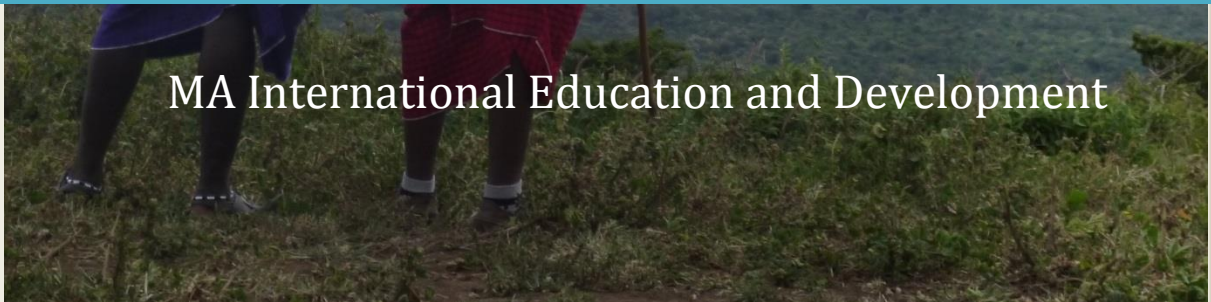




# Living in Two Worlds: A Case Study of a Remote Secondary School in Northern Tanzania



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Cover page image: author's own photograph taken when visiting the *boma* of a local elder.

## Abbreviations

|               |  |
|---------------|--|
| <b>ACHPR</b>  | African Commission on Human and Peoples' Rights                  |
| <b>BRN</b>    | Big Results Now  |
| <b>CSEE</b>   | Certificate of Secondary Education Examination                   |
| <b>EFA</b>    | Education for All  |
| <b>IK</b>     | Indigenous Knowledge   |
| <b>IWGIA</b>  | International Work Group for Indigenous Affairs                  |
| <b>LOI</b>    | Language of Instruction  |
| <b>NGO</b>    | Non-Governmental Organisation                                    |
| <b>SEIA</b>   | Secondary Education Initiative in Africa                         |
| <b>TNC</b>    | Tanzanian National Curriculum                                    |
| <b>UDP</b>    | Unity in Diversity Project                                       |
| <b>UNESCO</b> | United Nations Educational, Scientific and Cultural Organisation |

## Abstract

This case study considers the position of students, who are mainly Maasai, attending an NGO run secondary school in Northern Tanzania where indigenous knowledge (IK) is valued by the founders of the school. Attempts have been made to include IK as a subject with a specially written curriculum running alongside the Tanzanian National Curriculum (TNC). The study clarifies some of the terms used and considers the question of why the category of indigenous can be applied to the Maasai before reflecting upon the notion of indigenous knowledge and what it means in the context of the school and how it sits alongside the TNC. It also contemplates whether indigenous knowledge is diminished as a result of formal schooling. A review of literature on issues of education quality, relevance and teacher competence, in relation to indigenous people, suggests that the subject is complex with conflicting research conclusions. The findings suggest that the Western style school curriculum takes precedence over the aims of the NGO inter-cultural curriculum; thus supporting the theories of Bourdieu regarding symbolic violence and social reproduction. Furthermore, teaching of IK only happens when visiting researchers are located at the school signifying that local agendas and values have been prioritised over those of the NGO. Students seem to display more than one habitus as they learn to live in two worlds.

## Vignette

“You want me to do what?”

My heart sank as I contemplated the motorbike and its smiling driver. I had reached the final stage of my long journey from Eastbourne to reach the remote Maasai village of Endulelei and Dumisha Secondary school<sup>1</sup>, my final destination. The road petered out here and so we were forced to leave the relative comfort of the rickety minibus and continue through the bush by motorbike to avoid a forty minute walk. I fidgeted uneasily as I rapidly calculated my options but since I had my luggage, which I couldn't imagine carrying all that way, my only choice was to climb aboard the motorbike and grit my teeth. Meanwhile one of my bags had been attached (securely I hoped) behind me and Machupa (my guide) carried my other bag onto a second bike and off we went.

I knew the school was in a remote location but it had not occurred to me what that meant in terms of access and transport. As I looked around just before we set off it seemed somewhat incongruous seeing traditionally attired Maasai men complete with their distinctive red robes and long wooden staffs riding pillion on motorbike taxis to shorten the journey back to their *bomas*<sup>2</sup>. Little did I realise, at this early point, I would witness many more illustrations of modern and traditional culture side by side during my four week stay.

I was a little surprised when we arrived at the school as I thought it would be located in the village. I was told in no uncertain terms that we were in the village. It did not fit my definition as there did not seem to be another building within view! However, the school did seem fairly conventional with a row of four concrete classrooms, another block of administration buildings and a new structure that housed the library. Additionally, there was another newish building that I later discovered was the science laboratory. Located on opposite sides of the compound and away from the classrooms were the boys' and girls' dormitories and close to the entrance of the school were two small houses for the staff. Finally, I also noticed two traditional round buildings in the centre of the compound. My first glimpse of some of the students confirmed my impression of a conventional school as they wore smart uniforms comprising khaki coloured trousers or skirts and royal blue woollen pullovers. I felt briefly disappointed because I had expected to see traditional Maasai dress being worn.

The purpose of my fieldwork was to observe how indigenous knowledge was being taught so I had assumed the culture of the Maasai would be visible in the form of clothing at least. Instead the only time I observed traditional dress, within the school compound, was when the local Maasai came to use the solar power generated to charge their mobile phones. The whole idea of 'traditional' versus 'modern'

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<sup>1</sup> Names of all participants and locations have been changed to preserve anonymity

<sup>2</sup> Traditional homesteads

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grew as an idea throughout my time at the school and has now become a central theme in my dissertation.



Photo 1: Mobile phone - the modern way to stay in touch!

## Introduction

The purpose of this research is to examine the tensions existing between formal schooling and a tailor made project designed to promote inter cultural learning whilst preserving indigenous knowledge. Using a small scale case study it argues that the school is part of the formal Tanzanian education system and as such is unable to deliver a true indigenous knowledge based curriculum. Bourdieu's theories of symbolic violence and social reproduction provide the theoretical framework while qualitative methods of data collection are used employing an interpretative methodology.

A secondary school located in a remote area of Northern Tanzania is the location of the study. The population is predominantly Maasai and the school began as an informal gathering for students who graduated from the local government primary school but did not wish to travel far afield to access secondary education. Instead the students paid a small monthly fee to be taught English, using the medium of traditional stories and songs, by a local elder who had experienced a missionary sponsored education up to tertiary level.

Eventually the success of the school attracted the attention of a visiting English researcher who, along with interested local people, set about constructing a more permanent structure by building two concrete representations of traditional round houses for teaching. The same researcher raised funds and gained Non-Governmental Organisation status (NGO) gradually growing the school and increasing the range of subjects taught. The British based NGO raises money to sponsor approximately 82 of the 200 students but leaves the day to day running of the school to a local management group including the Head teacher and community elders. The school is now registered and inspected by the Tanzanian Ministry of Education and as such is required to deliver the TNC. This has resulted in the abandonment of the original



round house buildings as the Government regulations do not allow the use of such structures. Giving a unique flavour to the curriculum, a project called Unity in Diversity was written jointly by NGO members and local people to continue the tradition of acquiring local knowledge and appreciating Maasai culture but at the same time learning about other indigenous cultures worldwide.

It is in this context my case study is located. Living on site with 200 students and 11 staff I was in a position to observe how any tensions between delivery of the Tanzanian National Curriculum and the Unity in Diversity Project unfolded. Set against a wealth of literature, concerning the relevance of formal education to indigenous populations, quality of education and the difficulty of recruiting suitable teachers to remote areas, the study engages with the debates revealed in the literature whilst using concepts of habitus, symbolic violence and social reproduction to answer the question: what are the tensions between formal schooling and a programme designed to preserve indigenous knowledge at this particular school?

## Theoretical Framework

In order to frame the study it is helpful to understand some of the theory that guided the methodology used and inspired the research questions. Therefore some explanation of Bourdieu's theories and how they apply to this study follow here.

### Habitus

Jenkins (2002) explains that the word 'habitus' is taken from the Latin which means a habitual or typical condition, state or appearance, particularly of the body. He goes on to say that in some ways it retains this original meaning because Bourdieu argues that it exists *inside the heads* of actors (Jenkins, 2002, p. 74). He also highlights that it only exists through interaction with others. Moreover, he stresses that the important point about habitus is that it is not under conscious control: it happens as a matter of routine. He continues by emphasising that habitus becomes ingrained through experience beginning in early childhood more than by explicit teaching (Jenkins, 2002).

Maton (2012) reveals habitus as a concept that *orients our ways of constructing objects of study, highlighting issues of significance and providing a means of thinking relationally about these issues* (Maton, 2012, p. 49). He continues by clarifying how habitus focuses on the way we act, feel and think in the present as a result of our history, and we make choices on that basis. Those choices subsequently shape future possibilities. In other words we are set upon a particular path based on how we understand ourselves. In turn this means we forgo alternative choices that could have set us upon a different path. Maton argues Bourdieu considers structures of habitus are not fixed but neither are they in constant flux but rather our tendencies evolve over time. Additionally, we should remember that the 'fields' in which

we move are also evolving. Maton offers an explanation for those who complain that habitus falls down when applied to concrete situations. He contends habitus links the social and the individual because experiences of life may be unique to an individual but they are shared in terms of structure with others; for example through gender, ethnicity, and occupation.

Maton feels Bourdieu offers a way to think about relations between, rather than the dichotomies of either or. Collins (1993) agrees and supports Bourdieu to an extent. Nonetheless, he concludes by feeling *troubled and genuinely puzzled* how to reconcile objective possibilities and subjective aspirations posited by Bourdieu (Collins, 1993, p. 134). Collins supports a critique of other authors, namely, Bourdieu's inability to address contradictions in his theories, arguing we need to appreciate the role that contradictions play in human affairs. Thus, it is important to remember habitus does not operate in isolation; it must be considered in the context of whatever 'field' we are operating within. Nevertheless, the concept of habitus is far from straightforward and can appear problematic when applied in this study where it may be argued the young people in question apply multiple habituses in their day to day life, illustrating some of the contradictions posed by Collins. Furthermore, this study offers an opportunity to gain an insight into a group of students and staff who live in different fields: formal school and Maasai home life and therefore adopt more than one habitus.

### **Symbolic violence and social reproduction**

Jenkins explains symbolic violence causes suffering despite being indirect and not physical. Additionally, it is applied in such a way as to obscure power relations at play and present them as legitimate. This in turn leads to social reproduction because those subjected to dominant behaviours adopt them as the norm and go on to reproduce such behaviours and thus the original, in this study indigenous, behaviour is lost in favour of the elite behaviour.

According to Bourdieu schools teach students particular things and socialise them in particular ways, only certain subjects are taught and are assessed in particular ways (Schubert, 2012). When linked to the concept of habitus Maton explains that, *we learn, in short, our rightful place in the social world, where we will do our best given our dispositions and resources and also where we will struggle* (Maton, 2012, p. 57). Perhaps the most important point highlighted by Bourdieu is that elite cultures are presented as the only normal and legitimate culture by schools. Thus, students who achieve at school are often those who feel at ease with the way chosen subjects are taught and can match their behaviour to the expectations of the school, often because they have been socialised in the elite culture. (Nash, 1990) argues this is because educational establishments tend to be controlled by socially and culturally dominant groups. Furthermore, schools will attribute fault to the student and not question their own practice thus supporting Bishop's explanation of *deficit theory* applied to Maori experiences (Bishop, 2003). Hence, students not of the dominant culture will suffer symbolic violence (Nash, 1990).

Moreover, students from cultural minorities are excluded from succeeding in the school system through neglect (Jenkins, 2002). In other words schools fail to acknowledge the mismatch between different cultures and the curriculum. Collins (1993) ascribes this to language and how it is used to create unequal power relations. He also acknowledges the work of Bernstein on linguistic codes saying that it influenced much of Bourdieu's thinking (Collins, 1993). Schubert (2012) remarks that Bourdieu saw language as, *an instrument of power and action as much as a form of communication* (Schubert, 2012, p. 180). Thus, language can be used as a form of domination. This is often revealed where students from cultural minorities find the language used at school is different from that used in the family home, immediately putting them at a disadvantage since schools do little to alleviate this situation. Maasai students find themselves in this situation as at home Maa is spoken yet they must also master Kiswahili, the national language, when entering primary school. But if they wish to succeed at secondary school level they have to learn English.

Harker (1984) suggests Bourdieu's work is, *one of the few coherent accounts of the central role that schools have in reproducing social and cultural inequalities from one generation to the next* (Harker, 1984, p. 117). He argues this is achieved by examining the tensions existing between two aspects of schooling: the conservative and the dynamic. The conservative aspect of schooling concerns the preservation of knowledge and experience across generations whilst the dynamic concerns the production of new knowledge (Harker, 1984). However, for those students not in possession of the right habitus it is far more difficult for them to achieve either aspect of education because it may involve a break from their own culture. It would require choosing an unknown path where the opportunity costs are apparent but the benefits are both vague and indeterminate. Schools are supposed to be egalitarian yet Bourdieu has demonstrated they are a site of class privilege. Moreover, through constant reproduction the dominant culture becomes the only culture and students from cultural minorities internalise their lack of success as entirely normal thus submitting to symbolic violence and contributing to the reproduction of the elite culture.

### Playing the game

Bourdieu uses the term 'field' to describe the social arena which is a site of struggle for actors (or players) as they strive to improve or preserve their positions by applying strategies. Jenkins argues that Bourdieu uses the term 'strategy' to explain how our dispositions interact with the possibilities and constraints that exist in any given arena (Jenkins, 2002). This may be likened to sports players who also adopt strategies in order to win games. A beginner may improve through playing games and learn through experience which strategies lead to victory and which fail to improve their position. As we watch sport we may remark how it seems that certain players "have a feel" for the game. It seems almost like an instinct as time and again they put themselves in a position to succeed. For example a footballer (player A) with strong self-belief

may view an unfolding situation where an opposing player is challenging for a pass. Player A sees how they can reach the pass and seize the opportunity to take a shot at goal. Footballer B may find themselves in a similar situation but not have the same self-belief that they can win the pass and go on to take a shot at goal because they do not strategize in the same way as player A.

In life, Bourdieu suggests, habitus is something an actor employs as a strategy to improve their position. These chances are improved if that actor is also in possession of capital; for example cultural capital may be acquired from upbringing and family. According to Harker, Bourdieu explains cultural capital as *style, language, taste, social grace* as well as the more obvious markers such as the educational levels of an actor's parents and their attitudes to education (Harker, 1984, p. 124). In education those students whose cultural capital matches that of the school stand a better chance of success and achieving educational capital in the form of qualifications and important contacts to help further their careers, because those students are already aware of the 'rules of the game'. Returning to the sporting analogy, a player without knowledge of the rules may learn through the experience of playing and by exploiting intelligent strategies thus learning how to play successfully. However, the odds are stacked against them because they have to learn the rules as well as learning how to apply strategies; they are more likely to be excluded from the game as they are more liable to make mistakes.

This also happens in education as few students without the right cultural capital manage to struggle to a level that is considered successful, and at what cost? Bourdieu argues this merely sends a message that endorses *equality of opportunity* whilst masking the real struggle involved in achieving educational capital (Jenkins, 2002, p. 124). Furthermore, it may be argued that by achieving educational capital the actor without the 'right' cultural capital is forced to measure the legitimacy of their own cultural capital against that of the elite, often making the choice to discard their own cultural capital in favour of the elite culture.

This raises the question about Maasai students attending secondary schools in Tanzania: if they are successful in gaining educational capital are they lost to the Maasai culture as Bourdieu's theories seem to suggest? This study attempts to engage with this question. At the same time examining how the balance, between the dominant Tanzanian education policy demanding constant testing, league tables and use of English as the language of instruction and the traditional Maasai culture that encourages living in harmony with the environment, shared construction of knowledge and practical experience as a learning strategy, is managed.

### Modern versus Traditional

It is important to acknowledge the terms 'modern' and 'traditional' as social constructs and as such may be used in a variety of contexts. From approximately the mid nineteenth century the term 'modern'

usually meant improvement and efficiency and is still used as such today (Venn & Featherstone, 2006). Venn and Featherstone argue that it is, *a meaning that has acquired the force of a dogma in the current largely neo-liberal strategy of an injunction to 'modernise' or disappear* (Venn & Featherstone, 2006, p. 458). In development circles 'modern' has also been applied to a theory stating that development follows a linear path from primitive or traditional societies towards civilisation or societies of high mass consumption (Cameron, 2005). It is used interchangeably with 'industrialised', 'Western' or 'Northern' and is often set against the binary opposition of 'traditional', 'primitive' or 'Southern' supporting the notion that modernisation is the desired aim for traditional societies.

The use of the term 'modern' in sociology has only come to the fore since the mid-1970s, prior to that the term 'capitalism' was preferred (Venn & Featherstone, 2006). To explain what it means to be 'modern' words such as secularism, democracy, technology, nation state and citizenship are used in addition to promoting the superiority of science and scientific methods. Furthermore, to justify 'modernity' it must be set in opposition to something. Therefore, 'traditional' is deemed to be an unsatisfactory state where spirituality is used to explain natural phenomena rather than the rationale of science implying negative connotations of primitive or even savage societies (Nakashima & Roue, 2002). However, relatively recently 'traditional' methods of farming, for example, are being considered as serious alternatives to potentially damaging 'modern' farming methods. It seems that dominant views may be changing and that 'traditional' does not have to be considered in a negative sense.

### **The Maasai in Tanzania: a traditional society in a modern state?**

The Maasai provide an interesting example of a group considered to be traditional and indigenous. They are both distinctive and colourful, living predominantly in the North of Tanzania. As pastoralists they have historically ranged across the border with Kenya and the area straddling the Tanzanian – Kenyan border, known as Maasailand. The exact numbers of Maasai are unknown because census data is not collected on ethnicity in Tanzania; supporting the ideal of national unity (Kalavar, et al., 2014). At the start of his book, 'Becoming Maasai' Spear (1993) claims,

*Everyone knows the Maasai. Men wearing red capes while balancing on one leg and a long spear gazing out over the semi-arid plains stretching endlessly to the horizon.....Uncowed by their neighbours, colonial conquests, or modernisation, they stand in proud, mute testimony to a vanishing African world (Spear, 1993, p. 1).*

This implies a sense of unity and homogeneity but Spear uses these words to warn against believing this reality. He suggests the Maasai are far from uniform and tread a variety of paths; some towards modernity whilst some linger amid the traditions built over time. He continues by arguing the reality of Maasai identity is complex; many myths surrounding their identity have arisen. For example they are considered to be archetypal pastoralists according to ethnographic and historical literature. Spear asserts there are many groups claiming to be Maasai and what actually links them is the Maa language since very

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few actually practice pure pastoralism. Moreover,

*Our view of the Maasai has....moved far beyond a simple opposition between pure pastoralists and others to embrace a view in which Maasai society is seen as encompassing a triangle of economic forces – pastoralism, hunter – gathering and agriculture within complex cultural structures – which were both highly differentiated and complementary (Spear, 1993, p. 9).*

Additionally, the Maasai are often referred to as 'indigenous'. They have laid claim to this title because they are, *distinct cultural minorities who have been historically repressed by the majority African population who control state apparatus* (Igoe, 2006, p. 403). The Maasai have struggled hard to retain their cultural identity including their language, Maa, which is widely spoken in Maasai communities (Aikman, 2011). As such they have met with resistance, discrimination and loss of land because of their desire to retain their own identity.

Nonetheless, it would be a mistake to assume a dichotomy of traditional versus modernity because there is evidence to suggest that some Maasai have been successful at finding ways to live within the system of a modern nation state. For example the label of 'indigenous' carries with it political opportunities and access to resources including foreign aid. Therefore, it has been in the interests of the Maasai to define themselves as indigenous to achieve admission into the world of politics and material gain (Igoe, 2006). Some Maasai communities have engaged with the global economy by setting up cultural *bomas*<sup>3</sup> where they perform for tourists, thus creating economic opportunities (Kalavar, et al., 2014).

Nevertheless, there is also evidence that shows lack of educational achievement amongst indigenous people (Aikman, 2011). Part of the reason is seen as lack of access and part of it is due to forms of symbolic violence described earlier. Often groups such as the Maasai live on the margins of society, in remote areas with a lack of basic infrastructure. Where schools are available they are often poorly resourced. Additionally, young Maasai attending school for the first time have to grapple with learning in Kiswahili and then if they graduate to secondary school they must also master English, making them doubly disadvantaged. Furthermore, some academics argue that traditional values and indigenous knowledge are diminished by formal school attendance (Reyes-Garcia, et al., 2010). Batibo (2009), argues that the main goals of modern education are about the preparation of young people to become part of a world based on Western and mainly Christian values (Batibo, 2009).

Describing the lower secondary school curriculum the Ministry for Education in Tanzania claims to have taken into consideration, *aspects of social, political and economic environments in order to prepare students who can fit into society and compete in the global economy* (Ministry of Education and Vocational Training - Tanzania Institute of Education, 2013, p. 7). The question arising here is how does the Government of Tanzania provide opportunities for groups like the Maasai to access a quality education? What do they mean by, *students who can fit into society*? Are the Maasai excluded because of

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<sup>3</sup> Traditional family homesteads

their distinctive culture and way of life? The Department of Culture assert on their official website, *Traditional African values are being consciously adapted to modern life, although at a much slower pace among the Maasai* (Government of Republic of Tanzania, 2013). This view fits with historical discrimination of and attempts to 'modernise' the Maasai by the Tanzanian Government. They are already disadvantaged since Kiswahili is not their mother tongue and yet they must master this language in order to access formal schooling. Caution should be applied as some Maasai fall into this group but others have succeeded in achieving educational success whilst retaining their traditions and other aspects of their culture.

## Political Background of Tanzania

When the Republic of Tanzania was created, the first President, Julius Nyerere had a clear vision about the way forward for his country. Using socialist ideals he wanted to create national unity in order to steer Tanzania into the modern world on equal terms (Nkyabonaki, 2013). According to Lindsay (1989), Nyerere subscribed to the school of thought that maintained,

*To aspire to elusive international models and standards is to perpetuate Africa's cultural and technological dependency and to ignore the needs of the majority of African people (Lindsay, 1989, p. 88).*

He saw education as key to his vision and establishing a relevant curriculum was crucial. Tanzania comprises some 158 different ethnic groups, many of whom speak their own language (Government of Republic of Tanzania, 2013). By making Swahili the national language and the language of instruction in education Nyerere hoped to put aside ethnic differences and create an educated citizenry who valued national unity above tribal rivalry (Lindsay, 1989). Today Swahili is still the national language and the language of instruction at primary school level (Nkyabonaki, 2013). However, once students graduate to lower secondary school they are expected to learn in English and this is also true of tertiary education.

## Indigenous Education or Indigenous Knowledge?

The title of this section suggests an either or scenario but in reality both may be used to describe the process of passing knowledge between generations through practical experience or by teaching skills, behaviour and attitudes. It has been suggested few people agree about a name for this with some preferring the term traditional ecological knowledge (TEK), but it is not only ecological knowledge that is captured by indigenous societies, it may include, for example, value systems and ways of viewing the world (Nakashima & Roue, 2002). More importantly some indigenous people do not set up dichotomies between the material and the spiritual or between nature and culture. Their beliefs may be described as a blend of science with the meta-physical where, for example, the success of the hunt is attributed as much to spiritual helpers as the physical skills of the hunter. Indigenous societies take a more holistic view and as such come into conflict with 'modern' science and the predominant Western view of



knowledge, based on rational thought and empirical evidence (Nakashima & Roue, 2002). Nonetheless, the term indigenous knowledge systems is an accepted term and may be defined as,

*Complex arrays of knowledge, know-how, practices and representations that guide human societies in their innumerable interactions with the natural milieu: agriculture and animal husbandry; hunting, fishing and gathering; struggles against disease and injury; naming and explaining natural phenomena; and strategies for coping with changing environments (Nakashima & Roue, 2002, p. 315).*

It is still problematic however, since it requires an understanding of who may be considered indigenous. Aikman (2011) notes that,

*In Africa today populations and communities who are identifying themselves as indigenous are doing so in an effort to redress their situation of marginalisation and discrimination. They are communities alienated by and made vulnerable by colonial and post-colonial processes, development paradigms and policies which favour agriculture over hunting, gathering and nomadic herding. Hunter gathers and nomadic pastoralists have been viewed as a threat to national unity and/or leading a backward and peripheral way of life (Aikman, 2011, p. 16)*

Due to pejorative usage in colonial times the term 'indigenous', for some, still carries negative associations but The African Commission on Human and Peoples' Rights (ACHPR) argues the use of the term today is internationally recognised and allows a way of analysing various forms of inequality suffered by groups such as pastoralists in Africa. Furthermore, it recognises that the term in this instance does not mean 'first people' as applied for example to Australian aborigines. Nevertheless, it does allow communities to self-identify as 'indigenous' and as such battle for justice in areas such as appropriate and relevant education systems (Aikman, 2011). Throughout this study the terms 'indigenous knowledge', 'local environmental knowledge' and 'traditional knowledge' are used interchangeably often reflecting the term used by a particular author cited.

## **Formal Schooling versus Indigenous Knowledge**

One of the complaints by indigenous people regarding formal education systems is the realities of their livelihoods and traditional knowledge are not reflected. This is because their languages are not used for instruction nor are their histories and cultures reflected in the curriculum (International Work Group for Indigenous Affairs (IWGIA), 2014). As a result, the IWGIA suggest some youths suffer the loss of their indigenous identity yet are unable to become fully accepted as part of the dominant national society resulting in traumatic experiences even ending in suicide for a minority.

Many indigenous people live geographically isolated lives but others live alongside majority populations in towns and cities. This has led to a growing recognition that education systems need to deliver education that is intercultural; rooted in appropriate values, cultures, languages and worldviews and yet open to and appreciative of other cultures, values, languages and knowledge systems (International Work Group for Indigenous Affairs (IWGIA), 2014). Nevertheless Rival (1996) argues that,

*Formal schooling, a major site of cultural production in contemporary societies, creates the conditions for dominant identities to undermine the continuity of minority identities (Rival, 1996, p. 153).*



In other words she is suggesting the existence of symbolic violence. She continues by claiming that although this may be resisted by local actors nonetheless schooling transforms social relations irrevocably and as a result identities that existed before the arrival of school are no longer able to occur (Rival, 1996). To use Bourdieu's terminology the habitus and social relations of minority identities have been changed through symbolic violence and participation in formal schooling.

Some argue formal schooling and the acquisition of academic skills are among the main causes for the weakening of indigenous knowledge (Quinlan & Quinlan, 2007), (Sternberg, et al., 2001). Reyes-Garcia et al (2010) acknowledge that the question: 'does local environmental knowledge enhance the acquisition of school content' is far from simple to answer. It is dependent upon a number of factors such as gender, social class, parental influence and motivation (Reyes-Garcia, et al., 2010).

Other factors concern teacher competence, class size and access to resources which they fail to mention in their review of literature. Nonetheless, they uncover evidence suggesting contextualising learning does enhance the acquisition of curricular knowledge. On the other hand they reveal evidence from other studies concluding formal schooling undermines aspects of traditional culture such as language and indigenous knowledge. The argument suggests time spent in school detracts from the environmental and experiential learning of traditional knowledge. Batibo (2009) noted how the traditional mode of transmitting culture via language and local knowledge has changed due to the adoption of a more Western based lifestyle. Instead of constantly interacting with adults and spending time in the physical environment children are now exposed to classroom based teaching from as young as the age of six or seven. Moreover, Batibo maintains this has not only led to diminished cultural diversity but a change in the attitude of the children, who are taught to consider their traditional ways of life as backward and are encouraged to look to modern ways of viewing the world (Batibo, 2009).

Reyes-Garcia et al examine schooling and the acquisition of local knowledge among the Tsimane<sup>4</sup> community. They note the negative association between schooling and indigenous knowledge is low when years of schooling is used as a proxy but increases when academic skills acquired is used as a proxy. Thus, confirming that measurements of time in school do not capture the realities of educational achievement. Furthermore, their research suggests broader links between formal schooling and changing lives as a result of modernisation, technology and Westernisation (Reyes-Garcia, et al., 2010). Rival's work among the Huaorani<sup>5</sup> supports this as she concludes that, for the Huaorani, *to be educated is to be modern and to be modern means to consume imported, manufactured goods* (Rival, 1996, p. 156). Teachers socialise the Huaorani into Western behaviour thus altering their habitus by changing their diet and hygiene practices. Rival argues parents now assume if their children adopt these new ways they will

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<sup>4</sup> A society of forager-horticulturalists living in the Bolivian Amazon

<sup>5</sup> A society of Hunters-and-gatherers living in Ecuadorian Amazon

also naturally learn to read, write and count (Rival, 1996). Teachers do nothing to dissuade them of this belief and when the continued low rates of literacy and numeracy are pointed out teachers blame the lack of modern socialisation, rather than considering that their teaching methods and curriculum are at fault.

Batibo questions the motives behind the adoption of Western curricula. He uses the example of Botswana where, he argues, the mission of the government is to,

*convert the people of Botswana into a major human resource through education and training, so they might be effective instruments of national development, while simultaneously integrating them into the moral and social values of development' (Batibo, 2009, p. 89).*

He explains the national language, Setswana, is used in all schools with no attempt to include traditional knowledge within the curriculum, leaving some of the marginalised groups such as the San at a disadvantage culturally and linguistically (Batibo, 2009).

In order to address this issue some NGOs have devised a programme aimed at supporting marginalised groups in Botswana by providing in-service training for those involved in teaching in pre-schools in remote communities. As a result, evidence has shown there are fewer drop outs from the minority groups and they are moving onto to higher levels of education whilst maintaining their identities and preserving their cultures. Batibo further suggests this is due to the involvement of minority communities in the development of the pre-school curriculum and in the running of the schools in an attempt at empowerment (Batibo, 2009).

Sarangapani (2003) explores the disconnection between formal schooling and the indigenous knowledge of the Baiga, an ethnic minority group, categorised as a *primitive tribe* by the government of India (Sarangapani, 2003, p. 201). Like Rival, Sarangapani finds teachers inculcate their pupils into more 'accepted' hygiene practices, ways of eating and dressing thus changing their habitus resulting in many pupils preferring to run away (Sarangapani, 2003). However, Sarangapani goes further than Rival questioning the wisdom in forcing the Baiga to accept formal schooling based on a literate tradition and which presents knowledge out of context whilst the Baiga traditional knowledge is based on oral practices and different societal structures. Sarangapani concludes the survival of indigenous knowledge systems is more likely to be guaranteed if kept outside the realms of formal modern education systems. Sternberg (2007) disagrees suggesting it is a matter of providing culturally appropriate methods of teaching and learning. He cites the example of rural Kenyan children who drop out of school quite early. This behaviour is encouraged by their parents, who do not value Western style education as it is not appropriate to their lifestyle so indigenous knowledge is taught instead (Sternberg, 2007). The challenge resulting from such studies is to decide if indigenous people are better served by not attending school or receiving a modified version or simply attending school as everyone else does.

## The Role of Teachers and Governments

The role of teachers and governments in the transmission of worldviews and knowledge is central in determining whose knowledge is valued. That school reproduces social stratifications and inequality in non-homogenous societies is also a well-studied phenomenon (Sarangpani, 2003). Thus, this section will explore some of the literature examining government motivation in curriculum construction, issues surrounding teacher competence and how teacher training can impact upon how and what students learn.

Sarangpani contends although the Indian Government has begun to incorporate indigenous knowledge into the curriculum it is a matter of status and power as to what knowledge is included. He suggests political influence is required in order to secure indigenous knowledge into formal education systems (Sarangpani, 2003).

Bishop (2003) claims the Maori have been the subject of discrimination especially in terms of relevant education. He attributes the ongoing inequality to the acceptance of cultural deficit theories. In other words the problems associated with lack of educational achievement among the Maori are considered to be due to some deficiency in the Maori. However, Kennedy (2013) takes a more positive view by exploring student-centred learning at an educational institute purporting to support Maori values and beliefs. She appears to support an idealistic view of teaching and learning in indigenous communities yet warns against merely labelling students based on simplistic interpretations of assumed cultural differences (Kennedy, 2013). This also resonates with the argument made by Breidlid (2009) who counsels against romanticising indigenous knowledge and overvaluing the role of heritage.

Breidlid cites the South African curriculum introduced in 2005 and asks the question: *to what extent has recognition of indigenous knowledge coupled with sustainable development been taken into consideration* (Breidlid, 2009, p. 144). He suggests the curriculum is modelled upon Western discourse and quotes familiar phrases he argues are found in most curricula in the Global North, e.g. *critical and creative thinking* and *use science and technology effectively* (Breidlid, 2009, p. 144). He contends the Western hegemonic discourse challenges traditional African values and the links between education, modernity and developing a competitive, international economy is the driving force in South African education policy; thus demonstrating nation states often make decisions concerning education of their citizens as a response to pressure from the international community (Breidlid, 2009). Furthermore, Breidlid concludes that alternative forms of education are not adopted for fear of being left out of globalisation. However, the argument must surely be by delivering a Western based education system the authorities are simply reproducing the hegemonic form of education policy therefore, subjecting students to symbolic violence and social reproduction. As Breidlid asserts,

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*An exclusion of indigenous knowledge and local cultural practices.....has major implications for the distribution of power in the country where those in the driving seat do not seem to appreciate indigenous cultural capital, at least not in the education system (Bredlid, 2009, p. 147).*

Rival appears to agree as she observes education in less developed countries is often presented as the means to bring about economic growth and achieve modernity, perhaps here 'modernity' could be substituted for 'westernisation'? Rival also notes that for the Huaorani education has resulted in constraints and obligations imposed by the state as they are now drawn into the role of citizens who must obtain birth certificates, identity cards and take part in political processes, such as voting, at the cost of their relative autonomous traditional existence (Rival, 1996).

The extent to which the international community imposes its will upon the education policies in developing countries has been addressed by Lindsay (1989) who investigates the impact upon indigenous cultures with a case study in Tanzania. She affirms indigenous people need to be involved in the development of relevant education systems if there is to be genuine development in Africa. However, throughout her study she fails to acknowledge the cultural differences within Tanzania where some are privileged over others thus perpetuating unequal power relationships within the country. She appears to view Tanzania as a homogenous population and is only concerned by external power relations in her research.

Her focus is a programme initiated by the United States with the stated aim of, *wishing to enhance American foreign policy through public diplomacy* (Lindsay, 1989, p. 90). It involved working with selected secondary school teachers to improve their levels of English as science and technology were taught in English since most of the relevant literature was produced in English. However, at this time social sciences were still being taught in Kiswahili (Lindsay, 1989). Still, the Tanzanians were able to insist upon adapting curriculum content to be relevant to Tanzanian students through the use of stories drawn from their own cultural context. Lindsay concludes that as the Tanzanians had input into the programme they were able to take certain aspects from the Americans without completely surrendering to US education systems. Nonetheless, America was also happy with the outcome as they achieved their aim of transmitting aspects of American culture to future citizens of Tanzania thereby assisting impending relationships (Lindsay, 1989). This supposition raises the question as to whether the same conclusion would be made today since this study was conducted during the 1980s. However, as national unity was the aim of Tanzania in the recent decades after independence, it may not have been so obvious that some ethnic groups were disadvantaged in terms of curriculum content. Nor was globalisation of education such a high profile subject during the 1980s.

Lindsay's study concerned the international community and how it was supporting aspects of

teacher training during the 1980s. Teacher training reform has continued to be a subject for academic study across many low income countries including one ethnographic study based in a teacher training college in Tanzania where student-centred learning was high on the agenda. The study notes the recent interest in secondary and teacher education among the international community, citing an increase in funding from the World Bank of nearly 40% in the decade up to 2004 (Vavrus, 2009). The explanation offered for this increase concerns maximising foreign investment thus necessitating the increase in human capital investment. However, Vavrus cautions against relationships that allow foreign influence in education policy which does not always serve the low income countries concerned and she argues,

*It would require strong ministerial will to reject outright the advice of the 'international community' (Vavrus, 2009, p. 304).*

Vavrus describes how student teachers, completing their final year, were fast tracked as there was a need for more qualified secondary teachers so they were deployed earlier than scheduled into schools to meet the influx of new students. The consequences of this in Tanzania were under-prepared secondary teachers who, in certain schools, comprised the majority of the staff. Thus, the quality of teacher training has been compromised in order to satisfy unrealistic international pressure to increase enrolment of children to build human capital. With such obvious evidence of international influence upon education policy it raises the question of relevancy to students. With outside influences holding sway it is no surprise that needs of indigenous communities are being ignored. Nonetheless, whilst accepting that education may contribute to the destruction of indigenous cultures, it has the power to lift people from poverty and empower them which requires a complicated balancing act from governments to provide the best opportunities for all citizens.

### Methodology

My research follows the interpretive paradigm in terms of data gathering, using semi-structured interviews, observation, narrative accounts and documents and my own field journal. Thus, my stance as a researcher leans towards an interpretivist approach, though as Weber (2004) argues, it is unhelpful to try to draw distinctions between positivism and interpretivism as he believes there are very few differences and even if there are any, *they have very little impact upon how excellent researchers conduct their research* (Weber, 2004, p. xi). He claims the differences lie more in the methods of research employed by so called positivists and interpretivists where positivists tend to use experiments and surveys where interpretivists lean towards case studies and ethnographic studies for example. With that in mind I felt my topic would be suited to a case study using participant observation. As Cohen et al (2011) remind us,

*The subject matter of the world in which the educational research is interested is composed of people and is essentially meaningful to them. That world is subjectively constructed, possessing particular meaning for its inhabitants (Cohen, et al., 2011, p. 298).*

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The decision to use a case study approach is one thing but a valid question to ask would be, 'why choose this particular secondary school in Tanzania?' To some extent the answer is it chose me which is a rather pragmatic approach (Hart, 2007). It happened following a chance meeting with one of the trustees and co-founder of the school who mentioned that researchers were welcome to visit the school for fieldwork. However, a further justification for my study is this particular school does not appear to be typical of secondary schools in Tanzania due to the inclusion of an inter-cultural programme called 'Unity in Diversity' (UDP). The aim is not only to examine local culture and knowledge but to gain an appreciation of knowledge and cultures of other indigenous communities around the world.

As a research topic this seemed manageable; it would be about one school, investigating one aspect of the curriculum so could therefore, be tightly framed. Additionally by living with the subjects of my research I would have the opportunity to observe their daily routines and build relationships which I thought would make it easier to gather relevant data thus guarding against the *over ambitious project* (Cohen, et al., 2011). I also followed the advice of Nisbet and Watt (1984) who suggest interviewing more senior people later in the process.

I was able to gather information from a number of other sources and conduct extensive observations thus allowing me to maximise my discussion time with senior people including the Head and also one of the founders and trustee of the school. I interviewed her after I returned which not only enabled me to come armed with data collected from the school but ensured I did not go to the school with a view point influenced by what she may have told me ahead of my fieldwork.

I also intended to pursue a mainly phenomenological approach in order to really try and understand how my participants perceived their situation. I hoped by living alongside the staff and students I could uncover how they felt about the education on offer. I wondered how much the students appreciated the inclusion of IK as part of the curriculum. I hoped to discover what role it played in the lives of the teachers and whether it was an aspect that was included in their everyday teaching of the curriculum or whether it was treated as a stand-alone subject.

### Context of Study

I arrived at Dumisha Secondary school with the minimum amount of detail. I knew there were roughly 200 students aged 12 years to approximately 20 years, it was registered and followed the Tanzanian National Curriculum (TNC) and was located in a remote area of Maasailand. I also knew the language of instruction (LOI) was English therefore I expected no difficulty in conversing in English. Thus, following the advice of Nisbet and Watt into conducting a case study I began with *a wide field of focus, an open phase, without selectivity or pre-judgement* (Nisbet & Watt, 1984, p. 79). They further suggest narrowing of the focus only after this open phase.

## Research Methods

In order to achieve a phenomenological study I needed to collect a large quantity of data in the form of interviews and personal notes. I could then identify common themes from my observations. The main question I was hoping to answer was, 'What are the tensions between formal schooling and the programme designed to preserve indigenous knowledge?' The important point to keep in mind with a phenomenological approach is trying to understand what lies beneath the seemingly every day or 'taken for granted' assumptions according to Husserl, considered by many to be the founder of phenomenology (Cohen, et al., 2011). He believed it was possible to examine situations without the use of cultural or symbolic structures. However, I found this a tall order, since I was approaching my case study as a white, female researcher from a former colonial power.

Nevertheless, I approached the research with a positive feeling and still believed qualitative methods would be my chosen technique as I had been in email contact with the Head teacher who assured me that he would be available for an interview and any other support I required. He also assured me other members of staff would be there to support my research including Lembui<sup>6</sup>, a teacher, who I learned, had overall responsibility for environmental education including the UDP project. I had explained I was hoping to conduct some lesson observations as well as interviews and focus groups. I repeated this on arrival and the staff agreed I was welcome to attend any classes that interested me.

My fieldwork took place over a four week period where I lived alongside the subjects at Dumisha Secondary School. I had planned to undertake about four lesson observations, five or six interviews and one or two focus groups (appendix 1). In addition I asked form three to undertake a short voluntary written task. I asked them to write why they thought it was important to include the subject of IK as part of the school curriculum or why they thought it was not important. They had a choice of writing in English or Kiswahili. I asked Machupa if he would translate the papers written in Kiswahili by recording his translation so that I could transcribe the English version onto the bottom of any student papers written in Kiswahili.

In theory all lessons were taught in English therefore, I did not anticipate any difficulty in following the content of the lessons. Similarly, as everyone I planned to interview spoke English I did not need a translator. I wanted to include some semi-structured interviews since Bell (2005) suggests it is an adaptable method of collecting data as it is possible to follow up interesting points and probe more deeply into some responses. However, she also notes that interviews can be time consuming (Bell, 2005). As I was living on site for four weeks time was not my major concern. Nonetheless, it was occasionally difficult to locate particular people to interview as they left the school for various reasons. I also

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<sup>6</sup> Names of all participants and locations have been changed to preserve anonymity



conducted one focus group session with five form 4 students. I hoped by attending together they would feel less intimidated by me as an outsider. As Hart suggests,

*A focus group is a carefully selected group of people brought together in the same place to discuss a particular topic or issue relevant to them (Hart, 2007, p. 358).*

I managed to get a group of students from the same form and of similar ages and mix of genders: three boys and two girls. Unfortunately a third girl was unable to attend as she misunderstood the time and location.

I believe my reasons for interviewing them together were justified in terms of the ease of the conversation flow and the subjects discussed. However, when transcribing it was occasionally difficult to hear exactly what was said as they sometimes all spoke together and quite often they relapsed into speaking Kiswahili before agreeing on how their ideas should be presented in English. However, apart from suggesting the topic of conversation I was able to listen to the group interacting and gather data on their views, values, opinions and attitudes to the school, indigenous knowledge and their culture and customs (Cohen, et al., 2011).

### **Informed Consent**

Before I arranged to observe any classes or set up any interviews I explained to the participants what my study involved. I also used my informed consent form to obtain permission to record our interviews and take photographs. The form also explained they could view my transcripts in order to correct any mistakes made and also withdraw their consent at any time during the study (appendix 2).

### **Method of Analysis and Ethics**

With the permission of participants I used a voice recorder during our interviews. I listened back several times to each interview before transcribing them. The advantage of doing this whilst still on site meant I was able to clarify aspects of what was said; in particular the spelling of some unfamiliar place names. I was also able to ascertain from each interviewee the accuracy of what I had transcribed. Additionally I checked some details about curriculum matters as I had a copy of the TNC and so I could cross reference, mostly with the Head, some details such as length of lessons and choice of subjects taught. Moreover, I was able to triangulate some information collected as analysis revealed the same information through more than one source.

I did not attempt to record lesson observations as there was too much background noise in the classroom and I feared it may appear intrusive. However, I took extensive notes using a template making comparison between lessons easier. The teachers were only aware which lesson I was actually observing shortly before the class commenced so it was unlikely the content was adjusted for my benefit, with the exception of the IK class taught by Lembui as he appeared to set this up especially for me. Furthermore, in every class the teacher attempted to involve me in the lesson in some way which I had not anticipated



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therefore, had not prepared the teachers before the class about my role as an observer. I had assumed I would be able to sit at the back unobtrusively. In fact this was not easy as there were no extra chairs or desks so I was sharing a bench with the students or standing against the wall. The photograph below shows the classroom, desks in rows with the teacher at the front.



Photo 2: form 3 classroom

Returning home I reread all the data gathered and established some common themes. I then analysed the data in depth refining the themes into more tightly categorised headings using a system of coding to preserve anonymity. My informed consent form made clear respondents names would not be revealed at any time. However, as Cohen et al argue it is impossible to guarantee anonymity as people may identify an individual through local knowledge (Cohen, et al., 2011). It is also important to ensure participants understand what is meant by confidentiality (Bell, 2005). This is perhaps a more accurate term than anonymity, in the case of my study, as I assured my participants that I would not be identifying them by name and I changed the name of the school and the village to help preserve confidentiality. The only person I could not be totally certain of preserving confidentiality with is the Head teacher as I only worked in one school therefore, if anybody knows the true identity of the school and village where the study was conducted they would be able to identify him.

### Findings

My research was designed to examine the tensions between formal schooling and a programme designed to preserve indigenous knowledge at Dumisha Secondary school. I planned to explore the interface between educational achievement and indigenous cultural knowledge by capturing information through observing how classes were taught and exploring the feelings of teachers and students through focus groups and interviews. On my return from Tanzania I realised, as I analysed my data, there seemed to be a wide interpretation of what constituted IK. At no time had I asked any of my participants to explain what they understood IK to be. On reflection I believe this is because I had expected to observe UDP lessons being taught which offers clearly structured content and describes itself as 'inter-cultural'. Instead I found no such lessons taking place and a very hazy understanding of UDP amongst my participants. This necessitated a change of direction while I was in the field. I adapted my questions to ask more generally

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about local culture, traditions and IK.

My findings first explain how UDP was designed and its intended use before continuing with perceptions of IK delivery by participants. There follows examples of some of the tensions between life as a Maasai and expectations at the school, concluding with some observations about the teachers and limitations regarding the teaching of IK at Dumisha Secondary School.

## Unity in Diversity Project (UDP)

Unity in Diversity is the name given to a project described as,

*A structured but non examined co-curricular programme in which participants learn the histories, oral literature, traditional cultural practices, and ethno-botanical knowledge of their respective ethnic groups (Burford, et al., 2012, p. 5).*

The working draft document I was given before my arrival in Tanzania explained the programme works best when a variety of cultures can be compared and contrasted; containing information about a range of indigenous communities, for example Australian Aborigines and the Oromo people of Ethiopia. It suggests the method of instruction is via collective learning led by a facilitator using a study circle. It emphasises the facilitator does not stand in front of the group and write on a blackboard but is instead part of the circle and respects the knowledge of everyone equally (taken from the working draft of UDP, 2009).

On my return from Tanzania I asked Gillian, who was my contact and also joint founder of the school, about the origins of the programme. She explained it was co-written by herself and some local Maasai but also involved two volunteers at a later stage to *make it more like a curriculum* (Gillian, June 2014). Though none of them were educationalists they based it on models they were familiar with which had worked in other contexts. However, she went on to explain,

*We hadn't appreciated how strong and how pervasive the Western model of education had become or how hard it would be to have an indigenous talking circle located in a Western school environment so that was why we built the boma<sup>7</sup> but that's not happening either (Gillian, June 2014).*

This observation concurred with what I witnessed at the school. It was two weeks into my research before anybody mentioned the cultural *boma* and it was not linked to UDP. School management told me how much they valued UDP and that it was taught to form 1 and form 3 since form 2 and form 4 had external examinations so there was no space in their timetable. When I pointed out it did not appear on the timetable for any class there was a surprised response from the Head, Lemaron and Lembui, the teacher in charge of environmental education, said:

*It is not on the timetable but I do teach it. I used to find out if there is not a teacher teaching at that time and then I go to the teacher and apply for that time (Lembui, May 2014).*

A few days after this interview Lembui asked me to accompany him to the classroom where he spoke to form 1 in Kiswahili and wrote 'cultural domain' on the blackboard in English. All the class had

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<sup>7</sup> She had earlier explained the difficulty in getting the *boma*, 3 small huts surrounded by thorn hedging, constructed on the perimeter of the school compound

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risen from their seats and said 'Good morning' as we entered. Lembui responded, also in English but then switched to Kiswahili and in response the class began to sing. I later learned this was the school song and apparently had references to indigenous knowledge in it.

I noticed Lembui was holding a booklet and seemed to be reading from it at times, in English, but would then switch to Kiswahili as if to emphasise what he had just read. It was quite difficult to ascertain the purpose of the lesson as he seemed to change subjects from talking about foods to medicinal plants and back to food and supermarkets. He asked me to comment on food from my culture and asked the students to question me about my culture. This was the only interactive section of the class as the previous 45 minutes was mostly Lembui talking in a mixture of Kiswahili and English with occasional questions directed to the students. I noticed they became restless after about 20 minutes and there was low level talking going on which Lembui ignored.

I believe this class was staged for my benefit to prove UDP was being taught when possible. However, I have been unable to identify the phrase 'cultural domain' in any of the UDP literature I was given and the lesson was not conducted as an interactive study circle. This may have been because there were 64 students in the class.

During my stay I spoke to a number of students, especially from form 4 and form 3 as their English was more fluent, asking them about UDP. None of the students were familiar with the name and seemed unsure what I meant when I asked about indigenous knowledge. When I suggested to Lemaron that UDP was not being delivered he asked me to clarify what was not being delivered. I explained form 4 did not recognise the name UDP. I was told this was because there were many new students with no further explanation then he changed the subject making it difficult for me to pursue an explanation.

I also interviewed Machupa as he told me he was not only an ex student of the school but in 2010 had taught UDP when Lemaron wanted it on the timetable. Machupa explained he found the students were not all engaged in learning about other cultures but seemed to enjoy learning more about Maasai culture and traditions through stories and songs. He indicated he kept a record of his lessons in a notebook which he left behind when he left the school to attend college in Arusha. However, now he is back and unfortunately, the notebook is not there and nobody seems to know what happened to it. When I asked if I could talk to some of the students he taught he explained they had all graduated from the school and expressed some doubt about what had been taught during his absence. I also learned he was not back as a permanent member of staff but was there to assist me and the other researcher who was there exploring how students learned about medicinal plants and their uses.

### Understanding Indigenous Knowledge

Before arriving at Dumisha School I was aware there would be another researcher at the school conducting fieldwork. I also knew over the past five or six years other Masters students had undertaken

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research at the school and in the local area. This was confirmed by the students in my focus group who recalled being part of a project to do with *medicine for animals* (Kumi, male, form 4). They also recollected wearing traditional dress and dancing when *some people came from Europe* (Suma, female, form 4). This was confirmed by Machupa who remembered working on a project cataloguing indigenous plants and their uses in 2011.

There were some photographs in the Head's office and also in a box in the library showing various Western people involved in activities around the school plus another box containing copies of a bound document with photographs and writing about local plants and their uses. Furthermore, other teachers would often mention past researchers in the course of casual conversations. I also found a box of dust covered copies of UDP written in English and Kiswahili.

Additionally, I asked form 3, who were involved in the other researcher's study, to write a short essay telling me why they thought IK should be included as a subject on the school curriculum or indeed why they thought it should not be included. I received 27 responses all positive; not really surprising as they were receiving IK lessons as part of the study. Nonetheless, some of the reasons they gave were not necessarily tied to knowledge of medicinal plants. For example one student said that,

*It helps people to respect our language because there are so many people who do not respect our language (Form 3 student, respondent 17).*

Another student linked IK to understanding the importance of conserving the environment: *it helps us avoid cutting of trees which are important to us e.g. eluwai trees (Form 3 student, girl, respondent 25).*

One of the girls listed five reasons why she thought it was important to include IK on the curriculum:

1. *It helps to know our culture*
2. *It helps to know different medicines which are found within our environment. For example, eseniji, endulelei*
3. *It helps to know our customs*
4. *It develops a person's confidence*
5. *It avoids discrimination among two people for communicating together using the same language. (Form 3 student, girl, respondent 26).*

In addition several students mentioned how much they enjoyed learning outside the classroom as they felt it helped them to learn more effectively. Several said although they knew the names of many plants now they also knew how to use them.

Later in my visit I experienced a version of a Maasai ceremony known as *Orpul*. The other researcher wanted to see how students learned about medicinal plants and so half of form 3 collected various plants from the forest to take to the traditional *boma* area where we lit a fire and took two goats in preparation for a day of *Orpul* activities. The group included boys and girls, some Maasai and some not. One of the Maasai elders was there to help in the preparation of the 'medicine' and Machupa ensured the students knew what plants were being used and why. When we were out collecting plants I noticed

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several of the boys were very confident in locating the relevant plants and digging up roots or scraping off bark, depending on what was needed. Later as we sat around the fire at the *boma* other boys slaughtered the goats before skinning and preparing them for cooking. I noticed the girls were not involved in these activities and when asked none had witnessed this happening before, but they were very interested in learning about the plants, some taking written notes.

**Photo 3: Girls watch as the boys skin the goat**



I gained a sense of how important the use of traditional ‘medicine’ was and the enjoyment of eating meat was also clear. The boys in particular became very animated and began dancing and singing, though they seemed a little embarrassed at times when they noticed me watching them. The girls tended to group together away from the fire and waited for the boys to offer them meat rather than collect it themselves. They seemed happy to eat and drink with the group but did not dance or sing.

During my interview with the Head he made it clear he thought IK formed an important part of the school ethos. He told me how respectful and disciplined his students were compared to other schools. He also said they were expected to carry out a number of duties around the school; one of which is collecting firewood which he described as, *part and parcel of IK. In their homes they are doing it so it is learning. They become responsible (Lemaron, male, Head teacher).*

This view was shared by Lembui, who felt it important to remind students about their culture,

*Yes, you must value your culture and because of this it has made them very strong and to progress well in their other subjects and have a good cooperation with other teachers and to be the best students (Lembui, male, teacher).*

He continued by asking me whether I had noticed any students showing bad manners since my arrival and seemed confident that my answer would be that I had not.

When asked whether he thought it was possible to use existing subjects to teach aspects of indigenous knowledge the Head referred to UDP which has a section concerning stereotypes and was able to link that to the English syllabus which also raises the subject of stereotypes. This was what

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prompted my question as I had observed an English Literature class earlier that week where the class were finishing reading a play called 'Black Hermit'. After the class I asked if I could borrow the Teacher Handbook that accompanies all the set books and plays studied in form 3 and 4. I noted several of the questions posed could be linked to IK, for example: Is it true that all traditions are bad and should be discarded from society?

The Teachers' Handbook contained comprehensive notes on how to interpret the text as well as a number of thought provoking questions. However, I did not observe the teacher in form 3 engaging the students in lively discussion. At one point she said to the class, *we do not solve problems by running away from them, Discuss (Adila, female, teacher)*. But rather than take responses from the students she asked me for mine. Some other students did volunteer occasional answers during the class but it tended to be the same few students who were confident in raising their hands to answer and whose English was fairly fluent. Moreover, there were only five copies of the play to be shared among more than 40 students making it difficult for all students to be fully engaged as the photograph below indicates.



Photo 4: Form 3 sharing one book per group

### Discussion

Before arriving at Dumisha School I had wondered how the school was able to balance the expectations of the Tanzanian Government to deliver a Western based curriculum alongside the desire to preserve their own culture and deliver inter-cultural awareness by teaching UDP. I soon discovered the short answer was they did not achieve this. However, within that short statement lays a host of possible reasons along with a belief by school management that they were preserving IK.

Firstly, I discuss some of the limitations imposed upon the school and debate why this impacts upon the acquisition of IK for the students, using examples from my own findings and wider literature available. I continue by addressing the aspects of IK that the school believed were being delivered and how various stakeholders explained this.

### Limitations on Teaching Indigenous Knowledge

Studies by Lindsay (1989) and Vavrus (2009) underlined the extent of foreign intervention in the education policies of Tanzania. The Head, Lemaron, also told me about the last meeting of district Head



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teachers where they discussed how curriculum changes were to be implemented. He said government officials presented a paper about,

*the competency based curriculum and trained us how to talk to the teachers and lead them in the way to implement the curriculum in line with national exams set by the ministry of education.....The problem is testing in this competence based curriculum because our teachers have no training in this method....so you see the problem (Lemaron, male, Head teacher).*

The terminology he used regarding a competency based curriculum resonated with me as a term all too familiar to me as a Western classroom teacher. He went on to explain how a new initiative called BRN (Big Results Now) was introduced last year but only a few teachers had received training. After returning I discovered BRN, according to a World Bank news item,

*is expected to fast track quality improvements in primary and secondary education to ensure that students are not just going to school but actually learning (World Bank, 2014).*

Education is one of six areas targeted for improvement and approximately USD416 million is being donated by the World Bank and other international partners. The report explains how Tanzania will introduce:

*Financial rewards for school performance, early grade student assessments, targeted support to lagging students, recognition incentives for teachers, and ensuring that funds reach schools in a timely manner (World Bank, 2014).*

Lemaron understood what was expected of him as a Head teacher yet also recognised the limitations he faced regarding the practicalities of delivering results. He spoke about the lack of qualified science teachers and the difficulty of retaining any qualified teachers in such a remote area. He claimed they left because they wanted more money. This was confirmed by Gillian, founder and trustee when I asked her about recent staff departures saying:

*I guess the grass always seems greener on the other side.....what they forget is that we offer free food and accommodation and the government schools don't (Gillian, female, founder and trustee).*

A recent UNESCO report also highlighted the *shortage of well qualified and expert teachers* (Woods, 2007, p. 18). The report cites issues that undermine the quality of teachers including limited secondary education in Tanzania with on average 34% enrolment (DFID, 2013, p. 3). Therefore, many of those who become teachers have experienced a weak form of education, achieving very low academic grades, leading to poor quality teachers; thus the cycle of poor quality is perpetuated (Woods, 2007). This reflects my own feelings when observing lessons at Dumisha. I believe I witnessed social reproduction in action since the teachers performed in ways they were familiar with; based on what they were taught at college but also influenced by their own experiences at school. This view was supported by Vavrus when discussing one of her student teachers:

*He struggled to enact this knowledge because he did not have a cultural framework in which to place the discourse and methods used in our class (Vavrus, 2009, p. 306).*

This was despite him achieving high scores in his written assignments at college on constructivist theory

and practice, leading Vavrus (2009) to question the wisdom of preparing student teachers using student centred methods when the reality of what they face in the classroom makes the implementation difficult.

When I observed Adila's English lesson she could have used examples from Maasai culture to promote a discussion of traditional values and the consequences of stereotyping but that would necessitate a confident command of spoken English from the teacher and students. Brock-Utne (2005) addresses this issue observing that teachers often do not have a large enough vocabulary to employ interactive teaching methods and when it is attempted group discussion switches to Kiswahili (Brock-Utne, 2005).

Vavrus outlines the difficulties she faced trying to develop a more student centred pedagogy before concluding,

*In this era of advocacy for social constructivist approaches in Africa it is critical that policy makers recognise that the examination system, the material infrastructure of schools, and the length and the quality of teacher education programmes limit the likelihood of a fundamental shift from formalism to constructivism (Vavrus, 2009, p. 309).*

I observed the pressure of the examination system during my fieldwork as the last week of my stay was set aside for whole school examinations. Form 4 were undertaking external national mock examinations while the remainder of the school sat internal exams that I had a hand in typing and checking, on request from the teachers. These exams are high-stake as no student can continue at the school if they fail the end of year exams and form 4 students need to score highly in order to secure places at the best upper secondary schools. Thus teachers are under pressure to teach using rote learning so students can pass the exams. Therefore, it is unlikely teachers feel inclusion of IK will add value to their teaching that is judged by how many students pass the exams. At the same time national results for the secondary leaving exam are poor across Tanzania with only 10% passing, prompting the government to implement the change to a competence based curriculum yet they are not taking away the pressure of constant testing (DFID, 2013, p. 3). However, as Tanzania receive substantial financial support from the international community for education they are unlikely to challenge the validity of the methods.

### **Bourdieu's Theories in action?**

I wondered if it was realistic of Gillian and the other trustees to expect UDP to be delivered against a backdrop of pervasive Western based curriculum expectations, so asked her why the school continued to deliver the TNC instead of adopting methods that supported IK. Her response was that in order to challenge it, first it would be necessary to engage with it. She maintains it is hard for the staff to understand how it could be different as they have been socialised to accept the present state of affairs as entirely normal. Thus Bourdieu's theory of symbolic violence is pertinent in this context as the elite culture constructs education policy and ensures its legitimacy by assuming everybody accepts it as the norm. Moreover, students and teachers alike are adopting multiple habituses as they negotiate their



indigenous cultural values at home but then adopt the 'modern' habitus throughout their school life.

This was revealed to me when I was invited by one of the local elders to visit his *boma* and meet his family. This elder was a member of the school board and had been instrumental in getting the school up and running. Koinet, one of the teachers, accompanied us and to my surprise he appeared wearing traditional Maasai robes. Whilst at the school I had only seen him wearing a western style business suit, shirt and tie yet here he was looking every bit the archetypal Maasai warrior. Arriving back at school he disappeared before returning in the familiar suit. When I challenged him about this he told me it was not appropriate to wear traditional dress at school. This concurs with Rival's experience with the Huaorani, who she claims,

*[C]arefully avoid the schoolhouse if not wearing bright, clean clothes, even if this implies long detours.....nobody approaches the school compound without first combing one's hair and washing off the mud from one's legs and feet (Rival, 1996, p. 157).*

Thus, it appears inside the school compound the performance of the 'modern' identity calls for western dress, hence the style of uniform for students as well. But students told me they were free to wear their traditional dress at weekends, though I did not often see this unless they were leaving to go home for the weekend. I can only assume that while in the school compound they felt compelled to wear the form of dress suitable for the habitus they were displaying. Unless there were Western visitors when they were expected to perform as Maasai to satisfy expectations.

### Teaching Indigenous Knowledge

At least once a year international researchers (mostly from England or America) have interacted with students and staff whilst conducting ethno botanical research. This has involved groups of students being taught about the uses of medicinal plants often involving practical sessions. A recent paper acknowledges the role of researchers at the school and describes the production of a booklet incorporating details of medicinal plants and usage as an ongoing activity which has generated,

*Not only a permanent written record of indigenous health knowledge, but also a comprehensive praxis based training programme for participating students. Several promising product samples have been obtained through laboratory studies, although production has yet to be scaled up (Burford, et al., 2012, p. 5).*

When these studies take place students are receiving instruction that may help preserve IK and lead school management to suggest IK is being taught. Nonetheless, it is not a subject appearing on the school timetable and is only taught to a selection of students during short periods of the school year. I examined the large copy of the school timetable posted in the school office (appendix 3). It was clear to see where a subject had been erased from the form 3 timetable and replaced with IK. I believe this was to cover the period of time needed by the other researcher to conduct her research.

During my interview with Gillian she intimated her conviction that UDP was not being taught as envisioned in its design. However, she was surprised to learn it did not appear on the timetable nor in my

opinion was it taught at all. She continued by explaining the difficulties experienced in constructing the cultural boma area intended for IK sessions as it had been built on a much smaller scale without windows rendering it, *useless as a learning space as it is too small and too dark (Gillian, female, founder and trustee)*. She believed it was possible to include it on the timetable; referring to the TNC she said,

*The way we got IK in the first place was by quoting their own documents back at them citing co-curricular programmes (Gillian, female, founder and trustee). (Appendix 4)*

It seemed from our conversation that the trustees were keen to see IK represented on the curriculum and had funded the construction of a special area as well as providing a programme to formalise the teaching of the subject and yet my experience highlighted the lack of any structured teaching other than what was happening as part of another researcher's study. Furthermore, there was no evidence of the teaching style promoting in the UDP literature.

Lemaron, the Head, believed that IK was happening at Dumisha, though he sidestepped the issue about whether it appeared on the curriculum nonetheless, he maintained it was happening as highlighted by his views on discipline, confirmed by Lembui's views on good manners. However, I was initially surprised and wondered if they had misunderstood my question. Yet further reading revealed a study by Sternberg (2007) concerning the cultural understanding of intelligence or knowledge where he argues social aspects of intelligence are valued by many cultures. He cites Zambia where studies revealed intelligent children are expected to be respectful of adults though he does argue it may be difficult to separate, *linguistic differences from conceptual differences in cross cultural notions of intelligence* (Sternberg, 2007, p. 17). Nonetheless this may offer an explanation of why respect and politeness are viewed as IK at Dumisha School.

### Conclusion

During my four week stay at Dumisha School the teaching of UDP was not present or represented on the written timetable, but it was possible to see both students and staff wearing Western 'uniform' and performing Western behaviour during their lessons: for example the way students always stood and greeted the teacher. Additionally the school operate a prefect system reminiscent of many English schools. Despite all this school management insisted IK was very much a part of the school and valued by them. While I was there teaching of IK happened as part of another research project and when asked students confirmed how important they felt it was to their learning. However, it appears the school has entered into the formal education system in Tanzania to gain legitimacy and access to educational capital to facilitate economic returns and this has come at the cost of a true IK curriculum.

In spite of this there are ways in which IK could become a more obvious part of the current curriculum. Students could, For example, learn practically outside the classroom identifying plants and

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discussing their uses as part of the biology syllabus. Even within the school compound there are plants and trees used in traditional medicine within easy reach. Instead students are expected to be familiar with types of ferns and coniferous trees not found in Tanzania and they are taught about them in order to pass the SCEE at the end of Form 4.

The English based NGO recognises the importance of cultural diversity, but the focus still tends towards academic achievement in terms of the TNC. It proudly displays on the website that Dumisha School achieved third place in the examinations leagues table out of 23 schools in the district: perhaps an indication of what potential donors value when making a decision to contribute money to fund the school.

This emphasis is evidenced by findings from the research indicating that local agendas and values given to types of knowledge production and capital have been prioritised over those of the NGO; thus lending weight to the argument that symbolic violence and social reproduction are present. Students and staff manage the change between Maasai home life and Western school life in an unproblematic way, to the casual observer, and students responded to the question of how their identity as Maasai changes after finishing their education by stating that they did not feel they had to change because it was their culture and they intended to keep the parts they felt were important; like the wearing of traditional dress (focus group of 5 form 4 students). However, research suggests that trying to balance the expectations of formal schooling with cultural identity is an important factor in high rates of substance abuse and suicide among young indigenous people (International Work Group for Indigenous Affairs (IWGIA), 2014).

Perhaps, it may be concluded, what the school is doing is providing the tools to 'play the game' of becoming a citizen of Tanzania while still valuing their indigenous status and knowledge. The NGO assumes some aspects of UDP are being taught and continues to support the school financially and is complicit in social reproduction as it advertises the academic success of the school. Yet local priorities have been able to override foreign funded projects as the school has used the connections enabling them to live in two worlds; 'playing the game' of being Maasai in Tanzania.

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## Appendices

1. Schedule of observations & interviews
2. Copy of informed consent form
3. School timetable
4. Relevant section of Tanzanian National Curriculum



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## Appendix 1: schedule of interviews and observations

| Time & Date   | Form          | Subject  | Duration    | Name  |
|---------------|---------------|--|-------------|---|
| 11am 29 April | -             | General background & history of school         | 30 mins     | Kurary (m)  |
| 11.30 2 May   | -             | Experience as ex-pupil & teacher of IK         | 40 mins     | Machupa (m)                                       |
| 13.25 5 May   | 1 (67 pupils) | 1 <sup>st</sup> lesson of indigenous knowledge | 1hr 15 mins | Kurary/Machupa                                    |
| 11.10 6 May   | 3 (45 pupils) | English Literature                             | 1hr 20 mins | Adila (f)   |
| 10.05 9 May   | -             | Experience as teacher at school                | 60 mins     | Lembui (m)  |
| 16.30 9 May   | 4             | Focus group re school and IK                   | 45 mins     | Abasi (m), Suma (f), Hasa (m), Kumi (m), Nala (f) |
| 09.15 12 May  | -             | Experience as Head of school                   | 40 mins     | Lemaron (m)                                       |
| 11.10 15 May  | 1 (64 pupils) | Indigenous knowledge (special lesson)          | 1hr 20 mins | Lembui (m)  |
| 19 May        | 3             | Written views on value of IK as a subject      | -           | 27 responses                                      |
| 11.45 17 June | -             | Views of a trustee and founder of school       | 60 mins     | Gillian (f)                                       |

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## Appendix 2: informed consent form

### **INFORMATION AND CONSENT FORM**

A project to critically evaluate the Unity in Diversity Programme (UDP) at Dumisha Secondary School

You are being invited to take part in a research study that will form part of an MA degree dissertation evaluating inter cultural education and how it is delivered at Dumisha Secondary School.

My name is Susan Kent and I am studying at the University of Sussex near Brighton in England. One of the school trustees has invited me to stay at the school and spend some time observing UDP lessons and interviewing staff and students.

The purpose of my research is to explore questions such as how the UDP has been delivered in the past and how it is delivered now, also to find out how students and staff feel about the programme and how it has benefited them.

You will be asked to take part in a focus group discussion after the lesson observations. These sessions will be recorded on audio. In addition you may be asked to take part in an individual interview which will also be recorded. Additionally I may take some photographs during the lessons.

I expect each session to last no longer than 45 minutes. There should be no more than 2 sessions.

You may decide to stop being a part of the research study at any time without explanation. You have the right to ask that any data you have supplied to that point be withdrawn/destroyed.

You have the right to have your questions about the procedures answered. If you have any questions as a result of reading this information sheet, you should ask me before the study begins.

The information I collect will not contain any personal information about you except your gender and school year. The final research paper may contain some quotes but they will be totally anonymous and nobody will attribute them to you.

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### **INFORMED CONSENT FORM**

By signing below, you are agreeing that:

- (1) you have read and understood the Participant Information Sheet,
- (2) questions about your participation in this study have been answered satisfactorily,
- (3) you are taking part in this research study voluntarily (without coercion).
- (4) you agree to your photo being used (if taken) anonymously

**Participant's Name (Printed):** \_\_\_\_\_

**Participant's signature:** \_\_\_\_\_

**Date:** \_\_\_\_\_

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## Appendix 3: Dumisha Secondary School Timetable May 2014

### Form 1

| Times            | 8-8.40    | 8.40-9.20 | 9.20-10.00  | 10.00-10.40 | BREAK | 11.10-11.50 | 11.50-12.30 | 12.30-1.10 | BREAK | 1.25-2.05   | 2.05-2.45 |  |
|------------------|-----------|-----------|-------------|-------------|-------|-------------|-------------|------------|-------|-------------|-----------|--|
| <b>Monday</b>    | CIVICS    |           | HISTORY     |             |       | GEOGRAPHY   |             | KISWAHILI  |       | AGRICULTURE |           |  |
| <b>Tuesday</b>   | ENGLISH   |           | PHYSICS     |             |       | BIOLOGY     |             | CHEMISTRY  |       | BIBLE KNOW. |           |  |
| <b>Wednesday</b> | MATHS     |           | ENGLISH     |             |       | BIOLOGY     |             | PHYSICS    |       | KISWAHILI   |           |  |
| <b>Thursday</b>  | CIVICS    |           | BIBLE KNOW. |             |       | ENGLISH     |             | HISTORY    |       | MATHS       |           |  |
| <b>Friday</b>    | CHEMISTRY |           | GEOGRAPHY   |             |       | MATHS       |             | AGRIC.     |       | RELIGION    |           |  |

### Form 2

| Times            | 8-8.40    | 8.40-9.20 | 9.20-10.00 | 10.00-10.40 | BREAK | 11.10-11.50 | 11.50-12.30 | 12.30-1.10 | BREAK | 1.25-2.05 | 2.05-2.45 |  |
|------------------|-----------|-----------|------------|-------------|-------|-------------|-------------|------------|-------|-----------|-----------|--|
| <b>Monday</b>    | MATHS     |           | PHYSICS    |             |       | GEOGRAPHY   |             | CHEMISTRY  |       | ENGLISH   |           |  |
| <b>Tuesday</b>   | GEOGRAPHY |           | CIVICS     |             |       | ENGLISH     |             | KISWAHILI  |       | HISTORY   |           |  |
| <b>Wednesday</b> | KISWAHILI |           | BIOLOGY    |             |       | BIBLE KNOW. |             | ENGLISH    |       | MATHS     |           |  |
| <b>Thursday</b>  | MATHS     |           | CHEMISTRY  |             |       | BIBLE KNOW. |             | PHYSICS    |       | CIVICS    |           |  |
| <b>Friday</b>    | ENGLISH   |           | GEOGRAPHY  |             |       | BIOLOGY     |             | HISTORY    |       | RELIGION  |           |  |

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## Form 3

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| Times            | 8-8.40    | 8.40-9.20 | 9.20-10.00 | 10.00-10.40 | BREAK | 11.10-11.50 | 11.50-12.30 | 12.30-1.10 | BREAK | 1.25-2.05   | 2.05-2.45 |             |  |
|------------------|-----------|-----------|------------|-------------|-------|-------------|-------------|------------|-------|-------------|-----------|-------------|--|
| <b>Monday</b>    | KISWAHILI |           | GEOGRAPHY  |             |       |             | ENGLISH     |            |       | BIBLE KNOW. |           | MATHS       |  |
| <b>Tuesday</b>   | CHEMISTRY |           | HISTORY    |             |       |             | ENGLISH     |            |       | CIVICS      |           | BIOLOGY     |  |
| <b>Wednesday</b> | PHYSICS   |           | MATHS      |             |       |             | IND. KNOW.  |            |       | HISTORY     |           | CHEMISTRY   |  |
| <b>Thursday</b>  | BIOLOGY   |           | MATHS      |             |       |             | GEOGRAPHY   |            |       | KISWAHILI   |           | BIBLE KNOW. |  |
| <b>Friday</b>    | ENGLISH   |           | PHYSICS    |             |       |             | CIVICS      |            |       | KISWAHILI   |           | RELIGION    |  |

## Form 4

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| Times            | 8-8.40    | 8.40-9.20 | 9.20-10.00 | 10.00-10.40 | BREAK | 11.10-11.50 | 11.50-12.30 | 12.30-1.10 | BREAK | 1.25-2.05   | 2.05-2.45 |           |  |
|------------------|-----------|-----------|------------|-------------|-------|-------------|-------------|------------|-------|-------------|-----------|-----------|--|
| <b>Monday</b>    | CHEMISTRY |           | ENGLISH    |             |       |             | PHYSICS     |            |       | PRIV. STUDY |           | BIOLOGY   |  |
| <b>Tuesday</b>   | HISTORY   |           | BIOLOGY    |             |       |             | MATHS       |            |       | BIBLE KNOW. |           | KISWAHILI |  |
| <b>Wednesday</b> | CHEMISTRY |           | GEOGRAPHY  |             |       |             | MATHS       |            |       | HISTORY     |           | ENGLISH   |  |
| <b>Thursday</b>  | CIVICS    |           | ENGLISH    |             |       |             | MATHS       |            |       | KISWAHILI   |           | PHYSICS   |  |
| <b>Friday</b>    | GEOGRAPHY |           | CIVICS     |             |       |             | BIBLE KNOW. |            |       | ?           |           | RELIGION  |  |

**Table 1:** Subjects to be Taught from Form I to Form IV with their Corresponding Number of Periods per Week.

| Form I and Form II |             |                      | Form III and Form IV |             |                      |
|--------------------|-------------|----------------------|----------------------|-------------|----------------------|
| SUBJECT NUMBER     | SUBJECT     | NO. PERIODS PER WEEK | SUBJECT NUMBER       | SUBJECT     | NO. PERIODS PER WEEK |
| 1.                 | Mathematics | 6                    | 1.                   | Mathematics | 6                    |
| 2.                 | English     | 5                    | 2.                   | English     | 5                    |
| 3.                 | Kiswahili   | 3                    | 3.                   | Kiswahili   | 3                    |
| 4.                 | Biology     | 3                    | 4.                   | Biology     | 3                    |
| 5.                 | Civics      | 2                    | 5.                   | Civics      | 2                    |
| 6.                 | Physics     | 3                    | 6.                   | Physics     | 4                    |
| 7.                 | Chemistry   | 3                    | 7.                   | Chemistry   | 4                    |
| 8.                 | Geography   | 3                    | 8.                   | Geography   | 3                    |
| 9.                 | Commerce    | 3                    | 9.                   | Commerce    | 3                    |
| 10.                | History     | 2                    | 10.                  | History     | 3                    |
| 11.                | Religion    | 2                    | 11.                  | Religion    | 2                    |
| 12.                | Bookkeeping | 3                    | 12.                  | Bookkeeping | 3                    |
| 13.                | Agriculture | 6                    | 13.                  | Agriculture | 6                    |
| 14.                | Engineering | 3                    | 14.                  | Engineering | 3                    |

Form I and Form II's students shall study 10 subjects as shown in **Table 1**. These shall include 7 core subjects, two elective subjects and religion as a compulsory subject. The core subjects shall be Mathematics, English, Kiswahili, Biology, Civics, Geography and History. Elective subjects shall be Physics, Chemistry or Bookkeeping and Commerce, Home Economics or Technical subjects. In addition, the student shall be required to take one optional subject as shown in **Table 2**.

In Form III and Form IV, students shall take six core subjects namely; Mathematics, English, Kiswahili, Biology, Civics and Geography. They shall also include in their study programmes one or more elective subjects; which shall be selected among: Chemistry, Physics, Bookkeeping, Commerce and History. These subjects shall fall under the following categories; **Sciences, Social Sciences, and Commercial subjects**. They shall also be required to study one optional subject among the ones shown in **Table 2**. Students shall, therefore, take the subject combinations as shown in **Table 3**.

**TABLE 2: Optional Subjects for Form I to Form II**

| SUBJECT NUMBER | SUBJECT                          | NO.OF PERIODS PER WEEK | SUBJECTS FOR THE SCIENCE GROUP | SUBJECTS FOR THE SOCIAL SCIENCE GROUP | SUBJECTS FOR THE COMMERCIAL GROUP |
|----------------|----------------------------------|------------------------|--------------------------------|---------------------------------------|-----------------------------------|
| 1.             | Additional Mathematics           | 2                      | Mathematics                    | Mathematics                           | Mathematics                       |
| 2.             | Information and Computer Studies | 2                      | English                        | English                               | English                           |
| 3.             | Music                            | 2                      | Kiswahili                      | Kiswahili                             | Kiswahili                         |
| 4.             | Fine Art                         | 2                      | Biology                        | Biology                               | Biology                           |
| 5.             | French                           | 2                      | Civics                         |                                       |                                   |
| 6.             | Arabic                           | 2                      | Physics                        | Civics                                | Civics                            |
| 7.             | Bible knowledge                  | 2                      | Chemistry                      | Geography                             | Geography                         |
| 8.             | Islamic Studies                  | 2                      | Geography                      | History                               | Book-keeping                      |
| 9.             | Home Economics                   | 3                      | Bias subject (s)               | Bias subject (s)                      | Commerce                          |
| 10.            | Theatre Arts                     | 2                      | Religion                       | Religion                              | Religion                          |

**TABLE 3: Science, Social Science and Commercial Subject Combinations**

\***Highlighted subjects** indicate what is taught at Dumisha Secondary School (information taken from 2007 Curriculum for Ordinary Level Secondary Education in Tanzania)

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## Appendix 4: Section of Tanzanian National Curriculum – Co-Curricular activities

### **10.0 CO-CURRICULAR ACTIVITIES**

*As the term generally refers to the academic program of a school, or the work done within the classroom, in contrast, the co-curriculum encompasses all activities that are held outside the regular curriculum. In some cases, in conjunction with the normal academic timetable of scheduled classes, the school to enable students to develop further all aspects of their character provides these (Ministry of Education and Vocational Training - Tanzania Institute of Education, 2013, p. 36).*