

The Application of a Knowledge Transfer Model for Global Impact

Marc Fleetham MBA FInstKT¹ Rebecca Macdonald BA(hons) AMInstKT² Nigel Birch IDMS MloD AMInstKT³,

¹University of Wolverhampton, Business Solutions, Wolverhampton Science Park,
WV10 9RT, UK
m.j.fleetham@wlv.ac.uk

²University of Wolverhampton, Business Solutions, Wolverhampton Science Park,
WV10 9RT, UK
rebecca.macdonald@wlv.ac.uk

³University of Wolverhampton, Business Solutions, Wolverhampton Science Park,
WV10 9RT, UK
n.birch@wlv.ac.uk

Abstract

This paper aims to demonstrate the impact of knowledge transfer activities on global communities. It draws on an award winning example of tri-party knowledge transfer, with partners from the UK and Nigeria, encouraging entrepreneurship and developing regional economic regeneration. This was stimulated by bespoke collaborative knowledge transfer activity in a location with substantial barriers and lack of access to municipal services. It is hoped that the reader will conclude that the application of knowledge transfer is effective and delivers results in a global context.

Introduction

The application and impact of international knowledge transfer is based on a partnership with The University of Wolverhampton, Nigerian Federal Government and The University of Maiduguri in Northern Nigeria.

The University of Wolverhampton has over twenty five year history of knowledge transfer activity within small to medium sized enterprise (SME) development and growth in the UK. The Nigerian Federal Government, funding the development of Centres for Entrepreneurship Development (CEED) as a matter of urgency to facilitate entrepreneurship and subsequently Nigeria becoming a developed nation [1]. The University of Maiduguri is the recipient of the knowledge against a challenging economic environment with limited infrastructure and entrepreneurial

effectiveness. Additionally, the knowledge transfer operated with a backdrop of civil unrest and a large amount of the population lacking access to adequate electricity and basic needs [2].

Knowledge transfer in this context will be explored in detail along with the impact of entrepreneurship education and how it can serve as a catalyst for economic growth and development [3]. The aims are to develop and grow regional economic regeneration, stimulated by the bespoke collaborative knowledge transfer activity in and to understand the impact of the collaboration. An analysis of each actor will be carried out with outcomes and ongoing partnership activity duly noted.

1. Background and Related Work

The Federal Government of Nigeria directed the National Universities Commission, National Commission for Colleges of Education and National Board for Technical Education to implement an enterprise stimulation strategy and support Universities to develop centres for enterprise growth. Six Nigerian Universities responded to the Federal Government's call. One of these Universities was the University of Maiduguri (UoM), Northern Nigeria who in 2011 secured multimillion Naira funding from the Central Bank of Nigeria, to commission the construction and establishment of a Centre for Entrepreneurship and Enterprise Development (CEED) which was completed in 2013. To date the UoM is the only Nigerian University to have a fully functioning facility to encourage entrepreneurship and enterprise establishment.

The thrust of the policies on Entrepreneurship Programmes in Nigeria is geared towards the development of entrepreneurial skills and competencies such as creativity, leadership, business planning, networking, innovation and many others. The intention of CEED is to engage with UoM students to nurture their ideas and develop positive, independent and innovative business leaders of the future and stimulate venture creation.

In 2011 a team of three academics from the UoM, who are now all Directors of CEED, visited a number of UK institutions including the University of Wolverhampton (UoW), researching which Institution would best fit their requirements for a knowledge exchange program which would assist them to:

- Build staffing capacity and expertise for CEED, enabling them to effectively deliver a high quality entrepreneurship programme.
- Assist them to develop an operational plan for CEED and understand its incubation capacity and strategy.
- Establish a framework for partnership in the areas of knowledge transfer, capacity building, research collaboration and curriculum development.
- Build continuous collaboration with a UK University with the aim of creating sustainable graduate start-up enterprises operating from CEED.

The mission of CEED is to enrich the knowledge horizons of students and staff in the field of entrepreneurship and nurture the development of high quality entrepreneurs, who have the capabilities for creating employment through business venturing and strategic planning. In September 2012 the three academics from the UoM's CEED, undertook a visit the UoW to better understand how the UoW's Business Solutions Department could deliver the support required.

2. A Model of Knowledge Transfer

Figure 1 illustrates a model of knowledge transfer which was drawn upon for the collaboration being discussed, a process model by which knowledge is transferred from knowledge sources to recipients in order to improve performance and capabilities [4]. 'It has been proven that without a culture of collaboration and cooperation being in existence. Knowledge transfer cannot be achieved.' [5]

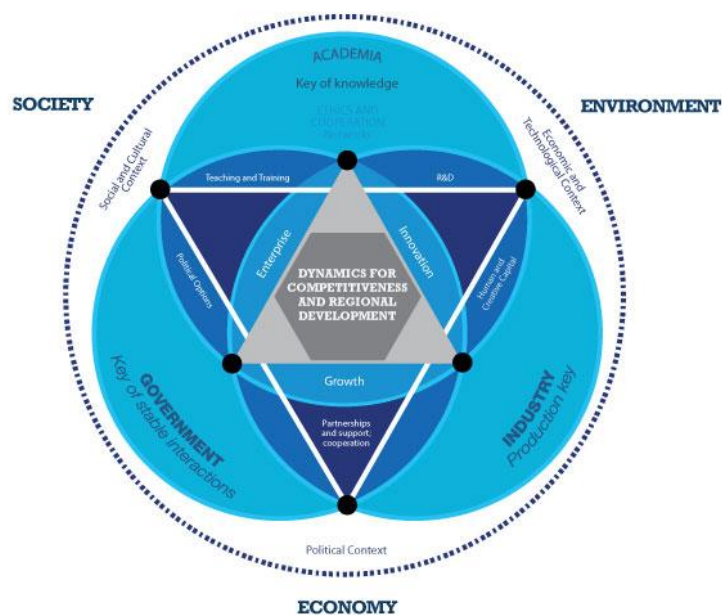


Figure 1 Knowledge Transfer Model

The actor in the model playing the role of industry is the UoM, academia being the UoW and the Government being the Nigerian Federal Government, all acting jointly in partnership to transfer and apply knowledge to facilitate an environment conducive to the growth of innovative thinking and the promotion of economic growth [4]. The creation of a balanced collaboration is the most favourable environment for generating innovation, enterprise and economic growth as the partnerships overlap, as shown at the centre of the model in Figure 1.

3. Entrepreneurship Education and Enterprise Incubation

Entrepreneurship education is described by [6] Arogundade (2011) as giving an individual with innovative ideas, the knowledge to transform their ideas into profitable activities. Entrepreneurship education within a University environment as a learning intervention and part of the knowledge transfer outcomes can positively influence the entrepreneurial activities of the students and by providing courses, enterprise start-up coaching and supporting incubation activities [7].

Some researchers have studied the relationship between education and entrepreneurial success and evidence suggests that entrepreneurship education does positively influence entrepreneurial behaviour and increases the likelihood of individuals engaging in entrepreneurial activities [7]. According to [8] Bates (1990), educated entrepreneurs are more likely to create firms that are sustainable and interestingly the University environment and the community it creates naturally stimulates a rich pool of network relations that entrepreneurs may use for a variety of purposes.

4. Entrepreneurship and Enterprise Growth in Northern Nigeria

There is evidence that entrepreneurial activity in northern Nigeria is primarily driven by an individual's necessity to generate an income [2]. For those that do embark on enterprise startup and entrepreneurial activities there are substantial barriers as ease of access to municipal services, such as power and water supplies, transport facilities and business services are very limited. Furthermore, access to finance for business start-up, technical education facilities and advertising avenues are limited due to political and economic instability [2]. Access to these services and facilities has been proven as a positive driving force of regional economic growth [9].

5. The Knowledge Transfer Actors

5.1 The Nigerian Federal Government

In 2010 the Nigerian Government sort to revise its policies on enterprise development and subsequently went on to integrate recommendations from the United Nations Conference on Trade and Development Policy Framework which put emphasis the need for entrepreneurship creation, generation of business startups and actions for priority groups such as women, youth and physically challenged, with the Small and Medium Enterprises Development Agency of Nigeria having primary responsibility for implementation and monitoring of the revised policies [10].

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Education to implement an enterprise stimulation strategy and support Universities to develop centres for enterprise growth. Six Nigerian Universities responded to the Federal Governments call. One of these Universities was the UoM, Northern Nigeria who in 2011 secured multimillion Naira funding from the Central Bank of Nigeria, to commission the construction and establishment of a Centre for Entrepreneurship and Enterprise Development (CEED) which was completed in 2013. To date the UoM is the only Nigerian University to have a fully functioning facility to encourage entrepreneurship and enterprise establishment.

5.2 The University of Maiduguri

The UoM's student population stands at approximately 30,000 students with 2,500 academics. CEED encompasses an administrative block with conferencing facilities and 27 skills incubation/business start-up units. The vision of CEED is to create an internationally recognized Centre of Excellence, which will spread the spirit of enterprise through education, training and research, using innovative and interdisciplinary approaches.

Through a collaborative approach CEED hopes to work innovatively with multiple Universities and develop initiatives which the centre can capitalise on as a catalyst for entrepreneurial activity and enterprise growth. This will bring together groups within thematic disciplines to prove best practice in all areas of their business. Through this international collaboration doorways to export markets may also be realised for the on-going development of the businesses.

The Nigerian partners spent a year visiting a number of UK Universities researching which Institution would best fit their requirements for a knowledge exchange program of this type. In September 2012 three academics from the UoM, now all Directors of the UoM CEED, undertook a visit to understand how the UoW Business Solutions Department could deliver the support required.

In December 2012 the Business Solutions International Business Development Manager visited Nigeria against a backdrop of six years of civil unrest, limited access to mains electricity and intermittent communication, to fully develop and agree the Knowledge Exchange Program.

5.3 The University of Wolverhampton

The UoW has 1000 academics, 21,700 full and part time students and 2,500 overseas students from over 100 countries currently studying at the institution. Alongside the Universities academic and research activities the Business Solutions Department works regionally, nationally and internationally to support activities which facilitate economic growth utilising the knowledge and expertise at the Universities disposal.

The University has historic grounding in developing entrepreneurs and supporting enterprise start up having for a number of years been the lead University in the Student Placements for Entrepreneurs in Education (SPEED Plus) Programme.

SPEED Plus supports entrepreneurial students and graduates in enterprise creation and business start-up. In the area of Knowledge transfer the UoW lies 6th in the UK for delivering government funded Knowledge Transfer Partnership (KTP) programmes alongside being the lead partner in the Knowledge Exchange and Enterprise Network (KEEN) programme. These programmes are tri-party knowledge transfer models supporting regional and nation businesses of all sizes to innovate, increase profitability and create employment for economic growth.

The University is also the home of the Business Solution Centre (BSC) which is a partnership model, with partners being the UoW, Wolverhampton City Council, colleges of further education and The Black Country Chamber of Commerce. BSC deals with around 300 enquiries every month and has delivered 1500 business assists and supported 500 new sustainable business start-ups since its opening four years ago. In June 2013 BSC won the highly prestigious Times Higher Education award for Knowledge Transfer, gaining national recognition for the universities work via the BSC partnership with 2 out of 3 business start-ups supported by the centre surviving their first year of trading.

The University has invested in business incubation spaces, having facilities for 95 supported business start-ups. Tenants have access to bespoke Business start programmes supported by the BSC, onsite business advice, networking and promotional activities, specialist consultants, and centres of excellence within the University, which have been proven to enhance the success of new ventures.

6. The Knowledge Transfer Programme Activity

The initiation, development and survivability of high growth SME's within Northern Nigeria is very low and with this in mind the program aimed to deliver innovation via developing innovative support mechanisms for entrepreneurs and business start-up which would in turn encourage economic growth both regionally and nationally.

After the completion of the UoM's CEED with funding from The Central Bank of Nigeria and supported by the Nigerian Federal Government the knowledge transfer programme was initiated in September 2012 following the exploratory visit from representatives from the UoM and in a short space of time objectives were agreed and implementation began in December 2012. The program aimed to support the establishment of a Centre for Entrepreneurship as directed by the Nigerian Federal Government's agenda for economic growth. The UoM was the first University within Nigeria to have completed the building of a Centre for Entrepreneurship and Enterprise Development (CEED) and to have embarked on stimulating high growth SME's by engaging with its resident graduate and academic population to foster graduate entrepreneurship and encourage business start-ups.

Since facilitating the acquisition of funding for CEED the Nigerian Federal Government partner in this programme continues to support and fund the UoM's

CEED. The centre is in receipt of ongoing funds to initiate an entrepreneurship and enterprise program to address the lack of economic activity within the region, however it is expected by the funders that CEED will be sustainable and self-financing with a two year time frame.

In December 2012 the Business Solutions International Business Development Manager visited Nigeria against a backdrop of six years of civil unrest, limited access to mains electricity and intermittent communication, to fully develop and agree the Knowledge Exchange Program. Next step engagement in Nigeria was planned for early 2013, however due to civil tensions in the area the program was reworked to maintain momentum with the Nigerian delegation visiting The University of Wolverhampton in May 2013 to undertake an emersion program, continuing the Knowledge Exchange activity.

This program was well aligned with the University of Wolverhampton's strategy of championing Knowledge, Innovation, Enterprise and opportunity for all. The core team from the University of Wolverhampton formed organically and the Business Solutions Team travelled to the UoM in July 2013 for a full month, with all four members of the team bringing with them a raft of knowledge and experience in a broad range of areas, all of which the team drew upon during their trip. The team in partnership with their Nigerian counterparts undertook tasks and facilitated entrepreneurial activity within CEED, against a backdrop of a violent terrorist insurgency and coupled with the lack of amenities that are taken for granted within the United Kingdom. Therefore the relationships which have formed transcend that of a normal partnership, illustrated by Professor M.M.Daura – Vice Chancellor University of Maiduguri, commenting that 'We are now in a very serious working relationship and that Nigel and Rebecca are now our brother and sister.' [11]

A follow up trip planned for early 2014, was unable to commence due to the area being unstable. As the delivery team from the UoW were unable to embark, the team from the UoM visited Wolverhampton in early 2014 instead to continue to work towards the outcomes of the program and to look at future opportunities and discuss an ongoing collaboration with the UoW.

7. Aims and Objectives of the Knowledge Transfer Programme

The Knowledge Transfer Program objectives:

- The development and implementation of a strategy for engaging University students and academics in enterprise creation and entrepreneurship.
- To understand the entrepreneurial gender inequalities within Nigeria's cultural mindset and develop strategies to address the findings.
- Development of an operational strategy for CEED business incubation.
- Creation of Greenhouse Investment Funding (GIF) to support business start-ups by offering low interest enterprise loans, allocated to successful

- entrepreneurs.
- To understand and capitalise on the changing role of Universities.
- The development of a framework model for regional economic regeneration in collaboration with other partners.
- Creating a scalable business model for other institutions within the Sub-Saharan region, inspiring other Universities within Nigeria to research and undertake similar knowledge transfer programs tailored to their regional economic needs.
- A knowledge transfer program tailored to their regional economic needs.

8. Outcomes and Results

A strategy for engagement was developed in collaboration with the University of Maiduguri's team and to date CEED has engaged with over 130 of their students and graduates. From those 130 CEED received 81 completed expressions of interest from students wishing to start up a new business venture. A total of 25 businesses have been supported to start-up by the Centre and its staff with guidance from the team from the UoW, all of which have remained sustainable over the critical first 12 months, and between them they are now employing 40+ people.

The UoW team took time to understand the entrepreneurial environment within the cultural and religious landscape of Northern Nigerian from the perspective of both genders. With enthusiastic support from female academia/entrepreneurs at the UoM a female enterprise support group was established following initiation by the team from the UoW during their visit in 2013. Together the partnership developed an operational strategy for CEED and its business incubation facilities. All 25 business start-ups mentioned above are housed within the incubation space and are supported via the CEED team.

The team from the UoM and UoW actively engaged with the Nigerian Banking sector to initiate a Greenhouse Investment Fund (GIF), utilising their Corporate Social Responsibility Funds. The banks on campus now provide low interest loans for a fixed term to the best entrepreneur business start-up proposals with a suitable framework for loan approval.

Whilst the team from the UoW were in Nigeria, they undertook the delivery of a number of workshops to UoM academia and the Universities Senior Management teams, which aimed to give them an understanding of the UK model of Knowledge Transfer and how it could be tailored to their activities in order to contribute to Nigerian regional economic growth, giving them an understanding of how they could collaborate to capitalise on the changing role of Universities in a regional, national and global context.

The UoM is a model for other institutions within the Sub-Sahara region, and could inspire other Universities within Nigeria to research and undertake similar Knowledge Exchange Programs tailored to their regional economic needs.

There have been two subsequent PhD applications to study at the UoW, both of which are focused on commercialising research in their particular fields and the partners are looking at opportunities for ongoing collaboration.

9. Ongoing Partnership

The two Universities, UoW and UoM, view this Knowledge Transfer Program as a long term relationship, all partners in the program feel that this program is unique within the international field, and believe that this is the first time a Nigerian University has successfully engaged in this type of Knowledge Transfer Program. It is hoped that this on-going program becomes an exemplar for knowledge transfer and creates future applied knowledge transfer research opportunities in within an international environment.

The two Universities are embarking upon the set-up of a joint venture to further develop knowledge transfer and consultancy opportunities within the Sub-Sahara region of Africa. In December 2013 the City Council of Wolverhampton signed a Memorandum of Understanding with the UoM with the intention of collaborating in the future and developing economic zones within the State of Borno, Northern Nigeria. 'The partnership is working and we can achieve a lot together....Indeed, this partnership is coming out to be the best we have had in the history of our University.' [11]

This program has been noted as exemplary within the UK and during 2014 was awarded the Guardian University Award for Best International Project, the Praxis Unico Award for the Best Collaborative International Project as well as being shortlisted for the Times Higher Education International Collaboration of the Year.

Conclusion

In conclusion the UoM was one of only six Universities in Nigeria to receive funding for a Centre for Entrepreneurship and a Centre of Excellence. To date CEED is the only centre to have reached completion of the structure and to have signed an international memorandum of understanding for the implementation of entrepreneurial support programmes. The UoM is now well placed to deliver upon its commitment to grow the regional and sub-regional economies' and provide real business opportunities for their graduate population.

This paper sought to inform the reader of the impact of knowledge transfer on an international community, drawing on an award winning example of knowledge transfer, whose three actors have embarked on an ongoing collaboration.

A key learning outcome found that informal entrepreneurial activity was already taking place within UoM but not recorded. The knowledge transfer model helped to facilitate and formalised entrepreneurship order to improve future enterprise activities for students and the region.

An ambition of CEED is to export these innovative learning and enterprise support models, replicating them throughout Nigerian educational institutions. Ultimately leading to the exportation of such models developed, across the African continent and potentially globally, thus giving CEED long term revenue streams for further additional localised expansion.

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