

Information Exchange within the Social Networks of World Teachers in Uganda:  
*An explorative mixed method study of information exchange, gender and cultural identity  
within the social networks of Ugandan teachers*



**edukans**



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### Abstract

Edukans aims to offer quality education in Uganda, by investing in the professional development of teachers through the World Teacher Program (WTP). Social networks and information exchange play an important role in the professional development of teachers. Therefore, this study outlined the social networks of Ugandan teachers and the information exchange within these networks, in order to improve the WTP. Mixed methods were used to collect data. The sample consisted of 24 Ugandan teachers who participated in the WTP. Results of this study showed that the social networks are of great importance in the professional development of the teachers. However, Edukans and the Ugandan teachers have conflicting interests regarding the WTP. In sum, the WTP is contributing to quality education; the implications focus merely on the practical implementation of the program. Besides, this study underlined the need for Edukans to examine how the conflicting interests can be integrated in the WTP.

*Keywords:* social networks, information exchange, Uganda

### Information Exchange within the Social Networks of World Teachers in Uganda

Education is a fundamental human right which promotes individual freedom and empowerment and yields important development benefits (UNESCO, 2013a). Even though the right to primary education is recognized by 193 countries in the world (United Nations [UN], 1989), millions of children and adults remain deprived of educational opportunities (UNESCO, 2013a). Edukans, a professional educational development organization, aims to 'offer quality education to underprivileged children and adolescents in developing countries' (Edukans, 2012a). Unique to Edukans are the social ties between the Western world (the Netherlands) and Third World countries. This cooperation aspect is visible in the Edukans exchange programs for students, teachers and trainers, which creates opportunities for mutual understanding and mutual learning (Edukans, 2012a). One such exchange program is the World Teacher Program (WTP). During the WTP, teachers and other employees in the Dutch educational system travel to developing countries in order to study the local educational system and situation. Together with local colleagues and partners of Edukans they develop ideas to improve the education in order to accomplish quality education (Edukans, 2012b).

In 2009, the WTP started in Uganda. Since then, no research has been done to evaluate the design, implementation and outcomes of the WTP in Uganda. Nevertheless, in 2012, two studies have been done in Kenya as well as Malawi. Results of both studies showed that overall the WTP is a highly valued, desired and appreciated program which contributes to the quality of education (Heijker, 2012; Otten, 2012; Van Monsjou & Metsemakers, 2012). It is important to study how the WTP contributes to quality education in Uganda as well.

Crucial to the provision of quality education are trained and motivated teachers (Edukans, 2012a). Edukans (2012a) believes teachers have significant influence on the nature, extent and rate of the learning of students. They make a difference by playing a key role in shaping the lives and futures of their learners. According to UNESCO (2000), teachers affect quality education since student achievement depends largely on the teacher's knowledge of the subject matter and the ability to use that knowledge to help learners learn. Therefore it is important that teachers engage in professional learning, through investing in their personal development and growth (Beekwilder & Klarenbeek, 2012). They need to constantly deepen and renew their knowledge and skills (Edukans, 2012a). Korthagen (2004) stresses the importance for teachers to be intrinsic motivated in order to keep developing. He developed the onion-model in which six layers reflect six levels of change within a teacher: mission, identity, beliefs, competencies, behavior and environment. Every level forms a starting point for a perspective on how teachers function. Every perspective will therefore have another

view on what the essential qualities of a good teacher are. Professional development should take place within these levels, which interact with one another (Beekwilder & Klarenbeek, 2012). Environment and behavior are layers that receive the most attention of teachers, because those layers are directly observable. The focus is at first mostly on problems in the classroom and how the teacher uses his competencies to cope with those problems (Korthagen, 2004). According to Edukans (2012a), the identity and mission of teachers should be taken into account on a more profound level, besides deepening and strengthening the level of competencies. Teachers need to learn how to get in touch with their core qualities, which will lead to a deeper involvement in their learning process (Korthagen, 2004).

### **Professional development through social networks**

Recently, traditional professional development is being criticized. Teachers are considered passive receivers of prescriptive development programs, without the possibility to integrate these new programs into their classroom. This traditional way of development is e.g. said to have failed (Lieberman, 2000). Social networks, on the other hand, attract teachers and actively involve them in their professional development. Through social networks their learning processes improve, just as the learning processes of their students (Lieberman, 2000). The shift away from the traditional and individualistic towards more relational understandings, began in the second half of the 20<sup>th</sup> century. Since then, the importance of social relationships for acquiring information became clear (Borgatti & Cross, 2003). Regular social relationships form social networks (Haythornthwaite, 1996). These social networks are set up around the interests and needs of their participants (Lieberman, 2000). For teachers, this means a focus on individual and collective development as educators (Lieberman, 2000).

According to Ng and Chow (2005) there are many ways in which social networks differ from each other. Nevertheless, all social networks commonly consist of patterns of resource exchange between actors (Haythornthwaite, 1996). According to Haythornthwaite (1996), these resources can be of many types, such as goods, services, social support, influence and information. The same applies to actors: not only individuals are considered actors; groups and organizations can be considered actors as well. An explanation as to why actors become engaged in social networks is that it produces profit (Lin, 1999). This profit can be seen in many ways. Lin (1999) offers several explanations why embedded resources in social networks will enhance the outcomes of actions. First of all, it facilitates the flow of information. Just as roads structure the flow of resources among cities, social relationships structure the flow of information among actors (Haythornthwaite, 1996). Secondly, through these social ties, participants become able to influence actors who carry valued resources or

exercise great power, and play a critical role in decisions involving the participant. Thirdly, through social relationships, individuals are being assured and reinforced of one's worthiness as an individual. Taken together, these explanations form social capital: investment in social relationships with expected returns (Lin, 1999).

Consequently, adapting to the social networks and needs of teachers in the WTP, would be a way for Edukans to make the WTP more durable. Durability is according to Otten (2012) one limitation of the program. Although the WTP contributes to the quality of education, there are a few components that risk to create dependency of the African teachers on the Dutch teachers (Otten, 2012; Van Monsjou & Metsemakers, 2012). Indicators of this risk are, firstly that, it is difficult for the teachers to apply their acquired knowledge and skills on their own. Malawian teachers state that the WTP only is sustainable when the Dutch teachers keep coming to their schools (Otten, 2012). Secondly, Malawian teachers need time in order to learn. Repetition is important so as to not fall back in old customs (Blakemore & Frith, 2005).

Because of the long distance and the additional costs, it is not possible for the WTP to visit the African countries more often, in order to adapt to the stated needs of the Malawian teachers. Therefore, it would be more cost effective to adapt to the social networks of teachers by means of modern technology. Instant communication is e.g. possible through internet. The importance of increasing the access to internet, is acknowledged by governments and international agencies (Madon, 2000). Therefore, information infrastructure broadens and, specifically, internet is being deployed in developing countries in the teaching and learning (Madon, 2000). The Imfundo program, a program of the Department for International Development (DFID) of the British Government, is an example of a program that advances the use of information and communication technologies in Sub-Saharan African schools (Ansell, 2005). Even though the internet access is increasing, a hindrance in Africa is that in practice still less than one in a thousand people have internet access (DFID, 2000).

### **Aims<sup>1</sup>**

**General aim.** The general aim of this study is to map the social networks of Ugandan teachers as well as to gain insight into the information exchange within these social networks. This is important, since the WTP focuses on improving quality education, on which teachers have significant influence. For teachers to reach and maintain excellence, they need to engage in professional learning whereby several layers of change should be taken into account, in

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<sup>1</sup> Written by Bibo and Bronkhorst, whereby Bibo focused on gender while Bronkhorst focused on cultural identity.

order to deepen their development (Korthagen, 2004). The results of the present study will be, first of all, interesting to Edukans because information exchange is crucial in most of Edukans' programs and projects. Secondly, it will give insight into how Edukans can adapt to the social networks of the teachers, since it might be effective to make a shift towards using modern technology. Overall, it will lead to indications to make the WTP more durable, which is according to Otten (2012) one limitation of the program. All in all, two specific aims can be identified.

**First aim.** The first aim is to gain insight into the social networks of teachers from an ego-network perspective. The social network of each individual teacher can be identified as an ego-network. At the centre of the network is the teacher: the ego. The ego is connected to other nodes (persons), which are called 'alters' (Borgatti, 2012). In order to identify relationships between the ego and the alters, a name generator can be used, which is a set of questions to recall persons that are important to the ego (Chamberlain, 2006). However, it is important to ask how Ugandan teachers perceive social networks, since this might differ from this ego-perspective, due to cultural differences. It is expected that the perception of the teachers corresponds to the collectivistic character of African cultures (Blunt & Jones, 1992 in: Beugré & Offodile, 2001). Besides mapping the social networks of the teachers, additional information should be asked, such as how they perceive their network and how it relates to their professional development in order to create quality education.

One characteristic of a social network is the network density, an index of how many connections are within a social network (Hanneman & Riddle, 2005). A high density means that more people within the social network are interconnected and the network is more closed. Different target groups benefit from different network densities. A high density has benefits for the privileged social class and mothers (Bourdieu, 1986; Coleman, 1990). For the privileged social class, their resources are preserved and reproduced, while a mother has a guarantee for the security and safety of her children. But when one needs resources that are not in one's assets, it is more useful to have a more diverse social network in a way that the network density is lower (Lin, 1999). It would therefore be in the interest of Ugandan teachers to have a more open social network, since this would contribute to their resources.

Since the access to internet is increasing in Africa, internet might be easily accessible among the Ugandan teachers (Madon, 2000). It is expected that, when internet is easily accessible, the social network of teachers will be more diverse and cover a wider range.

**Second aim.** The second aim of the present study is to gain insight into the information exchange within these social networks. This aim consists of three sub-aims: (2.1)

to learn what sources teachers use to gain information regarding education; (2.2) to examine what information is being exchanged, considering Korthagen's six levels of change; (2.3) to determine the role of Edukans in the exchange of information.

Since information exchange plays an important role in professional development (Lieberman, 2000; Lin, 1999), it should be studied how and what information is being exchanged. In order to gain insight into the flow of information exchange, at first should be explored what sources teachers use in order to gain information regarding education. Since the internet is an important information source for teaching and learning and the access to internet is increasing in Africa (Madon, 2000), it is expected that the teachers will name the internet as important source of information.

Furthermore, the content of the information being exchanged should be clarified, which can be related to Korthagen's six levels of change (2004). It is expected that on some levels more information will be exchanged than on others. For instance, Korthagen (2004) notes that environment and behavior often get more attention of teachers, because of the direct observable character of these levels.

Finally, the role of Edukans in this information exchange will be studied, in order to examine how Edukans contributes to the professional development of teachers and improves quality education. Since research in Kenya and Malawi showed that Edukans is highly appreciated and that the WTP contributed to the quality of education (Heijker, 2012; Otten, 2012; Van Monsjou & Metsemakers, 2012), this optimistic view is expected to be found in Uganda as well.

However, besides measuring information flows among network nodes, it is important to study relational characteristics that underlie information seeking and sharing (Borgatti & Cross, 2003). Gender and cultural identity are such relational characteristics that possibly underlie information seeking and sharing (Beugré & Offodile, 2001; Katungi, Edmeades, & Smale, 2008). The third and fourth aim will therefore regard gender and cultural identity.

**Third aim.** The third aim of this study is to gain insight into how gender relates to social networks of Ugandan teachers, since gender may have far-reaching influence on social networks and information exchange (Katungi, Edmeades, & Smale, 2008). Gender can be perceived in many different ways. Even though the term 'gender' is widely used, there is no common understanding of its meaning (Acker, 1992). Gender could e.g. be theorized as the patterning of difference and domination through distinctions between women and men; it is a basic principle of social structure and cultural interpretation (Acker, 1992). Scott (1986) defines gender as "an integral connection between two propositions; gender is a constitutive

element of social relationships based on perceived differences between the sexes, and gender is a primary way of signifying relationships of power” (p. 1067). These different views on gender are recognized by Meyerson and Kolb (2000), who developed a framework with four perspectives towards gender. In this study gender will be viewed from the fourth perspective, in which sex differences are viewed as being active, ongoing social constructions (Meyerson & Kolb, 2000). This is important since this study does not primarily focus on women, but on how gender takes on different forms, depending on race and other aspects of identity. Therefore, in this study gender is viewed from the fourth perspective, since it is the only approach which builds from a more complex and comprehensive perspective on gender and not purely emphasizes women. However, more important is to examine from which perspective Ugandan teachers perceive gender.

Therefore, the first sub aim is to gain insight into how Ugandan teachers understand gender. It is expected that Ugandan teachers will understand gender according to the first perspective as described by Meyerson and Kolb (2000); liberal individualism. In this perspective, gender is synonymous with biological sex and the differences between men and women are seen as the result of sex-role socialization, in which woman lack certain skills or attributes. It is expected that the participants view gender from this perspective, since in many African countries socialization is based on traditional gender roles (Strebel et al., 2006).

The second sub aim is to gain insight into how Ugandan teachers view gender in education. When it comes to education, there is a struggle for gender equality in Africa (Ampovo, Beoku-Betts, Njambi, & Osirim, 2004; Kevane, 2004). A study done by Gaidzanwa in Zimbabwe e.g., shows that women’s education was designed in order to prepare women for being housewives and subsistence farmers (as cited in Ampovo et al., 2004). Even when women are in academic positions, they are mostly concentrated in middle- or lower-level academic positions. Programs have been designed in an effort to redress gender inequity in African higher education, but studies in Uganda suggest there is resistance and resentment towards these programs (Ampovo et al., 2004). According to Ampovo et al. (2004) in Uganda it is thought that women are intellectually less capable than men. This gender inequality in education may influence the building of social networks, since education increases social capital as well as the likelihood of acquiring information from formal sources (Katungi, Edmeades, & Smale, 2008). Therefore, when it comes to social networks in Uganda, men and women have different access to certain resources, which may have far-reaching influence on social networks and information exchange (Katungi, Edmeades, & Smale, 2008). Hence, it is important to gain insight into how Ugandan teachers view gender



in education. It is expected that, since many African countries have traditional gender roles (Mirembe & Davies, 2001; Strebel et al., 2006), Ugandan teachers think of education as in which mostly males and boys should be involved.

The third sub-aim considering gender is to explore how Ugandan teachers perceive gender relating to social networks and information exchange. Gender influences, likewise education, the probability of an useful social network. According to Huffman and Torres (2002), the usefulness of one's personal contacts as a source of information is conditional on his or her gender. There are several differences in the social networks of women compared to men. E.g., Igarashi, Takai and Yoshida (2005) found that women tend to have social networks that are more stable than men's. Furthermore, women's social networks are more likely to be based on personal and emotional communication while men prefer task-oriented social networks (Karweit & Hansell, 1983). Besides, men are more likely to have social networks in order to gain and maintain social position (Tannen, 1992). Altogether, scientific research suggests that social networks of men differ from those of women (Huffman & Torres, 2002; Igarashi, Takai, & Yoshida, 2005). Therefore, this study aims to explore how Ugandan teachers perceive gender relating to social networks and information exchange. It is expected that male teachers mostly relate to males and female teachers mostly relate to females. Furthermore, it is expected that the information which is being exchanged differs between males and females, based on the traditional gender roles. This is important for Edukans to know, since it may influence the way the WTP can be adjusted to the social networks of the teachers.

**Fourth aim.** The fourth aim of this study is to gain insight into how cultural identity relates to social networks. Cultural identity is, like gender, a relational characteristic that possibly underlies information seeking and sharing. Therefore it is of importance to study cultural identity, because it might be an interesting factor for Edukans to take into account when looking for ways to adapt to the social network of teachers. Since there is a great diversity in cultural identity, this diversity might reflect in social networks (Beugré & Offodile, 2001; Edel, 1965).

Before gaining insight into cultural identity, it is of importance to outline the basic sociologic terms of cultural identity (Bhugra & Becker, 2005). Therefore, cultural identity foremost will be outlined conceptually. Culture consists of the beliefs and value systems of a society. The learning and propagating of these beliefs and value systems takes place through generations. Culture consists also of the features that people share. These shared features are creating a bond of people into a community. One's perceptions of the self, form identity

(Bhugra & Becker, 2005). These perceptions change while people develop themselves at a personal or social level, therefore identity can be seen as dynamic.

When defining cultural identity, different emphases can be placed. Triandis (1989) focuses more on shared geographical location and language as the basis of culture, while Sussman (2000) notes that cultural identity often can be confused with national identity (i.e., 'I am Ugandan' or 'I am Dutch'). Cultural identity rather has to be seen as the psychological approach to national identity, as it describes the cultural self in structure, evaluation and content. According to Segall, Dasen, Berry and Poortinga (1999) one's national identity is essential to one's identity, because like cultural identity, it is part of the beliefs people have about themselves. These beliefs are called self-schemes. Self-schemes include both personal and collective attributes about the self. The personal attributes about the self include for instance traits or characteristics, while the collective attributes about the self derive from the membership of social groups, like social groups formed around religion or culture (Sussman, 2000). While cultural identity consists of various elements like rites of passage, food and leisure activities (Bughra, 2004), the main points of interest of this research will focus on the tribal and religious background of Ugandan teachers, being part of their cultural identity.

Uganda has a great diversity in religion. The Uganda Bureau of Statistics (UBOS, 2002) states that religion is the belief in supernatural powers. The shared devotional object and accompanying behavioral code form a frame of reference, by which persons can relate to their group and the cosmos. In 2002, which is the most recent official census, the Ugandan population was classified into nine different religious beliefs. Most noted religious beliefs are a division of Christian faith. In total, 84.2% of the Ugandan population belongs to the Christian faith, including Catholics (42%) and Anglicans (37%). Twelve percent of the Ugandan population belongs to Muslims (UBOS, 2002). Religious rituals and beliefs are essential to one's cultural identity, because it preserves values within the community, and cultivates a sense of belonging (Bughra, 2004). In Uganda, religion is very influential in people's lives, as well as in the public sphere (Sadgrove, 2007). One's religious domination therefore possibly reflects in the social networks and information exchange of Ugandan teachers. Specifically, since regular churchgoers report larger social networks because of their churchgoing, this is conceivably noticeable in the social networks and information exchange (Ellison & George, 1994).

Besides the variety in religious backgrounds, Uganda deals with a variety in tribal backgrounds (Beugré & Offodile, 2001; Edel, 1965). These different tribes vary in language, way of life, religion and rites. Sub-Saharan Africa is known for the vast loyalty towards

tribes. Before European colonization, the many tribes in African countries used to be hostile towards each other (Beugré & Offodile, 2001). After the colonization, many expressions of a sense of African identity were noticeable, because of the shared experience under colonialism and a shared goal of freedom and dignity in the modern world. For instance, African intellectuals searched for common African values and worldviews, in order to create bonding within the African cultures (Edel, 1965). But nowadays Sub-Saharan African people still think more in terms of being part of a tribe, rather than being part of a nation (Beugré & Offodile, 2001). Takyi-Asiedu (1993) remarks that there is exceptional tribal loyalty in Sub-Saharan Africa. Because of the obligation one has regarding their relatives or tribe, there is from a Western point of view a perception of nepotism or favoritism (Takyi-Asiedu, 1993; Beugré (as cited in Beugré & Offodile, 2001)). This preference for one's own tribe will possibly reflect in the social network and information exchange of Ugandan teachers. In the districts of Kumi and Soroti, the two main tribes are the Iteso and the Kumam (Uganda Bureau of Statistics, 2002). In 2002, the Ugandan population consisted of 6.7% Iteso and less than 1% Kumam.

Though there is a great variety in the characteristics of different tribes, common characteristics of African culture can be stated. These common characteristics should be taken into account, besides the variety of characteristics when looking at cultural identity in relationship to the social networks and information exchange of Ugandan teachers. Blunt and Jones (1992) discuss the most prominent characteristics that underlie African culture, though it is impossible to make a comprehensive list of these cultural patterns. These most prominent characteristics include collectivism, the importance of the extended family, respect for elders and respect to power and authority. It is expected that these characteristics are also elements of the various cultural identities in Uganda. Since cultural identity is an important relational characteristic that underlies information seeking within social networks, this study aims to gain insight into the way cultural identity relates to the social networks of Ugandan teachers. Because cultural identity is dynamic and personal, social networks can be mapped by interviewing teachers in order to see how cultural identity relates to their networks. Since Uganda has a variance of tribes and religions, it is interesting to see how people perceive their cultural identity.

Overall, the aim of this specific topic is to gain insight into how cultural identity influences social networks, by examining how Ugandan teachers perceive their cultural identity. It is expected that because of the vast loyalty towards their own tribe, Ugandan teachers prefer people of their own tribe in their social network and information exchange and

will consider themselves more of a person belonging to their tribe, then belonging to Uganda (Takyi-Asiedu, 1993; Beugré (as cited in Beugré & Offodile, 2001)). It is also expected that, since regularly going to church enlarges social networks and religion is at large extend represented as well as very influential in Uganda, the religious background of the Ugandan teachers will be represented more in their social network and information exchange, than other religious backgrounds (Ellison & George, 1994; Sadgrove, 2007; UBOS, 2002).

## **Method<sup>2</sup>**

### **Multi Method Approach**

The present study had an explorative and descriptive nature and was carried out in Eastern Uganda, in the Teso region. The data were collected at the same point in time, which makes it cross-sectional (Borgatti & Cross, 2003). Most studies concerning social networks predominantly use quantitative methods (Hendrickson, Rosen, & Kelly Aune, 2011; Lischka, Lind, & Linden, 2009). However, according to Chamberlain (2006) the combination of quantitative social network analysis and qualitative interviewing offers many advantages, such as the ability to construct rich details of the social networks, to explore complex relationships and compare them. Too, qualitative methods are useable for studying former unexplored topics (Britten, Jones, Murphy, & Stacy, 1995). By doing so, the native's point of view can be grasped, which is according to Malinowski (1922) crucial in understanding man. Therefore in the present study both qualitative and quantitative methods were used, to complement the information and provide a more thorough understanding of the social networks (Martínez, Dimitriadis, Rubia, Gómez, & De la Fuente, 2002). At first, the social network of each individual teacher was mapped through social network analysis. Afterwards, this information was deepened through qualitative interviews, in order to clarify the relationships between the teachers and the alters as well as among the alters (Hanneman & Riddle, 2005). Besides this clarification, the interviews offered insight into how information exchange flows, which information is being exchanged and how gender and cultural identity underlie the exchange of information.

### **Participants**

In order to gain insight into the social networks of Ugandan teachers, six Ugandan primary schools were selected. All schools have participated in the World Teacher Program, namely in the area of respectively Soroti, Kumi and Bukedea. The participants were selected

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<sup>2</sup> Written by Bibo and Bronkhorst.

based on availability, gender and participation in the World Teacher Program, which makes it a convenience sample (Baarda, 2009). In total 24 teachers were interviewed and filled in the ego-network survey, 11 males and 13 females. The males' age differed from 22 to 53,  $M = 40.91$ ,  $SD = 8.30$ , the females' age from 34 to 58,  $M = 41.69$ ,  $SD = 6.13$ . Twenty-three teachers participated in the World Teacher Program; one teacher was involved in the program but has not participated himself. Eight teachers participated for the first time in 2009, three in 2010, seven in 2011, five in 2012 and one will participate in 2013. The years of teaching experience ranged from one to 39 years,  $M = 16.20$ ,  $SD = 8.08$ . Considering cultural identity, 20 teachers were part of the Iteso tribe, three teachers of the Kumam tribe and one teacher of the Bantu tribe. All the teachers spoke English. Ateso was spoken by 23, Kumam by six, Luganda by three and three teachers also spoke other languages. Most teachers were Anglican/Protestant by religion ( $N = 13$ ), six teachers Catholic, one Muslim and four Pentecostal. Most teachers completed university ( $N = 12$ ), nine secondary school, two primary school, and one unknown. Many teachers taught multiple classes and subjects. Of all the teachers, 29% taught first grade, 21% second grade, 21% third grade, 25% fourth grade, 13% fifth grade, 8% sixth grade and 13% seventh grade. The subject English was taught by 58% of the participants, Mathematics by 50%, Social studies by 29%, Science by 29%, Reading and writing by 21% and Religious Education 25%. Besides, 25% taught other subjects than the main subjects.

Since only 6.4% of the Ugandan population belongs to the Iteso tribe, this sample is not representative for the total Ugandan population (Central Intelligence Agency [CIA], 2013). However, when considering religion, the sample corresponds with the Ugandan population: respectively 42% is Catholic and 36% Anglican/Protestant (CIA, 2013). The sex ratio of Ugandan teachers is 41% female against 59% male (UNESCO, 2013b), which is slightly different than the sample of the present study. However it should be mentioned there are no statistics on the gender ratio of teachers participating in the WTP. All in all, since the WTP is mostly implemented in the Teso region, the sample partially represents the total population of Iteso teachers joining the WTP. Therefore caution should be exerted in generalizing the results of this study.

### **Ego network survey**

The survey aimed to provide a representation of the social networks of Ugandan teachers, which is the first aim of the present study. The survey was based on the survey of Hirzalla, De Haan and Ünlüsoy (2011), which aims to map the use of new media and the internet by youth migrants. This survey was validated after a two-step intensive piloting.

Besides, the scale reliability was sufficient (Hirzalla, De Haan, & Ünlüsoy, 2011). Consequently, the reliability and validity of the adjusted survey used in the present study was ensured. The adjusted survey included demographic information, general information about the use of contact devices (telephone and internet) and a name generator. Questions considering demographic information were e.g.: 'What is your tribal background?' To gain information on the use of contact devices, both open and closed questions were asked on how often, where and why participants use the internet or mobile phone. Participants could e.g. choose 'never', 'once a week or less', '2 or 3 times a week', '4 or 5 times a week', 'once a day' or 'more than once a day', when asked about the frequency of using contact devices. Afterwards, the name generator was used to map the social networks of the participants. Participants were asked to name seven persons with whom they exchange information regarding education. Further, information on these seven persons was asked: general information of the contact, like their gender and tribal background; but also information on the relation between the teacher and his contact, e.g.: 'How often do you have contact with Person 1 by (mobile) phone?'. Subsequently, in order to map the network density, the participants were asked whether these seven persons know each other. Spearman's correlation coefficients were computed to examine the relations between characteristics of the participants (e.g. gender, tribal background) and the characteristics of the persons in their social network (e.g. gender, tribal background). Finally, the density of the ego networks was computed by the amount of persons who knew each other divided by the total amount of possible relationships in each ego-network.

### **In-depth interview**

The in-depth interview completed the survey in a way that it sought to provide insight into the nature of, and the information exchange within, the social networks of the participants; this regards the first and second aim. Too, characteristics of the social networks of the participants were explored, which are the third and fourth aim. Moreover, it provided insight into not only the social networks of the participants, but also into the information that is exchanged within these social networks. The research consisted of an explorative cycle, whereby it was possible to make adjustments in between. Before starting the interviews, an introduction was given: (a) introducing the interviewers and explaining the purpose of the study; (b) stressing the importance of their own opinion in order to reduce social desirability; (c) explaining the content of the interview; (d) guaranteeing the anonymity of the participants. To make it possible to be flexible and adapting towards the answers of participants and to increase internal validity, a semi-structured topic list was used. This topic list consisted of

four topics: (1) respondents' view on social networks (e.g., description of a social network, characteristics of their own social network, how their social network contributes to their professional development); (2) respondents' view on information exchange within social networks (e.g., sources of information, content of information being exchanged, role of Edukans in information exchange); (3) respondents' view on gender relating to social networks (e.g., description of gender, general and personal view on gender, role of gender in education, their social networks and information exchange); (4) respondents' view on cultural identity relating to social networks (e.g., description of cultural identity, role of tribal background and religion in their lives, education, social networks and information exchange). At the end of each topic a summary was given by the interviewers, to verify the opinion of the participant and contribute to the reliability of the interview. Besides, during the interview a piece of paper was shown to the participants on which the six levels of change (Korthagen, 2004) were mentioned. The participants were asked to make a top three of the levels which were the most important to them and elaborate on these three.

### **Procedure**

The data were gathered over a period of six weeks in February and March 2013 at six different schools. Every week one school was visited; one day per school. The participants were asked to participate by the head teacher and participated voluntarily. Via informed consent procedure, the participants were recruited and their anonymity was guaranteed. At first the participating teachers were brought together to explain the purpose and procedure of the research. The importance of the participants' opinion and expertise was emphasized, as well as the guarantee of anonymity and their free choice in sharing specific information. The participants were asked to complete the survey individually, which took 30 up to 60 minutes, followed by an one hour in-depth interview. Both researchers maintained the in-depth interviews, to make the interview more reliable. They both asked questions and complemented each other with interview probes. However, both researchers focused on one characteristic which underlies information exchange within the social networks. Bibo focused on gender, while Bronkhorst focused on cultural identity. The interviews were recorded, with permission of the participants. The verbatim transcripts of the interviews were analyzed according to the analyzing method of Baar (2002) and Baarda, De Goede and Teunissen (2005). This method consisted of three analyzing phases: (1) open labeling and encrypting (selecting relevant information, dividing transcripts in fragments and labeling these fragments); (2) arranging, reducing and defining labels in categories (defining covering labels based on content); (3) integrating and relating the categories (in order to answer the aims of

the present study). In order to contribute to the construct validity and reliability of the qualitative analysis: (a) both researchers analyzed the first five interviews together; (b) the researchers collaborated and consulted each other to reach agreement; (c) the labels were coded during each analyzing phase so that each label could be controlled on the original text passage; (d) the formulation of the labels was kept as close to the original quotations of the participants as possible (Baar, 2012). The quantitative data was analyzed by using the statistical software SPSS. The social networks were visualized in NodeXL, a software package for Microsoft Excel 2007/2010 (NodeXL, 2013). In this program descriptive statistical analyses can be carried out on both individual alters as well as relationships among alters. Characteristics of individuals as well as networks in total were studied and visualized. Too, the network density was computed via NodeXL.

### Results<sup>3</sup>

The next section will discuss the major results of the qualitative and quantitative data analysis per objective. For this purpose, the categories which are developed during the analysis of the results will be used and displayed in italics. Quotations of the participants will be used to clarify these categories. Each quotation will end with a code consisting of the participant number and the sex of the participant, in which M stands for male and F stands for female. When needed, more specific information about the participant will be given (e.g., tribal background).

#### Social Networks

The first aim of the present study was to gain insight into the social networks of teachers from an ego-network perspective, since social networks involve teachers in their professional development. By using software package NodeXL the networks of the Ugandan teachers were visualized, as showed in Figure 1, 2, 3 and 4. Moreover the results of the data were analyzed, with the three sub-aims as point of departure.

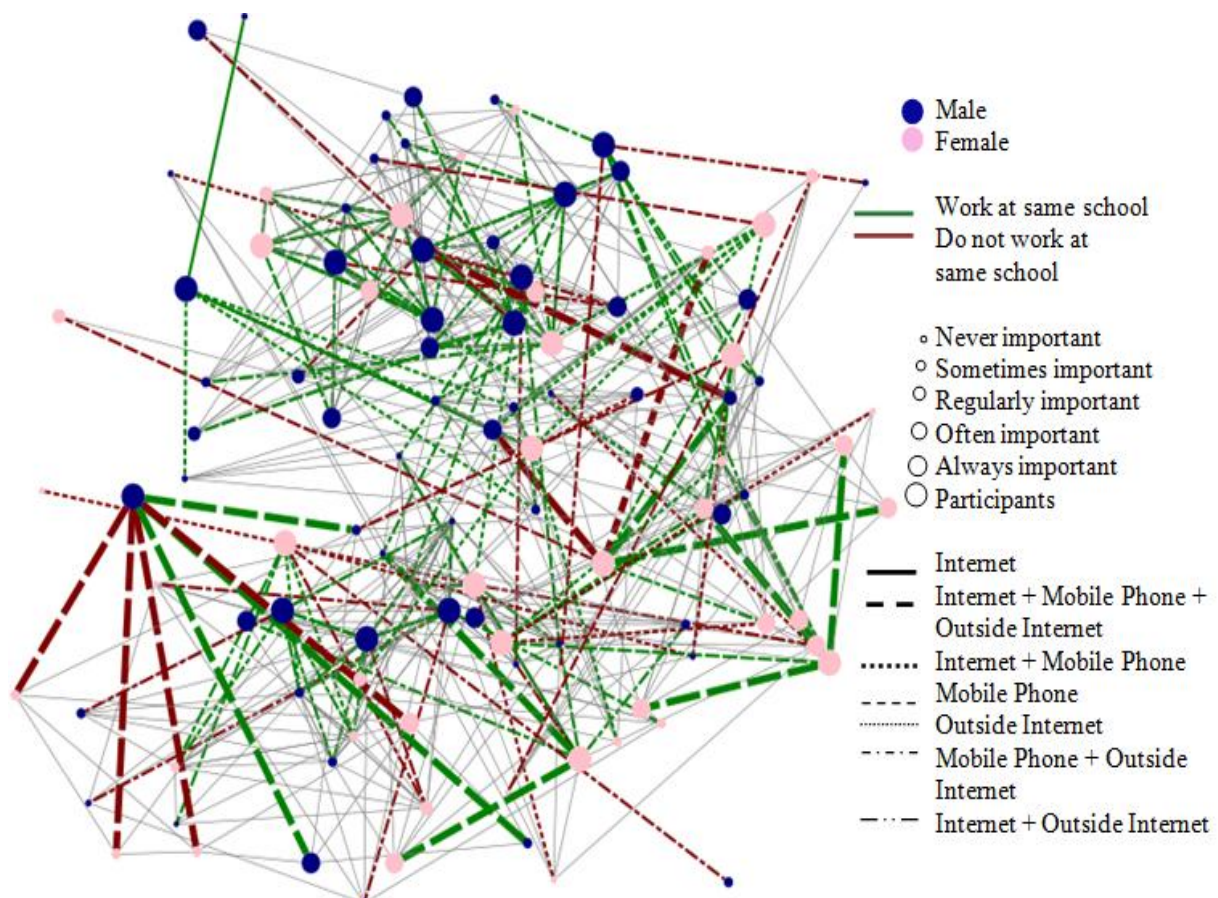
**Social network of Ugandan teachers.** Figure 1 shows the social networks of the participants based on gender, importance of actor in information exchange, ways of communication and whether the actor worked at the same school as the participant. It was expected that, when internet access is easy, the social networks of Ugandan teachers will cover a wider range and show more diversity in people. The male participants had on average five males ( $M = 4.64$ ,  $SD = .43$ ) and two females ( $M = 2.36$ ,  $SD = .43$ ) in their social network.

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<sup>3</sup> Written by Bibo and Bronkhorst, whereby Bibo focused on gender while Bronkhorst focused on cultural identity.



The female participants had on average four males ( $M = 3.77$ ,  $SD = .34$ ) and three females ( $M = 3.23$ ,  $SD = .34$ ) in their social network. There is no significant relation between the sex of



*Figure 1.* Visualization of the social networks of the participants, considering gender, importance of actor in information exchange, ways of communication and whether the actor worked at the same school as the participant.

the participant and the sex of the actors in their networks. The results considering the third aim will elaborate on the relationship between gender and social networks.

When looking at the importance of their social network in information exchange, most participants said their social network is *regularly* ( $N = 9$ ) or *often* ( $N = 8$ ) important. Three participants said their social network is *sometimes* important and four participants said their social network is *always* important in exchanging information regarding education.

Considering the ways of communication, most participants do not contact their social network through the internet ( $N = 20$ ). Only one participant averagely uses the internet to contact his social network *once a month or less*, one participant *a couple times a month*, one participant *once a week* and one participant *a couple times a week*. The mobile phone is used as a way of contacting their social network by 21% *on daily basis*, 30% *a couple times a*

week, 10% once a week, 7% a couple times a month, 10% once a month or less and 21% does not contact their social network by mobile phone. Most participants do not use internet often. The social networks consist mainly of persons working at the same school as the participants ( $M = 5.50$ ,  $SD = .26$ ). This explains the high average network density (0.88), since most persons at the same school know each other. In sum, the participants communicate mostly with both male and female persons at the same school. These persons are important for their information exchange and are contacted mostly by phone and outside the internet. The social network of the average participant considering gender, importance of actor in information exchange, ways of communication and whether the actor worked at the same school as the participant, is visualized in Figure 2.

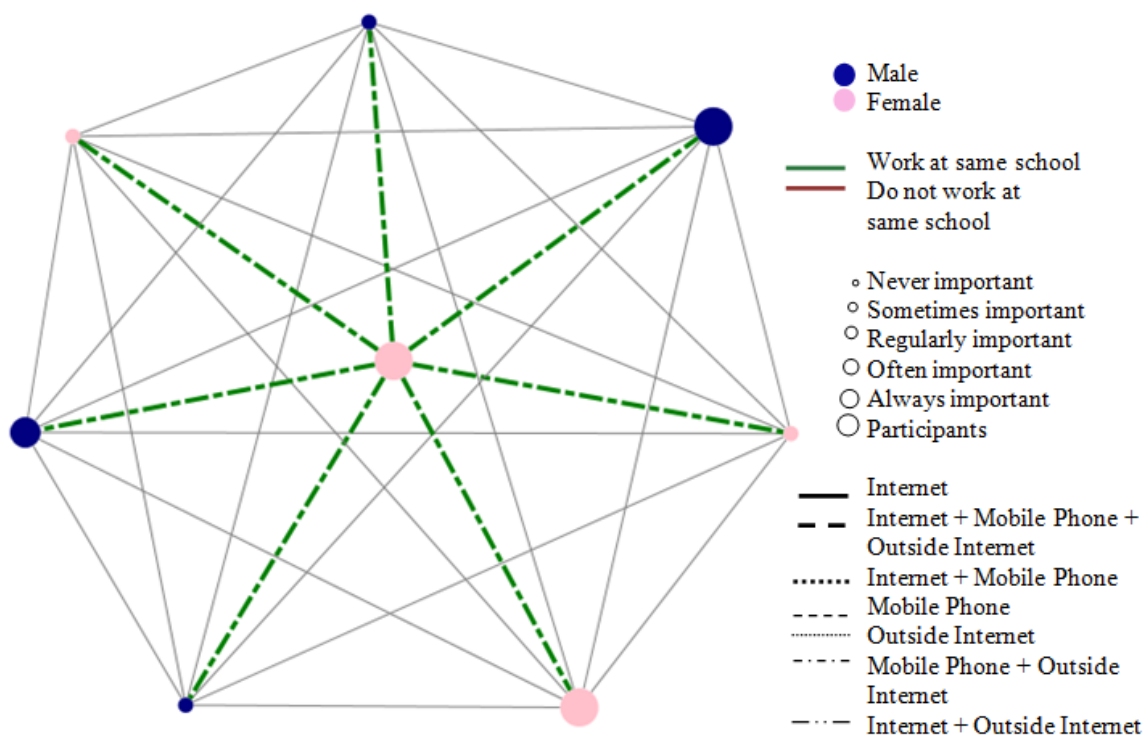


Figure 2. Visualization of the social network of an average participant, considering gender, importance of actor in information exchange, ways of communication and whether the actor worked at the same school as the participant.

Figure 3 shows the social networks of the participants based on tribal background, religion, languages and where the actor lives. Most participants belonged to the Iteso tribe ( $N = 20$ ), three were Kumam and one participant belonged to an *other* tribe. The social networks of Iteso participants included mostly Iteso persons (89%), but also Kumam (2%) and other tribes (9%). The social networks of Kumam participants included Iteso persons (81%), Kumam (10%) and other tribes (10%). The social networks of participants belonging to other

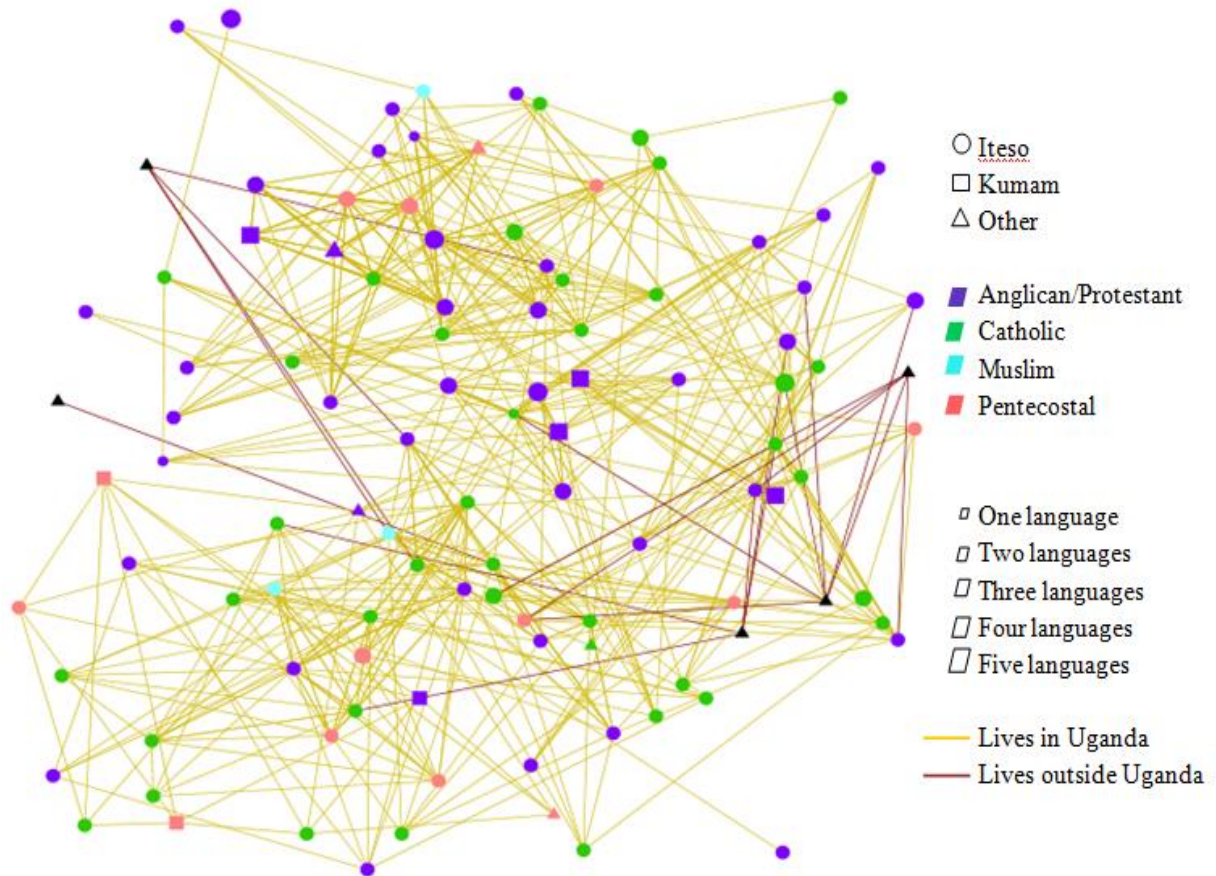


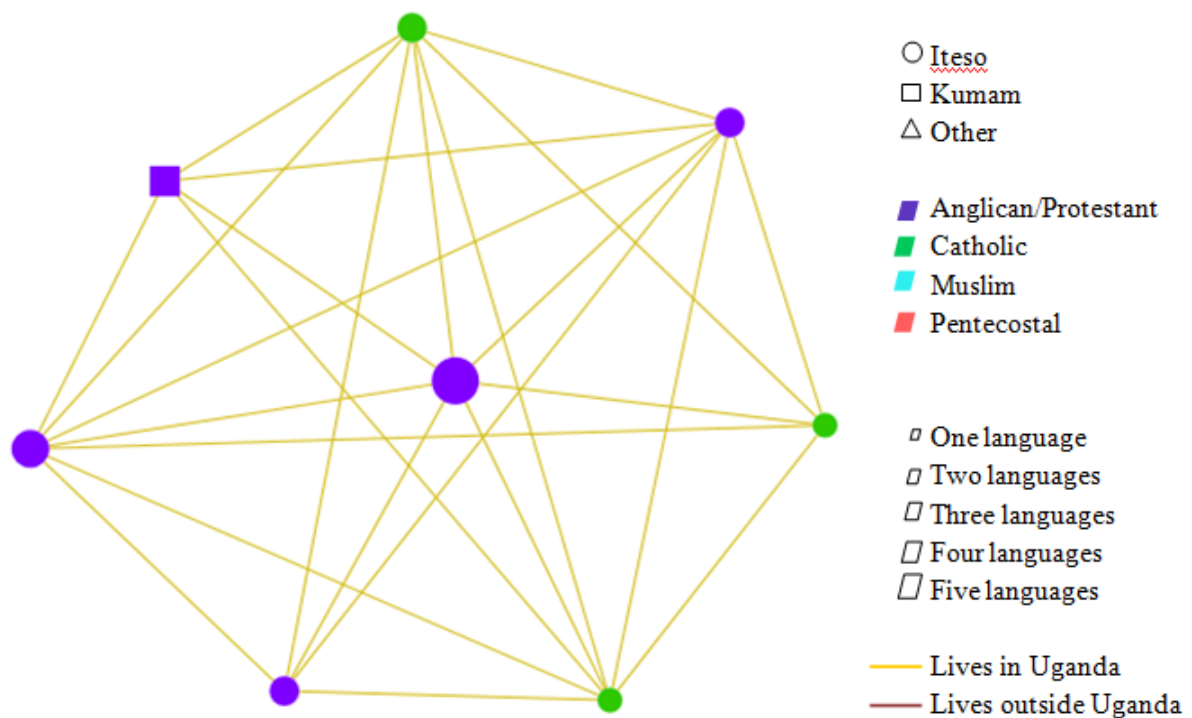
Figure 3. Visualization of the social networks of the participants, considering tribal background, religion, languages and where the actor lives.

tribes than Iteso or Kumam included mostly Iteso persons (86%), some Kumam (14%), but no other tribes. However, there is no significant relation between the tribal background of the participants and the tribal backgrounds of the persons in their social networks. The dominating amount of Iteso among the participants and the persons in their social network is explicable, because the research took place in the Teso region of Uganda where mostly Iteso are represented among the population. The result-section of the fourth aim will elaborate on the relationship between tribal background and social networks.

Most participants were Anglican/Protestant by religion ( $N = 13$ ), six were Catholic, four were Pentecostal and one participant was Muslim. In contrary to the participants, the persons in the social networks were mostly Catholic (42%) or Anglican/Protestant (42%). Next to these religions, 10.71% of the persons in the social networks were Pentecostal, 2% Muslim and 2% belonged to an *other* religion. When looking at the relation between the religion of the participant and the religion of the persons within his social network, no significant relations were found. When comparing these percentages within the participants, it

corresponds to the data of The World Factbook (CIA, 2013). Therefore the data is representative, regarding religion. The result-section of the fourth aim will elaborate on the relationship between religion and social networks.

Considering languages, all participants spoke English and all but one spoke Iteso language. Six participants spoke Kumam, three spoke Luganda and three participants spoke another language. In the social networks, most persons spoke English (92%) and Iteso (89%). Eighteen percent of the persons spoke Kumam, 8% spoke Luganda and 13% spoke another language.



*Figure 4.* Visualization of the social network of an average participant, considering tribal background, religion, languages and where the actor lives.

Finally, most participants have persons in their network who live in their neighborhood (60%). Others live at their home (5%), in their city/town (9%), in the same district (11%), in Uganda (13%) or even outside Uganda (4%). In sum, most persons in the social network are Iteso, living in Uganda. Therefore English and Iteso are the languages generally spoken. Merely all persons are either Catholic or Anglican/Protestant. The social network of the average participant considering tribal background, religion, languages and where the actor lives is visualized in Figure 4.

**How Ugandan teachers understand social network.** In order to determine how the concept of social network was comprehended, the participants were firstly asked to describe a social network. Notable was the emphasis on sharing and communication among the participants. Most participants state that a social network *is about sharing information, or sharing views or ideas* (58%). Also a lot of participants point out that a social network *is about communication or interaction between persons* (42%). Besides it, about 25% emphasize that a social network is *a relationship, or a way of relating*. This is in line with the expectation, that the perception of the teachers regarding social networks corresponds to the collectivistic character of African cultures (Blunt & Jones, 1992 in: Beugré & Offodile, 2001).

**Personal view on own social network.** The personal view on their own social network corresponds to how Ugandan teachers define a social network in general. Half of the participants say their social network *is about sharing ideas, or information, or teaching methods* (50%). What stands out is the openness to a diversity of people. Forty-two percent of the participants tell *to be free to deal or interact with any person*: “Well, I’m free to interact with anybody, that reaches me for anything. As long as I can help. And I’m free to socialize with anybody that comes across my mind.” (7F) Nevertheless, only four participants claim *to have a diversity of people in their social network* (17%). Less diversity in the social network can be clarified by the *lack of communication resources* (13%): “Yeah, that one would be there, but now what is hindering is maybe in the communication. Like in that form, something like internet, some of them had not go to, had not learnt the word computer. So that is one of the hindrances that make us not able to access some of the friends outside. So we have the mobile phones, but in most cases, the most of our social network is in here. So I just come to a friend ...” (6F) The finding that most of the social networks of the Ugandan teachers consist of persons in the nearby community is confirmed by two other participants (8%), who state their social network *is depending on distance*. Specifically, it is said to be challenging to meet with other Ugandan WTP-teachers, because of the distance.

Considering that the social networks of the Ugandan teachers are formed in the nearby distance, one expects that important people in the social network are people who are close to the participants. Consequently, *the head teacher is important* in the social network of the teachers, because the head teacher helps the participant (13%). *Helping* is seen as an elementary component in their social networks (25%). “They are always helpful to me.” (3F) Two participants point out that the instruction to name only seven persons as their social network is a restriction, because it is *involving everybody* (8%). “...you limited it to 7. But it

is actually wider than that. It will actually involve everybody, but you linked it to 7. But actually it involves everybody. Everybody.” (19M) The whole of *the community is a social network* (4%).

**Social network relating to professional development.** When asked how the participants see their social network in relation to their professional development, what stands out is that *sharing helps* (46%). “...In a way that, you see, something that you do alone, may not help. But many heads when they come together, can do something better. So just like I was telling you that in case, there are many methods, but among the many methods you can have the best. So, when you share with a colleague, you can come and say, hey let’s do this one so the learners can get the concept very well.” (6F) Besides the sharing, more positive influences of the social network on the professional development are indicated. The social network contributes to the *improvement of techniques, methods and skills* (33%). Besides, it functions as *a source of information* (17%) as *it gives new ideas* (21%) as well as that participants *learn or gain knowledge* from their social network (21%). Moreover, the social network *enables to be a better teacher* (21%). However, the lack of resources is seen as a shortage to the contribution the social network could make to the professional development. “...I see it is a bit difficult, because we are not exposed a lot to the internet, if a teacher wants to share information with you. So some teachers outside the villages I am not able to reach them and can’t talk to them. And I am not able to use them. So it is limited. ...it is limited because I only have a phone, I don’t have access to the internet. I can’t talk to many people outside. And even the phone, to get useful information it is very expensive.” (4F)

### **Information exchange**

The second aim of the present study was to gain insight into the information exchange that takes place within the social networks of Ugandan teachers.

**Sources of information exchange.** When looking at the surveys, most participants consider *workshops* (79%), *the WTP* (71%) and *books* (63%) as the most important sources of information. *Team meetings* (25%), *formal education* (21%), *colleagues* (21%) and *head teachers* (17%) are considered important by some participants. This is an important finding, since apparently sources like the WTP and books are more important to the teachers than local sources of information. No participant named the *internet, family* and *students* as important sources. Not naming the internet as important source of information contradicts the expectations and hinders the desire of Edukans to increase the use of modern technology in the social networks of teachers. During the interviews, *books* (63%), *workshops* (42%), *colleagues* (33%) and *meetings* (33%) were still named as important sources, however new

sources also came up: *Newspapers* (50%), *telephone* (33%), *radio* (29%) and *television* (29%). Teachers acknowledge the importance of the internet as source of information, but emphasize it is hard to access the internet: "...the problem is that the internet has many things but you cannot access it." (6F) Considering professional development, mostly *further education* (38%), *reading* (38%) and *interacting with persons* (29%) were named.

**Content of information exchange.** Mostly practical information regarding education is being exchanged within the social networks of the teachers. They discuss the *teaching in general* (29%) and *how to help learners* (21%), *how to handle (big) classes* (25%), *how to come out of professional problems* (25%), and they exchange *advice* on how to improve the teaching (29%). Since the six levels of Korthagen are used to identify a good teacher, the participants were asked to make a top three of the six levels and elaborate on these three. It was expected that the levels *behavior* and *environment* would be mentioned the most. This expectation was partly confirmed, since besides naming *behavior* and *environment*, the level of *competencies* was mentioned the most in the top three of the participants (see Figure 5). *Environment* was mentioned 11 times as first most important, four times as second and two times as third most important. *Behavior* was mentioned respectively four, nine and five times as first, second and third most important. *Competencies* was mentioned respectively six, six and eight times as first, second and third most important. *Beliefs* was mentioned respectively two, one and two times as first, second and third most important. *Identity* was mentioned once as first, second and third most important. *Mission* was never mentioned as first most important, three times as second and six times as third most important.

According to the participants, the environment can either disable or enable the teaching: "I can use the environment. Cause when they don't have pencils, I bring them out. They use the environment, they use the floor, they write with their fingers." (22F) Especially the use of the environment in making instructional materials was emphasized: "The environment we have is rich with what we can use for making instructional materials." (10M) Teachers discuss how *behavior of teachers and learners affects the work and interaction* (21%). Many participants agree that *teachers should behave well, since children behave likewise the teachers* (42%): "As a teacher, there are things you should not do, because children learn by doing and they do what we teachers do. They imitate us." (12F) Competencies were thought to be merely *goals set by the teachers* (50%) and on *how to pass the competencies to the learners* (38%): "This one is about how you are able to handle, and how you pass the competencies to the learners." (4F)

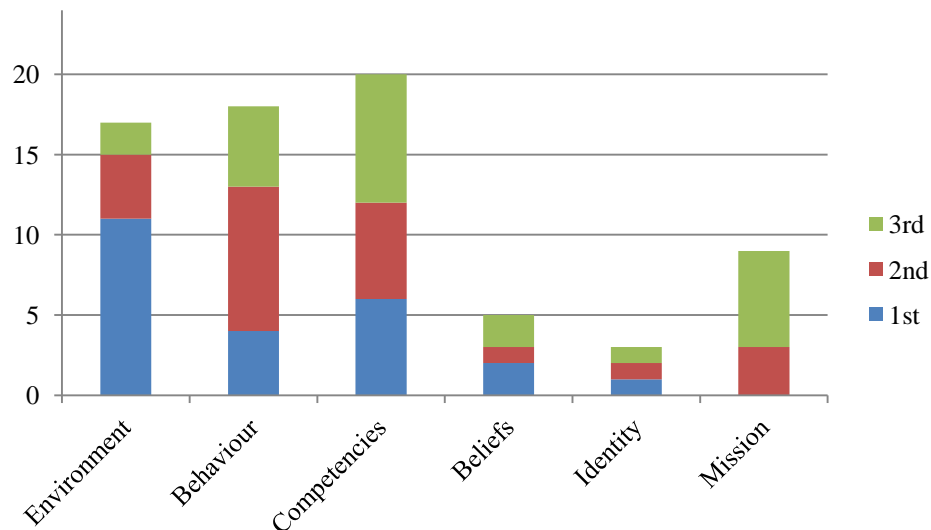


Figure 5. Importance of the levels of Korthagen according to the number of participants.

**Role of Edukans.** All participants were optimistic about Edukans, which corresponds to the expectations and the findings of Heijker (2012), Otten (2012) and Van Monsjou and Metsemakers (2012). The WTP is seen as a *source of information* (38%) and a *contributing program* (38%). It *created relationships* (42%), helped in *providing and learning how to make instructional materials* (33%), *provided materials* (21%), and *simplified the work* (17%), especially *through group work* (25%). But most of all, Edukans gave *new teaching methods* (71%): “Edukans has contributed a lot in my professional education. Because I’ve learnt so many methods of teaching.” (22F) The participants want the Dutch teachers *to come back more often and stay longer* (17%). Other recommendations are merely on the side of *providing materials* (75%): *Computers and internet* (17%), *books* (13%), *laminating machines* (21%), and *instructional materials* (29%). Besides providing materials, many participants state that it is important to *involve all the teachers at the school in the program* (38%): “Because when you all involved and cooperate and share ideas together, then you can improve the quality of the education.” (24M)

### Gender

The third aim of the study was to gain insight into how gender relates to social networks and information exchange within these social networks.

**How Ugandan teachers understand gender.** As expected, when asked how they would define gender, most teachers said gender is about the *biological sex; men and women* (75%): “According my own understanding, gender simply deals with sex of humanity; that is a female or male.” (7F) Some teachers mentioned differences between male and female,



however others felt there are or at least should be no differences: “A woman is the one to conceive, and then the man is the one to what... But differences... Maybe that one is slightly there but other differences...I think there is no.” (8M) This contradicts the expectations, since all four perspectives towards gender according to Meyerson and Kolb (2000) assume differences between men and women.

It is interesting to see how the teachers emphasize equality between men and women. Both sexes *should be treated equally*: “We need to treat people equally, respectable their gender.” (1M); gender *is about balanced sex*: “Gender is just balancing females and the males.” (6F); and gender *is about equal responsibilities*: “And they should be equally, equally responsibilities. Same, not these ones doing this, others doing that.” (12F) However when asked how gender is generally perceived in Uganda, different opinions come forward. Some say women used to be viewed as the *weaker sex but not anymore* (25%), others say they still are *less than men* (42%). Considering gender roles, opinions are divided as well: nine teachers (38%) think both *men and women can do the same role*, while ten teachers (42%) say it is thought that *men should have different roles than women*. It is interesting to see that the participants who think men and women can do the same role are mostly female, while the participants who say there are different roles are mostly male, even though some women acknowledge these different roles: “When a women is at home, her role is to cook, to take care of the children. Though some men can cook. But what we believe is the responsibility is with women. (...) Our work is to care for the home. In a while on the other hand, men, they are the overall people. They have to educate their children. They buy food for taking care of the family.” (18F) When asked how these differences between men and women originated, three explanations are given: *Because of society* (17%), *parenting* (21%) and *nature* (21%). Even though there are different opinions on how gender is viewed in Uganda, certain participants mention *gender equality is improving nowadays* (29%). Taken together: “[Women] are not as such equal to men, but that is what they advocate for.” (15M)

**Gender in education.** In contradiction to the expectations, overall the teachers have *no negative feelings towards teachers of the other sex* (67%): “I can also feel there is no tension. We just walk together.” (13M) Furthermore, there are three main findings. First of all, there is a difference in which sex teaches lower primary (class 1 – 3), middle primary (class 4 and 5) and upper primary (class 6 and 7). Some teachers think *male teachers should teach upper classes, while female teachers should teach lower classes* (42%). Mostly men name this difference, while on the contrary proportionally more women say there is no difference: “We all teach throughout from grade 1 to 7 in a primary school. (...) Even female

teachers teach all those classes.” (18F) At the same time women emphasize that, unlike women, men cannot teach lower: “... because women are mothers. These children are still young, they can come and say I want to sleep, somebody has spoiled herself, you can help the child, so they [men] say: that is the work of women. Because they know what to do with a child. That is why we are down.” (16F) However, when looking at the surveys, six male participants (55%) teach lower primary, while only one female participant (8%) teaches upper primary. Secondly, most participants think *there is no difference in teaching between male and female teachers* (81%). Nevertheless, proportionally more women say there is no difference, while more men say female teachers have less impact in their teaching or pass information differently. Thirdly, it is acknowledged that domestic duties keep female teachers from teaching: “Cause naturally women have so many problem to solve before they come to school. (...) But only by the nature of being a woman, there are so many things that really distract that female teacher.” (17M)

**Gender relating to social networks and information exchange.** When discussing the social networks of the participants, most participants report to *relate to both sexes* (75%). This corresponds with the surveys, in which all the participants relate to both sexes. However, according to the surveys, women interact more with women than men do, which corresponds with the expectations. There is a slight distinction in how differences in the social networks are being viewed: More women than men state that there are no differences in the social networks of men compared to women. Though when looking at the importance of the social networks in gaining information regarding education, men report their network on average as *regularly* important, while women report their network on average as *often* important. Despite this difference, there is no significant correlation between gender and importance of the networks. Likewise the social networks, there is according to most participants *no difference in the information being exchanged with man compared to woman* (75%), which contradicts the expectations. However, some teachers say it depends on the subject: “You maybe want to talk about some family affairs with a female teacher, you also... we sharing some household whatever. You cannot talk it to the men.” (12F)

### **Cultural identity**

To gain insight into how cultural identity relates to social networks and information exchange within these social networks, the results were analyzed by means of the three sub aims.

**How Ugandan teachers perceive cultural identity.** In order to gain insight into how Ugandan teachers perceive their cultural identity, participants were asked to describe their

cultural identity. That cultural identity consists of various elements (Bughra, 2004), is confirmed by the various emphases participants made in their answers. One's cultural identity is among others defined by different types of *food* (33%), different ways of *dressing* (24%), *the way people behave* (17%) or certain *cultural norms or morals* (17%). Also *the beliefs* of the society are part of one's cultural identity (17%), as well as the shared language (13%) and someone's *origin* (13%).

Noticeable is that, though Sub-Saharan African people think more in terms of being part of a tribe, rather than being part of a nation (Beugré & Offodile, 2001), this does not stand out among the participants. Slightly more participants say to *feel more of Ugandan* (33%) than being *member of one's tribe* (29%). Some participants *feel both Ugandan and of own tribe* (13%).

**Tribal background relating to social network and information exchange.** There is so far no significant relation found between the tribal background of the participants and the tribal background of the persons in their social networks (see Figure 3 and 4 for a visualization), despite our expectations. Nevertheless, participants have their *own tribe represented more* in their social network than other tribes (29%). The reasons are not necessarily the vast loyalty towards own tribe, but practical reasons. As such, because *it is the largest group around* (17%), or because of the *shared language* that simplifies communication (8%). Practical reasons are on the other hand as well a reason to have more persons of another tribe in the social network. "...I interact more with Itesots. Because it is the largest group around." (13M; tribal Bantu)

The preference for one's own tribe in information exchange seems to be most about the *communication that comes more easily* (29%). "It (communication within own tribe) is very easy. Because they can understand fast. It is only that maybe this other, other tribes, that they might not pick them fast, because of the language barrier. But with my own tribe, I pick very fast." (16F) Also having *own tribe as the major population* results in *sharing more* information exchange within the tribe than outside the tribe (8%). Nevertheless, information exchange with a mix of persons considering tribal background, is seen as a good thing to do. "...I also relate, being somebody who knows English, I also relate well with people who come from other districts. People who are from other cultures, I also relate with them well. So that I can get to know what they have in their regions. So that they can bring and we use that in the school. ... it is not good to concentrate on...in relating only people of your own tribe. It is better to connect to people from other places, so that you get to know what is happening in those areas they have come from." (10M)

**Religion relating to social network and information exchange.** Since religion plays a major role in Uganda, it was expected that the religious background of the Ugandan teachers reflects in their social networks and information exchange. Though no significant relations were found between the religion of the participant and the religion of the persons within the social network, participants imply that their own religion is represented well in their social networks and contributes to information exchange. Sharing the same religion *helps to relate* (29%), specifically *because of the shared morals and religious values* (13%). *Interaction can take place with different denominations* (4%). Own religion is *not represented more in the social network* (4%), though two participants admit that *own religion is represented more in the social network because it being the largest population* (8%). Overall, regardless of which religious background one has, religion “helps to live very positively with the friends and the society. Because of the teachings that they always do.” (5M)

Religion seems to contribute to information exchange. It *gives a lot of information* (17%), and “...it is very easy to pass information in church, because in most cases people have open minds in church.” (15M) Religion functions as a considerable social factor that makes information exchange effortless. It is *a social union* (4%), that *brings people together* (like in church) (8%), in order to have the *possibility to share information*. Religion “...contributes, because you have something in common to share” (4F) and because of having something in common *there is free interaction* (4%). Nevertheless, religion *does not play a role when one wants or shares information* (13%). The participants *learn from people of different religions* (13%), and they share with “...people with mixed religions. We shall sit together and discuss...” (18F)

## Discussion<sup>4</sup>

### Social Networks

The first aim of this study was to outline the social network of Ugandan teachers from an ego-network perspective. As expected, the perception of the teachers regarding social networks corresponds to the collectivistic character of African cultures (Blunt & Jones, 1992 in: Beugré & Offodile, 2001). The Ugandan teachers described social networks in terms of sharing, communication and relationship. The general impression was therefore that the focus of the participants does not lie on themselves as the central ego of a social network, but more on themselves as being part of a social network. The concept of an ego-network consequently

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<sup>4</sup> Written by Bibo and Bronkhorst, whereby Bibo focused on gender while Bronkhorst focused on cultural identity.

is in this research more a method used for visualization (see Figure 1, 2, 3, & 4), than an underlying substance of the participants.

Remarkable is that, though 42% participants have an openness to a diversity of people, only 17% claim to have diversity in their social network. This lack of diversity might relate firstly to the lack of communication resources that was stated by the participants. In contrary to the expectations, internet is not easily accessible to the Ugandan teachers, though the access to internet is increasing (Madon, 2000). Therefore, the internet access of Ugandan teachers is consistent with the rates of DFID (2000), in which less than one in a thousand people has internet access in Africa. Secondly, the lack of diversity might relate to the challenge to meet with other people because of the distance. Ugandan teachers might not have enough financial resources to travel long distances, because poverty is a daily problem in Africa (Ansell, 2005). Because of this, the average Ugandan teacher is limited to their nearby community as a social network.

This limitation to the nearby community and own school as a social network, corresponds to the high average network density (0.88) of the social networks of Ugandan teachers, since most persons at the same school know each other. A more open network, with a lower density, would be more in the interest of Ugandan teachers, since it will result in a chance to increase the resources (Lin, 1999). However, when the Ugandan teachers become resourceful, the high average density would be better, because in that case the resources are being preserved with their network (Bourdieu, 1986).

Worth mentioning is the importance of the head teachers within the social network. The main reason for this importance is the help of the head teacher to the participants. However, the status of the head teacher contributes possibly to his importance in the social network as well, because the Ugandan culture is characterized by their respect for power and authority (Blunt & Jones, 1992 in Beugré & Offodile, 2001).

Overall, the social network is of great importance to the professional development of the Ugandan teachers. Two conclusions can be made regarding the social networks of Ugandan teachers. Firstly, a central concept within the social networks of Ugandan teachers is sharing, e.g. ideas. This corresponds thorough with the WTP, where the focus lies on sharing on how to improve quality education. Secondly, the social networks of Ugandan teachers mostly take place in the nearby community, because of practical reasons. The main practical reasons include the lack of communicational resources and the challenge to overcome distance, since there is a lack of financial resources as well (Ansell, 2005).

## **Information Exchange**

With respect to the second aim, the present study gained insight into the information exchange within the social networks of Ugandan teachers. Contrary to the expectations, hardly any teacher named the internet as important source of information. Various other sources were mentioned, in which it stands out most sources are based on interaction with other persons, like workshops and team meetings. This is explained by Lin (1999) who states that interaction with individuals facilitates the flow of information. However, it is interesting to see that overall books are the most important source of information. It is not only a good source of information, it also helps the teachers in developing professionally. Hardly any teacher was able to access the internet, however they did acknowledge the importance of internet as source of information. Therefore it can be concluded that, even though the internet is acknowledged as source of information, it is too difficult for the participants to actually have access to online information. This hinders the possibilities for Edukans to make the WTP more cost effective by adapting to the social networks of teachers by means of modern technology. However, it emphasizes the importance of increasing the access to internet (Madon, 2000). This is important since the internet provides access to free sources of information and data (Lin, 1999), which is important in the professional development of teachers and improves the education (Beekwilder & Klarenbeek, 2012).

Considering the content of information exchange, mostly practical information regarding education is being exchanged. In line with the expectations, most teachers thought the levels environment and behavior are important. This was expected, because of the direct observable character of these levels (Korthagen, 2004). Too, this can be explained by the emphasis on conditions and environmental factors by teachers participating in the WTP, as found by Heijker (2012), Otten (2012), and Van Monsjou and Metsemakers (2012). However, in spite of the expectations, the most important level to the teachers was competencies, which were mostly thought to be goals set by the teachers. This stressing of goals is confirmed by the environment, since at all schools, posters and pieces of paper hung on the walls with many different types of goals on it. It becomes clear that Ugandan teachers value goals and to teach according these goals.

Overall, the participants were enthusiastic about the WTP, mostly because it provides new teaching methods. This optimistic view towards the WTP confirmed the findings of the evaluation studies of Heijker (2012), Otten (2012), and Van Monsjou and Metsemakers (2012). However, to improve the program, most teachers think the program should run more often and involve all the teachers at a school. This shows that the teachers have a dependant

attitude towards Edukans, instead of becoming more self supporting in their development, as intended by Edukans (2012a). Besides, it contradicts the intentions of Edukans to make the program more cost effective by coming less often and instead adapt to the social networks of the teachers. Beside the suggestion to come more often, it stands out that teachers think Edukans should provide materials. This is in line with how they value the level of environment (Korthagen, 2004), since this is mostly about materials. It should be noted that Edukans focuses on motivating the Ugandan teachers to provide for themselves, by learning how to use their own environment to make (instructional) materials. This is based on the vision of Edukans in which the importance of self-confidence and independence is emphasized (2012a). This works to the extent that many teachers mention the WTP taught them how to make instructional materials. However, still most Ugandan teachers remain dependant on the WTP in their professional development.

### **Gender**

The third aim of this study was to gain insight into how gender relates to social networks and information exchange of Ugandan teachers. In line with the expectations, almost all teachers defined gender as the biological sex. This can be classified in the first perspective of Meyerson and Kolb (2000), in which gender is synonymous with biological sex. However, interesting to see is that many teachers say there are no differences between men and women, while all the perspectives of Meyerson and Kolb (2000) are based on the assumption that there are differences between men and women. Therefore it can be argued that Ugandan teachers cannot be classified in the four perspectives. It should be noted though, that in Uganda many awareness about gender balance is being created by Non Governmental Organizations (NGOs) as well as the government (Ministry of Gender, Labour and Social Development, 2007). This probably influenced the opinion of the teachers regarding gender and explains why they emphasized the equality between men and women; because of social desirability. Nevertheless, during the interview gender differences did come up, such as differences in roles. Besides, teachers thought these differences developed because of parenting, nature and society. Therefore it can be concluded that, even though teachers say there are few differences between men and women, they mostly fit in the first perspective of Meyerson and Kolb (2000).

Considering gender in education, there seem to be no negative feelings between male and female teachers. This contradicts the expectation that only males are thought to be involved in teaching. This finding can be explained by the emphasis on gender balance as a result of the campaigns conducted in Uganda against gender inequality (Ministry of Gender,

Labour and Social Development, 2007). Furthermore, the results indicate that mostly men think female teachers should teach lower primary, while male teachers should teach upper primary. Women agree that men should not teach lower primary, but on the other hand say that women can teach upper classes. The results of the survey however contradict this perception, since more than half of the male participants teach lower primary, while only one female teacher teaches upper classes. This is probably a result of traditional gender roles, in which men should be on top of the wife (Strebel et al., 2006). Mirembe and Davies (2001) found that at Ugandan schools it is mostly thought that man should be in the lead. Even more, females in leadership positions were continuously undermined. This explains why mostly men teach upper primary, since women might not be accepted as being 'in charge' in upper classes. Too, it can be explained by the view that women are intellectually less capable than men. Even though this was not found in the present study, various studies in Uganda suggest this is the attitude towards women (Ampovo et al., 2004). Possibly, this attitude underlies the division in teaching upper and lower classes between the sexes, but is not mentioned explicitly because of the emphasis on gender balance by the government and NGOs.

The expectations concerning gender in social networks and information exchange were based on the presumption that the usefulness of one's personal contacts as a source of information is conditional on his or her gender (Huffman & Torres, 2002). Therefore it was expected that male teachers mostly relate to males and female teachers mostly relate to females, as well as that the information which is being exchanged differs between males and females. Opposite to the expectations, the participants averagely relate to both sexes and say there is no difference in the information being exchanged with man compared to woman. This is contrary to what Katungi, Edmeades, and Smale (2008) say: gender has far-reaching influence on social networks and information exchange. There is however a small difference in the importance of the social networks in information exchange, but this was not significant relating to gender. Therefore, it appears that gender barely relates to social networks and information exchange. However, this too can be explained by the recent attention of the government and NGOs, towards gender equality in Uganda. Since Edukans is an NGO and the teachers depend on their funding and training, it is plausible that this explains why the teachers hardly name anything that contradicts gender equality when asked directly. However, because of contradicting statements later on in the interviews, it becomes clear that social desirability probably influenced the answers of the participants at first.



## **Cultural Identity**

With respect to the fourth aim, we examined how cultural identity, respectively tribal background and religious background, relates to social networks and information exchange.

**Tribal background.** Contrary to the expectations that Ugandan teachers will feel more part of one's tribe, than Ugandan (Beugré & Offodile, 2001), slightly more participants say to feel more Ugandan, than feeling member of one's tribe. Uganda is a country in transition (Restless Development, 2013) and very dynamic in a way that it is progressing and developing in different aspects. Uganda makes e.g. significant progress in reducing HIV/AIDS, it is one of world's top performers in Millennium Developmental Goals, as well as that it has a strong economic growth (Restless Development, 2011). This context taken into account, it might explain the change of mind from an explicit tribal identity to feeling more of an Ugandan. All the more because after the colonization the same switch was noticeable, because of the shared experience under colonialism and the shared goal for freedom and dignity (Edel, 1965).

Because of the vast loyalty towards own tribes (Beugré (as cited in Beugré & Offodile, 2001); Takyi-Asiedu, 1993) it was expected that Ugandan teachers prefer people of their own tribe in their social network and information exchange, but no significant relations by means of the qualitative data were found. The qualitative data nevertheless initially seem to support the expectations because the own tribe is i.e. represented more in social networks than other tribes. However, practical aspects of having the same tribal background seem to influence one's social network more than the tribal background. In the social network as well as the information exchange two practical factors clarify the representation of the participants' people in their social network and information exchange. Firstly, the tribe that is the largest population in the community around is represented more. Secondly, people who speak the same language as the participant are represented more because of the simplified communication. This is conform Lieberman (2000), who states that the needs of participants play a crucial role in forming a social networks. In this case, one's tribal background might be subordinate to one's needs.

**Religious background.** No significant relation between the religious background and the religion of the persons in the social network was found, despite the expectations. Nevertheless, qualitative data represent that a majority of the participants have more of their own religion in their social network, which is in line with the major role religion plays in Ugandan life (UBOS, 2002; Uganda Visit and Travel Guide, 2013). Sharing the same religion is i.e. said to be helping to relate to others because of the shared values. Religion contributes

also to the exchange of information. Firstly, because religion in itself gives a lot of information and, secondly, because the church functions as a social factor. Information exchange i.e. takes less effort when people are brought together. But besides these findings it is noticeable that there is also an openness to learn from people of different religions. This is in line with the findings that Sub-Saharan African people trust people, despite differences in religious values and that there is interfaith dialogue (Pew Research Centre, 2010).

Though the qualitative findings confirm the expectation that participants have more of their own religion in their social network and information exchange, it is not possible to filter out to what extent practical reasons play a part in this as well, like the influence of the largest religion in the community in the social networks.

Overall, there is no explicit preference for one's tribe or one's own religion in the social network and information exchange, except for practical reasons. However, religion plays a major role in the lives of Ugandan people (UBOS, 2002; Uganda Visit and Travel Guide, 2013) and has a positive influence in information exchange.

This study mapped the social networks of Ugandan teachers as well as it gained insight into the information exchange within these social networks. These findings are important to Edukans, since within a social network teachers can engage in professional development which improves quality education. Besides, adapting to the social networks of the teachers will improve the durability of the WTP. The main finding of the present study concerns the conflicting interests of the Ugandan teachers and Edukans, regarding the WTP. While Edukans aims to train the teachers at a distance by means of modern technology, the teachers advocate for a more intensive program in which the Dutch teachers come more often and stay longer. The findings of this study will lead to several implications, which will be discussed below. But first several limitations have to be taken into account.

### **Limitations<sup>5</sup>**

This research has some limitations to take into account. Firstly, some data might not be representative, because of different interpretations of some survey questions. Participants marked e.g. they watch videos (in a list of things one does at the internet), while previously they gave notice of the lack of internet usage. It might be that this question is misinterpreted for watching videos outside the internet, instead of on the internet. Possibly, this is also due to the language barrier, the second limitation. Though both the interviewers and the Ugandan

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<sup>5</sup> Written by Bibo and Bronkhorst.

teachers spoke English, it was noticed that there were sometimes difficulties in understanding each other. Different English words were used by Ugandan teachers, just as different pronunciations. In future research, it might be interesting to include a native speaker during the interviews to translate or clarify when necessary.

Thirdly, the small quantitative dataset made it difficult to state legitimate results. Besides, no significant results were found. This might be by cause of the small quantitative dataset as well. Also, as one participant stated, the instruction to name only seven persons in their social network, was limiting to the participants. One must keep in mind that the visualization of NodeXL is a small impression of the social network of an Ugandan teacher. When the participants would be allowed to name more than seven persons, the network density might be lower as well.

Besides the small quantitative dataset, the less diverse dataset considering tribal background made it difficult to discover the underlying reason of the results. Future research could include more diversity in tribal backgrounds, since it would allow to distinguish whether Iteso being the main tribe within the social networks is truly because of practical reasons, and not because of the preference for one's own tribe.

Fifthly, there is a possibility that the answers given by the Ugandan teachers were socially desirable (Baarda, 2009). Especially considering the topic of gender, since in Uganda much awareness about gender balance is being created by NGOs as well as the government (Ministry of Gender, Labour and Social Development, 2007). This has probably influenced the opinion of teachers regarding gender and the equality between men and women. Consequently, the participants were likely to be more cautious in expressing their opinion on gender differences.

By starting the interviews with an introduction by a Ugandan mentor to explain our independency of Edukans as well as the WTP, an attempt was made to avoid social desirability. Therefore, social desirability might not be the only limitation: it seemed difficult for Ugandan teachers to be critical. This corresponds to the nature of African people to not be critical (Garcia, Pence, & Evans, 2008). Future research could therefore pay extra attention to provide space to criticize, during the interviews.

Because of the cross-sectional nature of this study, no conclusions can be drawn concerning every country that joins the WTP. This study only shows conclusions regarding Ugandan teachers in the present time. Further research in other countries is required to examine whether the present conclusions can be generalized to other countries that joined the

WTP. Besides, future longitudinal research is required to verify if the present findings are stable over time.

Though findings show that there are conflicting interests of the Ugandan teachers and Edukans, no tangible research has been done to examine what Ugandan teachers think of the intentions of Edukans. Ugandan teachers want the Dutch teachers to come back more often and stay longer, but future research can examine what the Ugandan teachers think of the use of social networks in order to stimulate the professional development, whether or not by means of modern technology.

Though this study has different limitations, several important implications emerged from this study, which Edukans can consider in order to improve the WTP.

### **Implications**

One important finding in this study is the lack of access to the internet by the teachers. This hinders the intentions of Edukans to train the teachers at a distance by means of modern technology. Therefore, two options are possible. Firstly, Edukans can invest in modern technology by providing computers and internet dongles. However, when this option is chosen, it is important to train the teachers in using the computer and the internet, since hardly any teacher has ever used a computer before. One disadvantage of this option is the high costs of the provision and the maintenance of the computers, but on the other hand it widens the possibilities of accessing information and training the teachers at a distance. Secondly, Edukans can temporarily relinquish the use of internet, but invest in training local teachers in order to roll out the program of WTP themselves. These teachers can be trained once a year and enroll the program at their schools themselves. This might be a better option, since it is less expensive, reaches more teachers and it creates more and better resources in the long term. Considering the high density of the social network of Ugandan teachers, these resources can be preserved well within the social network. Besides, it meets the expectations and needs of the Ugandan teachers; the participants advocate for a more intensive program in which the Dutch teachers come more often and stay longer.

This dependence on Edukans is therefore a subject which should be considered as well. It is important to change the attitudes of the Ugandan teachers by improving their self-worth and enabling them to become more self-supporting. This is of great interest to both Edukans and the teachers, since it makes the program more cost effective and improves the durability of the program. The attitude of the teachers can be altered by using the social networks. Since most networks have a high density and are concentrated at the school or in

the neighborhood, it would be best to pick one or two persons per school who can be trained to enroll the program at their own school. This could be e.g. the head teacher, since most teachers named the head teacher as important person in their network.

Considering information exchange, mostly books as well as social interaction are important sources, and Ugandan teachers value practical information and stress the importance of goals. Therefore Edukans could implement the use or distribution of books in the WTP. Additionally, it is important to set specific goals together with the Ugandan teachers; during the WTP, but also afterwards. This is in line with their working methods; they value working towards set goals.

Besides it is important for Edukans to keep the gender differences in mind. Practically this means e.g. that Dutch females should be careful in advising Ugandan males in upper classes. On the other hand, the Dutch female teachers can be a role model and play an important role in empowering Ugandan female teachers to teach upper classes and help Ugandan male teachers to teach lower classes. The positive impact of female role models for women has been confirmed by many studies (Neumark & Gardecki, 1996; Nixon & Robinson, 1999). Especially interesting to Edukans is the program rolled out by Unicef in India, through which female teachers were empowered by addressing gender-based attitudes, roles and behaviors (Stacki, 2002). The gender-explicit focus helped the Indian female teachers to gain more self-esteem and confidence, which helped them to move closer to becoming equal and co-decision makers with their male counterparts. Therefore, this is an important implication for the WTP, since the topic of gender should be handled with care.

Considering cultural identity, it is important for Edukans to keep in mind that Uganda consists of a lot of different tribes, and therefore a lot of different languages (Beugré & Offodile, 2001; Edel, 1965). Ugandan teachers prefer talking in their own language, because otherwise they sometimes feel a language barrier. This supports the implication to invest in local teachers, since local teachers will mostly share the same linguistics. Therefore local teachers can explain the content of the training better. When needed, the tribal language can be used in addition to English.

Another thing to keep in mind considering cultural identity, is the function of the local church. The church seems to have a power of attraction to Ugandan teachers. In order to create more durability, Edukans can cooperate with the local church so that it can function as a place to share information on how to improve quality education.

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