

# Universities' Role in Regional Development: A Case Study of University for Development Studies, Ghana

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## Abstract

This study, employing an interpretive research paradigm, sought to investigate into how University for Development Studies (UDS) is responding to its regional development mandate with a specific focus on how it is responding to human capital development, innovation capabilities, and social and environmental development in northern Ghana. A study of this nature was deemed relevant and appropriate since UDS was established in 1992 under the PNDC Law 279 with an explicit mandate to blend its academic work with that of the community in order to provide constructive interaction between the two for the total development of northern Ghana. Despite the deplorable state of development in Northern Ghana, the regional development mandate of UDS in such a challenging environment has not attracted much attention in the literature. Findings from the study suggest that while UDS has appreciably linked its teaching, research, and service roles to the development needs of northern Ghana, it has a stronger link with the human capital development and social, cultural, and environmental development compared to developing the innovation capabilities of northern Ghana. It is, therefore, recommended that if UDS is seen as a key player in the development of Northern Ghana through its policy mandate, then, government and regional authorities need to create an enabling environment and put in place appropriate policy support structures to stimulate an effective engagement of UDS with the industrial sector and local businesses.

**Keywords:** Universities, Regional Development, Human Capital Development, Innovation, Ghana

## 1. Introduction

Over the past few decades, academic interest in the relationship between knowledge production institutions within a region and the region's socio-economic development has increased significantly (Gunasekara, 2004, Lester, 2005; OECD, 2007). Universities everywhere are being forced to carefully reconsider their role in society and to evaluate the relationships with their various constituencies, stakeholders, and communities (Jongbloed, Enders, & Salerno, 2008). It is observed that the two core functions of higher education institutions - teaching and research - are exogenous to and independent from specific economic and social imperatives (Chatterton & Goddard, 2000; Gunasekara, 2005). In that respect, universities and other higher education institutions are being called upon by various regional actors and agencies to make an active contribution to the region in which they are located. Thus, in addition to teaching and research, higher education institutions are to play a key role as agents of economic, social and cultural development in their located regions (Puukka & Marmolejo, 2008) since it is perceived to be beneficial both to the engaged university as well as to the larger society (Gunasekara, 2004; OECD, 2007).

Realizing the potential contribution that higher education institutions can and do play in the development of their located regions, the government of Ghana established the University for Development Studies (UDS) with an explicit mandate to particularly help address and find solutions to the environmental problems and socio-economic deprivation that have characterized the people of northern Ghana. UDS was established in May 1992 by the Provisional National Defence Council (PNDC) Law 279 as a multi-campus institution and it began academic work in September 1993. Through the legislative instrument establishing the university, the policy makers enjoined upon UDS to "blend the academic world with that of the community in order to provide constructive interaction between the two for the total development of northern Ghana in particular, and Ghana as a whole" (Manuh, Garba, & Budu, 2007, p. 166). Thus, in addition to its core functions of teaching and research, UDS was given an added responsibility for the development of its surrounding communities.

The catchment area of the university covers what is traditionally called Northern Ghana – comprising of three administrative regions - Northern Region, Upper East Region, and Upper West Region (see Appendix 1). Over the past years, the three regions in Northern Ghana have been noted to be the poorest, both in absolute and relative terms, in Ghana using various indices of measurement (Asenso-Okyere, Asante, & Gyekye, 1993; Kaburise, 2003; Osei-Assibey, 2014). They fall below national average levels of income and consumption expenditures, weak education and literacy levels, poor health and sanitary conditions, and absence of basic social amenities (Manuh et al., 2007). According to the UNDP's 2007 Ghana Human Development report, these three regions 'harbor the poorest of the poor' (Harsch, 2008). Thus, at its establishment, the university was seen as a key player and instrument for the development of this economically disadvantaged region.

Despite the state of development in Northern Ghana, the policy expectation of this university to have a close relationship with its surrounding regions as a means to promote socio-economic development in Northern Ghana has not attracted the needed attention in the literature. There has been no empirical study that has investigated into how the university is responding to such a regional development mandate in northern Ghana. It is against this background that this study seeks to investigate into how UDS as a case of a university with a particular regional development mandate in Africa has envisioned and carried out this role within a highly disadvantaged region. In achieving this objective, the study explores these research questions:

- In what ways is UDS responding to the development of human capital development needs of Northern Ghana?
- How is UDS engaging in building the innovation capabilities in Northern Ghana?
- How is UDS engaging in the social, cultural, and environmental development in Northern Ghana?

## 2. Literature Review

The university engagement literature proposes that universities adapt their core functions of teaching and research, as well as community service, to address actual regional needs (Chatterton & Goddard, 2000; OECD, 2007). In this vein, the regional engagement of higher education institutions is conceptualized into three dimensions, namely knowledge creation in the region through research and its exploitation via technology transfer; human capital formation and knowledge transfer; and cultural and community development contributing to the milieu, social cohesion and sustainable development (Jongbloed et al., 2008; OECD, 2007).

Research has shown that through its teaching function, higher education institutions can play a key role in developing the skill needs of the region within which they are located. Thus, the knowledge that is transmitted to students and graduates and is subsequently absorbed into the regional economy is one of the most effective means of knowledge transfer and has a greater potential of transforming regional economies (OECD, 2007). The literature points out that higher education institutions can respond to the development of the human capital in the region in which they are located in a number of ways (Charles, 2003; Gunasekara, 2004; OECD, 2007). They can widen access to higher education, especially from remote areas, communities with low tradition of participation in higher education and among non-traditional learners who combine work and study, improve the balance between the labour market and supply through creating improved labour market intelligence, supporting new enterprises in their curricular and stimulating links with local employers, and also attract talent to the region and help retain and develop it. Another way through which higher education institutions can help improve upon the skill base of their regions is to map out strategies to enhance graduate retention and employability in the region by pursuing more regionally focused programmes which can facilitate the retention of graduates into these regions (Chatterton & Goddard, 2000; Gunasekara, 2004). They can localise the learning process by drawing upon the specific characteristics of a region to aid learning and teaching and enhance the regional skill base through lifelong learning and distance education since the changing nature of labour market competencies requires retooling and re-skilling of workers to enable regions to be competitive (OECD, 2007).

Higher education institutions further adapt their research function in building the innovation capabilities of the regions there are located. Chatterton and Goddard (2000) assert that research within higher education institutions, especially the university sector, has traditionally focused on the production of basic knowledge for the international academic community and has neglected the application of established knowledge for the local/regional community. Nonetheless, there are a number of trends that are encouraging universities for commercializing their research activities and link their research and expertise more closely to their surrounding environment. Lester (2005) argues that the university's role in local innovation processes depends on what kind of industrial transformation is occurring in the regional economy and thus the "one-size-fits-all" approach to economic development pursued by so many universities, with a focus on patenting, licensing, and new business formation, should be replaced with a more comprehensive, more differentiated view of the university's role in regional innovation. Chatterton and Goddard (2000) assert that higher education institutions have established a number of mechanisms to manage their research interface with the outside world. Explicit mechanisms through which research results are transferred between higher education institutions and regional stakeholders include single entry points such as regional development offices, research centres, spin-off companies, incubator units, advice and training services, sciences parks and mechanisms to exploit intellectual property rights.

Additionally, research advocates for a broader regional development concept including community development, welfare, social inclusion and cohesion, sustainability and cultural vitality, hence recognizing that social, cultural and environmental developments have demonstrable economic and intrinsic benefit (Mora, Gomes, Haddad, & Marmolejo, 2006; OECD, 2007). These underpin and stabilize economic growth and bring forth benefits in terms of community health and welfare, social cohesion, community life and sustainable development. Chatterton and Goddard (2000) indicate that a number of trends are converging that are increasing the service function of higher education institutions. Among these is the growing awareness of the global nature of many problems such as environmental degradation, poverty and economic development which has created a

number of interconnected local responses and that higher education institutions are well placed to interpret these global issues on a local scale and to play a major role in the social and environmental development of the region.

### 3. Methodology

This study employed an interpretive and qualitative research paradigm. Denzin and Lincoln (2011) stress that qualitative research entails interpretive and naturalistic approach to the world and thus study things in their natural setting, attempting to make sense of, or interpret, phenomena in terms of the meanings people bring to them. The interpretive paradigm was deemed appropriate for the study as it sought to explore the perspectives of participants on the kind of initiatives and programmes they have implemented at the institutional level to promote community development in the Ghanaian setting. The researcher employed the use of semi-structured interviews to gather the required data from participants. This was supplemented by an extensive review of some selected documents including university reports on outreach programmes, annual reports on research activities, Vice Chancellor annual report, and the policy document that established the university.

The researcher employed purposive sampling technique in selecting the participants during the data collection process. Bryman (2008) indicates that the goal of purposive sampling is to sample cases/participants in a strategic way so that those sampled are relevant to the research questions that are being posed. In this vein, the researcher needed to select respondents strategically from different units within the university that will provide relevant information on how the university is responding to the development of the skill needs of northern Ghana, regional innovation, and the contribution to social and environmental development. With this in mind, the researcher drew respondents from the University's central administration, Deans of selected Faculties and Heads of Departments, the unit in-charge of the University's Outreach programme, the Centre for Continuing Education and Interdisciplinary Research (CCEIR), some senior academics, and the Alumni office. In all 20 participants were selected for the study. Interviews were conducted in English with all participants and were all audio-recorded after seeking their approval. Interviews were held in the offices of the respondents and each session lasted between one to two hours.

The data collected was analyzed manually. The researcher after the collection of the data transcribed all the digitally-recorded interviews in verbatim. This enabled the researcher to capture the views expressed by respondents in their own words. The transcribed material and the documents gathered were later read through several times with close attention being given to emerging themes in the data.

To enhance the data trustworthiness of the data, data triangulation was employed as the interviews were complemented with documentary data. Also, participants were selected from different units of the university so that views on the same issues could be easily cross-checked so as to enhance the accuracy and credibility of findings. Finally, the researcher complied with ethical issues by commencing the data collection process only after an approval had been sought and granted by the university administration while the consent of all participants was sought.

### 4. Findings

#### 4.1 In what ways is UDS responding to the development of human capital development needs of Northern Ghana?

Research question one sought to investigate the strategies and programmes that UDS has initiated to help in developing the skill needs of northern Ghana.

##### 4.1.1 Recruitment of students from Northern Ghana

Findings from the study showed that UDS has initiated a policy that aims at promoting the recruitment of students from northern Ghana. It emerged that while applicants to the university come from all over Ghana, the general university policy is that the first forty percent of the students' places are recruited on merit and such applicants could come from any part of the country. The next forty percent is reserved for the catchment area comprising the three northern regions and the Brong Ahafo Region while the last twenty percent is allocated to district-sponsored students. However, the interviews revealed that though this is an institution-wide policy, it is more pronounced in some faculties than others. For instance, a respondent from the School of Medicine and Health Sciences expressed that:

“This policy regarding recruitment cut across all faculties in the university but it is more pronounced in the medical school because of numbers. It is a general university policy”.

They explained that since the other faculties admit a large number of students, it is often assumed that many students from northern Ghana stand a chance of gaining admission, and thus the institution policy is normally not strictly applied. However, the Medical school has a small intake and hence the policy is strictly applied.

In addition, it emerged that UDS is creating opportunities for more females from northern Ghana to be enrolled through their admission process. Respondents pointed out that the university realizing the wide gap in educational attainment between males and females in northern Ghana is making frantic effort to promote the

admission of more females, especially in the sciences. This was confirmed by the one policy document reviewed as it states:

“The University is committed to addressing the issues of gender equity and mainstreaming, especially in relation to empowerment and poverty reduction. In Ghana, and particularly in Northern Ghana, gender and poverty are intricately and inextricably linked. Our admission policy in relation to gender is informed by findings, supported by research, that education is one of the ways through which poverty can be reduced. We are encouraging female enrolment through an admission policy that allows more qualified applicants to gain admission into our academic programmes”. (Vice Chancellor Report, 2003, p. 5)

Thus, while UDS has the policy to promote the recruitment of students from northern Ghana, it has taken a further step to promote the recruitment of females.

#### *4.1.2 Localizing the learning Process*

Respondents mentioned the localization of the curricula of UDS which aims at integrating students into their surrounding communities. A respondent from the central administration commented that:

“The curricular of the Faculties of UDS emphasize community entry, community dialogue, extension and practical tools of inquiry. Participatory appraisal and participatory technology development methodologies are incorporated into the various curricula to ensure that students appreciate that the poor need to be partners in attempts to reduce or eradicate poverty”

Respondents added that through the Third Trimester Field Practical Programme (TTFPP), students are integrated into communities in northern Ghana to deepen their understanding of the unique characteristics of northern Ghana. It was indicated that apart from the service role of the programme, it helps students to put the theoretical components of their respective programmes learnt in the two trimesters into practice in the third trimester. In the first year of the programme, students are to write a profile of the communities comprising the physical resource base, demographic characteristics, socio-political organization, agricultural and natural resources, science, technology and industries, special organization and social services of the communities in which they are located. It emerged that once they write their report on these, academics draw upon these in their teaching and learning. Respondents said that their stay in the communities as well as the reports they submit constitute six credits of the learning process in each academic year.

Additionally, respondents at the School of Medicine and Health Sciences indicated that the School has localized its learning process by adopting the Problem-Based Learning (PBL) approach. Recounting the rationale behind the adoption of such an approach, the school administrator commented that:

“The policy instrument establishing the medical school indicates that northern Ghana is a distinct ecological zone of savannah grassland and hence it has a peculiar type of diseases and hence there was the need to have a medical school located within the area to take care of those peculiar diseases which may not necessarily be in the south. As part of that justification, the school had to have a curricular which seems more modern than those being run in other medical schools. As such the school had to adopt the PBL student centred interdisciplinary oriented approach in the medical training”

It was noted that the PBL allows for some interactive teaching and exposes students as well as medical care to the rural communities. Thus, the link between the students and the communities is strengthened through the teaching and learning approach.

#### *4.1.3 Establishment of programmes in response to regional labour market needs*

Findings from the study showed that UDS is adapting existing programmes and establishing new ones in response to regional labour market needs. One of the cases mentioned through the interviews was the establishment of the Faculty of Education, Law and Business in 2008 at the Wa campus, which was established in response to a pressing regional labour market need. The respondent from the central administration explained that for instance with regards to the education component, they realized that the two universities in Ghana that offer courses in education and hence the training of teachers are all located in the southern part and that has resulted in the lack of teachers in northern Ghana. Realizing this, the University created such a faculty to assist in producing teachers for the education sector in northern Ghana. The documents reviewed also supported this claim as it indicates that:

“... It is in response to this mandate that the Faculty of Education, Law and Business Studies was established in 2008 at the Wa campus. The planned programmes in education, law and business are directed to the practical and equity needs of northern Ghana in particular and rural communities in Ghana in general” (<http://www.uds.edu.gh/felbs.php>)

Respondents from the Faculty of Agriculture made mention of the establishment of the Department of Agribusiness. They noted that farmers in northern Ghana are mostly into peasant farming and the faculty feels that agriculture needs to be done in commercial form and this calls for the training of experts who will help farmers in that direction. However, the interview with respondents showed that UDS has not established courses in response to the needs of specific local businesses and industries in the region. This could be explained by the orientation of the University with its dominance in the social sciences and the humanities and perhaps the nature

of the industrial activities in northern Ghana.

#### *4.1.4 Promoting lifelong learning in Northern Ghana*

Respondents indicated that UDS has instituted lifelong programmes that cater for non-traditional students. The university has established the Centre for Continuing Education and Interdisciplinary Research (CCEIR), a unit which among other things is to organize professional programmes for non-traditional students. The mission of the unit is as follows:

“The Centre for Continuing Education and inter-disciplinary Research exists to promote research and teaching for socio-economic advancement in Northern Ghana in particular and Ghana as a whole.... It organises professional training at the graduate level and short courses for capacity building for grass-roots development”. (UDS Website, [www.edu.uds.gh](http://www.edu.uds.gh))

Respondents added that realizing the importance of lifelong learning in the emerging knowledge society, the component of continuing education was added to the unit. This was to establish programmes for students who might not find it possible to combine work and regular education. In response to such a need, the centre has initiated distance learning programmes and also coordinates distance learning in other campuses of the university. At the time of the study, distance learning programmes were run in all the campuses.

#### *4.1.5 Graduate retention and employability into northern Ghana*

With regards to the retention and employability of graduates into northern Ghana, respondents indicated that the University has created two units, the guidance and counseling unit and the Alumni Office. They reported that the guidance and counseling unit organizes career and guidance seminars for final year students while the Alumni office keeps a record on past students and monitor their employment records. However, when the researcher sought to ascertain from the Alumni office if there was a comprehensive record on the employability of past students in northern Ghana, the search revealed that there was no available data to that effect. It emerged that they only kept addresses of students who completed studies at that time.

Respondents also indicated that considering the deprived nature of the communities within which UDS is located, they felt that one potent means to enhance the retention of graduates in northern Ghana was to integrate students into the rural communities during their studies. Thus, to them, the long-term goal of the TTFPP was to inculcate into students favourable attitudes that will enable them to stay upon completion. The Coordinator of the TTFPP commented that:

“Students engage in teaching and other community services but again that is not the only aim or rationale behind the programme. It is to build in them that attitude that will enable them to live in these communities upon completion. So if a student is trained as an agricultural extension officer, will he be able to stay and work in that deprived area? That is what we want”.

Nevertheless, they also pointed out that they were limited as an institution as the employability of graduate in northern Ghana was beyond their scope.

## **4.2 How is UDS engaging in building the innovation capabilities in Northern Ghana?**

This section sought to investigate whether and if so, how the research activities of UDS are linked to building the innovation capabilities in Northern Ghana. Two major themes regarding how UDS is introducing innovative practices into agriculture and the mechanisms put in place to disseminate its research findings to local farmers in northern Ghana emerged from the data.

### *4.2.1 Introducing innovative practices in Agriculture in Northern Ghana*

Respondents from the Faculty of Agriculture reported that the academics at the faculty have collaboration with the Savannah Agriculture Research Institute, a unit of the Council for Scientific and Industrial Research at Nyankpala, and they engage in research relating to food and fibre crop farming, for the purpose of introducing improved technologies to enhance agricultural productivity. It emerged that they have programmes for the major crops cultivated in northern Ghana, including sorghum, millet, maize, groundnut, and cowpeas and that they have supplied farmers with different varieties of improved seeds. Also, through the support of the German Agency for Technical Co-operation (GTZ) they are introducing farmers into dry season farming, chili pepper, and beekeeping production.

They reported that since northern Ghana has a long period of drought, they realized that farmers in northern Ghana mostly become unemployed during dry season periods. Thus, to help them overcome such a situation, they are researching into varieties of crops that can withstand a long period of droughts so that farmers can cultivate during the dry seasons. In the process, they have organized farmer groups and they are educating them on how to do dry season farming so that during the dry seasons they will still remain employed. As part of the programme, women have also been grouped to be educated on how to develop the shea nuts in order to improve the quality of their produce.

Again, respondents from the Department of Animal Science commented that they had an international partnership with the Veterinary Department of the University of Glasgow which aim at improving the nutritional quality of animal feeds for local farmers. Farmer groups were formed to be educated on how to improve the

nutrient level of their feeds. Also, the Department of Agricultural Mechanization and Irrigation Technology is equipping local farmers with the expertise in building irrigational facilities. They added that these initiatives are supported by international agencies such as the EU and other foreign donors.

#### *4.2.2 Institutional mechanisms for knowledge transfer to local communities*

Another theme that emerged was institutional structures and mechanisms through which research products at UDS are disseminated to local communities. Respondents noted that the department of agriculture extension liaises with other departments and they meet farmers from time to time to demonstrate knowledge and technologies to the local community members. They added that previously they used to have some radio programmes through which they disseminate their research findings and also offer advice on some best practices of farming but that could not continue due to lack of funding.

Respondents categorized the research activities of the university into commissioned, where the project is initiated and supported by some international agencies, and non-commissioned research, their own individual research activities. It emerged that apart from commissioned research or internationally supported projects, the dissemination of research findings directly to local community members has not been effective. A respondent at the CCEIR remarked that:

“For commissioned research, they would organize what is called the validation workshop, where you go back to the communities and meet stakeholders, opinion leaders, and the general public and discuss the outcome of the research. The implications of the findings are brought to bear. In the case of our own research, finding money to do the research in itself is a problem, how then do you get resources to go back to the communities again”

This suggests that though the creation of the extension department was to enhance the dissemination of scientific knowledge and research products from the university to the local communities, it appears it is not carried out effectively as expected due to financial and other logistical constraints.

### **4.3 How is UDS engaging in the social, cultural, and environmental development in Northern Ghana?**

The third research question sought to investigate into the sort of strategies/activities that have been initiated by the university aimed at promoting the social, cultural and environmental development in northern Ghana.

#### *4.3.1 Community service through Third Trimester Field Practical Programme*

Respondents made mention of the institution of the Third Trimester Field Practical Programme (TTFPP) which was initiated in 1993 as the university’s flagship programme in Northern Ghana. With this, the University’s academic calendar is divided into three trimesters and a whole of the third trimester of eight weeks is devoted solely to practical field work in the local communities. Students from all faculties are required to live and work within the communities in northern Ghana during the third trimester throughout their four-year degree programmes.

Respondent indicated that in 2002/2003 academic year, the University embarked on an integrated approach to the programme. This modification entails the grouping of students from all the different faculties into one group. One of the documents reviewed emphasizes the importance of the shift to the integrated approach as follows:

“This integrated approach is informed by the growing awareness of the holistic approach to the solution of development problems of the deprived communities, which UDS has positioned itself to serve. This integrated approach would, therefore, enable students to appreciate community problems and opportunities in a holistic manner through the perception and appreciation of such problems from various angles, secondly, the integration will help broaden the knowledge and experience of students, as they would have the opportunity to interact and learn from each other. It will also foster in them the spirit of teamwork, which is essential for work in a world that is becoming increasingly complex and requiring collective efforts to overcome challenges”. (UDS Website: [www.uds.edu.gh](http://www.uds.edu.gh))

Respondents indicated that students are put into groups of ten and spread into the surrounding communities of the university. The students identify development challenges, goals, and opportunities in the communities and design ways of working towards those goals and aspirations with the communities. Each group is assigned an academic who serves as the supervisor. Academics go to the field themselves to ensure that students go about their work according to the work schedule and to ensure that students identify and apply the right techniques and methods. Besides, respondents indicated that if communities have specific developmental challenges, the academics do follow-ups to ensure that projects initiated by the students are successfully completed.

In addition to the community profiling, identification of major challenges and offering possible solutions, the study showed that students also engage mostly in teaching at the basic and secondary schools in their located communities. Besides, as part of the programme, they give public talks to the communities – issues on HIV/AIDS, encouraging the communities to send their children to school, and good environmental practices were cited as some of the things they do. Respondents also mentioned that in cases where there are ongoing

national as well as regional policies to be implemented, students use the opportunity to educate community members on those policies.

#### *4.3.2 Engaging in public debate through the institution of the “Harmattan School”*

Another theme that emerged was the institution of the ‘Harmattan School’ which they claimed was contributing to the social and environmental development of northern Ghana. It was instituted in 2007 and usually organized in February each year (i.e. in the middle of the Harmattan season which runs from December to March each year). The ‘Harmattan school’ subjects a number of developmental issues confronting northern Ghana into critical analysis and after two days’ deliberation, a communiqué on the developmental issue as well as possible recommendations are presented to the Government, Civil Society Organizations, Traditional leaders, and other Stakeholders. A senior University Administrator commented that:

“The Harmattan school series was instituted by the University for Development Studies to provide a platform for academics, development practitioners, and other stakeholders to deliberate on development issues concerning northern Ghana in particular, and Ghana as a whole”

They indicated that since the northern Ghana is a deprived area, they need to bring to the attention of the government, other development agencies, and the general public the pressing issues and the developmental challenges in the area and suggest possible solutions to the challenges.

#### *4.3.3 Improving the health needs of the people of Northern Ghana*

As a way of helping to improve the health needs of the people in northern Ghana, the School of Medicine and Health Sciences has in place a yearly programme dubbed Community-Based Education and Service (COBES). This programme is specifically for the School of Medicine and Health Sciences. The students are expected to go in groups and stay in the rural communities that have clinics. They go and stay there for six weeks and as part of their stay go to these clinics and find out the common diseases that are reported on a daily basis so they can help come out with some solutions through their medical training. It is done every year and they do continue in the same community. Based on their findings, the student groups organize community talks and education on health issues and how to control these common diseases to the local community members. The role played by academics in the programme is to go round from time to time to see that students are doing what is expected of them.

## **5. Discussion**

The purpose of this study was to investigate how UDS is engaging in regional development with specific focus on how it is engaging in human capital development, regional innovation, social, cultural, and environmental development in northern Ghana. This study was deemed relevant as UDS was established in 1992 under the PNDC Law 279 with an explicit mandate to blend its academic work with that of the community in order to provide constructive interaction between the two for the total development of northern Ghana. Overall, findings from the study suggest that UDS has appreciably linked its teaching, research, and service functions to the development needs of Northern Ghana.

Findings from the study have shown that UDS has undertaken a number of initiatives, strategies, and programmes in order to enhance the skill needs of northern Ghana. Past studies in Ghana have shown that students from the three northern regions of Ghana stand a lesser chance of gaining admission to higher education institutions in Ghana (Manuh et al., 2007). According to Manuh et al. (2007), the most significant factor determining access to universities in Ghana was the region of residence and that nearly 70 percent of the students of the five public universities in Ghana resided in only three regions, namely Greater Accra, Ashanti, and Eastern Regions. This is an indication that students from Northern Ghana are underrepresented in Ghanaian public universities. Thus, if UDS is creating opportunities for more students to be recruited from northern Ghana then it is in the right direction since it has the potential of reducing poverty level in northern Ghana (Blondål, Field, & Girouard, 2002; OECD, 2007). This initiative is consistent with the effort of several other universities highlighted in the literature as they are making an effort to recruit students from their located regions (Gunasekara, 2004).

However, a mere recruitment of students from a region is not enough to stimulate regional development. It partly depends on the retention of students and their employability in the region after completion which is also influenced by how well the university aligns its academic programmes to the needs of the regional economy and how strong the regional economy is to absorb the graduates. According to the (OECD, 2007), the knowledge that is transmitted to students and is subsequently absorbed into the regional economy is one of the most effective means of knowledge transfer and has a greater potential of transforming regional economies. Thus, UDS has adopted a curricular that integrates students into local communities for eight weeks in each academic year with the hope that they will gain favourable attitudes which will facilitate their retention in these communities. However, what is not clear is whether these students have corresponding industrial and business opportunities in these communities and whether their respective programmes are linked to these industrial or business pathways in the communities.

It appears from the study that there is a lack of systematic assessment of the labour market needs of the region by the university, lack of specific programmes responding to specific regional industrial needs, and a minimal co-operation between UDS and regional employers. This existing weaker link between UDS and the labour market in northern Ghana could lead to migratory pull of graduates into other regions upon completion. Again, while UDS has created a specific unit to promote lifelong learning in northern Ghana, an assessment of the existing programmes show limited target to local industrial workers and other Small and Medium Enterprises. Thus, UDS needs to orient academic programmes to the industrial activities and other local businesses in their surrounding communities to stimulate the retention of graduates into northern Ghana upon completion.

With regards to building the innovation capabilities in northern Ghana, findings from the study suggest that while UDS has introduced some innovative practices into agriculture in northern Ghana, little effort is done to liaise with other industrial activities in the region. This supports the view that university's role in regional innovation processes depends on the kind of industrial transformation that is occurring in the local economy (Lester, 2005). Over 70 percent of the population in northern Ghana engages in Agriculture and thus it is not surprising that UDS has aligned most of its research activities to agricultural related activities in Northern Ghana. Again, while research highlights a number of channels or mechanisms through which research output is transferred from higher education institutions to the industrial sector and the wider community including regional development offices, research centres, spin-off companies, incubator units, advice and training services, sciences parks and mechanisms to exploit intellectual property rights (Chatterton & Goddard, 2000), our empirical data show little evidence of the above mechanisms and infrastructures in the case of UDS and northern Ghana as a whole. Rather, the study results showed that UDS disseminates knowledge and technology through one to one consultations with local farmers and meeting farmers directly from time to time in the communities to demonstrate new technologies. Thus, it appears the industrial transformation occurring in the regional economy shapes the manner through which knowledge is likely to be transferred.

Finally, result from the study showed that UDS is responding in a variety of ways to the social, cultural and environmental development of Northern Ghana. This was done through the institution of the TTFPP which integrates students and academics in the communities in the third trimester of each academic year. Through this programme, students engage in teaching in the basic schools, participate in community health talks, and undertake community profiling in order to keep coherent data on the communities which serve as the basis for developmental projects. Besides, the University engages in the public debate that aims at contributing to the development of northern Ghana through the institution of the annual Harmattan School which brings together stakeholders to discuss development issues confronting northern Ghana. These findings suggest that UDS has positioned itself well in this domain of regional development than introducing innovative practices in industries and other local businesses in the region. This could be explained partly by the fact that students are the agents being used mostly in these activities. From the data analysis, the driving force behind the outreach activities is the fact that students earn six credits for engaging in such activities. Thus, since students want to earn good grades, they end up putting up their best in the engagement activities.

## **6. Conclusion**

Overall, this study has shown that UDS has appreciably linked its teaching, research, and service roles to the regional needs of northern Ghana. However, it appears that UDS has strongly linked its engagement activities to the human capital development and social, cultural, and environmental development needs than the innovation capabilities in Northern Ghana. UDS has not made enough progress in linking its research activities to regional industrial activities and stimulating local businesses in northern Ghana. This situation contrasts how the regional role of higher education institutions is undertaken in the advanced economies as the literature suggest a strong link of research activities to the innovation capabilities of the regional industries and other regional businesses (Gunasekara, 2005; Lester, 2005; OECD, 2007). The prevailing situation in the case of UDS could be explained by the internal institutional dynamics with regards to the subject mix of the university with its dominance in the social sciences and possibly institutional interpretation and meaning given to the idea of the role of universities in regional development, regional characteristics in terms of weak industrial base in northern Ghana and the lack of adequate financial support and policy frameworks guiding the engagement activities of UDS. Thus, if UDS is seen as a key player in regional development through its policy mandate, then, government and regional authorities need to create the necessary enabling environment and put in place appropriate policy support structures to stimulate its regional engagement activities. This calls for active collaboration between UDS, policy makers at both regional and national levels and the industrial sector in northern Ghana. UDS could equally establish more programmes that are practically and vocationally oriented in order to strengthen its relationship with the industrial and business sector in Northern Ghana.

## **7. Limitations of the study and future research directions**

Despite the fact that this study has shed lights on a number of ways that UDS has responded to its regional



development mandate, it suffers from some limitations. Firstly, the selection of participants mainly from the University can be seen as a limitation. If the views of community leaders, local farmers, students, regional authorities, and even the Education Ministry were also sought, it would have added more nuances and validated the findings of the study. Second, UDS is a multi-campus institution with four campuses located in a different geographical part of northern Ghana and as such the researcher could not visit all Faculties. Drawing participants from all campuses would have added more meaning to the study findings. Future research could explore the impact of the engagement activities of UDS on the community members in Northern Ghana. Since the students play important role in the engagement programmes in UDS, future research could explore student experiences in community engagement programmes. Similar studies could be carried out in other universities in Ghana to explore the nature of engagement activities they carry out. Finally, further research could explore the factors that inhibit the regional role of UDS in northern Ghana.

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*Appendix 1: Regional Map of Ghana*

