Harnessing information and communication technology (ICT) framework into African traditional governance for effective Knowledge sharing

Alfred Coleman
School of Computing, University of South Africa, South Africa
E-mail: colema@unisa.ac.za

Received 23 June 2014, revised 11 July 2014

Many South African (70%) depend on traditional governance for social and economic development. However the duties of traditional leaders towards the citizens and the government in power are always marred with fundamental problem related to dissemination of indigenous information. This paper investigated the roles and functions of traditional leaders and how ICT is applied in execution of their duties in the North West Province of South Africa. A case study approach was used. Nine participants were drawn from population of traditional leaders. Data was collected using semi-structured individual interviews to inquire about the roles and functions of traditional leaders, availability of ICT tools and how these ICT tools support their work process. The findings revealed that traditional leaders perform functions which included protection of the rural local communities', customs, cultural values, and leadership provision. Further findings indicated, computers are not used to support routine work activities of the traditional leaders such as record keeping, management of cases and information from municipal offices. The findings lead to a proposed ICT Framework for African Traditional Governance which could assists traditional leaders to automate their work process and to share information with municipal managers in district offices to facilitate effective governance. In addition the ICT framework is to provide a repository where all indigenous knowledge, rules and procedures are stored for future generation.

Keywords: Traditional governance, Information communication, Technology framework

IPC Int. Cl.²: G05D 13/10, G06F 17/30, B82Y 10/00

The Interim Constitution of the Republic of South Africa, 1993, Section 182¹ gives recognition to traditional leaders and states that traditional leaders are chiefs and headmen appointed to rule in their area of jurisdiction². Traditional leaders ascend to the throne of leadership either by appointment or by birth. Prior to 1995 and 1996 when the first democratic local municipalities were put in place, chiefs and headmen were responsible for addressing developmental and social issues in their respective areas of jurisdiction³.

Traditional leaders who govern local municipality areas such as Bophirima Municipalities function as leaders who maintained peace and stability, without aligning themselves with political parties. Again traditional leaders or tribal rulers are described as individuals occupying communal leadership sanctified by cultural mores and values, which enjoy the legitimacy of a particular community to direct the affairs of that local community⁴. Traditional leaders’ basis of authority and legitimacy come from tradition, which includes the whole range of inherited culture and way of life⁵.

In the context of this study, a traditional leader is any person who, by virtue of ancestry, occupies the throne or leadership stool of an area and who has been appointed to it in accordance with the customs and traditions of the area and has traditional authority over the rural local community under his/her jurisdiction (e.g. chiefs, tribal councilors and headman). It may also refer to any other person appointed by instrument and order of the government to exercise traditional authority over the rural community of his or her jurisdiction.

According to Economic Commission for Africa,⁶ the roles of traditional leaders in the process of good governance are broadly categories into three areas. The first role is to act in an advisory capacity to government, and participate in the administration of the district or region. Secondly in a developmental role to complement the government’s efforts in mobilizing the population for the implementation of development projects, sensitizing them to health issues such as HIV/AIDS, promoting education, encouraging economic enterprises, inspiring respect for the law and urging them to participate in electoral
process. Lastly the traditional leaders act in a mediatory role as conflict resolution managers, a role where traditional leaders across Africa have already demonstrated some success\(^7\).

As indicated in the previous paragraphs traditional governance has its roots entrenched in traditional knowledge inherited from ancestors. This traditional knowledge is based on oral transmission, personal observation and experience which always give room for arguments and disputes, leading some time to litigation, armed conflict, death and destruction\(^8\). In the practice of executing their duties as traditional leaders towards their people and the democratic government in power, there is always fundamental information and communication problem such as (the issue of record keeping management, accessibility, as well as the appropriate coding, packaging and dissemination of indigenous information). However, Information and Communication Technology (ICT) tools have the potential of converting and preserving knowledge of traditional governance for future use of the citizens\(^9\).

The objective of this paper is therefore to investigate the roles and functions of traditional leaders in rural communities and based on the findings propose an ICT framework to support traditional leaders in their governance of area of jurisdiction. The paper then examines related work, methods, results, and ends with a discussion and a proposed ICT framework. The next section elaborates on existing literature on Traditional leadership.

**Literature**

Traditional leadership is an institution that has developed over years in many African countries. It has served the people of these areas through wars; period of slavery; famine; freedom struggles; and political and economic restructuring\(^10\). The indigenous authority system in South Africa has been characterized by the two distinct types of indigenous components, firstly, a political and administrative component and, secondly, a socio-political component\(^11\);\(^13\). According to Hartman\(^13\) the political and administrative component of traditional governance consisted of a decision-making body for the traditional community. Traditional leadership operated within the defined limits of its prescribed Jurisdiction\(^14\).

Prior to the colonisation of the African continent in general, and South Africa in particular, social organisation was characterised by a number of tribal regimes based on a patriarchy and ascriptive norms\(^15\). Each tribe, up to date, has a traditional leader who was the central figure. The traditional leadership is the highest authority in the territory and majority of South Africans, especially in the rural areas, continue to owe allegiance and support to this institution of traditional leadership. Traditional leaders are seen by their people not only as a link between them and their ancestors but also as a spiritual, cultural and judicial leader, and the custodian of the values of their rural local communities\(^16\). It can be deduced that traditional leaders are the co-coordinators of the various aspects of everyday life, the realisation of rural local community dreams and aspirations, and the creators of harmony between people and their natural, spiritual, physical, social and economic environment.

According to Yoder\(^7\) there are several challenges confronting traditional governance in Africa. These challenges revolve around the issue of record keeping, management, accessibility, as well as the appropriate coding, packaging and dissemination of indigenous knowledge as already indicated above. These challenges extend to networking and connectivity for the purpose of monitoring, counselling, sharing experiences and information.

**Methodology**

**Research approach**

The research adopted a qualitative approach using a case study techniques. This approach was chosen because involves an inquiry process of understanding based on a distinct methodological tradition of inquiry that explores a social or human problem\(^17\). The researcher conducted the study in a natural setting where three rural communities, Taung, Ganyesa and Christiana in the Bophirima Region of the North West Province in South Africa were used. These three communities were selected because they are traditional set up communities which are governed by traditional chiefs who are rooted in traditional governance in South Africa.

**Population and sampling techniques**

Participants for the study were drawn from an entire population of traditional leaders (chiefs, tribal councilors and headmen). Three chiefs, three tribal councilors and three headmen were selected based on their profession as traditional leaders. In describing population\(^18\) indicate that it is the aggregate of cases having a common and designated criterion that is accessible as subjects for a study. A purposive
sampling technique was used in selecting the participants. One chief one tribal councilor and one headman were selected from each rural community. A total of nine participants volunteered to participate in the study. The Table 1 indicates the number of participants according to their professional category and age from the three communities.

The Table 1 indicates the categories of tribal leaders who provided data for this research.

**Data gathering methods**

Given the nature of the study, a case study approach provided the most effective method for data collection. Data was collected using semi-structured individual interviews. This data collection method was used because a structured interview does not allow flexibility to explore interesting issues that arise, and an unstructured interview does not provide enough focus. Therefore, a semi-structured interviews are used. The interviewees represented different roles ranging from Chiefs to headmen. The interview protocol was design to asked participants to tell in their own words:

- Their roles and functions as traditional leader
- Types of Information and communication technology (ICT) tools available to them as traditional leaders
- How these ICT tools are used to support their work process.

**Assessment of trust worthiness**

Integrity of data entry from the study was checked by another researcher for correctness. Holloway and Wheeler point out that trustworthiness in qualitative research means methodological soundness and adequacy. The researcher made judgments of trustworthiness possible through triangulation. Data was obtained from three different groups of participants (chiefs, tribal councilors and headmen) in order to cross-check data and interpretation. The data obtained was analyzed twice by both the independent coder and the researcher.

**Analysis of data**

Transcripts were coded using methods of case study analysis techniques. After the initial coding, broad categories were identified by searching for patterns in the participants’ responses. Four categories were identified and these are discussed in the results and discussion.

**Results and discussion**

The following categories were derived from data obtained from the interview.

a. **Roles and functions of traditional leaders**

The following paragraphs will present the evidence from the respondents which indicate the roles and functions of traditional leaders are to serve national and provincial Government by giving advice to Government on issues which affect rural local communities in accordance with traditions, customs and culture. This is confirmed by Moloto that traditional leaders collaborated with national government on issues pertaining to their area of jurisdiction. Traditional leaders interviewed indicated their daily communication with district municipal offices regarding judicial development.

All the respondents agreed that the tribal council of traditional leaders is an effective forum for traditional leaders to participate in rural local communities. One traditional leader said “Our tribal council is good enough to take over municipal governance from municipal managers”. It can be deduced that the response to that traditional leaders participate in the process of policy-making with particular reference to matters that were affecting them as leaders and their area of jurisdictions as provided in however, they do not govern the district or regional area where their jurisdiction as leaders resides.

The respondents further indicated that they assist members of the rural local communities in their dealings with the state. Traditional leaders act as symbols of unity in the rural local community and advise local Government on traditional matters. One traditional leader stated “We are the eyes through which the community see the government and vice versa.” Being custodians and protectors of the rural local communities’ customs and general welfare, we protect cultural values and provide community building through communal social frame said by a chief.

Traditional leaders further stated that they convene meetings to ascertain the needs of their communities and priorities these needs. They further provide information to the communities regarding health, education and progress made in the community. Being the general spokespersons of their rural local

---

**Table 1—Participants categorization**

<table>
<thead>
<tr>
<th>Category</th>
<th>Number</th>
<th>Average Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chiefs</td>
<td>3</td>
<td>+45</td>
</tr>
<tr>
<td>Tribal Councilors</td>
<td>3</td>
<td>+40</td>
</tr>
<tr>
<td>Headmen</td>
<td>3</td>
<td>+42</td>
</tr>
<tr>
<td>Total</td>
<td>N=9</td>
<td></td>
</tr>
</tbody>
</table>
communities the traditional leaders, consult with rural local communities through tribal gatherings called by the traditional leader to address urgent issues and needs of the community.

Acting as head of the traditional authority the traditional leaders exercise administrative, executive, and legislative powers which position them to preside over customary law courts to maintain law and order. Above all these, the traditional leaders indicated that before the advent of democratic government the state, they collected land taxes from the people and used the money for development projects like roads and traditional schools.

The traditional leaders reiterated that are challenges confronting traditional governance and these revolve around the issue of record keeping, management, accessibility, as well as the dissemination of indigenous knowledge. Transmission of indigenous knowledge is based on oral transmission, personal observation and experience there is always room for arguments and disputes, leading sometimes to litigation, armed conflict, death and destruction.

b. Information and communication technology (ICT) tools available to traditional leaders

The ICT access level in relation to its availability, accessibility and usability in tribal offices is as follows. The tribal office has computers which are available mostly to the administrators of the tribal office. There is an average of 1 desktop computer, 1 printer, 1 fax machines and 1 photocopier in each tribal office. However, this ratio does not represent the utilization of computers as evidenced from the interviews. It was revealed that the tribal leaders do not use computers in the execution of their daily duties. One headman stated “These computers are difficult to use for my daily work because it consumes my time which I could use to treat a patient.”

This means that even though there are computers in the tribal offices they are not used for activities which are not directly related to their work like record keeping. The computers operate on Windows XP. Internet access is not available in the tribal offices. A tribal leader commented….“I do not have the slightest Idea how this existing e-health tools work and I do not believe we will know how the new ones will work if they are installed in our hospital”.

From the findings, ICT resources are partially available in the tribal offices but specialist e-record and documentation management systems are not available. Again no institutional repository and metadata are available to assist the different tribal offices to share information. On the question of communicating and sharing information with Government municipal offices, the tribal offices have no ICT tools to facilitate it. The individual users (tribal leaders) do not have the required skills and knowledge to use these tools should it be available as evident in the findings.

The next section will discuss how these ICT tools are used to support their work process.

c. The use of ICT tools to support their work process

The respondents indicated that ICT in their offices are used to write official letters and read e-mails were the individual has a 3G connection. Their routine work activities such as issue of record keeping, management of cases, accessibility of information from municipal offices as well as the appropriate coding, packaging and dissemination of indigenous knowledge are not executed by using ICT.

One of the tribal leaders indicated that they do not have the knowledge of using these ICT tools should it be implemented.

Respondent “we only use typed documents from out computers to work”.

It was also noted that apart from the services which the traditional leaders offer to their people, they also collaborate with their local municipality for current information regarding development and how to source funding for rural projects.

The traditional leaders indicated that these collaborations are achieved through constant face to face meetings between the traditional leaders and the municipal managers.

From the interviews with the traditional leader one could deduced that there is no management system (document management system nor work flow systems to facilitate the automation and management of work process) to support all the functions of the traditional leaders. Furthermore, there is no knowledge management system to support the capturing of traditional knowledge which is transferred from generation to generation. Work activities within the tribal offices is not integrated and collaborated between the tribal offices and the municipal offices. It is therefore important that an ICT framework is proposed to support African Traditional governance for effective communication between the tribal offices and the municipal offices well as to automate some of the work activities in these tribal offices.
d. The need for ICT framework for African traditional governance

From the findings it became evident that the roles and functions of traditional leaders includes services to national and provincial government by giving advice to Government on issues affecting rural local communities in accordance with traditions, customs and culture. It was also noted that the traditional leaders protect the rural communities’ customs, general welfare, and cultural values and provide community building. These functions are performed without any management support system (e.g. document management system nor work flow systems to facilitate the automation and management of work process) to support all the traditional leaders in rural communities.

The ICT Framework for African traditional governance

Based on the findings the researcher proposes an ICT framework to support traditional leaders in their governance of their area of jurisdiction. The proposed ICT framework is indicated in Fig. 1.

The framework is explained in the subsequent section.

The traditional offices within a particular district will have a central database situated at a strategic location. The central data base will be a repository which will store all the data from different traditional leader’s office. A traditional office links it server to this district central database server through the internet.

District central database server as a component of the ICT framework

This is a uniform data integration architecture that provides consistent support to traditional leaders and municipal managers. The integrated data ensure interoperability between data received from traditional leaders systems and municipal managers system. These data are linked, processed and analysed for usage by both groups. Traditional leaders receive government or state information about development through the district database server, while the municipal managers also receive data from the traditional leaders for planning through the same district database. The interaction between components across the different layers in the ICT Framework is supported by an appropriate transport protocol, such as HTTP for Internet communication and TCP for intranet communication and is considered for sending messages. All the components of the ICT Framework communicate through a shared network infrastructure using an agreed service protocol. An XML messaging standard has been adopted as the messaging standards for the in South Africa.

Traditional leaders transmit data to the district central data base which is used by the municipal managers.

Traditional leader’s office will host a system that is capable of managing, storing, retrieving and transmitting data to the district central database server. This system will facilitate the automation and management of work process in the traditional offices. This will then promote good communication and knowledge sharing between traditional leaders and municipal mangers.

Conclusion

Having reviewed the problems associated with the African Traditional governance unpacked the roles and activities of traditional leaders, ascertain the availability of (ICT) tools and how the ICT tools support their work processes the following conclusion can be derived from this research. Traditional leaders perform numerous functions which included protection of the rural local communities’ customs, cultural values, laws and provision of leadership direction to the people. It was further noted that there were computers in in most traditional or tribal offices but are used to write official letters and read e-mails. The routine work activities of the traditional leaders such as issue of record keeping, management of cases, accessibility of information from municipal offices as well as the appropriate coding, packaging and dissemination of indigenous knowledge were not executed by the use ICT.

The findings lead to the proposal of ICT Framework for African Traditional Governance which assists
traditional leaders to automate the work process and to share information with municipal managers in a district to facilitate effective governance. In addition the ICT framework is to provide a repository where all indigenous knowledge, rules and procedures are stored for future generation.

**Recommendations**

It is recommended that all traditional leaders be given ICT training. Traditional offices must be equipped the computers and software programs to manage their routine activities. Internet services must be provided to improve connectivity. There should be an ongoing online collaboration between traditional leaders and municipal managers to support the traditional leaders in ICT usage.

**References**

10. Department of Provincial and Local Government, Submission by the Coalition of Traditional Leaders of South Africa on the Local Government: Property Rates Bill for Presentation at the Public Hearing to be conducted by the Parliamentary Portfolio Committee, (Pretoria: Government Printer), 2004.