

Coping with Learning through a Foreign Language in Higher Education in Rwanda

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This thesis is lovingly dedicated to my husband Emmanuel Muyombano and our children: Happy Axel Muyombano, Chryssa Benie Douce Keza, Smart Arsene Kaze, and Bright Ariel Muyombano.

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List of papers

1. Andersson, I., Kagwesage, A.M., & Rusanganwa, J. (In press). Negotiating meaning in multilingual group work: A case study of higher education in Rwanda. *International Journal of Bilingual Education and Bilingualism*, DOI: 10.1080/13670050.2012.695771.
2. Kagwesage, A.M. (2013). Coping with English as instructional language in higher education in Rwanda. *International Journal of Higher Education*, 2(2), 1-12.
3. Kagwesage, A.M. (Re-submitted). Peer interaction and learning in higher education in Rwanda: A study of higher education students initiated group work activity. *International Journal for Knowledge and Learning*.
4. Kagwesage, A.M. (2012). Higher education students' reflections in times of academic language shift. *International Journal for the Scholarship of Teaching and Learning*, 6(2), 1-15.

1. General introduction

The present thesis sets out to investigate how students in higher education in Rwanda experience learning through the medium of a foreign language and the strategies they employ in order to successfully complete their university studies. It addresses the problem of using a foreign instructional language, English in our case, to learn content subjects in contexts where English is a foreign language to students. The research is qualitative in nature and considers the case of the National University of Rwanda, the oldest public and relatively stable higher learning institution that is likely to reflect the conditions of higher education in Rwanda (Teferra & Altbach, 2003).

There is a dearth of qualitative studies investigating the effects of medium of instruction on content learning in higher education in Rwanda. Such studies are necessary to ascertain and understand the current practices, evaluate the effectiveness of the language in education policy, effects of medium change and ways of coping in order to inform policy makers, pedagogical practices and contribute to the growth of a literature base of empirical studies. Taking a students' perspective, the present study moves beyond policy documents to focus on how the language policy, which is most of the time adopted without taking into account students or teachers' input, is implemented in everyday academic activities, and its impact on content learning in higher education, at least for the selected sample.

It is hoped that, by investigating how students experience the transition from dual French-English medium of instruction to English only in students' daily activities and the strategies they employ to cope with the change of instructional language, this study will contribute to shed light on how the English medium of instruction is actually implemented and students ways of coping. The study may inform pedagogical practices and support mechanisms towards quality content teaching and learning in higher education through the medium of English. The study might equally be useful in other multilingual contexts where

English is a foreign language to the learners, and at the same time used as an instructional language for content learning.

Background and motivation

The world today is subject to tremendous social and economic transformations that develop at an extraordinary speed. It is in this line that entire nations are striving to redesign strategies that can allow them to be competitive in the new order. Rwanda, like any other nation in this trend, is guided at macro level by the Millennium Development Goals (MDGs). At the micro level, Rwanda is progressing towards a development of the vision which is contained in a reference document entitled 'Vision 2020'.

Many factors hinder the socio-economic development in Rwanda. This includes being a landlocked country, depending on foreign aid, subsistence agriculture, and low level of export versus high level of import. Besides, following the 1994 genocide, Rwanda faced infrastructural destruction. The systems were not functional as all was to start from zero. As a consequence, the country did not have an appropriate institutional capacity. The severe lack of professional and technical staff constituted a tremendous obstacle to the development of all sectors. The scarcity of qualified professionals and technicians in the fields of agriculture and animal husbandry hinders modernization of the sector. The insufficient number of technologists, medium level technicians and competent managers constituted a serious setback to the development of secondary and tertiary sectors. The high level of illiteracy both among rural and semi-urban populations impeded on the dissemination of the information necessary for socio-economic development.

As a consequence of the above, while committed towards the MDGs, Rwanda's great challenge was lack of sufficient skilled human capital both to attract foreign direct investment for infrastructure development and manage the investment development projects.

It is against the above-mentioned background that Rwanda decided to turn weaknesses into opportunities. At the trend of globalization, the world

development indicators are enshrined in the MDGs. In Rwanda, to be in line with the MDGs, a vision document, the Vision 2020, will serve as a strategic framework for all development stakeholders. For example, one of the pillars of vision 2020 is human resource development and a knowledge based economy.

Vision 2020 and the subsequent strategic plans (Ministry of Education [MINEDUC], 2003, 2008; National University of Rwanda [NUR], 2008) make it clear that the government of Rwanda has made education one of its top priorities. It is believed that educated Rwandans will work towards the development of the country. Indeed, the government of Rwanda views education as a major instrument of national development. It seeks to expand the human resource base by improving the quality and practical relevance of education at the tertiary level (Ministry of Finance and Economic Planning [MINECOFIN], 2002). According to Rwanda's education sector policy (MINEDUC, 2003, p. 4):

Education is a fundamental human right and an essential tool to ensure that all Rwandese citizens – women and men, girls and boys – realize their full potential. The development of human resources is one of the principal factors in achieving sustainable economic and social development. Education and training has been considered as a critical lynchpin to achieve development and poverty reduction in Rwanda. The major aims of education and training should be: 1) to give all Rwandese people – women and men, girls and boys – the necessary skills and values to be good citizens; and 2) to improve the quality of human life through the formal and informal systems at all levels

MINEDUC asserts that education is expected to transform the people of Rwanda into human capital for development, and enable poverty reduction (MINEDUC, 2008). Hayman (2005, p. 15) lists seven goals of Rwanda's education and the last two read as follows:

- To transform the Rwandese population into human capital for development through acquisition of development skills;
- To eliminate all the causes and obstacles that can lead to disparity in education, be it by gender, disability, geographical or social group.

It is in line with this belief of extending education to all Rwandans that the dual-medium of instructions was introduced. Since Rwanda received many Rwandans from different language backgrounds after the genocide of 1994, English was introduced in schools as a medium of instruction in addition to French in order to

accommodate educational needs of all Rwandans. Officially, French, English and Kinyarwanda were the languages used in the Rwandan education system (MINEDUC, 2003). The aim of using the three languages in education was to promote Rwandan and foreign cultures and to build an educated knowledge based and technologically oriented society (MINEDUC, 2003). In this regard, additional public and private higher learning institutions have been established, thus ensuring increased access to higher education as stipulated in Vision 2020 and MINEDUC strategic plans.

This vision towards education for all and increased access to education at all levels in general and higher education in particular intrigued my inquiring mind and motivated this study. As a university teacher, it was my belief and conviction that I must teach, do research and provide service to the community, which relate to the triple mission of the university.

In my teaching duties, I am mainly involved in teaching courses related to communication and study skills development at undergraduate level. I was sometimes called to assist in designing, administering and correcting English entrance/placement tests for all new first year students at the beginning of every year. Considering the differing degrees of English language abilities of students I was involved in teaching and testing, yet supposed to attend the same mainstream courses in the medium of English, I was motivated to carry out a qualitative research taking into account the relationship between English as a medium of instruction and content learning.

I felt that, given the continuous change in instructional language, a study to investigate how students learn their higher education content subjects through the medium of English as a foreign language and the coping strategies they employ to assist their learning was needed in order to gain knowledge on the current practices and eventually devise support and emulation mechanisms based on empirical results.

I believed that an in-depth understanding of how varying degrees in the medium of instruction abilities contribute to content learning would benefit the increasing number of students enrolling in higher education, the institutions and

the country at large who was heavily investing in education as way to build foundations for a strong human resource capital and a better future. Thus, I started the present study under Sida-NUR Research Cooperation sponsorship and it spans the period of dual French- English medium of instruction to English only instructional language (2008-2010).

While I refer to foreign instructional language to mean French and English as the study was undertaken at a time when both languages were still used in higher education on equal footing, the discussion progressively concentrates on English only medium of instruction as the data used were mainly collected in the context of courses offered through the medium of English, but French was also used as a language that was, and still is used in the Rwandan academic discourse/culture.

Higher education in Rwanda

Higher education is a relatively complex sector in any economy because it plays a crucial role in enhancing the development of nations, societies, communities, and individuals (Bowden & Marton, 1998; Barnett, 2005). Higher education in Rwanda expanded considerably over the last decade. As per September 2011, a total number of 31 higher learning institutions were registered. Among the 31 higher education institutions, 17 are public while 14 are private. In a related development, the country has experienced a significant rise in higher education enrollment over the last decade too. It is estimated that enrollments rose from 3,400 students in 1990–1991 to almost 17,000 by 2001–2002. In 2011, statistics show that a total of 73,674 students were enrolled in public institutions of higher learning, while 35,772 students were enrolled in private higher learning institutions (National Council for Higher Education [NCHE], 2011). The National University of Rwanda alone counted a student population of 12,366 students (NCHE, 2011, pp. 10-11), which is more than double the student population in 2001-2002 that totaled 5,923 students (NUR, 2012).

In past years, Rwanda's higher education was dominated by social sciences and humanities, but there has been a strong move in recent years to accommodate

and promote science and technology, health sciences, and education related fields in the growing higher education sector.

Language in education policy in higher education in Rwanda

Coupled with a growing higher education sector, language in education policy has also continuously changed over the last decade. Prior to 1994, languages in use in Rwanda were Kinyarwanda as the national and official language, and French as the only official foreign language. French was used as the language of instruction in secondary and tertiary education. After the genocide, in 1995, English was introduced as an official language in addition to Kinyarwanda and French (Rosendal, 2009). The introduction of English was considered necessary by the government of Rwanda because of the new demographic composition of the Rwandan society that included citizens who grew up in English speaking countries and did not know French (Samuelson & Freedman, 2010). It is estimated that more than 800,000 Rwandans from exile and expatriates, came back to Rwanda from English-speaking countries (Rosendal, 2010). Since 1995 the Government of Rwanda (GoR) decided to create a ‘trilingual’ society, introducing English as an official language and medium of instruction in addition to Kinyarwanda and French.

Until 2008, both English and French were used as media of instruction in higher education depending on the lecturers’ linguistic ability. At the same time, students with language problems were given remedial/support courses either in English or French depending on where they had problems.

Although Kinyarwanda is not officially recognized as the language of teaching and learning at higher education level, it is the language spoken by almost all Rwandans and used almost exclusively during out of class communication. It is estimated that 99.4% of Rwanda’s population can speak Kinyarwanda (MINECOFIN, 2005). While research evidence to ascertain its potential to serve as an instructional language at higher education level seems to be inexistent, to my knowledge, it is however used as a medium of instruction at

lower levels of education and continues to be taught as a subject from primary to secondary school level. At the university level, it is learnt as a subject in the department of African Languages and Literature. Quality textbooks and publications available in Kinyarwanda remain relatively few though (Rosendal, 2009; Rassool, 2007).

English and French continued to be used as official and instructional languages until 2008, when a move was made to make English the sole medium of instruction in all levels of education with Kinyarwanda taught as a subject. In this regard, starting from 2009, a new policy with immediate effect required students to start all their academic subjects in the English medium, regardless of whether they had been learning in French or in English in secondary school (MINEDUC, 2008). The government of Rwanda justified the switch to English as the sole medium of instruction by “pointing to the global and regional growth of English as the leading language of science, commerce, and economic development” (Samuelson & Freedman, 2010, p. 192).

At the end of 2008, NUR, in its draft policy on language teaching, reflected the language change. The policy document stated that English would be the sole language of teaching, learning and assessment throughout the University, except for the disciplines which focused on French, or African languages and/or literature, or on subjects, such as Law, where the ability to read and comment on documents in French or Kinyarwanda was an essential skill. The document further stipulated that English would be the normal language of the administrative business of the university both for students and staff, and the normal language of university meetings (NUR, 2008).

Learning in higher education

Universities are most of the time viewed as higher learning institutions where knowledge is developed. Sometimes, some people may wonder the kind of knowledge that is developed in such institutions of higher learning. Some scholars have looked at higher education on the macro level. In this regard, they voiced the task of the university as being to develop individual and societal

knowledge. Drawing upon scholars like Barnett (1994, 2005), Bowden and Marton (1998), and Nowotny, Scott and Gibbons (2003), the present section discusses learning in higher education, taking into consideration aspects related to construction, production, and dissemination of knowledge in higher education.

To start with the production of knowledge in higher education, it seems that knowledge production is a continuous and reciprocal process through deep learning approaches to teaching/learning, research and involvement in community service (Bowden & Marton, 1998). For example, teachers who prepare their lessons read a varied number of books and reference material on the subject they are preparing. By doing so, they learn and gain more knowledge. Also, the students who will follow the course will gain from the teachers' knowledge. In addition to the knowledge they get from the classroom, they also read varied material on their own, discuss with peers and they increase and update their knowledge in their own context and depending on their needs (Nowotny et al., 2003). Furthermore, once they are involved in research, they also produce new knowledge which adds up to what they already knew about a given subject. It is in this regard that Bowden and Marton (1998, p. 4) assert that

Teaching contributes to students learning, to their developing knowledge, which is new to them but not necessarily new to others. On the other hand, research is about developing knowledge that is new in an absolute sense: Nobody has developed it previously. We can therefore talk about two forms of knowledge formation –learning on the individual and learning on the collective level.

Reflecting upon the above quotation, it suggests that higher education is not a place where learners mainly rely on the teacher to deliver expert knowledge; it is rather a place where learners participate actively in knowledge development.

Bowden and Marton (1998, p. 4) again support this idea by asserting that

Student learning is not only, and probably not even mainly, a function of teaching; students develop knowledge by various means and teaching is simply one of those. Of course, developing entirely new knowledge is also a learning experience for those involved in its development.

However, this idea of continuous and reciprocal knowledge production through teaching and research might be challenged by some people in higher education who might still consider the University to be a place where universal knowledge

is taught (Barnett, 2005). Also, the conception of the university as the institutional appearance of truth, a place where each age consciously and methodically hands down its highest intellectual formation to the coming ages seems to be challenged by the increasing research commitment of universities (Barnett, 2005; Bowden & Marton, 1998).

Such convictions apparently do not fully consider the aspect of negotiating and constructing knowledge as a joint effort from learners, teachers and society at large. In this context, knowledge production is viewed as a product rather than a process. In addition to emphasizing power relationship where the teacher full of knowledge is in a powerful position and the learner consumer of knowledge is in a weak position, it is doubtful whether such a relationship takes into account the future use of such knowledge they are imparting on learners. Therefore, it seems that in such a context, crucial aspects of knowledge production such as continuous and active involvement of stakeholders in knowledge production is left aside. They view knowledge provision as an end in itself; they do not consider the varying conditions in the society in which learners will have to use the gained knowledge and tend to foster surface approaches to learning (Bowden & Marton, 1998). Yet, knowledge production should go hand in hand with society development and demands (Barnett, 2005). The way knowledge is produced have a bearing on how it is subsequently constructed, a point I would like to consider in the next section.

Construction of knowledge in higher education depends mainly on how knowledge has been produced. One scenario is likely to be the one in which students are trained to be independent thinkers and adjust to, or deal with unknown situations they come across in their professional life. Bowden and Marton (1998, p. 6) emphasize this task of higher education by claiming that

The most important thing about institutional forms of learning, such as studying at university, is that they are supposed to prepare students for handling situations in the future, situations which are often very much unlike the situations in which students are being prepared. These future situations are more or less unknown. The more rapidly the world changes, the less can be said about them and the more unknown they become. ... The instrument we have for preparing students for an increasingly unknown future is our current knowledge. We have to prepare them for the unknown by means of the known and we have to work out how that can be done.

This can be done of course by developing learners' competences as independent learners and critical thinkers who are able to adjust to and deal with new situations as they emerge. If they have been trained to match theory and practice, it means that they are trained to deal with the varying situations of real life situation. They are therefore likely to adjust and adapt their knowledge once they come across the continuous changing situations in the society. By adopting a critical mode of learning, they reflect on how they can transform the acquired knowledge to deal with situations never met before. Scholars emphasize that one way to help learners deal with an unpredictable future might be to expose them to learning in terms of changes in or widening of ways of seeing the world, which can be understood in terms of discernment, simultaneity and variation (Bowden & Marton, 1998). According to Bowden and Marton (1998), students experience and discern critical aspects of the situations or phenomena they have to handle thanks to the variation in ways of seeing the world. Thus, university training that prepares students to be capable of handling a varying future challenges, in a way, the universal character of the University especially as regards universal categories such as 'truth' and 'knowledge' (Barnett, 2005, p. 796).

Another scenario however, might be the one in which students rely on a teacher who provides expert knowledge. In such contexts, realities on the ground might surprise the learner, because the unpredicted situation may call upon adjusting or even modifying the expert knowledge to fit the situation at hand. Therefore, in my view, if learners have just taken teacher's expert knowledge instead of developing necessary competencies to deal with varying situations in life, they will succeed exams, but handling new future situations might call for extra practice.

The last point I would like to consider is knowledge dissemination. In higher education, stakeholders create forums in which they share ideas and work together, thus benefiting from one another. The universities triple commitment of teaching, research and community service seems to be a favourable setting where people gain, construct, negotiate, share and pass on knowledge from each and every person involved in the university and the community at large. Having

identified that learning in higher education involves knowledge construction, production, and dissemination, it is worth considering the medium through which all this takes place.

Learning through a foreign language in higher education

Learning through a foreign language in higher education entails using the foreign language as a vehicle for knowledge production, construction and dissemination. Research findings suggest that this kind of knowledge development does not always enjoy a straight forward relationship. On the African continent, Gerber, Engelbrecht and Harding (2005) found significant differences between the achievement in mathematics of Afrikaans speakers when Afrikaans was used as the instructional language and when the medium of instruction shifted to English. In the Hong Kong context, Yip, Tsang, and Cheung (2003) found that English medium students, despite having initially higher grades in science, performed more poorly on tests than their peers who were taught in Chinese. The students in English medium were found to be particularly weak in problems that assessed understanding of abstract concepts, their ability to discriminate between scientific terms and their application of scientific knowledge in new situations. Similarly, researchers in New Zealand have found negative correlations between second-language learning and performance in undergraduate mathematics, with students disadvantaged by 10% when taught in a second language (Barton & Neville-Barton, 2003, 2004). Research in the Netherlands has also shown negative effects for Dutch engineering students' learning when they are taught in English (Klaassen, 2001; Vinke, 1995).

Despite the negative correlations however evident when a second/ foreign instructional language is used, English medium of instruction remains predominant even in contexts where it enjoys the status of a foreign language. Many scholars attribute the rather contradictory practice to the status of English and the pragmatic considerations of using English as a medium of instruction. For example, in his study on the use of English as a medium of instruction in

Flemish higher education, Van Splunder (2010) found that the majority of his respondents held a positive attitude to using English as an instructional language mainly because it is referred to as a global language, its advantages in academic contexts considering that publications and teaching materials are mainly in English. Also, the use of English medium of instruction is viewed to attract more students thereby contributing to internationalization of academic programmes with all the advantages that such internationalisation entails such as student and lecturer mobility. These pragmatic considerations are in line with the reasons that Airey (2003) as cited in Airey (2009, p. 19) listed to account for the use of English in Swedish higher education. In the African context, the dominance of English appears in what Chinua Achebe (as cited in Desai 2012, p. 84) has termed the “unassailable position of English”. In a similar development, Orwenjo (2010, p. 297) refers to the Kenyan context by mentioning that Kenyans did their best to learn English since they had figured out the fact that English was “the launching pad for white-collar jobs”. In yet another instance, Ouane and Glanz (2006, p. 6) cite a minister recalling a parent in a village who told her that “it is not skills in mother tongue which make a child succeed in life, but how much English they know”. The above mentioned examples show that the dominance of English is a worldwide phenomenon. Van Splunder (2010) acknowledges that even European languages which were very powerful in the past cannot compete with English as the language of science anymore, a state which is likely to last for some time in the future. Indeed, Marsh (2006, p. 29) asserts that “now and over the next fifty years, English is viewed as the language which will be increasingly used to serve the demands of globalizing economies”. Considering this established globalization trend, it is worth investigating the effects of using English as a medium of instruction on content learning, especially in contexts where a disjunction exists between the formal lecture language and the language of out of class communication such as in Rwanda.

Subject matter learning is not only problematic when conveyed through the medium of a second/foreign language. Gerber et al. (2005) assert that it is difficult to understand abstract concepts and ideas in mathematics, even when

instruction takes place in the students' first language. In the same line of reasoning, Airey (2009) observes that language-related problems in disciplinary learning appear even when the lecturing language is the students' first language. What then happens when students are required to acquire disciplinary knowledge through the medium of a second/foreign language? The present thesis sets out to investigate how higher education students in Rwanda experience and reflect on learning through a foreign language and the coping strategies they adopt. In this regard, it will contribute new knowledge on the subject in the specific Rwandan higher education context. Also, it will contribute to the growing knowledge and research literature on this subject in other contexts where a foreign medium of instruction is used at higher education level.

Aims and research questions

The overarching aim of the present thesis is to gain knowledge on how students in higher education in Rwanda experience learning through the medium of a foreign language and the coping strategies they adopt in order to successfully complete their university studies. To address this general aim, four specific research questions converging to the issue of learning through a foreign language in higher education in Rwanda were designed. Each research question is explored in details in each of the four papers that constitute the present thesis. Considering the present status of English as a global language covering almost all educational grounds, it is hoped that a PhD thesis in the area of English medium of instruction will contribute new knowledge as regards current practices, could inform pedagogical practices and support mechanisms towards quality teaching and learning in higher education in Rwanda through the medium of English. Thus, the following research questions were dealt with throughout the whole study:

1. How do higher education students negotiate meaning in a teacher designed group work activity? (Paper 1)

2. What strategies do students employ to cope with a foreign medium of instruction in higher education? (Paper 2)
3. How does student initiated and peer mediated learning contribute to learning in a foreign instructional language? (Paper 3)
4. What are higher education students' reflections on learning through the medium of a foreign language in times of academic language shift? (Paper 4)

Structure of the thesis

The present thesis is divided in two parts. The first part presents an overview of the whole thesis that revolves around the four papers. It is made of five chapters. The first chapter is a general introduction, the second chapter presents the theoretical framework guiding the analyses and discussions in the four studies; the third chapter relates to the methodology used for the present study; chapter four provides a summary of the four studies and chapter five deals with the concluding discussion of findings and suggests ways for further research.

The second part presents the following four articles:

1. Andersson, I., Kagwesage, A.M. and Rusanganwa, J. (In press). Negotiating meaning in multilingual groupwork: A case study of higher education in Rwanda. *International Journal of Bilingual Education and Bilingualism*, DOI: 10.1080/13670050.2012.695771.
2. Kagwesage, A.M. (2013). Coping with English as instructional language in higher education in Rwanda. *International Journal of Higher Education*, 2(2), 1-12.
3. Kagwesage, A.M. (Re-submitted). Peer interaction and learning in higher education in Rwanda: A study of higher education students initiated group work activity. *International Journal of Knowledge and Learning*.
4. Kagwesage, A.M. (2012). Higher education students' reflections on learning in times of academic language shift. *International Journal for the Scholarship of Teaching and Learning*, 6(2), 1-15.

2. Theoretical framework

Teaching and learning through a foreign language has been, and still is, a subject for varied research. Following the globalization trend, English is increasingly dominating the educational grounds as an instructional language. In the African context, it was officially believed that language in education policy favoured the use of the colonisers' language as a medium of instruction after independence of some African countries. However, the current trend seems to be that even in contexts where it is not the colonisers' language, the use of English in education alongside the coloniser's language progressively gives way to the dominance of English. A case in point is Rwanda, where English officially took over French as the main instructional language since 2009 despite the fact that they had been enjoying equal status as educational languages for more than ten year (see section 1.3 for more details on language in education policy in Rwanda). Considering the continuous medium of instruction change, a theoretical conceptualisation is needed to understand how learning takes place and how learners cope with content learning in such contexts. This chapter presents the theoretical framework used to understand how students in higher education in Rwanda learn and cope with learning content subjects through the medium of a foreign language.

A sociocultural perspective on learning through a foreign language in higher education in Rwanda

A sociocultural perspective on learning was chosen as a frame of reference to conceptualise and understand learning through a foreign language in higher education in Rwanda, mainly due to its focus on language tools and interaction to mediate learning; and the social nature of learning. The present section starts by discussing some of the key concepts of the sociocultural perspective relevant to the present thesis, and then proceeds to show how the chosen key concepts might illuminate and help to understand the practice of learning through a foreign

language in higher education in Rwanda as discussed through out the whole thesis.

To start with a general understanding of social cultural theory, Wang (2006) mentions that sociocultural theories draw heavily on the work of Vygotsky (1978) as well as other later theoreticians, such as Lemke (1990), Rogoff (1990) and Wertsch (1991). Vygotsky (1978) believed that learning is embedded within social events and occurs when a child interacts with people, objects, and events in the environment. According to him, social interaction plays a fundamental role in the improvement of learning. While Vygotsky's research was derived from working with and observing children, his ideas remain valid even in adult learning such as in higher education contexts (Wang, 2006).

One of the fundamental concepts of sociocultural theory is mediation. According to Vygotsky, mediation refers to the part played by other significant people in the learners lives, people who enhance their learning by selecting and shaping the learning experiences presented to them. Vygotsky (1978) claims that the secret of effective learning lies in the nature of the social interaction between two or more people with different levels of skills and knowledge. This involves helping the learner to move into and through the next layer of knowledge or understanding. Vygotsky also regard tools as mediators and one of the important tools is language.

Considering the importance of tools in mediating human mind (Lantolf, 2000), let us discuss tools as the second key concept. According to Lantolf (2000), Vygotsky finds a significant role for what he calls "tools" in humans understanding of the world and of themselves as beings. According to him, Vygotsky advocates that humans do not act directly on the physical world without intermediary of tools. Whether symbolic or signs, tools are, according to Vygotsky (1978), artefacts created by humans under specific cultural and historical conditions, and as such they carry with them the characteristics of the culture in question. They are used as aids in solving problems that cannot be solved in the same way in their absence. In turn, they also exert an influence on the individuals who use them in that they give rise to previously unknown

activities and previously unknown ways of conceptualising phenomena in the world. Language, regarded as one of the important mediating tools, plays an important role in knowledge acquisition and appropriation through interactions, which is another key concept to discuss. Sociocultural theories emphasise the importance of interaction in knowledge acquisition and appropriation. Vygotsky (1978) states that the child acquires knowledge through contacts and interactions with people as the first step at the social level, then later assimilates and internalises this knowledge adding his personal value to it at an individual level. This transition from social to personal property according to Vygotsky is not a mere copy, but a transformation of what had been learnt through interaction, into personal values. Vygotsky claims that this is what also happens in schools. Students do not merely copy teachers capabilities; rather they transform what teachers offer them during the processes of appropriation. Still on the importance of interaction in learning, Ellis (2000) mentions that sociocultural theory assumes that learning arises not through interaction but in interaction. Learners first succeed in performing a new task with the help of another person and then internalise this task so that they can perform it on their own. In this way, social interaction is advocated to mediate learning. Closely linked to interaction are collaboration and the Zone of Proximal Development (ZPD) as yet other important concepts in social cultural theory.

From a sociocultural perspective, collaboration serves as a means of reaching a learner's potential performance level in the ZPD. The zone of proximal development is defined by Vygotsky (1978, p. 86) as "the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers". Learning can be said to occur when assistance is offered at points in the ZPD at which performance requires assistance. Collaboration serves as a means of reaching a learner's potential performance level in the ZPD.

Although the ZPD concept was originally constructed to describe child development in interaction with adults, this view of the ZPD has been expanded

beyond “novice-expert interaction” (Anton, 1999, p. 304). The important concept of the ZPD remains valid in tertiary student learning and enables us to understand that all learners are potentially better learners and to treat all of them as “able to offer new and valuable insights with respect to the issues being discussed in the classroom” (Wells, 1993, p. 9).

Having identified key concepts relevant to the present work, I will now turn to how they frame the understanding of learning through a foreign language in higher education in Rwanda. Related research studies will be referred to as well.

Interaction and learning in higher education

A sociocultural perspective on learning maintains the importance of interaction in knowledge acquisition (Vygotsky, 1978). Interaction takes place within the social and cultural context of the learner. Regarding interaction in higher education and in the specific context of the present study, interaction occurs in the social and academic culture of the university (Bieber, 1999), through the mediation of cultural tools such as language and written academic texts (assignments, course notes, reading materials, etc.).

In line with the present thesis and specifically study three that investigates the potential of peer interaction on learning through a foreign language in Rwandan higher education, previous research on interaction and learning in the cultural context of the university explored academic environments and practices that encourage interaction, thereby fostering learning in higher education. Hlatshwayo (2011) highlight the peer tutoring practice as creating and providing the teaching and learning environment that enables students to interact with one another in a less formal, anxiety-free atmosphere, which will encourage them to participate more actively through asking questions, seeking clarification of concepts and negotiating the meaning of the tasks assigned with their fellow group members. Peer tutoring as a cultural practice creates and presents real spaces within which individuals attempt to physically, verbally and intellectually interact with one another. Peer tutoring can provide a range of opportunities to

allow students to engage with the ideas presented in lectures, readings and discussions, as well as helping them to develop the conceptual and theoretical resources needed to negotiate more complex material (Shaw, Carey & Mair, 2008, p. 705).

Studies on interaction in small groups have shown that if they are organised and run properly, they can effectively foster active participation between students. Clouston and Kleinman (1999), for example, explored interaction in small groups at the University of Victoria (British Columbia) in a first year organic chemistry course. They noted that when students become active participants in a learning environment, retention of information can reach very high levels. They also noted that peer tutoring serve as a means of developing effective learning in small groups, especially where lecturer-student interaction may be limited in large classes.

Research also show that through interaction, new comers gain membership in the academic community and culture. Johnson and Johnson (1983) and Huddle, Bradley and Gerrans (1992) observed that first-year students working cooperatively in small groups increased achievement and self-esteem, stimulated cognitive achievement, and promoted a liking for the discipline. Huddle et al. (1992) found that a useful way in which students become involved in the process of learning was by participation in group discussions. Sawyer and Berson (2004) observed that college students working in groups collaborated to resolve issues, clarify material from lectures and helped each other to appropriate the knowledge transmitted in the original lecture. Bruffee (1993) argued more generally that students learn most effectively and profoundly via interaction with peers. Working in small groups affords and needs to ensure that all members participate, argue among themselves and get an opportunity to initiate discussions without fearing that they may lose face.

Still on the potential of interaction in learning, Soller, Goodman, Linton and Gaimari (1998) highlight five categories of characteristics that are likely to bring about effective interaction and foster learning. According to them, the five categories are: participation, social grounding, active learning conversation

skills, performance analysis and group processing as well as promotive interaction. Only participation and social grounding are elaborated on below. Regarding participation, they maintain that when all the students participate actively in the group's discussion, they maximize the team's learning potential. Also, once all members of the group are involved in the discussion, the increased involvement in group discussions increases the amount of information available to the group, enhancing group decision making and improving the students' quality of thought during the learning process (Jarboe, 1996). Likewise, if all group members are encouraged to participate actively, they are likely to learn the subject matter and thus the possibility that only a few students will learn the material and others stay behind is reduced. In essence, each and every member should bring in their contribution in the group discussion. Not only should students who feel confident that they have the 'right' procedure speak up and suggest their ideas, but also the students who are unsure (but may actually have the best proposal) should bring in their contribution to the whole discussion instead of keeping quiet. Concerning social grounding, during effective interaction, students naturally take turns speaking by playing characteristic roles such as questioner, mediator, clarifier, facilitator, and motivator in order to establish and maintaining a shared understanding of meaning within a study group.

Although this section has focused interaction and learning in higher education, research at other levels of education also revealed the relationship between interaction and knowledge acquisition and they could inform the present work. Considering that in educational contexts learners interact with teachers, material, peers and other members of the community, research supports the value of both teacher-led and students' led discussions (Hulan, 2010). With reference to student- led kind of interactions, research maintains that student-led discussion has the potential to offer students a safe place and a sense of freedom (Vygotsky, 1978) for many students to work with new ideas. In their study on reading groups, Almasi and Gambrell (1994) found in their observations of teacher-led and student-led discussions that student discourse in peer-led discussions was

significantly more complex than in the teacher-led discussions. When teachers were present, responses tended to serve as artifacts for assessment. Also, conflicts with text were resolved through teacher interjections, leading to a view that the teacher was the source of all answers, as opposed to being one of many such sources. In student-led discussions, rather, understandings were created collaboratively, and students resolved conflicts through interaction and dialogue.

For peer interaction to be effective, Merrill and Gilbert (2008) differentiate between peer interaction and peer telling. According to them, peer interaction is likely to be more effective in the context of problem solving and in such cases peer interaction differs from peer telling. When one thinks of peers teaching peers it is tempting to consider this activity as the dissemination of information, peer-telling (Merrill & Gilbert, 2008). Peer telling is mostly common when learners are asked to read papers and present them to the rest of the class or learners are asked to each select a chapter and present the information to a study group. Having peers present information is in Merrill and Gilbert (2008)'s view, perhaps the least effective form of peer interaction much as having a teacher dispense information is perhaps the most ineffective form of teaching. Such critics towards peer-telling are based on grounds that the learning involved in peer-telling often requires only associative memory rather than the activation of mental models. Peer-telling may help learners remember the information but does little to help them learn to solve problem or complete complex tasks. Except in rare situations, where an expert may be explaining a new concept or a new procedure that has not previously been documented, such dissemination of information is better handled by other forms of communication. In an instructional situation providing new information is always better when communicated in ways other than merely telling.

Peer interaction based on problem solving is thus more conducive to learning than just mere peer telling. Not only do problems help prevent peer-telling, they provide needed structure and guidance for effective peer interaction (Kirschner, Sweller & Clark, 2006). The effective use of a well-structured problem in the context of peer interaction directs that discussion toward a

specific learning objective and fosters a focused and productive discussion that benefits all involved. They also provide a way of measuring learning outcomes as they emerge from a peer interaction.

Although the distinction between peer interaction and peer telling originates from a distance training perspective (Merrill & Gilbert, 2008), it holds for other cases where peers meet to interact and benefit from one another's knowledge. For example, one of the aspects of peer instruction in the context of the present thesis related to solving a problem related to consignment in the Management/accounting course. Recording entries in the consignee's book required that students to activate their prior knowledge on "bills duly met" and "bills duly accepted" concepts that they had hopefully covered prior to the process of peer discussion, where they were then required to understand and use them to solve the book keeping exercise. Thus, problem solving kind of interaction among peers reveals to be conducive to effective learning (Merrill & Gilbert, 2008; Kirschner, Sweller & Clark, 2006).

As it is evident throughout this section, interaction, language and collaboration are concepts that are intimately related that it is hard to separate them either from the literature or from the discussion and the way they are related in the present thesis. They are interrelated but for the sake of clarity and coherence, the present section has tried to focus on how interaction in educational contexts or academic culture/setting contributes to learning. The next section will deal with language as a mediating tool in learning in higher education, especially in a foreign instructional language.

Language as a mediating tool for learning in higher education

From a sociocultural perspective, the role of cultural tools is critical because sociocultural theory rests on the assumption that our access to the world is indirect, that it is mediated by psychological and cultural tools such as languages, other symbols, and so forth (Wertsch, del Rio & Alvarez, 1995). These tools, or mediational means, shape the ways in which we interact with the world.

Mediational means, of course, are developed and used by individuals and groups for different purposes. They are the products of sociocultural evolution; we appropriate them so that we may participate in the particular social practices of our culture.

For clarification purposes, it is worth noting that in the context of the present study exploring the use of foreign instructional languages in higher education in Rwanda, the world that the sociocultural theories refer to is the academic world, and the culture involved relates to academic culture. Officially, foreign instructional languages (namely French and English) are recognized though French progressively gives way to English only medium as per official language in education policy in Rwanda since 2009. However, beside the officially recognized foreign instructional language, the mother tongue (Kinyarwanda) is also commonly used in the academic culture, unofficially but for academic purposes. Considering that the present thesis investigates learning through the medium of a foreign language in higher education in Rwanda, this section takes into consideration all the languages in use by focusing on how they mediate learning, how they allow users to participate in the particular social practices (e.g. assignments, discussions) of the academic culture. Simply put, the focus is on how those languages mediate or facilitate learning.

While exploring the relationship between language and thought and how language helps people to think together, Mercer (2000) believes that language is a tool for carrying out joint intellectual activity, a distinctive human inheritance designed to serve the practical and social needs of individuals and communities and which each child has to learn to use effectively. Through the use of the tool of language, people thinking and working together transform given information into new understanding and solve problems as a result of their combined intellectual efforts. Language has the special function for collective thinking (Kao, 2010). As such, language allows for information exchange, variation of interpretations, understanding and negotiation of meaning during any kind of discussion. Considering that variations of understanding are quite normal, constructive and sometimes even welcome when dealing with complex,

interesting presentations of ideas, and since understanding always involves interpretation, language as a cultural tool offers something more valuable than mere information exchange. Language plays a meditational role (Mercer, 1995, 2000; Moate, 2011).

In the context of the present work where foreign languages (mainly English) are used as instructional languages, it can be argued that for the languages to fully play the mediational role; learners have to be fully conversant in those languages. In higher education context, research studies highlight that in some instances, foreign instructional languages fail to mediate learning fully and appropriately. In their investigation on associations between studying in a foreign language and student's academic and study behaviour in the German context, Jochems, Snippe, Smid and Verweij (1996) found that language proficiency (Deutch by then) played a major part in explaining differences in study achievements. Less proficient students made more attempts before passing an examination; they were more likely to postpone examinations and to follow a different order from the recommended one. Assuming that relevant language proficiency would enable students to fully and successfully participate in the academic work, one of their suggestions was to raise the level of language proficiency required for entrance in the German higher education at Delft University of Technology where they had conducted the study. While investigating the impact of language on teaching content, Wilkinson (2005) carried out a qualitative survey of twenty nine highly experienced content teachers from three Dutch universities across eleven disciplines on how language affected the teaching of content in English programmes. His main finding was that teaching in English required much time to both teachers and students as they had to constantly adapt programmes and methods, unlike when instruction was through the mother tongue. It is worth noting that none of his respondents was a native speaker of English. In her study on lecture comprehension in English medium higher education, Hellekjoer (2010) compared student lecture comprehension in English and the first language at three Norwegian and two German institutions of higher education. She found that students had difficulties

understanding the English medium lectures. The main problems students met related to distinguishing the meaning of words, unfamiliar vocabulary and difficulties taking notes while listening to lectures. Her findings are in line with Airey and Linder's (2006) in the Swedish context. According to their study, important differences in learning Physics when the lecturing language changed from Swedish to English were noticed. Such differences pertain to reduced classroom interaction to ask or respond to questions, reduced ability to follow the lecture and take notes at the same time. Similarly, in the Hong Kong context, Evans and Morrisson (2011) highlighted the less interactive character of lectures in English as well as problems in listening to lectures in English as considerable challenges for students especially during the first term at the University. A similar trend was observed by Zakaria and Abd Aziz (2011) through their investigation on students' performance in Mathematics when English was used as a medium of instruction in higher education in Malaysia. Their findings revealed that students performed poorly when English was used.

In the African context, in addition to varied studies related to primary and secondary school levels that outcry the negative educational drawbacks of using a foreign language medium of instruction at such lower levels of schooling (Alidou & Brock-Utne, 2011; Benson, Heugh, Begale & Gebre 2010; Brock-Utne, Desai & Qorro, 2003, 2004, 2005, 2006; Brock-Utne, Desai, Qorro & Pitman, 2010; Desai, 2003, 2010, 2012; Heugh, 2002, 2004, 2006, 2009; Kyeyune, 2010; Orwenjo, 2012; Rubagumya, 1997; Rugemalira, 2005; Swilla, 2009 and Vavrus, 2002) research carried out at higher education level present foreign medium of instruction, mainly English as a barrier to knowledge acquisition (Paxton, 2009; Van Der Walt & Dombrack, 2011; Webb, 2002), hence failing to mediate learning fully and appropriately.

Since language has to move beyond mere information exchange to facilitate learning through variation of interpretation and negotiation of meaning, and sometimes foreign instructional languages fail to meet such expectations, alternative ways to maximize the meditational function of the tool of language are devised. In such cases as apparent in the present thesis, forms of code

switching, translanguaging, and predominant use of an unofficial medium of instruction are called forth to mediate learning.

Exploratory talk and learning

With reference to language as the primary tool in mediating learning, Moate (2010, 2011) maintains that language is the tool of engagement between learner and teacher, learner with subject, learner with learner and it is one of the artifacts that allow learners to think and conceptualise learning together (Mercer, 2000). The type of language in which learners construct thinking and learning is exploratory talk, that is, according to Barnes (2008, p. 5) “hesitant and incomplete because it enables the speaker to try out ideas, to hear how they sound, to see what others make of them, to arrange information and ideas into different patterns”. Considering the value of exploratory talk in education, research evidence suggest that through talking together, learners think together and learning goes beyond interaction to foster deep ways of learning.

Moate (2010) identified four basic principles on which exploratory talk rests. The first principle relate to commitment. According to her, learners are committed to work together until they find or reach an intellectually-satisfying conclusion. With reference to transparency as the second principle, group members share all relevant information, thus making the joint resources of the group available to all the members of the group throughout the discussion. The third principle is consideration both to each other as group members that everyone is invited and expected to participate, and in addition full consideration is given to each suggestion as reasons are explored and challenges made. The final principle is joint ownership, that the final conclusion of the group must be accepted by each group member as a result of the reasoned discussion process. Considering the above mentioned principles, Mercer and Dawes (2008) maintain that exploratory talk involves, allows, and encourages intellectual risk-taking, which is valuable in educational contexts given its productive, inspirational and collaborative quality.

Although exploratory talk provides an important means of working on understanding, Barnes (2008) however cautions that unless learners feel relatively at ease, free from the danger of being aggressively contradicted or ridiculed, they are unlikely to embark on it.

While the concept of exploratory talk has been most of the time studied at lower levels of education (Mercer, 1995; Barnes, 2008), research evidence suggest that the educational value embedded in exploratory talk applies to higher education contexts as well. For example, while investigating higher education students' interaction with web-based literature, Mukama (2008) found that exploratory talk in Kinyarwanda contributed to enhanced understanding of the web literature.

Code switching and learning

The ability to code switch is an important tool for the individual in the learning process within the context of a multilingual and multicultural society. Every conversational interaction between the learner and the teacher reveals to the learner not only information about language but also information about the world in which this language use is occurring.

Scholars from different bilingual and multilingual contexts argue that the imposition of one language on the exchange limits the range of communicative competence that bilingual learners can demonstrate (Evans, 2008; Praxton, 2009). A unique feature of the bilingual learner's linguistic repertoire is the ability to draw on more than one language in interaction with others. When participants in interaction speak more than one language there is a richer range of discourse options available (Van der Walt & Dornbrack, 2011). Code switching can be regarded as a diverse linguistic resource from which an individual speaker can choose to draw in order to communicate effectively (Evans, 2008).

Considering code switching as a resource for teaching and learning, a number of research studies show that in some learning contexts where a foreign language is used as the language of teaching and learning, code switching is allowed as a supplement to maximize the learners' understanding. In a paper

presented at AEAA Conference (2004) in which Mati was investigating code switching as a strategy for education in the South African context, it was maintained that even though English is the official language of instruction, some teachers sometimes do switch to Xhosa (the home language) to explain, discuss meaning, improve the quality of information flow, regulate and control classroom activity.

Research studies carried out in Africa show that code switching is common practice, mainly for education purposes. Clegg and Afitska (2010) explored the educational value of code switching in African classrooms. Considering that in sub Saharan Africa education is most of the time conveyed through a European language that learners do not master well, they particularly focused on the way low learners' ability in the medium of instruction limits talk and necessitates bilingual interaction. They also explored and outlined ways in which teachers can make adjustments to the management of bilingualism in the classroom which facilitate learning in a European language.

Regarding how often code switching occurs during teaching and learning practices, research results vary. In a South African survey related to language in education policy and classroom practices, Probyn (2005) reports that while most teacher-talk was in English, teachers varied widely in the amount of first language they used: some conducted whole lessons almost completely in their first language while others stuck to English as far as possible and used code switching to increase comprehension. There is evidence that in many contexts where the medium of instruction is a second or foreign language, much of the classroom interaction takes place in the teacher's and learners' shared first language (Probyn, 2006; Brock-Utne & Holmarsdottir, 2003). In such cases, although the second/foreign language is officially the medium of instruction, the teacher's and learners' first language might be predominantly used for learning purposes, especially for oral interactions. Evidence from different parts in the African context show that code switching is commonly used in teaching and learning situations. Bunyi (2005) through his investigation on language practices in Kenya reports that in Kenyan classrooms code switching is common practice.

A study by Mwinsheikhe (2003, 2009) in Tanzania reveals that 89% of the teachers interviewed used code switching from English to Kiswahili to clarify and increase understanding of their lessons offered through the medium of English. Research by Abd-Kadir and Hardman (2007) in which they were investigating the discourse of whole class teaching by comparing the Nigerian and the Kenyan educational contexts found that code switching was used in over two thirds of the Nigerian classrooms and over half of the Kenyan classrooms studied.

Coupled with the increasing occurrence of code switching practices in second/foreign medium of instruction, recent research trends evidence and recognize the academic benefits of code switching. In terms of language use, Cook (2001) maintains that instead of considering learners who resort to code switching practices in a foreign instructional language as deficient users of the foreign language, they should rather be viewed as multi competent language users. In the same line of reasoning, Scott and La Fuente (2008) explored the use of the first language as a resource for learning. They found that using the first language while solving the grammar problems was extremely beneficial for the students. Liebscher and O' Cain (2005) investigated the use of code switching in English and German classrooms and observed that allowing the use of the learners' first language helped them to follow. Similarly, Hancock (1997) found code switching to be very useful in group work when students used their first language to clarify tasks to their peers.

On the whole, code switching as reviewed above highlight the fact that considering language as a cultural tool that mediates learning, using languages that learners understand better through code switching practices to increase the mediational role of the tool of language present some educational value. Despite the educational value embedded in code switching practices however, research evidence show that some people still hold negative views about such practices, arguing that they testify careless language habits (Shin, 2005) and lack of English competence (Setati, Adler, Reed & Bapoo, 2002; Martin, 2005). The researchers recognize though, that code switching is used as a pragmatic

response to the local classroom context since such practices are rarely if ever institutionally accepted. Martin (2005, p. 89) mentioned that code switching affords classroom participants “creative, pragmatic and ‘safe’ practices . . . between the official language of the lesson and a language which the classroom participants have a greater access to”. In the same line of reasoning, Lin (2005, p. 46) referred to teachers’ and students’ code switching practices in the Hong Kong context as “local, pragmatic, coping tactics and responses” to the socioeconomic dominance of English in the country. Since many students from socioeconomically disadvantaged backgrounds have limited access to English resources, they struggle to acquire an English-medium education for its socioeconomic value.

Those who hold a negative view of code switching in learning seem to align by Wertsch and his colleagues who warn that mediation “always involves constraint as well as empowerment” (Wertsch et al., 1995, p. 24). Any mediation involves some form of limitation; while it may free the user from one limitation, it introduces others.

In the context of the present thesis, using Kinyarwanda or code switching for mediation purposes, reduces opportunities for which English is used and eventually reduces possibilities of using and practicing English to develop fluency and command of the language. However, considering that study four highlighted the fact that some students prefer to keep quiet for fear of making mistakes in English or simply because they lack the required English competence to express themselves, and considering that their active participation is of paramount importance as regards negotiation of meaning and knowledge building, I argue, from a language ecology perspective (Hornberger, 2002) that using the linguistic tools readily available in their cultural context duly mediates the learning and discussion social practice despite limiting opportunities for the use of English. The use of Kinyarwanda or forms of code switching allows students to participate actively in peer interaction and collaboration to enhance learning.

While code switching practices for educational purposes appear throughout the four articles that make up the present thesis, article one specifically focuses on how learners draw upon languages at their disposal in the Rwandan context (mainly English, French and Kinyarwanda) to negotiate meaning during a teacher assigned task. From the very starting stage of understanding the task requirements, gathering material, discussing key words and procedures towards completing the task, code switching practices predominate over the sole use of foreign instructional languages (French and English), and leads to the successful understanding and completion of the task. Thus, considering the perspective that all languages are resources for learning (Creece & Blackledge, 2010; Garcia & Sylvan, 2011), we notice that code switching practices in our context mediates and facilitates learning.

Collaboration, peer support and learning

An assumption in some socio-cultural approaches is that higher cognitive skills of individuals develop through participation in socially and culturally organized activities. From a socio cultural perspective, collaboration plays an important role in thinking and learning. According to Wang (2006), through collaboration, learners interact among themselves, engage in completing tasks and solving problems and explore answers to the tasks and problems. As they work together, learners support and assist one another to bring about learning. Sociocultural theories maintain that learning occurs when assistance is provided / offered in the Zone of Proximal Development (ZPD) (Vygotsky, 1978). The ZPD includes all of the knowledge and skills that learners cannot yet understand or perform on their own yet, but are capable of learning with guidance. Therefore, collaboration and peer support mechanisms reveal to be some of the alternative ways that could allow fellow learners to reach their potential performance in the ZPD.

Linked to the ZPD and brought about by collaboration and peer support is scaffolding. Wang (2006) asserts that in collaboration with others, the experienced peers offer scaffold assistance to other learners and guide them to complete tasks or solve problems that would not be successfully completed or

solved without the peers' assistance. In the same line of reasoning, Chitanana (2012) with reference to online courses maintains that collaboration provides an environment in which peers give and receive help from each other, exchange resources and information, give and receive feedback, challenge and encourage each other and jointly complete a given task.

Summary

In summary, this chapter presented the theoretical and conceptual framework used in the present thesis on learning through a foreign language in higher education in Rwanda. Overall, a sociocultural perspective on learning was chosen mainly based on two aspects. The first relates to the emphasis placed on language as the primary tool mediating knowledge development, understanding, appropriation and learning; and the second relate to the social nature of learning. In this regard, issues pertaining to interaction, collaboration and peer support that foster the learners' active participation in their learning at all educational levels generally and at higher education level in the specific context of the present thesis were discussed. Next, I will turn to the methodology used to collect and analyse data.

3. Methodology and design

The previous chapter presented the theoretical framework adopted in the present study. This section will mainly present aspects related to methodological considerations and research design, choice of methods, participants and setting, ethical consideration, data analysis and quality considerations as they were observed for the present research study.

Methodological considerations

Interaction analysis, according to Jordan and Henderson (1995) investigates human activities such as talk, non-verbal interaction and the use of artifacts and technologies, identifying routines practices and problems and the resources for their solution. In the present study, interaction analysis was mainly used to investigate students' verbal and non-verbal communication during their group discussion while completing the set task. The aim was to identify how they go about completing a task, the kind of problems they come across and how they solve them using the resources at their disposal, and the learning that takes place.

While maintaining that there exists some disagreement about the fundamental assumptions of interaction analysis, Jordan and Henderson (1995), however, provide some ideas in order to clarify interaction analysis as a way of doing analytic work. According to them, interaction analysis assumes that knowledge is situated in interaction among members of a particular community. As members of a given community interact, they negotiate and help one another to construct knowledge. Through interaction, they build common knowledge that is eventually shared. Thus, interaction analysis considers knowledge to originate from and to flourish in social interactions among members of a particular community instead of being located in the heads of individuals. In this thesis, the analyses in papers one two and three are performed to elucidate the interaction that takes place during the student / peer interaction while engaged in completing a specific task. The analyses of the verbal and non-verbal interaction that takes place during the peer group discussion shed light on negotiation and support

mechanisms, and the clarification and participation procedures that bring about the successful completion of the task and eventually the content gains.

Concerning the source of data for interaction analysis, Jordan and Henderson (1995) claim that the basic data is to be found in the details of interaction. According to them, since interaction analysis considers knowledge to be located in social interactions, it seems obvious that the basic data are to be found in social interactions of members of a given community. Specifically, the method mainly studies and focuses on the naturally occurring everyday interaction among members of communities of practice.

In addition to viewing knowledge as situated in details of naturally occurring interaction among members of a particular community, practitioners of interaction analysis assume that verifiable observation provides the best foundation for analytic knowledge of the world. Accordingly, Jordan and Henderson (1995) recognize that electronic recordings produce the kind of data corpus that allows the close interrogation required for interaction analysis, since they provide the crucial ability to replay a sequence of interaction repeatedly for multiple viewers and on multiple occasions. In the present study, video recording was used in article three to collect data for interaction analysis. It was possible to replay the recorded data for multiple viewers and multiple occasions within the limits of ethical considerations agreed upon between the researcher and the participants in the group discussion.

In learning situations, interaction analytic studies locate learning in the broad social interaction occurring during the learning process. Jordan and Henderson (1995) claim that in order to investigate whether learning is occurring or has occurred, interaction analytic studies analyse the ongoing interaction process and try to understand how people engaged in the learning activity collaboratively bring about learning and recognise that learning has occurred. In this respect, interaction analysis closely looks at how participants in the learning activity participate, work collaboratively to negotiate, elucidate some issues, construct knowledge and come up with a shared understanding on the issue under discussion (Jordan & Henderson, 1995). In the present study, interaction analysis

considers participation patterns such as turn taking, agreement and disagreement, desk talk and self-selection (Sahlström, 1999), clarification requests and provisions etc. throughout the collaborative endeavor of understanding and completing the assigned tasks.

Overall, interaction analysis tends to proceed inductively attempting to generate statements about general patterns from multiple sets of empirical data and the present study subscribes to an inductive analysis design especially in the studies where analyses of interactions were involved.

Research design

A research design implies a careful plan, which a researcher makes at the beginning of a project to decide on an appropriate approach. An appropriate approach is most of the time guided by the objective of the study, implying that the research issue determines which type of research to be employed (Bryman, 2012; Silverman, 2007). As Bryman (2012, p. 50) suggests, the choice of the research approach depends on whether it fits the research problem and the nature of the issue being raised. Since the aim of this thesis is to gain and expand on knowledge on how students in higher education in Rwanda experience and cope with their content subjects through the medium of a foreign language, English, the approach used is qualitative.

Many writers on research methodology find it purposeful to make a distinction between quantitative and qualitative research (Berg, 2004; Bryman, 2012; Howlett, 2010; Patton, 2002; Silverman, 2007; Yates 2004). This division is perceived differently among methodologists. According to Howlett (2010), some see qualitative methods as a soft and easy way of doing research, whereas quantitative methods are more complex and demanding. Others see the two as extreme positions on either side of a continuum.

Bryman (2012, pp. 36-37) distinguishes between qualitative, quantitative and mixed methods. While qualitative and quantitative methods of research entail some ontological and epistemological differences, Bryman (2012, p. 35) cautions that the distinction between the two is not a “hard-and-fast one” and

maintains that they can simply be taken to form two distinctive clusters of research strategy. By research strategy, Bryman (2012, p. 35) means a “general orientation to the conduct of social research”. According to Bryman (2012), qualitative research is considered as a research strategy that usually emphasises words rather than quantification in the collection and analysis of data. Qualitative research predominantly emphasizes an inductive approach to the relationship between theory and research, puts more emphasis on the ways in which individuals interpret their social world, and views social reality as a constantly shifting emergent property of individual’s creation. Qualitative methods produce rich and detailed information about a much smaller number of people or cases. This reduces the generalisability of the study, but increases understanding of the cases and situations studied (Bryman, 2012; Howlett, 2010; Patton, 2002). On the other hand, quantitative research, which emphasizes quantification in the collection and analysis of data that entail a deductive approach, has incorporated a positivist approach and claims to hold an objective view of social reality. Quantitative research methods provide a broad, generalisable set of findings which can be presented concisely and economically.

Based on the above mentioned ideas and taking into account the overarching aim of the study, the present work subscribes to a qualitative research design. Basically, it relies on students’ rich interview responses on how they experience, reflect on and cope with learning through foreign instructional languages, and audio and video recordings of naturally occurring interactions of students in their social environment while completing assignments. An inductive approach and thematic analyses are used, all of which are characteristics of qualitative research. As Howitt (2010) mentions, some of the distinguishing features of qualitative research are its preference for data rich in description, the belief that reality is constructed socially, and that reality is about interpretation.

Choice of methods

The research topic, the overarching objective of the present thesis, and the research design adopted informed the choice of the research methods employed

for data collection. Considering that the thesis investigates students' reflections and ways of coping when they learn content subjects through the medium of a foreign language, a qualitative research design was adopted. The methods used overlap as the choice depends on the objective of each paper. Two of the four papers used interviews in order to gain an in-depth understanding of how higher education students reflect on, handle and cope with learning through a foreign language. The other two papers used naturally occurring data gathered through audio or video recordings in order to capture some of the seen but unnoticed details of informal discussion that might be of interest in shedding light on aspects related to learning in a foreign language.

Individual interviews were used in order to allow students to express themselves as exhaustively as possible, thus providing rich details and deep answers regarding their reflections on the use of a foreign instructional language as well as their coping strategies. Howitt (2010, p. 7) mentions some of the major defining characteristics of qualitative research and one of them relate to methods that are likely to bring about the kind of data relevant to qualitative studies. Considering that qualitative researchers value data which is rich in its descriptive attributes, they tend to favour data collection methods which obtain detailed, descriptive data such as that produced by using in-depth interview methods, focus group discussion and detailed field notes. In the present study, in-depth interviews were deemed to be the right methods to bring about rich data on how individual students reflect on and cope with using a foreign instructional language for learning content subjects. Thus, they were used for articles two and four.

In order to capture each individual's perspective, the use of individual in-depth interviews was preferred over the use of focus group interviews. While both methods provide rich data and encourage individuals' perspectives (Howitt, 2010), individual interviews appeared to be more useful than focus groups, as they provide an "undiluted focus on the individual" (Ritchie, 2003, p. 36). Thus, in the present study, individual in-depth interviews were used to collect rich data

likely to lead the researcher to gain knowledge on the students' reflections and ways of coping from an individual perspective.

In articles two and four, a semi-structured interview design was followed (Bryman, 2012, Howitt, 2010). An interview guide (see Appendix 1-2) was constructed to make sure that all the aspects I wished to illuminate regarding the use of a foreign instructional language for content learning and students' coping strategies were covered. The interview guide is basically a list of questions or topics that are to be explored in the course of the interview (Bryman, 2012; Patton, 2002). In article four, the interview guide was established based on a questionnaire that was handed out and collected prior to the interview process, but whose results are not used in the present thesis. This was done in order to get more developed answers on selected issues that the questionnaire had not generated. In fact, as Abell and Myers (2008) observe, interviews tend to elicit much more varied and rich data than questionnaires as they provide the researcher with the reasons for the participants' thinking. In this regards, the flexibility of the interview process allowed me to follow up an interesting point or to clarify an unclear response (Bryman, 2012). Interview questions were phrased in both Kinyarwanda and English, but the participants were allowed to respond in the language of their choice. The interviews were conducted in a quiet room at the university and were audio recorded following participants' informed consent. Later on, they were transcribed verbatim and translated from Kinyarwanda (sometimes mixed with French) into English whenever necessary.

Video and audio recordings of naturally occurring data were also employed as yet other methods of data collection. In line with the qualitative researchers' preference to use methods which get them close to real-life experiences of people (Bryman, 2012; Howitt, 2010; Silverman, 2007), audio or video recorded authentic discussions of students in their social setting while completing assigned tasks are used in articles one, two and three. Audio recordings in studies one and two were done by placing a tape recorder on one of the tables around which the group was sitting, in agreement with all group members. A fourth year student from the same university but different faculty was in charge of overseeing the

recording process from the beginning of the discussion up to the completion. Through video recording in study three, it was possible to capture details of what really happened during the particular recorded sessions which were thought to be necessary and important for the exploration and close scrutiny of students' ways of coping. As Jordan and Henderson (1995, p. 50) point out, "video provides a shared resource to overcome gaps between what people say they do and what they, in fact do. Video provides optimal data when we are interested in what "really" happened rather than in accounts of what happened". Video recording was done in a classroom where the peer mentoring session took place, using one camera. A fourth year student from the same university but in another faculty operated the camera. The researcher stayed in the discussion room for the whole session, quietly sited at the back. While video data might present some technology related limitations, they however bear credit regarding presenting social events as they occur and with a high level of details.

Another advantage of video recorded data presented by Jordan and Henderson (1995) is that primary record is kept permanently in all its richness and it is possible to view the data many times and at a convenient pace. Considering study three, which dealt with a relatively large group, video recording was preferred in order to provide "richer record" of verbal and non-verbal communication from the individuals and artifacts appearing during the session (Jordan & Henderson, 1995, p. 52).

Participants and setting

The present study was carried out at a university in Rwanda. The selection of participants combined both convenience and purposive sampling techniques (Bryman, 2012). Over all, the first criteria for selecting respondents were availability and willingness to participate in the study, which is characteristic of convenience sampling (Bryman, 2012; Silverman, 2008). However, selecting respondents from those who were available and willing to participate in the study required purposive sampling. In purposive sampling, Cohen, Manion and Morrison (2007, p. 103) maintain that "researchers handpick the cases to be

included in their sample on the basis of their judgment of cases' typicality". In the same line of reasoning, Bryman (2012, p. 418) highlights that in purposive sampling, participants and settings are selected considering their relevance to the research questions. The technique entails a process in which the researcher purposely chooses subjects who are perceived to be relevant for the study (Patton, 2002). Thus, considering the overall aim of this thesis and the research questions of each article, respondents had to be university students following their courses through the medium of English. The following are details of choice of participants.

In the first article, a group of five first year students from the Faculty of Economics and Management was chosen because they had an assignment to complete in groups and they allowed us to record their group discussion from the beginning up to the completion of the exercise. This group used all their languages to communicate during the group work and wrote the assignment in French.

In article two, first year students from the faculty of economics and management were included in the study because they had participated in the two group discussions of five students each, on a teacher designed assignment. They allowed us to record their discussion. One group discussion was selected for detailed analysis because of the richness of the discussion that took place in relation to the objective of the study. All the ten students from the above mentioned two groups participated in the in-depth interviews as they were available and willing to participate.

In the third article, a group of around thirty second year students from Accounting were video-taped during a student initiated peer-mentoring activity. It was included in the study because it illustrates another coping strategy frequently used in Rwanda. These students also allowed us to video tape their discussion.

In the fourth article, I interviewed twenty five first year students from the faculty of Economics and Management. To be eligible to participate in the interview exercise, respondents ought to have completed and returned a

questionnaire which was handed out and collected before the interview process (though the questionnaire findings are not reported on in this study). In addition to having completed and returned the questionnaire, only those who were available and willing to participate in the interview were chosen. Overall, out of 105 students who received the questionnaire, 92 (88% response rate) returned it completed and I interviewed the first 25 students (ten females and fifteen males) who turned up for an in-depth interview.

Table 1. Overview of data collection and participants

Study	Instruments	Number of participants	Student group
1	Tape-recorded group discussion on teacher designed assignment Data gathered 2008	A group of 5 students	1st year students
2	Tape-recorded group discussion Individual interviews Data gathered 2008	A group of 5 students 10 students	1 st year students
3	Video-taped informal group discussion on student initiated group work Data gathered 2009	30 students	2 nd year students
4	Individual interviews Data gathered 2010	25 students	1 st year students

Ethical considerations

With reference to ethical considerations in research, Cohen et al. (2007) note that whatever the specific nature of their work, social researchers must take into account the effects of the research on participants, and act in such a way as to preserve their dignity as human beings. In this regard, issues pertaining to informed consent, privacy and confidentiality (Bryman, 2012; Cohen et al., 2007; Howett, 2010) were observed throughout the four studies that constitute the present thesis.

Concerning informed consent, Bryman (2012) stresses that since it is one of the imperative ethical aspect of any study involving the participation of human beings, participants must be informed about the main goal of the study, and about possible disadvantages and advantages that participating might imply. In addition, informed consent means that it is completely voluntary for the informants to participate, and that they have the right to withdraw at any time. Moreover, Cohen et al. (2007) point out that in accordance with scientific ethical standards, researchers are advised to make their presence and aims known in order to avoid deception when conducting fieldwork.

With respect to the informed consent principle throughout the process of data collection, I clarified the objective of my research to my respondents. I told them that I needed their views, opinions and strategies regarding the use of English as a medium of instruction only for research purposes. I also stated that I was carrying out research meant to gain and expand knowledge on the impact of using a foreign instructional language for content learning, and that my focus was on higher education in Rwanda. I had a formal authorization from the academic authorities allowing me to conduct the research in the selected setting and it spelt out the objective of the research and requested for cooperation. Nevertheless, I made it clear to my informants that participation was voluntary and they were allowed to withdraw from the study at any time if they wished. Consequently, the data reported in this thesis are from those respondents who agreed to share their views, opinions and practices with the researcher regarding the use of a foreign instructional language for content learning in higher education in Rwanda.

With regard to confidentiality and privacy principles, I followed Bryman's (2012) advice that personal identifiers should be avoided to protect the anonymity of the respondents. In this respects, although my study did not present any potential harm to the participants, I did not use real names and opted for the use of codes instead (Bryman, 2012). Also, I did not spread my video data by just sharing them with my supervisors and my research group members only, which was still within the limits of the ethical considerations.

Data analysis

The qualitative data in the four papers that make up the present thesis were analysed based on both thematic analysis (Boyatzis, 1998; Braun & Clarke, 2006; Bryman, 2012; Howitt, 2010) and interaction analysis (Jordan & Henderson, 1995).

According to Braun and Clarke (2006), thematic analysis is presented as a method for identifying, analysing and reporting patterns or themes within data. Bryman (2012) observes that although thematic analysis lacks a clearly specified series of procedures, it is credited for its flexibility. Indeed, Boyatzis (1998, p.4) maintains that thematic analysis is a flexible and useful tool for “encoding qualitative information”. According to Bryman (2012), the analytical process consists of a search for themes, which are patterns that describe and organize as well as interpret parts of a phenomenon. Themes and sub-themes emerge from the data as the researcher gets familiar with them through the process of reading and re reading the collected data. Thematic analysis helped me to identify, analyse and report patterns (Howitt, 2010) within interview data and group discussions. It is worth noting that although the steps followed during the analysis are outlined below, the analytical process was not linear, but rather recursive (Braun & Clarke, 2006), that is, moving back and forth throughout the phases whenever needed.

The first step consisted of familiarizing myself with my data (Braun & Clark, 2006). This stage involved transcribing and listening to the recorded interviews and the naturally occurring data in the group works over and over again. After the transcription process, I also took time to read and re-read the transcribed data, discuss them with colleagues and supervisors, which helped me to get even more familiar with my data. The second step consisted in sensing themes (Boyatzis, 1998). This stage entailed identification of topics/information relevant to my research focus that recur again and again (Bryman, 2012). In this regard, I mainly looked for concepts and information related to using a foreign language for content learning in Rwandan higher education and students’ ways of coping. Basically, research questions and aims of different papers constituted

the basis for sensing themes. The third step consisted of grouping recurring topics/information into themes and sub-themes throughout the whole data set. At this stage, Boyatzis (1998) advises to do it reliably, that is, to recognize and use the encoding consistently. As Boyatzis (1998) suggests, the fourth step consisted of developing codes in order to process and analyse the findings. In this respect, I selected quotations from the interview responses and extracts from the discussion data set that could support claims and arguments made throughout the study. The last stage, as Boyatzis (1998) suggests, was to interpret the information and themes in the context of a theory or conceptual framework. The interpretation of findings in the light of a theory sheds light on what occurs and indicates important meanings throughout the findings (Braun & Clarke, 2006). This will eventually point to the contribution of the finding towards the development of knowledge (Bryman, 2012). At this stage, identified themes were interpreted based on a socio-cultural theoretical perspective. Nevertheless, I cannot claim that my interpretations were only theory driven. Being a teacher who is roughly aware of the impact of using a foreign language for content learning in the researched community, my status and my pre-understanding might, to some extent, have influenced the reporting and interpretation of the findings, despite my original commitment to do my best to bracket my pre-understanding and influence.

The selection of quotations and discussion extracts to include in each of the four papers making up this thesis was based on how best they illustrated and supported different themes and arguments put forward. As a result, some respondents' voices are more dominant than others. For example, in article four, although I interviewed twenty five students, only interview quotes from ten students are dominantly used because they expressed their reflections regarding the use of English as the sole medium of instruction in a reflective and articulate way. In article three, one episode was selected for detailed analysis from the whole video data because it was particularly striking how students collaboratively discussed to straighten out a misunderstanding without losing face. Overall, while striving to keep those quotations and extracts that provided

relevant information and detailed explanation as regards the use of foreign languages, English in particular, as the medium of instruction in Rwandan higher education and students' ways of coping, the selected quotations were equally representative of many others that were kept aside due to space and focus considerations of each paper.

Jordan and Henderson (1995, p. 39) describe interaction analysis as an interdisciplinary method for the empirical investigation of the interaction between human beings and with objects in their environment. For the present study, interaction analysis was used to investigate both how students in formal group work which was arranged by the teacher, and the work in the informal student initiated groups interact with one another to complete an exercise, to clarify content and eventually learn from one another's explanation and understanding of concepts. In the informal group work students' discussions are based on an exercise, set by the teacher, which is related to the course content they had just completed (about book keeping, ledgers and consignment) and which phrasing is recorded on a piece of paper students keep on referring to throughout the discussion. So, students interact among themselves but at the same time they also interact with the course content and the set exercise in order to successfully complete the task. The same applies to the formal group work where students also interact with literature they had to select themselves.

Quality considerations

There has been much debate on how to weigh quality in qualitative research studies. In this section, I would like to discuss quality aspects of the present thesis in terms of trustworthiness and generalisation (Cohen et al., 2007; Larsson, 2005, 2009).

According to Cohen et al. (2007), the quality aspect of qualitative studies in social sciences can be discussed in terms of trustworthiness. As Shenton (2004) mentions, trustworthiness hinges on the relationship between the researcher, the data and the research questions. In other words, it is related to the internal consistency (Larsson, 2005) of the whole work.

Throughout the present thesis, I made my research process open through the presentation of the choice of methods and theory, data collection and interpretation procedures. In line with the trustworthiness quality aspect, I adopted a research strategy that conveys “low inference descriptors” (Silverman, 2007, p. 283), that is, recording naturally occurring data in ways that are as concrete as possible, including verbatim accounts of what people say rather than the researcher’s constructions of the general sense of what a person said, which would allow the researcher’s personal perspectives to influence the reporting. In this regard, I made an effort to support my claims and arguments by verbatim quotations selected from interviews or recorded discussion extracts. Even when the quotations were not grammatically correct, I kept them as they were produced by the respondents in order to allow readers to gain access to the real data instead of my own reconstruction of the respondents’ meaning (Silverman, 2007). The transcriptions of some of the data sets were detailed enough to include even details related to pauses, hesitations and overlaps in a bid to present the data as they occurred from the respondents thereby leaving the data open to other researchers to make their own analysis against mine. In this regard, the following transcription conventions were used.

- 1) When the original wording is in English, the translation is in bold
- 2) When the original wording is in French, the translation is in italic
- 3) When the wording is in Kinyarwanda, the font is normal
- 4) S: student
- 5) Class: all students in the class/group
- 6) (...) empty space. The number of dots corresponds to the length of the empty space.
- 7) (()) body movement, own comments
- 8) (?) low voice discussion, hard to transcribe
- 9) ? rising intonation
- 10) . falling intonation, finality
- 11) , listing, continuous talk.

Source: Flexibly adapted from Bucholtz (2007)

In qualitative research, the researcher is at the same time his/her research instrument (Bryman, 2012), which increases subjectivity. Also, Merriam (1998) claims that since investigators play the primary role of data collection and

analysis in qualitative research, human limitations are likely to interfere with the quality of the research work thus produced. As any other human being, they are likely to make mistakes, to miss opportunities or be subjective. Keeping the trustworthiness aspect in mind and determined to avoid personal biases, I constantly discussed the interpretation and findings with my supervisors, colleagues, research team members and the expert academic community at large through seminars and conferences. I received constructive feedback from them which at times helped me to strongly revise my papers. Such practices could stand to validate the trustworthiness of the present study. Furthermore, one of the articles in this study (article 1) was completed through the collaboration process of three authors. In this respect, the findings we present result from our shared knowledge and interpretation, which could also be looked at as another quality aspect that brings about trustworthiness in this thesis.

Another quality aspect I would like to discuss in this section relates to generalisation. According to Larsson (2005), the generalization from a case increases when those who have been persuaded by the interpretation keep it in mind as they reflect on other cases, and thus may discover the relevance of the description that the qualitative analysis resulted in, if they find it useful in their particular case. This study mainly deals with higher education students' views, reflections, practices, and ways of coping in relation to the use of a foreign language of instruction for domain specific content learning.

The study considers and applies to a Rwandan context. Yet, I believe that some of the ideas expressed in this thesis could be valid even in other contexts where a foreign language is used for teaching and learning content subjects even though, I contend that there are some context specific features that would interfere with a smooth generalisation of findings in this study to other contexts. For example, the mediating role that the mother tongue (Kinyarwanda) plays in the present study might not be generalisable in other contexts where students do not share the same mother tongue, although they may experience similar problems. Thus, as Larsson (2005) notes, it is not easy to generalise from a case study to other corresponding cases. A case does not represent other cases in a

simple way. Nonetheless, it is my belief that through context similarity (Larsson 2009), the findings in this study could apply elsewhere.

4. Summaries of articles

Introduction

In this section, I summarise the four articles that constitute the present study. I also highlight how they are linked together in relation to the overall research topic of this thesis i.e. the use of a foreign instructional language for content learning, as well as their contribution.

As stated earlier on, this research work spans a period of important changes concerning the language in education policy in higher education in Rwanda. Thus, two papers were written drawing upon data collected when the dual French-English medium of instruction was still in use, while two others are written drawing upon data collected during the English only medium policy. It is worth noting that although the medium of instruction changed from French and English to English only, the instructional language remained foreign to Rwandan students as they do use neither French nor English as their first language. Therefore, while the four papers making up the present thesis span a period of medium of instruction change, they all address the issue of using a foreign instructional language for content learning. They all converge to investigate how students experience and reflect on using a foreign language of instruction and the coping strategies they use in order to successfully complete their academic tasks.

In this respect, the first study explored how students negotiate meaning using two or three languages at their disposal during a group work activity. Based on earlier research findings (Kagwesage, 2006; Mutwarasibo, 2006) which evidenced the fact that during the early implementation stages of the dual French English medium of instruction policy, students memorised teachers notes and reproduced them during any kind of evaluation without questioning and reflecting on the material in order to convert information into knowledge, we decided to undertake this study to investigate how language diversity that students are exposed to contribute to learning. Our findings revealed that the use

of multiple languages at the students' disposal has the potential to facilitate learning, thus highlighting the complementary aspect of the languages used in the Rwandan multilingual setting.

Considering that such findings were arrived at through the analysis of a recorded group discussion, need arose to interview students and get their views on the different practices and strategies that facilitate them to learn through the medium of a foreign language. The interview data coupled with the group discussion data were then used to produce the second article which mainly investigated students coping strategies to cope with a foreign instructional language. The findings revealed that students have varied coping strategies, but among the most prominent and successful was the use of peer mentoring systems. Thus, I decided to pick it up and investigate it in more details in article three.

To gain knowledge on peer mentoring systems, I video recorded examples of peer mentoring sessions in order to capture what happens during peer mentoring sessions that is conducive to learning and eventually coping with using a foreign instructional language for learning content subject. Findings revealed that peer mentoring sessions present a significant context for learning as students with different conceptual abilities interact to support one another, take on different roles in an anxiety-free atmosphere and in a language they understand well, and all this on a student initiated and voluntary basis. At this juncture, the English only medium policy had just started to be used and I wanted to capture the students experience and reflections on the new practice in the fourth article.

Basically, the fourth article explored the higher education students' reflections at a time when the instructional language had shifted to English only. Just as in other contexts where a disjunction exists between the formal instructional language and the language of out of class communication, the study revealed that students faced different challenges and difficulties in using the newly adopted language of instruction. Guided by pragmatic considerations and instrumental motivation however, students seem to be determined to devise ways

of coping that will eventually allow them to find their way and place in the globalised world.

This description helps to explain the order in which these four articles are organised and how they hang together in this dissertation. In the next section, I present a detailed summary of each of the four articles.

Article 1

Andersson, I., Kagwesage, A.M., & Rusanganwa, J. (In press). Negotiating meaning in multilingual group work: A case study of higher education in Rwanda. *International Journal of Bilingual Education and Bilingualism*, 1-15
iFirst article.

Aims

This study was conducted in 2008, when the dual French and English medium of instruction was still in place. The aim was to expand knowledge on how students handle the linguistic diversity they are exposed to during group work sessions. This study was carried out at a university in Rwanda. Considering the Rwandan context where Kinyarwanda is a common language to all but is not used as a medium of instruction or examination in higher education, necessity arose to investigate how tertiary students in Rwanda navigate between different codes to handle group work tasks. The questions that guided the study related to how different languages are used in group-work sessions, the learning strategies students used to cope with learning tasks and how they negotiate meaning.

Method

A group of five first year students studying management was audio recorded during their discussions on teacher designed group work activity. The group was made of two students from an English speaking background while three others are from a francophone background. The group met five times. Thus, the data consist of five audio-recorded group-work sessions covering the whole process from the first to the final meeting. Participants were selected based on

convenience sampling (Bryman, 2012). Drawing on theories relating to code switching and learning in multilingual settings (Gafaranga, 2010; Garcia, 2009; Myers-Scotton, 2000), we analyse data to find out the function of the different languages and how meaning is negotiated.

Findings and discussion

Based on the discussion that took place, we found that students draw upon their knowledge in all the languages used in the Rwandan context to complete the designed task. Taking into account students' discussion about literature, Kinyarwanda, the first language to all the students but not officially recognised as one of the instructional languages is generally the unmarked language (Myers-Scotton, 2000). It is used most of the time but the students tend to shift to French or English depending on the language of the literature they are referring to, especially when the conversation turns to a subject-specific topic. Meaning making entails reading aloud specific passages where important concepts are explained. Through continuous reading and negotiation of meaning through translanguaging (Garcia, 2009), the group-work seems to give ample opportunities for developing the understanding of the topic under study. In fact, they read texts aloud to share content, ask questions, request for medium change, reformulate the text through lengthy and polite negotiation of meaning. The negotiation of meaning requires the contribution of all the group members and the utilisation of their trilingual competence. Thus, we contend that language diversity in higher education in Rwanda has the potential to facilitate learning, thus emphasising the complementarity rather than the exclusion of languages used in Rwanda.

With the use of dual foreign instructional languages, Kinyarwanda is used to play a mediating role in situations where the use of a foreign language, either French or English would entails some kind of misunderstanding. Kinyarwanda is mainly used for oral production and reception whereas English and French are used for both oral and written purposes. Based on findings in this study, we hope that through the use of the three languages, students would increase their

retention capacity and overtime develop academic literacy in all of them if encouraged to do so.

Article 2

Kagwesage, A.M. (2013). Coping with English as language of instruction in higher education in Rwanda. *International Journal of Higher education*, 2(2), 1-12.

Aims

The aim of this study was to examine strategies that multilingual university students in Rwanda use in order to successfully deal with complex academic material offered through a foreign instructional language, English. The motivation to carry out the present study sprung from the recent research studies (Kagwesage, 2006, Andersson, Kagwesage & Rusanganwa, 2012), which highlighted the mismatch between Rwandan students English language abilities and the cognitive demands they come across in their higher education studies. Considering that an instructional language is assumed to be an enabling tool which facilitates the learning of content subjects, necessity arose to investigate how students successfully cope with their daily academic activities.

Method

This qualitative study is based on recorded naturally occurring group discussion as well as interview data conducted with first year students at a university in Rwanda. Two groups of five students each, completing a teacher assigned task were recorded during their group discussions. For the scope of this paper, only one group discussion was analysed to gain knowledge on the different strategies that higher education students use in order to complete a task in English. Also, the ten group members were interviewed to get a personal perspective on the different strategies used to cope with learning through the medium of English. Each interview lasted twenty five minutes on average, and interviewees were allowed to respond in a language of their choice. Participants were selected based on convenience and purposive sampling (Bryman, 2012). The choice of the faculty of economics was motivated by the fact that much written and spoken

English is required for the successful completion of courses. The data was transcribed verbatim, translated in English and analysed drawing on thematic and interaction analyses (Boyatzis, 1998; Bryman, 2012; Howitt, 2010; Jordan & Henderson, 1995).

Findings and discussion

The present study investigated coping strategies that facilitate students learning in higher education in Rwanda to successfully complete their academic tasks through a foreign instructional language. Findings reveal that students have a number of strategies that help them to complete their academic tasks. These include using different languages to mediate domain specific content, using different languages to negotiate meaning and construct knowledge, using peer mentoring and peer support systems, extensive reading, lecture attendance, completing assigned work, and memorisation. Kinyarwanda, the familiar and common language to all students was revealed to clear up any confusion or misunderstanding arising from using a foreign instructional language. Also, coupled with hard work through extensive reading, lecture attendance and memorisation, another interesting finding relates to the peer mentoring and support systems which seem to be specific to the Rwandan higher education as a response to the problematic language of instruction. Based on findings in this study, students believe and maintain that these strategies facilitate subject matter understanding and allow them to successfully complete daily academic tasks. It is my belief that this study on strategies used to cope with learning through a foreign language at higher education level could inform pedagogical practices and support mechanisms designed to help new comers to fully integrate the university community, especially during the current open access to higher education.

Article 3

Kagwesage, A.M. (Re-submitted). Peer interaction and learning: A study of higher education students' initiated learning. *International Journal of Knowledge and Learning*.

Aim

The present study investigates how students' initiated learning and peer mediated learning contribute to learning in foreign instructional languages. The study focuses on the mediating role of students' initiated group discussion and what effect it might have on the students' ability to construct knowledge through negotiating of meaning in informal group work. The study was motivated by findings in a previous study (Article two), which highlighted students initiated learning through peer mentoring to be one of the strategies used to enhance comprehension of content subjects taught in English. Thus, necessity arose to investigate what really happens during such students initiated mentorship sessions and how they contribute to subject matter understanding. The study is mainly based on a detailed analysis of a video recorded episode of a group of approximately thirty students who, on a voluntary and students initiated basis, were helping one another to complete an assignment.

Method

The data for this study was gathered in 2009, through videotaping thirty second year students from accounting during a student initiated voluntary group discussion. They were completing an individually assigned work, but students decided to meet and help one another understand how they should go about completing the task. Only those students who felt they would gain or contribute to the group discussion attended. The group was selected because they were doing some kind of mentorship sessions, some of the group members had participated in previous studies and they allowed us to video record them. Interaction Analysis (Jordan & Henderson, 1995) was used to analyse the selected episode of students' naturally occurring verbal and non-verbal communication.

Findings and discussion

This study investigated the contribution of students initiated study groups.

The result shows that student initiated study groups prove to be a forum where students might get an opportunity to participate and express their ideas through a peer constructive discussion. Although some participation patterns may be looked at as replicating formal classroom practices, the analysis reveals that they are meant to highlight and foster the collaborative and mutually beneficial aspects of learning in peer initiated study groups. In addition, the less formal character and the anxiety-free atmosphere of the group discussion are attributes that encourage students to participate actively through asking questions, seeking and providing clarifications etc. Negotiating meaning and problem solving seems to be a collective strive towards a shared understanding of the allotted task. Nevertheless, despite this increased participation through formal participation patterns or even through self-selection and desk-talk (Sahlström, 1999), the group size issue needs to be observed in order to minimise the number of free riders (Barkley et al., 2005) who may neither contribute nor learn anything in large groups. Overall, the present study shows that informal student group discussion, initiated by the students, potentially promotes knowledge construction and learning.

Article 4

Kagwesage, A.M. (2012). Higher education students' reflections on learning in times of academic language shift. *International Journal for the Scholarship of Teaching and Learning*, 6(2), 1-15.

Aim and background

With reference to Rwanda higher education, the present study investigates higher education students' reflections on using English as the sole medium of instruction in their everyday academic activities. It falls within the current debate on the use of English as the only medium of instruction in contexts where it is a second or foreign language. This study aimed to answer the following question: What are higher education students' reflections on learning through the medium of a foreign language in times of academic language shift? As a matter of fact, the language in education policy has changed considerably over the last decade in Rwanda. From French medium of instruction before 1994, the instructional

language during the period 1995-2008 shifted to the dual French English languages of teaching and learning in order to accommodate returning Rwandans who had grown up in English speaking countries. Starting from 2009, English was to be used as the only language of instruction in higher education in Rwanda in order to fully integrate and benefit from the east African community and the common wealth organisations that Rwanda had just joined. Considering that students and teachers are rarely if ever part of the policy making team, necessity arose to investigate higher education students reflections on learning all their subjects in English in order to reveal yet unknown experiences of students regarding the use of the English medium of instruction in their daily activities.

Method

This study was conducted in 2010 and subscribes to a qualitative research design. Although both questionnaire and individual interviews were used as data gathering methods the result is mainly based on the interviews from first year students at a University in Rwanda. Participants were chosen following convenience and purposive sampling techniques (Bryman, 2012). Originally, a questionnaire was handed out to first year students in a faculty where the use of much verbal language is a requirement for successful content learning. In this respect, 105 students filled in the questionnaire because they were available and willing to do so. 92 students (88% response rate) returned the completed questionnaire. To participate in the interview, students ought to have completed and returned the questionnaire. Additionally, they had to be available and willing to be interviewed. Thematic analyses (Boyatzis, 1998; Bryman, 2012; Howitt, 2010) were used.

Findings and discussion

The study revealed that the students faced different challenges and difficulties in using the newly adopted language of learning and teaching in their everyday academic activities. The main problems relate to understanding lessons, note taking, participation in classroom discussions and accessing information from

books. Many participants highlighted that they have problems in understanding courses in English, mainly due to the speed and pronunciation of teachers coupled with limited domain specific vocabularies. When it comes to taking own notes from the teachers' explanation, some students mentioned that they get lost and prefer to wait until teachers write something on the board for them to copy. Similarly, students' participation in classroom discussion in English remains low and often limited to single word utterances because of shyness and fear to make mistakes in English. In this regard, some learning opportunities such as asking and answering questions, asking for and providing clarification or following up any issue arising from classroom discussion are missed out, simply due to the limited command of the instructional language. As such, lessons become teacher centred and reduce possibilities to negotiate meaning and provide relevant scaffolding. In addition, unless supported by the more knowledgeable peers, a number of students revealed to experience problems related to reading, extracting, organising and presenting the required information from books. Nevertheless, the students were aware of the globalisation trend and, through motivation and hard work, are willing to upgrade their English in order to cope with the new academic situation. Thus, just as when the dual English French medium of instruction was still in use, students still revert on collaboration and peer support in order to enhance deeper processes of learning required at higher education level and eventually complete their daily academic duties successfully.

5. Concluding discussion

Throughout the present thesis, it has been my aim to investigate how students in higher education in Rwanda reflect on, handle, experience and cope with learning through the medium of a foreign language. The study was motivated by the desire to gain and increase knowledge on this topic which is of international interest but with limited research work in the Rwandan context. The empirical investigation was materialised through four papers which, despite focussing on different perspectives, converged towards gaining knowledge on the broad topic of using a foreign instructional language for content learning. Taking a students' perspective, issues pertaining to students' reflections, negotiation of meaning, collaboration, peer support and other strategies for content learning in a foreign language of instruction were investigated in detail throughout the four papers. In general, the findings in the present thesis reveal an existing gap between the medium of instruction policy and practices in students' daily academic activities. Although the languages of teaching and learning have officially shifted from dual French English to English only medium as detailed in the first chapter, the practices remained the same. All the languages in use in the Rwandan society are still used as resources for learning though not officially recognised as instructional languages. This thesis spans a period of dual French English medium of instruction as well as English only medium. However, since much of the findings relate to data collected from courses offered through the medium of English, foreign instructional language sometimes gives way to English medium of instruction, which is the current official instructional language. Thus, as reported in this thesis, students in Rwandan higher education experience learning problems related to the use of foreign instructional languages. Nevertheless, they also have student designed ways of coping. In this concluding discussion, I will critically revisit the findings in the papers in relation to the overarching aim of the whole study. Next I will reflect on the research process and finally, some issues for further inquiry will be considered.

Instrumental motivation and pragmatic considerations

A pragmatic perspective on the choice of English Medium Instruction in contexts where English is a foreign language to students mainly considers English language as a tool to access knowledge and open up opportunities in the globalised world (Coleman, 2006; Van Splunder, 2010). In an academic context, the adoption and use of foreign languages, mainly English in the context of the present study, is considered as a way to empower academics to fully function in the globalised world which uses English as the lingua franca (Coleman, 2006; Dewey, 2007; Seidlhofer, 2005). English in this context is taken as a commodity (De Swaan, 2001), a key that opens up gates to social mobility, academic development and many more (Marsh, 2006).

In this thesis, the pragmatic considerations are amply exemplified through studies two and four. Through individual interviews held with students, it was clear that, at times, they meet problems in their subject courses due to the problematic instructional language. For instance, study four highlighted that classroom participation is reduced due to lack of terminology and fear to make mistakes in English. Confusion results from limited English language abilities to catch what the teacher says and failure to ask for clarifications. Understandably, it is not an easy task to struggle with new course content and, at the same time, the language in which the content is expressed. Research evidence support that such a scenario would lead to frustration and high dropout rates (Brock-Utne 2011; Desai 2012). However, findings from article four in this thesis reveal that participants in the study consider the use of English as a medium of instruction as a gate opener to academic and employment opportunities. Despite the learning problems they face when English is used for teaching and learning, they are determined to make extra effort to cope with the academic demands. This finding is in line with the response given by the Kigali Institute of Science and Technology (KIST) Vice Rector Academic, another institution of higher learning in Rwanda that the present study did not investigate. While expressing himself on the spread of English as a teaching language in universities worldwide in an interview accorded to University World News (2012), he was quoted saying that

in Rwanda, of course with reference to KIST, students and instructors are still struggling with English four years after the policy started. In his words, he mentioned that “it is a problem for students to understand what lecturers are saying” (Green, Fagging, Cochrane, Dayson & Paun, 2012, p. 2). Thus, a possible explanation for the support of the rather problematic medium of instruction could be found in the current globalisation trend (Dewey, 2007) and pragmatic considerations attached to English (Van Splunder, 2010). Still in his address, the Vice Rector at KIST revealed that he had never heard anyone question the transition because “to be bilingual is a benefit” (Green et al., 2012, p. 2).

Such pragmatic considerations are not found in the Rwandan context only. On the African continent, Vavrus (2002) reports that students in Tanzania supported the use of English as an instructional language despite the varied problems that prevented them to use and understand English appropriately. They rather chose to intensify the use of English instead of abandoning it, thus rejecting the researcher’s proposal of using Kiswahili as the language of instruction and learning English as a subject only. The same scenario applies to the European context as well. In his state-of-the-art article, Coleman (2006) states that English medium teaching has been widely adopted despite the predictable problems. The most important problems relate to inadequate language skills of both staff and students, and ideological objections against the use of English (Van Splunder, 2010). The dominance of English instructional language continues to expand in Europe, where Costa and Coleman (2012) show that the expansion of English is established in Italian higher education as well where English medium courses have increased. Coleman (2006, p. 8) mentions that the global expansion of English medium of instruction has not even spared France where “there is now acceptance of the need for more English medium university courses, and even acceptance of English as *lingua franca*”. In the Asian context, Manh (2012) and Kirkpatrick (2011) show the ever increasing English medium of instruction programmes despite the problems it entails such as limited support from teachers (Byun et al., 2011) and difficulties to understand

the subject content and express their opinions fluently (Chang, 2010). Despite all the academic demands emanating from learning in English however, English medium programmes continue to expand worldwide and to embrace diverse programmes, from pure sciences, engineering and technology to social sciences (Van Splunder, 2010). Scholars attribute the dominance and expansion of English medium of instruction benefits associated to the use of English such as employment, research and publication opportunities, academic mobility, institutional prestige and many more (Airey & Linder, 2006; Coleman, 2006; Evans & Morrisson, 2011). Costa and Coleman (2012, p. 5) comment that “.....university not offering English courses to their students risk exclusion from the scientific and academic worlds”. In yet another development, Fergusson (2007) maintains that English as the language of scientific communication is well documented in such a way that its strong presence is undisputed even by those who are critical of this development.

With reference to the focus of the present study, students believe that by being instructed in English, they will be able to compete with fellow East African counter parts (Ugandans, Kenyans and Tanzanians) who mainly use English in education. They believe that completing a degree programme in English widens their employment market. In addition, considering the expansion of English medium higher education programmes as detailed above, completing their undergraduate degree programme in English opens up opportunities to further their studies in English medium universities abroad or even through distance training. As someone familiar to the context, I think there is some sense and pragmatic consideration in the students’ reflections. For example, I am aware that, to sponsor students for Masters or PhD programmes abroad, some sponsors require undergraduate/Masters degrees in English, not proficiency in English. In my opinion, this explains partly why students in the present study preferred to double efforts to cope with and successfully complete their academic tasks through the medium of English despite the challenges that using English for content learning entails in Rwandan higher education. It could sound legitimate to wonder how students’ command of English, which is not effective enough to

allow some of them to discuss course content or actively engage in classroom discussions, will open up opportunities and lead to social mobility and development. Here, it should be noted that the participants were first year university students, fresh from secondary school where the use of either French or English for teaching and learning was officially permitted. While further research would be necessary to investigate how students improve on their language abilities throughout their higher education journey, it could however be speculated that as they make progress in their studies, they also improve on their English language abilities thanks to the English support courses they get along the content subjects in the first year. Hopefully, by the time they graduate after four to six years at the university (depending on the programme), they are likely to be fully competitive in the English speaking/using community.

Through its global scale expansion, English has been labeled the “killer language” (Price,(2000) as cited in Coleman, 2006). The more English is used in various domains and places, the more it reduces and limits the use of other languages previously used (Coleman, 2006), thereby contributing to their extinction and slow demise unfortunately (Skutnabb-Kangas, 2001). In our context, further research would shed more light on this issue. What this study reveals though, is that all languages spoken in Rwanda are used in a complementary way for educational purposes despite the fact that some are not officially recognized as instructional languages. The following section gives more details.

Language diversity and learning in higher education in Rwanda

Coupled with students’ reflections on the use of English instructional language as a key to open up academic, employment and many more opportunities, this thesis also demonstrates the importance of other languages at the students’ disposal to mediate learning. As mentioned before, the data used in this thesis spans a period where French was used along English as instructional language and the English only medium period. Officially, starting from 2009, English was supposed to be the only medium of instruction, which means that all course notes, assignments

and even classroom communication had to be exclusively in English. Nevertheless, the present study shows that other languages (mainly Kinyarwanda and French) remained to be unofficially used during lecture time to clarify course content. Failure to revert to a familiar language for explanation and clarification purposes resulted in reduced understanding of course content. Through all the four papers, there are ample examples showing that students frequently draw upon the rich and resourceful linguistic environment to break the barriers that using English for content learning might pose. All the languages spoken in the Rwandan community (but mainly Kinyarwanda, the mother tongue) are used to explain, clarify or discuss course content or assignments during teacher designed group work (Papers 1 & 2), and students initiated study groups (Paper 3). The frequent use of other familiar languages in use in the Rwandan community for academic mediation was as well reported through interviews (Paper 2 & 4). In this regard, just as in other post-colonial contexts (Ferguson, 2003), code switching is regarded as a valuable communicative and pedagogic resource (Evans, 2008).

In line with the sociocultural theory (Vygotsky, 1978), it can be argued that, in the context of the present study, the use of ‘unofficial’ instructional languages at the students’ disposal plays an important mediational role for knowledge building and sharing. If the students’ level of English is not good enough to facilitate active participation and smooth discussions for content learning, it sounds legitimate to use other languages students are conversant with in order to improve on learning. In their description of International High Schools (IHS) in the US which comprise speakers of different home languages, Garcia and Sylvan (2011) report that students who know little English will most often sit next to a more proficient classmate with the same home language, who will support the less proficient student to access the information. Considering the merit of familiar languages to mediate learning and the multilingual character of such schools, Garcia and Sylvan (2011) highlight that IHSs have designed a dynamic plurilingual system of education by allowing students to use their home language to make sense of the learning moment. Thus, in a language diversity

context, students benefit from discussing the content of their subjects using any familiar languages at their disposal instead of restricting the discussion to the use of the official and most of the time unfamiliar instructional language only. Since students in this study have an added advantage of sharing the same mother tongue (Kinyarwanda) and a working knowledge in French, they gain from other students' perspectives with less or virtually no language barriers thanks to the meditational role of those languages. Thus, in a multilingual environment, by taking all the languages as resources for learning (Moll, 2007), translanguaging (Garcia, 2009) and codeswitching seem to be valuable practices for content learning when a foreign instructional language is officially recognised and used.

Peer mediation and collaboration as compensatory practices

It is also important to note the contribution of collaboration, peer support and peer mentoring when teaching and learning is conveyed in a foreign language. These concepts are explored in more details through Papers 1, 2 and 3. In line with the sociocultural theory that emphasizes the social aspect of learning (Vygotsky, 1978), this study noted the importance and academic value of other resources and practices that exist outside the formal classroom. Among those are peer mediation and collaboration practices to compensate for language and content barriers and foster critical and deep learning.

In study one, by investigating how students discuss and negotiate meaning on a teacher designed assignment, it was revealed that although the assignment is phrased in a foreign language, students discuss in languages they understand better and help one another to understand. From the beginning up to the completion of the assignment, students keep on working collaboratively taking into account each one's illuminating ideas towards the completion of the task, either related to searching for documentation, reading, explaining the chosen material and relating the material to the assignment they had to complete. At the same time, they also clarify any misunderstanding that results from the group discussion and keep on encouraging one another to work hard towards the

successful completion of the task. In this regard, I find that despite the language barriers that might be apparent in the official design of the exercise and probably in writing up the final report, at least collaboration and peer support (though time consuming) prove to be other important resources available to students to compensate for the language barriers, improve on the content and thereby foster learning.

Similarly, in article three, the detailed analysis of a peer mentoring session through a selected video recorded episode exemplified the potential of collaboration to compensate for language and content barriers, to support one another and foster learning outside the official classroom. In paper 3, just as in papers 1 and 2 but to different extent, the sociocultural belief which holds that knowledge is jointly achieved through interaction and scaffolding practices (Vygotsky, 1978) was most apparent. Overall, the compensatory role that peer mediation and mentorship systems play in learning emanate from working as a team motivated towards attaining a shared and common goal, that is, successfully completing an assignment, negotiating meaning of a difficult or hard to understand content, understanding different perspectives on a given topic etc. Varied research studies show that learning improves when students work in groups. In her compilation of research on group work in education, Hammar Chiriac (2011) mentions that interaction, discussion and ability to share information might account for the reasons why learning improves when students work in groups rather than individually. On the other hand, research studies also highlight some issues that should be taken into consideration for group work to be effective and beneficial. For example, issues pertaining to group composition and participation have to be taken care of in order to reduce free riders and social loafing (Banda, 2007; Hammar Chiriac, 2011).

Instructional language, coping strategies and quality learning

Considering the strategies used to cope with the use of foreign instructional languages in higher education in Rwanda, it could be argued that the use of a foreign language for teaching and learning in the context of the present thesis

leads to overload and is likely to affect the quality of learning that takes place in a number of ways. Studies two and four highlighted peer mentoring as a typical Rwandan construct initiated by students themselves to help one another cope with content learning. Basically, mentorship sessions consist in students gathering around a more knowledgeable peer who explains or repeats the course content or an assignment in Kinyarwanda. Looking at mentorship practices through the sociocultural lenses, they could be of high academic value since a group of different levels of skills and knowledge interact to help one another gain more knowledge and understanding. Nevertheless, without undermining the academic merit of mentorship practices, I contend that they prove to be double work and take off time that could be used for additional readings to gain more knowledge. In a way, almost all the time is spent on course notes, thereby reducing opportunities to consult other sources to develop and increase students' knowledge. Also, some students rely on the availability and willingness of the more knowledgeable students to share their expertise in a given content. Therefore, in my view, it is worth wondering what would happen if such voluntary and valuable peer mentoring sessions are not available. In addition, through "translation" of course notes and assignments, some important aspects and information in terms of quality is lost in the process of translating the material, thereby affecting the quality of instruction and output and raising questions on the empowerment aspect. Thus, providing the linguistic tools needed to cope and reduce the translation activity is required and might be achieved through collaboration between language and content teachers. In addition, ways of uplifting students' command of English in relation to their field of study (Rusanganwa, 2012), unlike general English which could be taken as a waste of time, could be devised. Devising the field specific English course would require close collaboration between language teachers and content teachers where each would bring in their expertise for the benefit of the students and the whole academic community.

Reflection on the research process

This thesis addresses the problem of using a foreign instructional language for content learning, in a context where a disjunction exists between the formal lecture language and the language of out of class communication, with massive enrolment in higher education. To my knowledge, very limited research has been previously undertaken, with the aim to increase and expand on knowledge related to the use of instructional languages for content learning in the Rwandan context (Rusanganwa, 2012). In addition, as mentioned earlier, this thesis spans a period of dual French English medium of instruction as well as English only medium. Furthermore, students are rarely if ever consulted when choosing a language in education policy. Yet, they are among the main stakeholders in the educational endeavour where such policies are implemented. By taking a students' perspective as emphasised all through the present study, this thesis contributes to the existing knowledge on the use of a foreign language for content learning in a number of ways.

The present thesis gives a voice to the students to express their views regarding the daily implementation of the language in education policy in Rwandan higher education. In this respect, the study highlights varied challenges posed by the use of a foreign instructional language for content learning in Rwandan higher education. At the same time though, the study points out students' ways of coping in order to successfully complete their academic tasks. Additionally, this study presents the specificity of capturing the issues amid the flux of language in education policy change, through a student's voice.

By investigating a 'less explored' context on a topic which is of international relevance, this thesis contributes both nationally and internationally. On the national level, this work could be a starting point to open up the debate and carry out large scale studies that could contribute to the growth of a literature base and empirical studies carried out in the Rwandan context regarding the use of English for content learning in higher education. Basically, the present research adds to the existing research by showing that, in the Rwandan context, the global problem posed by English medium of instruction is compensated by

the use of other languages through code switching and translanguaging. The Rwandan construct of voluntary peer tutoring seems to be a new contribution to the existing studies on medium of instruction in higher education. By using multiple data sources, the present thesis contributes to provide a more comprehensive picture on the use of foreign languages to learn content subjects in higher education in Rwanda. On the international level, the discussion in this thesis adds to the ongoing debate on the use of English as a medium of instruction in higher education in Africa and globally. Also, I assume that the study will be useful in other multilingual contexts where English is a foreign language to the learners, and at the same time used as an instructional language for content learning. The study entails some weaknesses though. One of the possible weaknesses in the present study could relate to the size of the sample population, which comes from social sciences in one University in Rwanda. Had I extended the sample population to other fields of study such as medicine or science and to other institutions of higher learning in Rwanda, I could have identified a rich variety of reflections, experiences and ways of coping. Also, concerning the audio and video recorded data in studies one, two and three, the existence of a recording device and the presence of ‘outsiders’ might have altered the way students could naturally engage in the discussion. Finally, being a member of the researched community could have, to some extent, unwillingly influenced my interpretations and discussions in this thesis.

Future research

For the scope and focus of the present thesis, a students’ perspective on using a foreign language for content learning was investigated in a detailed manner. Nevertheless, in order to get a comprehensive picture of how the language of instruction policy is implemented in real learning situations, I believe that it could be of high value to consider a teacher’s perspective as well. In one quote, a student reports that the teacher reads the notes in English and explains in Kinyarwanda. This suggests that it could be interesting to study the lecturers’

own coping strategies when it comes to teaching in a foreign language. What can teachers learn from students' coping strategies?

Since this study was mainly based on findings from first years of the University training, it could also be of importance to study what happens as students go further and higher into their courses and programmes. In this regard, a longitudinal study could be interesting to gain knowledge on strategies used, developed and dropped as learners make progress in their studies; and variation of ways of coping depending on level and field of study.

In an interview to University World News in July 2012, the Vice Rector Academic of KIST attributed higher education students' English problems to "not having enough primary and secondary school teachers with English fluency" (Green et al., p. 2). In this respect, research at lower levels of education could be important to address this knowledge gap and eventually inform support mechanisms and policy makers based on empirical results.

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Appendices

Appendix1. Interview guide for university students: Study two

Theme: Coping with foreign instructional languages in higher education

Q1. Tell me briefly what is your experience with using English or French for your studies at university? Does it happen that you do not understand a course because you have problems with the language?

Q2. When you meet problems, how do you try to solve them?

Q3. When you are a student you have to understand and successfully pass your courses, how do you manage to understand? How do you use different languages that you know to help you to understand your courses? Tell me your experience so far as a university student.

Q4. Tell me briefly about the use of languages during group discussion. Do you keep the discussion to the language of the course or sometimes shift to another language? Why?

Q5. In which language do the other students help you? How do you appreciate the explanation in other languages? Can you explain to me why while you were completing your practical work you mostly used Kinyarwanda while the practical work was in English?

Q6. How do you handle reading academic material and organizing the information you need?

Q7. Is there any other strategy you use in order to increase the understanding of your courses? Please elaborate.

Q8. When it comes evaluation, when you write examinations for example, does language cause any problems? In understanding questions or writing answers?

Q9. Do you have any other comment you would like to make?

Thank you!

Appendix2. Interview guide for university students: Study four.

Theme: Higher education students' reflection on learning in times of language shift

Q1: How do you experience studying all your courses through the medium of English? Do you enjoy the course material; do you have any problem in understanding the course material or following the lecturer when he explains? Feel at ease and tell me what you have experienced so far.

Q2: How do you handle taking lecture notes on your own? Do you manage on your own, do you meet any problem, do you get any support? Tell me more.

Q3: What about your participation in classroom discussion? Do you participate actively in class discussions or, how do you appreciate your participation? Please elaborate.

Q4: During your study time, how do you go about reading and extracting required information from prescribed books?

Q5: If you have problems in extracting information from books, what do you do? When you are required to present the information you extract from books, how do you proceed. Please elaborate.

Q6: If you have problems in expressing yourself in English, can't you use another language in your presentation if you know the material?

Q7: Do you get any support from your lecturers and colleagues when you meet problems? How do you appreciate the support? Please elaborate

Q8: What is your overall reflection about the use of English only as a medium of instruction? Would you like it to be changed?

Q9: Do you have any other comment you would like to make regarding the use of English as a medium of instruction in all your courses?

Thank you for your contribution!

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