m-Government and Service Delivery: A Case Study on the Pension System in South Africa

Rosemary Bukola Ojo, School of Management Science-University of South Africa (UNISA)
Pretoria, South Africa, ojorb@unisa.ac.za

Hossana Twinomurinzi, Department of Informatics-University of Pretoria
Pretoria, South Africa, twinoh@up.ac.za

Abstract

The ability for a government administrator to make just, fair and reasonable decisions, better known as administrative decision making, is dependent on the information flow between the administrator and a citizen. South Africa recognizes that it struggles with the information flow primarily because of a lack of skilled human resources [1]. In this paper, we investigated in the interpretive paradigm the use of mobile technology designed as the technology in a group support system (GSS) to support the decision making process required by the Promotion of the Administrative Justice Act of South Africa (PAJA) within the context of pension applications. Group Support Systems (GSS), the technological focus of this research, is a suite of software tools which focus team efforts working towards a set of goals. The findings from the research resulted in a framework for government service delivery for pension applications with mobile technology serving as a convenient communication tool. The paper argues that the resultant service delivery framework can better deal with the typical government service delivery problems such as citizen frustration, citizen threats, administrative abuse of power and the non-compliance problem of the PAJA. The framework also revealed that mobile technology designed as GSS can help to anticipate and preclude these problems. The paper makes a contribution to research and practice by proposing a framework for government service delivery using mobile phone technology designed as a GSS tool.

1. Introduction

1.1 Administrative Law & the Promotion of Administrative Justice of South Africa

In South Africa, administrative decision-making is promulgated through the Promotion of the Administrative Justice Act 3 of 2000 (PAJA) as part of general administrative law. PAJA sets out the general rules that govern how administrators must make decisions; reasonably, justly and procedurally fairly [2]. Reasonableness means that administrators should be able to comprehend the context of an application for a government service before making a decision. Justifiableness refers to administrators having the power to make the decision. Procedural fairness means that an administrator must ensure that if a person is likely to receive a negative decision, the potentially affected individual must be given; adequate notice of the nature and purpose of the proposed negative decision, a reasonable opportunity to make representations, a clear statement of the administrative action, adequate notice of any right of review or internal appeal where applicable and adequate notice of the right to request reasons [2].

The effectiveness of the PAJA can be measured through the lens of decision-making theory because of its focus on the process of decision-making. Classical decision-making theory suggests that for a decision to be arrived at adequately, the people involved must have adequate information to make the decision and a commitment to make the decision [3]. With regards the PAJA, adequate information can therefore only be achieved if there is an unencumbered flow of information between the administrator and the individual/collective.

1.2 Problem Statement & Research Aim

In this paper, attention is drawn to the flow of information between the administrator and the individual and/or group collective towards improving service delivery. South Africa recognizes that the implementation of many of its policies is problematic and that service delivery is far from being excellent [1]. This paper identified that Information and Communication technology (ICT) particularly communication technology such as GSS has evolved to encompass improved forms of interaction and collaboration between categories of people such as government and citizens, where information can be exchanged at different times and from various places.

The general aim of the research was therefore to investigate how GSS can support policy implementation and improve service delivery. The case study used to empirically conduct the research was the government administrative agency responsible for executing social security services, the South Africa Social Security Agency (SASSA) with the unit of analysis as the Old Pensions Grant (OPG).

The rest of the paper is structured as follows; the next section reviews the literature on GSS. It is followed by the case study adopted in the research, the Old Person's Grant administered by SASSA. The next section outlines the interpretive research approach used to carry out the investigation. The next section provides the findings from the research using the same interpretive method of analysis. The final section makes the conclusions and contributions to research and practice from the research.

2. Literature Review

2.1 GSS Research

There are different definitions of GSS but all have a similar underlying notion as a suite of software that can be used to focus and structure the deliberations of a group. For example, Briggs et al. [4] define GSS as a socio-technical system consisting of software,

hardware, meeting procedures, facilitation support, and a group of meeting participants engaged in intellectual, collaborative work. Nunamaker et al. [5] define GSS as a special type of groupware designed to improve the efficiency and effectiveness of meetings by offering a variety of tools to assist the group in the structuring of activities, generation of ideas and improvement of group communication. Zigurs & Buckland [6] define GSS as a communication support system that supports, enhances and defines the capability of group members to communicate with each other. This paper adopts a definition of GSS as a set of communication, structuring, and information-processing tools that are designed to work together to support the accomplishment of both group and individual tasks. GSS can as such be considered as an enabling tool in the hands of people, with the tool being the software and hardware that enable a collaborative effort towards a goal. Accordingly, a GSS includes not only the hardware/software artefact but also the people and the process involved in moving people towards a goal [7]. The process of GSS defines how the group interacts, gathers, shares, aggregates, structures or evaluates the information [8].

The main advantages of GSS are in their features of anonymity, parallel communication and in group memory [7]. Anonymity allows users to raise and explore new and perhaps risky ideas that a member might otherwise be reluctant to voice. Parallel communication allows group members to input ideas simultaneously while group memory ensures that all inputs are captured. These features of GSS increase the productivity of groups and reduce the time required for projects. They also effectively encourage the involvement of large groups in meeting processes, thus enabling stakeholders at all levels to be involved [9]. GSS tools are designed to influence the patterns of group interaction in varieties of useful ways, to reduce the mental cost of information access and the minimization of distractions among the team working towards a goal [4].

Hence, the purpose of this research was to investigate how mobile phones may be adopted as ideal GSS tools to support the creation of sustained predictable, repeatable and useful patterns of collaboration among people working together towards a goal [10].

Typically, GSS software runs on a network of computers with separate workstations. Participants using portals of the GSS software have their own cursors and can simultaneously contribute to the shared objects, so that the contributions of any one user is immediately visible on the screen of other users.

There has been a decline in GSS research primarily because of the excessive focus on the technology itself without taking into consideration the context [5]. Gopal & Prasad [11] called for a shift of focus from technology to interaction by studying the technological context of GSS use. Gopal & Prasad [11] recommend that GSS should rather be viewed as a socio-centric tool in the hands of people, and the effectiveness of its use dependent on the context. In undertaking this contextual challenge, it is important to find a fit between the task (such as in this research context, implementing procedural fairness during the pension application cycle) and the technology (in the research context is the mobile phone used as a GSS tool) [6, 12].

The GSS tool adopted in the research, the mobile phone, was appealing because of its massive worldwide proliferation and its fundamental features of flexibility, convenience and versatility [13]. Other features of a mobile phone which exhibit GSS features include the distribution, sharing, acquiring of information, and support of teamwork development and coordination. The next section turns to the context of the research, the case study.

3. The Case Study

3.1 Old Pension Grant (OPG)

In South Africa, all social grants are administered by the South Africa Social Security Agency (SASSA). As at March 2007, OPG beneficiaries represented 22% of the total grant beneficiaries [14] and 4.58% of the population. While the main motive for applying for the OPG should be financial sustainability for older people who do not have the means, its real utility in the hands of the recipients is expanded. In many instances, the responsibility of looking after grandchildren often falls on the elderly, especially when the children are orphaned or when the parents are unable to bring them up [14]. This plight has increased the pressure on pension applications in South Africa (Table 1).

The process for applying for pensions begins with a means test which assesses eligibility based on age, income and existing assets. The results of the means test are then given to the applicant indicating whether the application for the OPG has been successful. According to the PAJA, if the means test recommends a negative decision, the prospective applicant must be given at least 90 days to make a representation before the decision may actually be taken.

3.2 The mobile phone as a technology tool

The research recognised that since 44% of old people receiving grants in South Africa have a mobile phone and 12% have a land line [14] the mobile phone is potentially an appropriate technology for use in the decision-making process of the pension application cycle. Further, using the mobile phone as a hand-held device can enable a reach to some of the most remote and disadvantaged people in South Africa.

Table 1: OPG statistics

Province name	% of OPG beneficiary per province	Number of OPG beneficiary per province	Total population per province 2007	% of OPG beneficiary per total population per province
Kwazulu-Natal	20.4	447,983	10,014,500	4.5
Eastern Cape	19.5	427,808	6,906,200	6.2
Limpopo	15.9	349,723	5,402,900	6.5
Gauteng	12.3	269,605	9,688,100	2.8
North West	8.9	195,089	3,394,200	5.7
Western Cape	7.7	170,110	4,839,800	3.5
Mpumalanga	7.1	155,877	3,536,300	4.4
Free state	6	132,536	2,965,600	4.5
Northern Cape	2.1	46,287	1,102,200	4.2
Total	**100**	**2,195,018**	47,849,800	

In order to empirically investigate mobile phone usage as a GSS tool to support the PAJA and as such improve service delivery, this research adopted a qualitative approach in the interpretive paradigm on a case study.

4. Research Approach

4.1 Interpretive Research

Interpretivism focuses on the relationship between the researcher and the phenomenon being studied [15] in this instance the researchers and the use of mobile technology in government towards implementation procedural fairness. In interpretivist studies reality is a result of individual subjective interpretations and / or of inter-subjective constructions shared between individuals. Epistemologically, facts and values cannot be separated and knowledge is viewed as ideological serving the interests of particular social groups [16]. Quantitative research assumes a purposive and objective researcher [17]. Interpretivism takes into account the bias of the researcher in treating reality as a subjective construct [18]. The use of a case study was because of the need to investigate a contemporary phenomenon (the pension application system) within its real life context [19].

4.2 Data Collection Techniques

Data was collected using face-to face semi-structured interviews with SASSA officials involved in the pension application process and open-ended question interviews during PAJA training and awareness workshops [20]. Secondary data was acquired from published research reports, journals, speeches delivered by government, online articles, the Department of Justice & Constitutional Development, and the SASSA website (www.sassa.gov.za).

The SASSA officials interviewed were the senior manager and three subordinate managers within SASSA operations unit. Their positions within the organisation as managers in the functional and business units qualify them to answer questions pertaining to data, operations and business processes. The questions asked from them include information on the process of pension applications, the operational problems in the present processes most especially looking at the procedural fairness as required in the PAJA. Open-ended questions were posed to the selected persons on the application process, application feedback, and the methods that were used to deliver negative decisions to applicants.

The research reports that were used include a profile of social security beneficiaries, a substantial report on pensions [14] and a profile of social security beneficiaries (www.sassa.gov.za, www.statssa.gov.za and http://www.doj.gov.za/paja/new.htm).

5. Interpretive Analysis & Discussion of Findings

The paper consistently adopted the interpretive method of analysis using Klein & Myers [21] set of principles for evaluating interpretive case studies to reveal the following primary findings.

5.1 Compliance with the PAJA

The pension application process fulfils the requirements of the PAJA to some extent in giving feedback about the application within 21 days. However, as at the time of this study, SASSA is looking into delivery of their service within 48 hours, and is currently working on a one-day turnaround time strategy, whereby people can actually wait and be informed of the outcome of their applications. Although this may appear like a brilliant idea it would actually breach the PAJA requirement which makes provision of up to 90 days for likely affected individuals to make representation before a negative decision can be made.

5.2 Frustration and threats

Rejection letters make applicants feel frustrated. This has in instances led to physical outbursts. For example, one of the interviewers cited a case where a SASSA official was physically beaten when his application was rejected. A large number of beneficiaries are only semi-literate, some even illiterate. These people are often intimidated by technology and yet are comfortable with the mobile phones which they are more accustomed to hence the proposal for the use of mobile phones as the technology of a GSS.

5.3 Technological intervention

The findings also implied that people have a perception that technology could help in interaction with administrators, as they would incur less travelling costs during grant application, and they would be able to interact with administrators at any time of day, thus allowing them to obtain feedback from administrators more quickly.

Based on the above key findings, the research proposed a framework for mobile technology as a GSS tool to support the PAJA in the process of pension applications (Fig. 1). The framework serves to ensure compliance with the requirements of the PAJA by allowing the administrators to inform the citizen prior to making decision that adversely affects them.

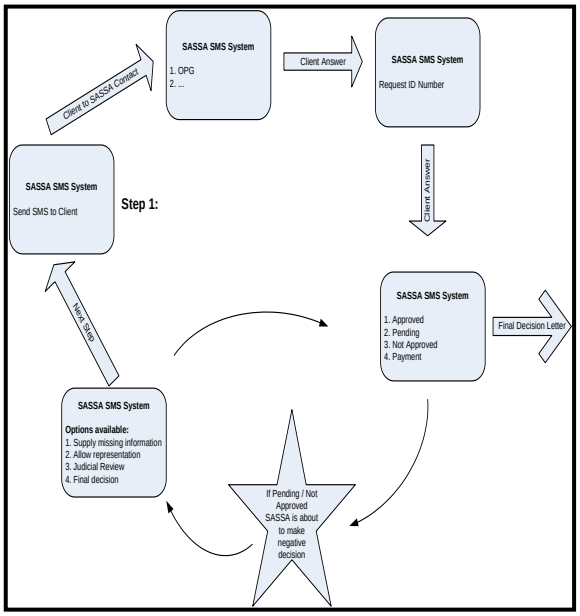

Fig 1. A framework of m-Government to support the PAJA decision-making process and the pension application cycle.

6. m-Government Framework

The framework assists to better understand the PAJA requirements and its implementation to support the pension application process. The framework proposes citizen interaction with a government administrator in SASSA to inquire about their pension application and/or file-in for grant application. The administrator should contact the individual when about to make decisions that affects them negatively. This can be done using the SASSA SMS system. The citizen can reply the administrator by SMS using a number to indicate the type of grant applied for; 1 (OPG) 2… (for other grants). The SASSA SMS system then requests for the ID number for identification purposes which is also replied to by SMS. The SASSA SMS system will then give a response depending on the status of the application; these could be APPROVED, PENDING, NOT APPROVED, ALREADY PAID. If the status is pending or not approved, the SASSA system will then send an SMS to the potential beneficiary allowing the person to make representation before the negative decision is taken by requesting for further information as required.

If further information is supplied and this changes the decision to an approval then an SMS and letter is sent out to that effect. If not approved, the SASSA system will send an SMS indicating the next process for recourse that the rejected applicant can follow.

7. Conclusions

South Africa is a country with a unique cultural context where the Old Person's Grant is a source of livelihood for the elderly and the children who are raised by the elderly. The pressure on the OPG has steadily been increasing the increasing responsibility on the elderly in raising children [14] and with the recent global economic crisis and its ripple effects of unemployment. While South Africa moves to act on the problems surrounding, mobile phones can assist in improving information access and transparency in the process of applying for the OPG. The framework adopts mobile phone technology as a GSS tool supporting the pension application process without circumventing the decision-making requirements of the PAJA. Such a framework is novel and has the potential to benefits the millions of old people and their dependents. The implementation of the framework has a potential advantage the effective and economical implementation of decision-making in government and can be extended to application for other government services.

7.1 Limitations of the Study

The framework is a result of data which is based on subjective data such as SASSA managers. The framework would need to be tested on a wider population to test its utility.

8. References

1. Republic of South Africa, *State of Public Service Report 2007: Promoting Growth and Development through an Effective Public Service.*, P.S. Commission, Editor. 2007, South African Government Online. p. 1-85.

2. Republic of South Africa, *The Promotion of Administrative Justice Act*, Republic of South Africa, Editor. 2000, South African Government Online.

3. Vroom, V.H. and P.W. Yetton, *Leadership and Decision Making*. 1973, Pittsburgh, PA: University of Pittsburgh Press.

4. Briggs, R.O., G.J. Vreede, De, and J.F. Nunamaker, Jr., *Collaboration Engineering with ThinkLets to Pursue Sustained Success with Group Support Systems.* Journal of Management Information Systems, 2003. **19**(4): p. 31-64.

5. Nunamaker Jr, J.F., et al., *Lessons from a dozen years of group support systems research: A discussion of lab and field findings.* Journal of Management Information Systems, 1997. **13**(3): p. 163-207.

6. Zigurs, I. and B.K. Buckland, *A Theory of Task/Technology Fit and Group Support Systems Effectiveness.* MIS Quarterly, 1998. **22**(3): p. 313-334.

7. Briggs, R.O., J.F. Nunamaker, Jr., and D. Tobey. *The technology transition model: a key to self-sustaining and growing communities of GSS users.* in *Proceedings of the 34th Annual Hawaii International Conference on System Sciences*. 2001. Hawaii.

8. Wood, D.J. and B. Gray, *Toward a Comprehensive Theory of Collaboration.* Journal of Applied Behavioural Science, 1991. **27**(2): p. 139-162.

9. Nunamaker, J.F., et al., *Electronic meeting systems.* Commun. ACM, 1991. **34**(7): p. 40-61.

10. Kolfschoten, G.L., et al., *A conceptual foundation of the thinkLet concept for Collaboration Engineering.* International Journal of Human-Computer Studies, 2006. **64**(7): p. 611-621.

11. Gopal, A. and P. Prasad, *Understanding GDSS in Symbolic Context: Shifting the focus from Technology to Interaction.* MIS Quarterly, 2000. **24**(3): p. 509-546.

12. Zigurs, I., et al., *A test of task-technology fit theory for group support systems.* Database for Advances in Information Systems, 1999. **30**(3/4): p. 34-50.

13. Palen, L., M. Salzman, and E. Youngs, *Discovery and integration of mobile communications in everyday life.* . Personal and Ubiquitous Computing, 2001. **5**(2): p. 109-122.

14. De Koker, C., L. De Waal, and J.H. Vorster, *A profile of social security beneficiaries*. 2006, Department of Sociology & Social Anthropology, University of Stellenbosch: Stellenbosch.

15. Nandhakumar, J. and M. Jones, *Too close for comfort? Distance and engagement in interpretive information systems research.* Information Systems Journal, 1997. **7**(2): p. 109-131.

16. Burrell, G. and G. Morgan, *Sociological paradigms and organisational analysis*. 1979, London: Heinemann.

17. Denzin, N.K. and Y.S. Lincoln, *The SAGE handbook of qualitative research*. 3rd ed. 2005, Thousand Oaks: Sage. xix, 1210 p.

18. Walsham, G., *Interpretive Case Studies in IS Research: nature and method.* European Journal of Information Systems, 1995. **1995**(4): p. 8.

19. Yin, R.K., *Case Study Research: design and methods*. 3rd ed. 2003, Thousand Oaks, California: Sage Publications.

20. Twinomurinzi, H. and L.J. Phahlamohlaka. *Simulating the Implementation of the Administrative Justice Act with ThinkLets and GroupSystems: A Comparative Analysis from Three Field Studies*. in *Conference on Information Technology in Tertiary Education*. 2006. Pretoria.

21. Klein, H.K. and M.D. Myers, *A set of principles for conducting and evaluating interpretive field studies in information systems.* MIS Quarterly, 1999. **23**(1): p. 67-93.