by the disconnect between criminal acts perpetuated during elections and punishment for those offenses. Some experts in the conflict field have said that it is almost impossible to minimize the occurrences of violence because of the lack of congruence between public utterances/discourse of political leaders and happenings behind closed doors. The institutions that ought to help prevent electoral violence have not been able to do so because of weaknesses either in the laws or in the institutional structure. The solution to Ghana's electoral violence problems lies not only within the reform of the security sector but also in other complementary governance actions aimed at strengthening the law and state agencies who enforce the law.

Conflicts of Interest

The author declares the work has no conflicts of interest.

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