Geography of African Development: an Alternative Curriculum

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ABSTRACT

The Geography of African Development module is part of a year-long Third Year level geography course on Africa that has been offered at Rhodes University since 2002. The course is an exception to the dominant trend, both locally and internationally, which has witnessed a major decline in the teaching of regional geography and area studies. This paper examines how adopting a constructivist approach to the module's curriculum enabled learners to develop geographical skills at the same time as Africanising the curriculum.

Introduction

Geography in South Africa has become increasingly fragmented with a great diversity of course offerings in University curricula and research outputs produced in an eclectic but splintered array of journals, consultancy reports, books, plans and assessments. One of the great losers in this process has been regional geography both as a teaching and research endeavor (Fairhurst *et al.* 2003). Running counter to this trend, however, have been the two semester-length Third Year level courses, *Development in Africa* (GOG 301) and *Environment in Africa* (GOG 302), which have been offered at Rhodes University since 2002. The *Geography of African Development* module is approximately half of the Development in Africa course and is the focus of this paper.

Since the early 1990s, when South Africa began to regain international acceptance, there has been an intriguing dialectic in operation. Once apartheid was overthrown and South Africa opened up to the outside world there have been calls for South African geography/ers to engage with Africa and their African colleagues. The title of Simon's (1994) paper 'Putting South Africa(n) geography back into Africa' encapsulated this idea. He called for increased engagement with post-colonialism so as to diversify our intellectual underpinnings and reduce our dependence on the ideologies of the Anglophone North. He concluded that, 'fundamental to senses of identity is one's individual or collective name and as the country's very geographical name makes explicit, South Africa IS part of Africa' (Simon, 1994: 299). More recent authors have also called for geographers to become intellectually de-colonised or Africanised.

> A successful de-colonization process also requires the linking of South Africa and Africa, and the wider South … even more worrying is the continued failure of many local geographers to appreciate material from African studies and associated journals (Ramutsindela, 2002: 9).

> The ultimate challenge for geography is …to ensure the Africanisation of the discipline, both in terms of institutional and organisational structures, as well as the curriculum. This will entail a shift from Eurocentrism to Afrocentrism, and will require greater engagement with colleagues and literature emerging from north of the Limpopo (Maharaj, 2002: 18).

The irony lies in the fact that just as we are being urged to become more African our departments have been chasing 'market share' in environmental and development studies or geographic information systems (Fairhurst *et al.* 2003). There is, obviously, a very strong spatial basis to GIS but environmental and development studies have no need to be concerned with place in anything other than packaging. Our curricula and associated research, consequently, are lacking the examination of place, in this case Africa, just as we are being called upon to engage or re-engage with Africa.

One overlooked problem associated with the above is that the geography curricula in South African Universities have difficulty incorporating our very particular way of understanding. The geographical skills we have developed are fundamentally place-based as well as spatial. For example, where in an environmental studies or development problems course do we actually expect our learners to demonstrate competencies in the following (van Hoven and de Boer, 2001; Klein, 2003)?

1. To be able to recognize spatial patterns in the distribution of features.
2. To be able to find similarities and differences in the distribution of features in regions, thus identifying patterns and exceptions.
3. To be able to use geographical variables to analyse local and global issues.
4. To consider location and relationships between places in analysing events.
5. To distinguish sub-regions within larger regions on the basis of differences in features.

The resources and methods used in the Geography of African Development module were chosen to ensure that the learner's pathways to understanding Africa came through using the geographical skills described above. Our attention now needs to focus on teaching philosophy and its associated pedagogy, so that I can show how the curriculum can become Africanised through placing the learner at the centre of the knowledge construction process. The following section also needs to introduce conceptions of African and Africanist to make a key connection.

The question of 'African' and teaching philosophy

The concepts of African and Africanist are contentious and need to be examined and appropriately defined for the central thesis of this paper to be followed. Firstly, although it is relatively easy to reach a definition of the geographical extent of Africa it is not so easy to define an African. Africa is defined by Princeton University's WordNet (2004) as 'the second largest continent; located south of Europe and bordered to the west by the South Atlantic and to the east by the Indian Ocean'. This seems to be simple enough but does 'mainland' Africa include the Sinai and Gaza Strip, both of which are part of Egypt? Where does this leave 'island Africa', the Indian and Atlantic Ocean islands such as Mauritius or Réunion (an overseas department of France)?

Secondly, African is described in two ways in the Collins Birmingham University International Language Database: 'African means belonging or relating to the continent of Africa, or to its countries or peoples … An African is someone, especially a black person, who comes from Africa, or whose family originally came from Africa' (Sinclair *et al.* 1987: 25). When used as an adjective, therefore, an African student would be someone who either belonged to an African country or to Africa's peoples. If used as a noun then the dictionary qualified the term with two characteristics:

• The racial marker of 'black',
• They, or their progenitors, either come or came from Africa.

We need to discuss this a little further as it is critical to see whether learners taking the module can be considered as African. The philosopher Kwame Anthony Appiah has examined the concept of race[1]. He has shown that it is commonly taken to involve four features (Appiah, 1990; Appiah and Gutmann, 1996) two of which are implicit in the definition found in language database referred to above.

• It is heritable,
• There are a limited number of races,
• It includes characteristics that go beyond physical appearance,
• We all have race.

Appiah went on, however, to show that there is insufficient evidence to link morphological features such as skin colour with attributes like honesty, financial skills, industrious behaviour etc. He also demonstrated that the morphological traits do not fall readily into categories. Racialism claims there are races but when you try and identify them you encounter complex problems. These arguments have called into question whether race can be considered to exist and this is highly problematic if we are to Africanise our curriculum and being African is frequently (but not exclusively) equated with being black.

Charles Mills' (1998) interpretation of race can help us over this dilemma. Rather than take a realist approach to race, he adopted a constructivist position: race does not have an independent existence but is constructed by us through our beliefs. So now we may treat race as though it exists even though we know that there are major problems in defining it. Taken further, the social world which we experience is also a racialised world since we believe it to be so. The construction of a worldview, or a curriculum, can now encompass the history and geography of racialism. We still, however, need to deal with the fact that most of the learners taking the Geography of African Development module were not black. Over sixty percent of the class were classified by the University (for government purposes) as white. Can you be white, or any other colour or racial marker, and still be African?

Recently, Sociologist Jimi Adesina (2004) has presented the argument that this is possible in his discussion of the concept of Africanity within the context of the African University. He concludes his discussion of Africanity as follows:

> Being African is not a matter of pigmentation or location: it is about being self-referentially defined as 'African' - it is a commitment to Africa. It is possible to be physically located in Africa but not be of Africa; it is possible to be physically located outside Africa but be self-referentially African … Further, to speak of African identity is not to speak of a single identity but as something spatially bound and defined by commitment to Africa - although highly differentiated. (Adesina, 2004: 3)

The important qualifying issue here is commitment to Africa. Are my learners committed to Africa, or, taken to its conclusion, do they become committed to Africa? Through building their own knowledge of Africa, and reflecting both on what they have learned and how they have learned it, do they then become

critical of other positions: Eurocentric, colonial etc? If they do become critical can I then claim that it is because the curriculum, and its philosophical stance, has Africanised them? The following discussion examines curriculum philosophies and explains why the student-as-worker (or constructivist) model was chosen since it facilitates Africanisation of the curriculum and also, potentially, Africanisation of the learners.

One of the most accessible discussions of teaching philosophies can be found in the work of Williams (2001). He presented a powerful caricature, based on the American situation, referred to as the three models of the student's role in learning (see also Jarolimek and Foster, 1985; Massey, 1997). The second one of these, the student-as-worker model, is the teaching philosophy that the module has adopted since it facilitates knowledge construction and what is called deep learning (Biggs, 1987; Ramsden, 1992). I will present all three models below as quotations.

The first model Williams labelled the student-as-product model, it is commonly accepted by faculty at Rhodes University and, as Williams (2001) comments, at most American Universities.

> Under this model, the instructor may be likened to a factory worker on an assembly line. As the student passes by, each instructor uses expository and demonstration methods to inject a certain body of knowledge into the student. When the student reaches the end of the assembly line, he/she has been educated. This model is especially popular among university professors, who prefer to style themselves as 'content experts' rather than 'educators'. They determine what knowledge is disseminated to each student, how it is disseminated, and measure their own success as instructors in terms of individual student performance on examinations or evaluation instruments generated by themselves, the knowledge disseminators (Williams, 2001: 27).

This is a problematic philosophy for the module's curriculum as it needed to be learner centred not instructor centred and was designed around a mix of active and web-based learning techniques. Williams (2001: 28) goes on to point out that teachers with the student-as-product philosophy find web-based and active learning 'both unappealing and difficult' as it involves a paradigm shift on their part. The second model, however, embraces both of these techniques and positions the learner at the centre of the process.

> The student-as-worker model is based on the concept that the classroom is a workplace where the students are engaged in generating new (to them) knowledge. The instructor is the foreperson responsible for setting goals, assigning tasks, monitoring progress, and assisting students as they generate their new knowledge … Adherents of the student-as-worker model employ, as learning mechanisms, inquiry, activity, and discovery strategies that emphasize exercises and projects, with students working either individually or in groups (Jarolimek & Foster, 1985). For grading, they rely extensively upon project reports, written and oral presentations of work completed outside the classroom, and possibly take-home examinations. They encourage cooperation among students while helping each student learn to accept personal responsibility for work submitted in their name (Williams, 2001: 28).

The student-as-worker model uses techniques such as active and web-based learning and places the learner at the center of the process, emphasizes problem-solving and introduces relevant, contemporary experiences to the curriculum. In this route to learning the instructor guides the learner through a sequence of activities and the learners construct their own knowledge because of engagement with each activity and reflection on

what has been learned. This meta-cognitive process produces what is known as deep learning (Ramsden, 1992) in contrast to surface or strategic learning (Biggs 1987) which is more commonly associated with the student-as-product or consumer models. In the case of the Geography of African Development module active learning facilitated learners' constructing their own knowledge about Africa. They followed a sequence of activities, engaged with different learning resources and reflected on what they had learned. Learning through doing was practised throughout and all learning was spatially referenced within the African context.

The final model, like the first, is instructor-centred and is called the student-as-consumer model. It is perhaps better understood as being driven by course marketing rather than course teaching.

> Under the student-as-consumer model, the student visits the university supermarket, selects a box of history and a quart of philosophy from the shelf, proceeds to the checkout stand, pays the bill, and leaves with education in hand. The faculty member's job becomes that of packaging knowledge so attractively that the student will be drawn to select that package, open the package, and consume some of its contents … The student-as-consumer model is particularly popular among higher education administrators who find sales of a particular product, that is, credit hours generated, the simplest way to manage budgets, and student enrollment and classroom evaluations the simplest way to evaluate faculty performance. It is also popular among cost-conscious students who seek to control their selection of classes to achieve their personal educational goals. (Williams, 2001: 28).

The philosophy behind this does not necessarily conflict with the constructivist teaching approach, which has been adopted by university administrators, who are eager to package courses in terms of the student-as-product model.

Recently Pan (2000) has characterised the activities of the active-learning constructivists as being in binary opposition to the dominant instruction paradigm. Table 1, below, summarises these two positions and incorporates Biggs' (1987) and Ramsden's (1992) concepts of surface, deep and strategic learning styles. Ramsden's (1992) work distinguished between two fundamentally different teaching and learning approaches which he called deep and surface learning and these two are

placed appropriately in the table below. Surface and strategic learning are placed in the instruction paradigm column since they describe the process of reproducing knowledge rather than assimilating it with marked tendencies to 'atomise', compartmentalise and inadequately link facts, ideas and theories. By way of a contrast, deep approaches to learning are essentially transformative since the learner and teacher are endeavouring to understand ideas for themselves and so deep learning has been placed in the constructivist column. Typically, deep learning involves relating ideas to broader experiences and sources of knowledge, looking for patterns and key processes and critically reflecting on the logic of arguments. Deep learners usually become actively interested and very enthusiastic about their course content and their participation in the learning experience. This paper goes one step further and proposes that this can lead to commitment to Africa.

The Geography of African Development module
The activities developed for the course were:
1. Learning from the eight part National Geographic Africa series.
2. Construction of wall map showing the Third Year class's group knowledge of Africa.
3. Playing the computer-based Africa map quiz.
4. Role-playing in the African Catchment Game.
5. Construction of stem and leaf diagrams showing human development indices of African countries.
6. Production of a portfolio of two countries based on selection within African regional divides.
7. Guest seminar series and a requested seminar.

Building foundational knowledge: the map quiz and wall map of group knowledge
The module started with two strategies designed to raise the class's spatial awareness of Africa. The Africa map puzzle was created for secondary schools but works just as well in a tertiary setting since our students also need to know which countries are where on the continent. It is a simple computer game with a blank map of Africa that needs to be filled in with countries. The countries and their names appear in a random sequence at one side of the continental outline and learners have to drag and drop each country into the correct location.

Table 1: The Instruction Paradigm and Constructivist Learning Paradigm

Instruction Paradigm	Constructivist Learning Paradigm
Instructor-led, students are dependent and micro-managed	Learner-led and students are self-directed
Didactic and prescriptive teaching methods	Active and discovery / inquiry-based learning
Students are extrinsically motivated	Students are self-motivated
Knowledge is transferred from the instructor to the student	Students learn how to learn
Students are encouraged to use surface or rote-learning	Students encouraged to develop deep learning
Education received at the end of the teaching process rewarding the strategic learner	Education is a process of life-long learning
Instruction is a synchronised activity	Learning can be asynchronous
Instruction takes place in the classroom	Learning is borderless
Emphasis is placed on theory	Theoretical learning is integrated with the real world
Education is credited through time spent on tasks	Assessment of learning is based on competency

There is an option either for the continent to be completely blank which is, initially, quite hard, or for it to contain country outlines, which is easier for the beginner. A timer runs as the learners play and so correct positioning is directly rewarded with quicker times. The learners are expected to play this independently in their own time and late in the course an 'after hours' session is held in which the quickest player is found. His or her reward is two cinema tickets. In 2004 the quickest time was just under two minutes in which 48 countries were correctly placed first time.

The puzzle was downloaded on to two computers in the Geography library for learners to use and the link (http://www.yourchildlearns.com/puzzle_afr.htm) was also given in the links page of the course's web platform, DisCo, so that the game could be downloaded onto the student's own computer. The role of using the web as a resource through the DisCo system will be discussed briefly later.

The second activity was based on the information learners filled in on a brief questionnaire, which requested them to list the places in Africa where they had either lived, worked/studied or had a holiday. The intention of this activity was to get them to think spatially about the Africa they had direct experience of. Once they had completed their questionnaire they had to place colour-coded adhesive stickers on to two laminated maps, one of Africa and one of South Africa, showing where they had been. For many of the learners this was one of the first times they had ever needed to locate their own experience spatially and finding where they had been took some time. The composite map that resulted (Figure 1) took two lecture periods to construct but showed a very interesting pattern.

Figure 1: Third Year (2003) students' joint experiences of Africa compared to 'High' and 'Low' Africa
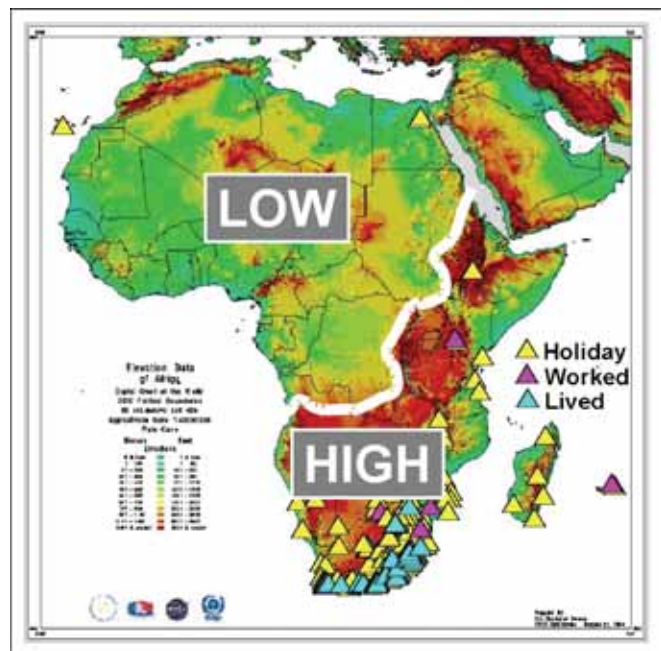

Figure 1 superimposes the High Africa: Low Africa division on to the composite map and it is quite clear that their direct experience of Africa is based in High Africa. This is that vast area, almost all of which lies above 1000 metres, stretching from Angola in the south-west to Ethiopia in the north-east (Grove, 1990). Here is one of the first examples of learning through constructing knowledge since I had to help interpret their experience of Africa and had to turn quickly to this regional construct, read up on it and then produce an image for them to use. At this time it was important to build their awareness of African regions and so they were also provided with a range

of maps showing, amongst others: the distribution of HIV/AIDS; distribution of major religions; distribution of violent changes of governments through coups; the distribution of dietary energy supply; and the major vegetation regions.

Hard copies of the maps were given to each learner and they were also uploaded as images onto the course's website. Class discussion quickly established that our knowledge of Africa was spatially coincident with particular thematic regions. The region we had direct experience of was High Africa and island Africa and we lived in the region where the incidence of HIV/AIDS was the worst in the continent. Our experience was of countries where Islam was either the minority religion or was numerically insignificant. Finally, the region was the most peaceful, in terms of changes of government, in the post-colonial era.

In this way we were undertaking three of the geographical skills listed in the introduction. We were distinguishing sub-regions within larger regions on the basis of differences in features, we were recognizing spatial patterns in the distribution of features and we were finding similarities and differences in the distribution of features in regions thus identifying patterns and exceptions. Finally, all of this was related to their own experience of Africa.

Constructing our understanding of Africa through the Africa series and examination of Africa's human development indices

The next activity was designed to give the learners a much better visual impression of different African environments and an appreciation of a variety of development themes. They sat through seven episodes of the National Geographic Society's Africa series, which was first broadcast in late 2001 and subsequently became available on DVD. Each episode was located in a different African region (which was indicated with a marker on the wall map) and followed the experience of selected individuals as they went about their lives. Frequently the makers of the series focused on significant events or rites of passage as focal points. There were some common themes running through all episodes.

The learners were not passive in this process. Each episode lasted for 55 minutes and they had worksheets to complete during and immediately following the episode. The worksheets had four sections. The first one was a simple recall activity of ten questions, which meant that they had to pay close attention to the episode. The second section required them to make interpretations based on what they had seen. For example, they might be asked to estimate the population size of a town or city shown in comparison to others they had already seen, or they could be asked to estimate population densities or rainfall. In this way I was asking them to connect the human and natural environments they were looking at to the knowledge they already had about Africa. Frequently I would provide approximate figures to facilitate this process.

The third section was then completed. This required them to infer the meaning and purpose of the episode and write down up to six bulleted points. For example, the episode might have been about the importance of cattle ownership, uncertainty in livelihoods or the management of water resources. The class as a whole would present their ideas, which were discussed in a workshop setting and written on to newsprint on a flip chart. Finally, the workshop session consolidated and synthesized their ideas about the purpose of the episode. The themes from that episode were then written up on newsprint, which was subsequently put on the wall for future reference. They would then fill in the last section, consolidation, in their worksheets.

After each episode the recall, interpretation and purpose activities would take about 5-10 minutes and the short workshop would take another 15-20. A total of approximately 30 minutes would therefore elapse before we would view a second episode and then have the next workshop session. In all two episodes and two workshops could run in a three hour practical class. These sessions were held at the beginning of the course, the students requested, however, that the DVDs be made available for them to review at the end of the course. An indication of the success of this method.

The active learning incorporating the Africa series required the class to use two of the geographical skills described earlier. They were using geographical variables to analyse local and global issues, for example, when the impact of HIV/AIDS cropped up in one episode in the context of long distance labour migration in southern Africa. Secondly, in examining and understanding some of the livelihood strategies shown they had to consider location and relationships between places. One learner's comment in the end-of-module peer review was particularly relevant to the theme of Africanisation, 'to a white person from southern Africa, the videos showed Africa's humanity and gave a personal face to the continent'.

Since the module was about development I also had to build their awareness of the levels of development in Africa and their geographical patterns. The class did this through producing their own stem-and-leaf diagrams of the United Nation's Human Development Indices (United Nations Development Programme, 2001) in small groups. We subsequently workshopped the patterns they revealed and pinned their diagrams to the walls.

They analysed patterns in the actual Human Development Indices (HDIs) and also worked with the other criteria found in the UNDP's tables: life expectancy, educational enrollment, wealth, urbanization levels, etc.

Stem-and-leaf diagrams were invented in the late 1970s as part of a bundle of innovative techniques, which became known as Exploratory Data Analysis, to explore data and the relationships within them (Erickson and Nosanchuk, 1977). Numerical information, such as life expectancy in years, provides the vertical stem or column of information and the leaves to one or both sides of the column can then be represented by acronyms of countries (Fox, 1989). Revisiting the data in an iterative way makes it is possible to translate large amounts of numbers into simple visual displays which facilitate immediate identification of exceptional countries and groups of countries. Figure 2 is an example of one of the stem-and-leaf diagrams, which the class produced. National human development indices are the vertical column and the country acronyms fan out to the right of this showing which countries had certain levels of development.

The diagram also highlighted certain countries based on particular geographical attributes: whether they are sub-tropical countries or small islands. Here again is an example of the knowledge construction that this type of active learning produced since the class requested me to give a seminar at the end of the course explaining why the stem-and-leaf diagrams showed certain patterns of development. As a result I investigated, for them, the recently reopened debate concerning the importance of geographical/ environmental endowments in the development process (Acemoglu et al, 2000; Easterley and Levine, 2002).

Figure 2: Human Development Index 1999, African Countries, highlighting <u>Sub-Tropical</u> Countries or <u>Small Islands</u>

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   0.800
   0.775  LIB  MAU
   0.750
   0.725  TUN
   0.700  CVD  RSA  ALG
   0.675
   0.650  EGY
   0.625  GAB
   0.600  EQG  NAM  MOR
   0.575  BOT  SWZ
   0.550  ZIM  GHA  LES
   0.525  KEN
   0.500  COM  CAM  CON  TGO
   0.475
   0.450  MAD  NGA  DJI  SUD  MTA  TAN  UGA
   0.425  DRC  ZAM  CDI  SEN  ANG  BEN  ERT
   0.400  GAM  GUI  MLW  RWA
   0.375  MAL  CAR
   0.350  CHA  GUB
   0.325  MOZ  ETH  BFS
   0.300  BDI
   0.275  NGR
   0.250  SLE
   0.225
   0.200


   Somalia and Liberia — VERY LOW (UNKNOWN)
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Stem: HDI value 1999
Leaf: African Country Acronyms
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LIBya, MAUritius,TUNisia, CapeVerDe, Republic of South Africa, ALGeria, EGYpt, GABon,
EQuatorial Guinea, NAMibia, MORocco, BOTswana, SWaZiland, ZIMbabwe, GHAna, LESotho, KENya,
COMores, CAMeroon, CONgo, ToGO, MADagascar, NiGeriA DJIbouti, SUDan, MauriTAnia, TANzania,
UGAnda, Democratic Republic of the Congo, ZAMbia, CoteD' Ivoire, SENegal, ANGola, BENin,
ERiTrea, GAMbia, GUInea, MaLaWi, RWAnda, MALi, CAmeRoon, CHAd, GUinea Bissau, MOZambique,
ETHiopia, Burkino FaSo, BurunDI, NiGeR, Sierre Leone.
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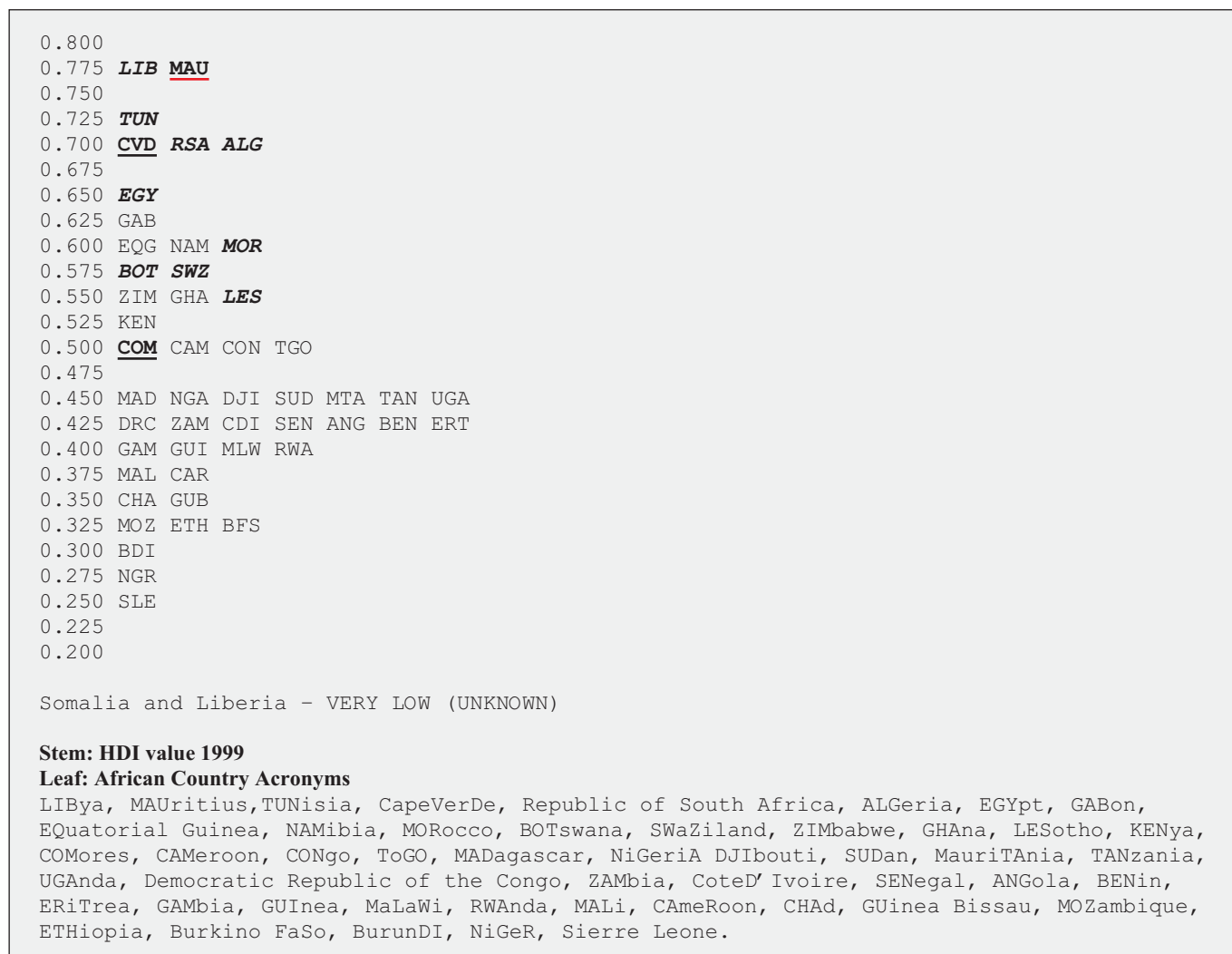
Figure 2 corroborates the global findings of the debate in the African context since it shows that sub-tropical former colonies and small islands had higher levels of economic development than land-locked tropical states. This activity was therefore directly using geographical/locational variables to analyse local and global issues and distinguishing sub-regions within larger regions on the basis of differences in development.

Developing experience through a role-playing simulation: the African Catchment Game

Role play is a type of active learning which depends on simulating actual experiences in an intensive game experience. The game cycle we have developed starts with a preparatory phase where learners are introduced through readings to role playing and game simulations in the generic sense. The game is then played, in our case over an entire weekend, at an isolated residential field centre. The game experience is then related to theory and their understanding about Africa through a reflection exercise held a short time after the game (Fox and Rowntree 2004).

Our learners played their two-day simulation roughly half way through the course and they took on roles in a simulated southern African country. They could be small-holder or commercial farmers, traders, retailers and wholesalers, agro-industrialists, industrialists, urban labour, informal sector workers, refugees, bankers and government officials such as the Minister of Home Affairs, Minister of Water and President. The original model for this game was the Green Revolution Game/Exaction developed by geographer Graham Chapman in the late 1980s for south Asian conditions. Although it has been widely played in Asia, Africa and the USA (Chapman, 2003) this game has received scant scholarly analysis, a rare exception being the paper produced by Park *et al.* (1995). Staff at Rhodes have developed the game to incorporate current southern African environmental and developmental processes and renamed it the African Catchment Game.

The rural and urban sectors in the game each run through a sequence of annual activities, whether planting, weeding and growing crops or purchasing factory inputs locally and internationally, negotiating with labour and producing goods for consumption or export. In order to survive in the game sufficient food has to be grown or procured and this is collected by the game managers periodically. A wide amount of interaction and strategies are possible within the structures built into the game which are enforced by the two managers. Everything in the game is represented by a token, whether it is land, a factory, rice, sugar cane, tinned meat, money or a bicycle. Location in the game is also largely confined to either the rural or urban area with certain restrictions on widespread movement as it would be unrealistic.

Playing the game itself follows a set pattern. The evening before play, learners (up to 35 of them) are shown the game venue and its spatial sub-divisions. They are shown all of the tokens, their starting assets are described and they select the roles they want to play. If necessary elections can be held to decide on who will be president. The following day the group is led through the mechanics of the game cycle and then several 'years' of the game are played with no breaks. At the end of the day's play there is time set aside for the learners to write down their immediate impressions of what they experienced and to have a short debriefing. On the second day the game is played again, with variations highlighting selected environmental or developmental themes; for example, the spread of HIV/AIDs or the need to manage water and land degradation. Once again several years are played followed by a short debriefing and an opportunity to write down immediate impressions. Two days after the game was played the learners have a written reflection exercise to complete where they describe what happened to them and where they reflect on the strategies they adopted or experienced in relation to the developmental and environmental forces the game was modeling.

The Africa series described earlier developed the connection between the visual aspects of what Africa looks like with interpretation of those environments. The African Catchment Game complemented this by enabling the learner to experience what it is like to be an African in a variety of very realistic situations.

Feedback from their reflection exercises showed the degree to which this activity had produced deep learning. The following quotes (Fox and Rowntree 2004) also showed that 'western' models were re-appraised and learners were engaging with what it meant to be a rural African.

> The [African Catchment Game] … was the most informative and insightful … previously, I feel that I had always had a very 'western' conception of development … I had always assumed that the challenge for a rural person was to uplift themselves and progress forwards. After playing the African Catchment Game I now understand that for many people the challenge is survival, successfully supporting oneself and family. I realize that this paradigm shift from upliftment to survival is one of the major stumbling blocks of aid policies.

> The Catchment Game in particular was more involving, and one really felt that she had to do something in order to survive. But basically it brought one to understand better what rural people are faced with on a day-to-day basis. Even though it is a model, it was able to give me an insight into rural livelihoods. Sometimes you claim that you know something about what is taking place in the rural areas, but this game gives you a better and clear perspective. After playing it you become a changed man/woman.

Their reflections also showed that that they were using geographical variables to analyse local and global issues and they were aware that location and relationships between places helped to explain events in the game.

Autonomous learning: preparing a portfolio of two African countries

In order to promote in-depth understanding of the development and environmental characteristics of particular countries the learners were required to produce a portfolio using internet sources. They were given instructions on what was required, which web sites were recommended and given a week to collate, synthesise and create their portfolio, which was handed in electronically.

The first section of the portfolio was a sequence of maps they were required to generate using the on-line Geographical Information System (GIS) in the Global Information and Early Warning System on Food and Agriculture website (Food and Agriculture Organisation, 2003a). The maps had to contain the following themes: agricultural zones, population distribution, cities, roads, railways, rivers. Tutorials were provided for those learners who requested instruction on using this GIS platform. The second section was a description of the development and environmental characteristics derived from the Central Intelligence Agency's World Factbook (CIA, 2003) and the FAO's website AQUASTAT (FAO, 2003b). They had to produce text describing the following: geography and population, the economy, climate and water resources, irrigation, trends in water resources management. The third section was their assessment of the relationship between resources and

development in each country and an appraisal of why the two countries are so different.

As a class we workshopped the countries they selected in relation to what they had already learned about the development of the continent. Each learner could select any two countries provided each one represented a regional cluster. By now we had already identified significant regions as:
• High Africa, Low Africa and island Africa;
• Muslim and non-Muslim Africa;
• Tropical, landlocked and sub-tropical Africa;
• The Africa of AIDS, the Africa with low AIDS;
• Peaceful Africa and strife-torn Africa.

Virtually all African countries were selected with the exception of the countries like Liberia where there was little or no information. The portfolios were handed-in electronically and uploaded on to the DisCo system (described later) by myself once they had been assessed. In this way the class could learn from each other's portfolios when it came to revising for their examinations. One student commented in the end-of-module peer evaluation 'I will never forget what I did on the portfolio' and this gives a clear indication of the impact that this activity can have.

Connecting the learning
Crucial to this type of teaching strategy is the role of the instructor in constantly guiding the process so that relevant experiences and insights are highlighted and resources are managed and introduced appropriately. Since the class had no actual lecture notes for the course it was very important to show how the resources and the understanding they had already developed could be moulded into a cohesive whole. Indeed, some of their comments in the course evaluation revealed that before the examinations the lack of notes was a considerable problem.

> Very enjoyable but doesn't seem to be enough to write our exams on! It is interesting and I have learned a lot, but worried about notes to learn from.

The following table (Table 2) was given to them before the revision session at the end of the course showing the resources available to them which they had already produced and utilized. It was subdivided into electronic resources (11 of them) and hard copy resources (a further 11). The initial reaction from the class was surprise at how much material they had been exposed to.

Table 2: Course Handout Describing the Resources Created and Used

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GOG 301 Development in Africa 2003

The following resources have been provided as we have constructed the course. Please familiarise yourself with them all once more before we have our revision session.

Electronic Resources
In the DisCo website:
1. The sequence of maps of Africa (Map Africa 1-12).
2. The sequence of photographs from this year's simulation game at Assegai Trails (African Catchment Game 1-9).
3. Jnl of Ag Ed and Ext Vol7(2).pdf (The paper describing simulation games and Risky Business).
4. Litrev.pdf (The reading on how to do a Literature Review).
5. Tropics, Germs and Crops.pdf (The paper by Easterley and Levine).
6. Colonial Origins of Comparative Development.pdf (The paper by Acemoglu et al).
7. Arid and Semi-Arid Lands-Pastoralism and Development.doc (Dr. Sibanda's first seminar).
8. Rural Electrification in the SADC region.doc (Dr. Sibanda's second seminar).
9. Theories of Development and HDIs 1999.doc (My seminar on Explanations for Development in Africa).
10. The **entire** class's portfolios of African countries will be uploaded here once I have assessed them.
11. In the Geography Library you can access the set of DVDs with the seven episodes from the National Geographic's Africa series.

Hardcopy Resources
1. A handout describing the specific outcomes of the course.
2. You each have the four worksheets in which you recorded your impressions of the seven Africa series episodes.
3. A handout map of Africa's major physiographic divides on which you located the Africa series episodes..
4. A handout map of Africa's countries (political).
5. A table showing the characteristics of 'our' region as contrasted to the rest of Africa.
6. A handout of tables showing Human Development Indicators.
7. A handout showing how the Human Development Index is derived.
8. In A37 are the series of stem and leaf diagrams which you have produced.
9. You have your notes describing the patterns which the stem and leaf diagrams revealed.
10. In the Geography Library is a ring file containing the entire class's evaluations of the African Catchment Game.
11. You have your own evaluation of the African Catchment Game.

The revision session took the form of a two part workshop. In the first they worked as small groups attempting to write the exam questions which they thought I could have set. As it happened the questions had already been set. These were written on newsprint and pinned up. We workshopped the suggestions to derive the clearest, least ambiguous and elegant questions. They then went back into small groups and drew concept maps on their newsprint showing how they thought they could answer the question they had selected to attempt. The concept maps were then pinned up and discussed by the class.

Through this process the learners were developing vital integrative processes to connect together the resources with their understanding in order to answer questions relating to the course's themes. The following quotation comes from the peer review undertaken at the end of the module and it reinforces this last point.

> The overriding sense that I [the peer reviewer] gained from the students was that they had enjoyed the course, related well to the lecturer, and that the different activities had together lead to a fuller knowledge and better understanding of development problems in Africa. The style of learning was new to them and initially perplexing in that they could not see where it was going. Only as the pieces began to fit together could they appreciate the whole learning experience.

Supporting the learning, the web-based platform DisCo

A very important aspect of the course was making resources readily available to the learners to access asynchronously. Rhodes Geography Department is fortunate in that it has free-of- charge access, through an exchange agreement, to the DisCo platform developed by the University of Trollhättan/Uddevalla (HTU), Sweden. HTU has designed and implemented their own web-based Distance Education facility DisCo (Distance Courses). Svennson (2003) has reported on the rapid spread of the DisCo system through HTU that occurred with very little technical assistance. He attributes this to the intuitive and lean nature of the DisCo interface that readily allows conventional face-to-face course instructors to use DisCo as a resource facility. This was the exact role that DisCo played in our Geography of African Development Course.

DisCo has a simple four part primary functionality and the module used two of these functions: Course Material and Debate. The second order functions called Files and Links were used as a repository for the electronic resources listed in Table 2 above. It is very easy for the instructor to upload files into this function and equally easy for learners to either view the resources directly in the site or to download them on to their own computer. The web site's Bulletin Board was also used to continue debates provoked and initiated in class.

The feedback on web-based learning was usually very positive. One learner has subsequently returned to the USA and has written to her classmates attaching an article from the New York Times on educators using web logs and bulletin boards. She started her message:

> Hey! You are SO ahead of the times. I have heard many South Africans sadly remarking on the earlier rising than the rest of the world, but being still a bit 'behind' on the North's scale. Well this one is for you. The news article and your classroom reflects one such instance of the opposite, that is that South Africa wakes up earlier and is further advanced with your classroom and web logging power!

Only one learner has commented negatively about using web-based learning in his/her module assessment 'too much emphasis on DisCo, this is a problem when it is not accessible or inconvenient for me to go to a computer laboratory'. By way of a contrast the overwhelming response has been positive since course resources were available '24/7, and they can't be stolen or hidden in the library'.

Conclusions

The evaluations introduced in the sections above clearly indicate the value of the active learning strategies and also point to some of the hurdles that have to be overcome as this was a new style of learning for the class. They corroborate well with other reports of the effectiveness of using different active learning techniques to promote deep learning of geographical skills and perspectives within area based or regional courses (Halseth and Fondahl, 1998; van Hoven and de Boer, 2001; Klein, 2003). All of these studies, including that described here, developed different active learning techniques and each of them was engaging to a greater or lesser extent with the same fundamental issue. How do we teach basic geographical skills in a regional context? If the Geography of African Development course has been successful then it will have constructed 'new' regional geographies and understandings and Africanised the curriculum. Not only will the curriculum have been constructed by Africans, as defined earlier, it may well have produced a few Africans from those learners who were from, but not of, Africa.

The final word should go to one of 2004's learners, his or her last comment is one which Simon would, presumably, approve of given the quotation from his work at the start of this paper.

> Very interesting! Learned lots! Better than lectures, lectures, lectures. Things have stuck in my head and I understand … interesting, taking us outside our little bubble of Southern Africa.

Endnote

[1] This section is indebted to the keynote presentation by philosopher Thomas Martin 'The Reality of Race' given at the International Education Association of South Africa Conference 'Internationalization and Cultural Diversity' Rhodes University 4-6 September 2002.

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