

# ADMINISTRATIVE STAFF'S AGE AND THEIR ADOPTION OF INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) IN SECONDARY SCHOOLS, KAMPALA DISTRICT, UGANDA

BY

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## ABSTRACT

*This study investigated the relationship between the administrative staff in secondary schools of Kampala district, Uganda and their adoption of Information and Communication Technology (ICT) in doing school work. The data were collected with the help of ten research assistants all of whom were secondary school teachers. The data were got from a sample of 450 members of the administrative staff (headteachers, deputy headteachers and Directors of Studies), 438 usable questionnaires were returned and 15 of the very questionnaire respondents were also subjected to oral interviews. The study took a descriptive correlational survey design with qualitative and quantitative approaches. The findings of the study were that there was a statistically significant relationship between administrative staff's age and their adoption of Information and Communication Technology (ICT) in secondary schools in Kampala district ( $Sig > 0.004$ ). Specifically, the young administrators were far better in ICT usage than their aged counterparts. Therefore, the aged administrators should be trained in different computer packages and then be urged to appreciate ICT just as the young ones do.*

### 1.1 Introduction

The use of Information and Communications Technology (ICT) has transformed the world by providing opportunities for businesses, opening access to the global marketplace, delivering a wealth of information, enhancing social interaction and enabling greater community participation. ICT is one of the most important tools to achieve economic prosperity of a country both as a modern industry that creates jobs and brings external revenues, as well as a tool for ushering in efficiency and effectiveness in service delivery both by government and for the private sector. Experiences in developed and emerging economies support the above notion (Akinwumiju and Owolabi, 1991; Brynjolfsson and Hitt, 2000). Despite this, some people, including school administrators, are ICT illiterate.

### 1.2 Statement of the Problem

Uganda has responded to the Millennium Development Goals through the country's broad national development goals as stipulated in the Uganda Vision 2040 which identifies ICT and the knowledge sector as an industry with enormous opportunities that can be exploited to transform the economy and people's lives through job creation, accelerated economic growth and significantly increased productivity. This is further elaborated in the National Development Plan II (NDP II) that identifies ICT as one of the primary growth sectors. Many of the opportunities being presented today by the ICT revolution can, therefore, be harnessed by efficient deployment and utilization of appropriate technologies (Uganda Communication Commission, 2015).

Despite these efforts, many challenges exist in the field of ICT revolution especially in schools, both secondary and primary, for example some teachers and school administrators have a negative attitude towards ICT innovation especially the old men and women above 50 years of age. Many of them are not responsive to the new changes of adopting ICT. In other instances, even if the teachers and administrators would be in place to use computers and the internet, those facilities are not readily available. Although many schools in Kampala district are well facilitated, some have elderly administrators who are computer illiterate. There are also many poor private schools which find it hard to afford buying and using ICT. The school administrators are not well remunerated to afford internet usage

much of the time (Kayindu, 2017; Bakkabulindi, 2007; Matovu, 2017). Thus, the study was carried out to investigate the influence of administrators' age on their adoption of Information and Communication technology (ICT) in doing school work.

### 1.3 Related Literature

It is generally believed that the age of persons or people does influence the way they adopt the usage of ICT. For example, the youth are more likely to be computer literate than their counterparts who are aged. The young generation is well equipped with knowledge of computer, Whatsapp, Twitter, Messenger, and Facebook among other social media platforms, which their aged counterparts are lacking or are not interested in (Matovu, 2017). Schiffman&Kanuk (2004) observe that it is reasonable to assume that the age of the consumer is related to the specific product category in which the consumer innovates, with consumer intending to be younger than either late adopters because many of the products selected for research attention (e.g. fashion, automobiles) are particularly attractive to young consumers. Kotler (1991) theorizes on age as an important variable in the innovation adoption process when he asserts that buy different goods and services over their life time. They eat baby food in the early years, most foods for the growing and mature years, and special diets in the later years. People's taste in clothes, furniture recreation is also age related). Age is also theorized to be important in the adoption of innovations such as family planning (Bonabana, 2000), contraception (Karugaba, nd) and health service utilization (Mayanja, 2001). Age is also theorized to be important in the adoption agricultural innovations, although there are two conflicting explanations for this: For example, Basisa (1999) points out that while older farmers may have more experience, education and farm resources which factor can be an incentive to try out a technology, young farmers tend to have more schooling and exposure to new ideas that may also help to adopt a technology, which suggests an inconclusive debate and hence gap on this issue (Cited in Bakkabulindi, 2007).

As cited in Bakkabulindi (2007), the positive influence of age on ICT adoption has been claimed. For example, Kintu (2000) in his study on the determinants of contraceptive use in Nakawa Division, Kampala, Uganda, found the age of the respondent having a significant relationship with the extent of knowledge and practice planning methods, while Mayanja (2001) in another study of the barriers to utilization of the package in selected districts in Uganda, found the age of mother related to the kind of assistance sought during delivery: Among women aged 15-19 the majority (57%) sought assistance from a trained service provider during delivery, while among the old mothers (45-49) the majority (69%) sought assistance from traditional! birth assistants (TBAs) or relatives. Karugaba (nd) in his study of factors influencing contraceptive use in Buhunga Parish, Rukungiri District in Uganda established that age (among other variables) had a significant bearing on conceptive use, while Kasule (nd) also empirically established that age determined contraceptive acceptance among the clients at Family Planning Association of Uganda (FPAU) Clinic, Kamwokya, with most acceptors being below the age of 30; further the age determined the contraception used: For those below 30, the majority were using the pill, while those above 30 the injection was most popular (Cited in Bakkabulindi, 2007).

According to Naire(1999), from a psychological perspective there are other obstacles that adults face as they stow old in society. One such problem is ageism, or prejudice against an individual based on his or her age. Prejudice, and particularly the formation of stereotypes, that people have beliefs about the personal traits and behaviors of individuals belonging to age groups. The elderly comprise such a group, and one's attitudes and beliefs toward the elderly can affect their ability to cope with the problems of everyday life.

Stereotypes about the elderly are complex and depend on cultural factors and the age of the individual holding the stereotype, but surveys often reveal beliefs that are inaccurate. Palmore (1990) has listed some of the more common myths, including the belief that most elderly people are sick, in mental decline, disabled and therefore unable to work, isolated and lonely, and depressed. In each of these cases, the negative stereotype is misleading or simply not true. Most elderly people are not sick or disabled, research indicates that the elderly may, on average, be more contented and less prone to depression than younger people (Lawton et al., 1992; Palmore, 1990). Not surprisingly, negative stereotypes tend to lead to negative consequences. Including the fact older people are generally evaluated less positively (Kite & Johnson, 1988) and may be to job discrimination (Kite, 1996).

It is almost impossible to separate the effects of aging from the effects of social change (Neugarten, 1977). That is, the cohort, or group of people, born in 1910, for example, has less education than the cohort born in 1960, and the

content of their education, because of scientific and social changes, was very different from that received by students half a century later. Second, most studies of older adults may include individuals with mild cases of brain disorders, such as those in the early stages of Alzheimer's disease. The scores of these individuals could account for part of whatever cognitive impairment is found and could result in assessments that do not apply to adults who remain healthy. It is estimated that one in every six older adults suffers from some loss of mental ability from these organic diseases, which are often marked by deficiencies in neurotransmitters and by physical changes in the brain (Kolata, 1981). About a third of these people show a severe cognitive loss; the rest show a mild to moderate impairment (Coyle, Price and DeLong, 1983). People with early Alzheimer's disease, for example, do worse than normal elderly at learning word pairs, drawing geometric forms, naming objects and actions, and retrieving information from long-term memory (Rosen and Mohs, 1982).

Keeping such problems in mind, it should be noted that there are many changes that accompany aging, perhaps the most characteristic is the tendency to "slow down." This slowness begins with the individual's perceptual processes, for with age, sensory input is reduced. Physical changes in the eye curtail the amount of light that reaches the retina, and hearing loss often develops, particularly for high tones; thus the absolute threshold. In addition, older people with good visual acuity may nevertheless require more contrast than younger adults do to recognize important features of the environment (mine, Ikeda, and Schieber, 1982). Finally, older adults seem to require more time to process any single perceptual event.

Since the central nervous system processes all information more slowly with age, the older individual reacts more slowly. As the discussion of memory will make clear, older adults seem less able to allocate their available processing resources to specific tasks. Yet this slowing and less effective allocation of resources does not seem to affect all people similarly. For example, some individuals show great slowing in one stage of perceptual processing; others show greater slowing in another stage. This variability maybe due in large part to individual differences in disease, nutrition, and life experiences (Walsh, 1982).

Along with slowness, memory impairment is the cognitive change most frequently assumed to accompany aging. In many respects, the memory of an older adult is no worse than that of a younger adult—at least not significantly so. But a number of memory changes do appear with age.

Some of these changes are related to sensory memory. Aging appears to slow down the rate at which the individual assimilates information from sensory memory, so that more information is likely to decay before it can be processed. When younger people are given a brief glimpse of seven unrelated letters, they can usually recall no more than four of them before the letters fade from sensory memory. Older adults consistently do worse than younger adults in this situation, recalling three letters at exposures that allow younger people to recall four, and two letters at exposures that allow younger people to recall three (Fozard, 1980). The same effect is found for sounds. In dichotic listening tasks, older people are as accurate as younger adults in remembering information that enters the attended ear, but they recall less than younger people do from the unattended message. Information fed to the unattended ear must be held in sensory memory longer than attended information before it is reported, which means that the message heard by the unattended ear is likely to decay before it can be reported (Parkinson, Lindholm, and Urell, 1980). Studies of visual and auditory memory consistently support the conclusion that older adults process available information more slowly than younger adults do (Kausler, 1982).

When it comes to short-term memory, older people can hold as much information in awareness as younger people do, so that they can remember the name of a person they have just met, or a phone number they have looked up, about as well as they ever did. Moreover, the speed with which information is lost from short-term memory does not change (Kausler, 1982). But when older people are asked to search for information in short-term memory, they are slower than younger adults at finding it. With extended practice, older adults improve as much as younger adults in the speed with which they examine items, but the age gap remains about the same (Madden and Nebes, 1980). Furthermore, when older adults are asked to reorganize information in short-term memory—for example, if they are asked to repeat a list of letters, numbers, or words backward—they tend to perform somewhat more poorly than younger adults (Walsh, 1983). In addition, an older person's short-term memory is likely to be hindered by a task that requires a division of attention.

Outside the laboratory, however, most differences between the short-term memory performance of young and old escape notice. When older adults are carrying out processes that have become automatic, they allocate their attention efficiently; it has been suggested that practiced skills, such as those used by air-traffic controllers, computer technicians, surgeons, and trial lawyers, do not suffer as people age (Hoyer and Plude, 1980).

Indeed, like adults of any age, older people have the greatest difficulty in remembering. In one study, researchers measured university students' self-concepts. In a later experiment, the students interacted with other participants and received fake feedback from them in the form of adjectives that were either consistent or inconsistent with their self-concept. Later, when the students were asked to recall and identify the adjectives that had been attributed to them, they showed greater recall for the consistent adjectives, suggesting that people selectively attend to and recall self-consistent information (Sunn et al., 1962).

Self-verification needs are also expressed in people's tendency to seek out self-confirming relationships. One study found that if people with firmly held negative self-views marry spouses who appraise them favorably, they tend eventually to withdraw from the marriage. Such people are more likely to remain with spouses who agree with the negative image they have of themselves. In contrast, people with positive self-concepts prefer spouses who share their positive view of themselves (Swarm et al., 1992).

Rogers also suggested that people have a need to regard themselves positively, and research confirms a strong and pervasive tendency to gain and preserve a positive self-image. These processes are known as self-enhancement (Brown, 1998; Swarm, 1996). Several self-enhancement strategies have been identified. For example, people show a marked tendency to attribute their successes to their own abilities and effort, but to attribute their failures to environmental factors. Furthermore, most people rate themselves as better than average on virtually any socially desirable characteristic that is subjective in nature (Steele, 1988). The vast majority of businesspeople and politicians rate themselves as more ethical than the average. In defiance of mathematical possibility, about 80 percent of high-school students rate themselves in the top 10 percent in their ability to get along with others. Even people who have been hospitalized after causing auto accidents rate themselves as more skilful than the average driver (Pyszczynski & Greenberg, 1987). Indeed, as evidence on self-serving biases in self-perception continues to accumulate, researchers are concluding that positive illusions of this sort are the rule rather than the exception in well-adjusted people and that these self-enhancement tendencies, or "positive illusions," contribute to their psychological well-being (Taylor & Brown, 1988; Taylor et al., 2000).

Within the organizational setting, many researchers have examined age differences with respect to work attitudes, work behaviors, and values, needs and preferences (Rhodes, 1983). For example, there is overwhelming evidence which supports a positive correlation between age and overall job satisfaction (e.g., Near, Rice, & Hunt, 1978; Siassi, Cro-cetti, & Spiro, 1975; Weaver, 1980). Gibson and Klein (1970) concluded that the age-satisfaction relationship was a part of the aging process and could be explained by changing needs, a mellowing process, and changing cognitive structures associated with age.

Taken together, these results present a life cycle orientation whereby job needs and preferences change with age. In fact, many have promoted theories that apply life cycle approaches to job-related attitudes and behavior as important contributions to psychological theories of aging (e.g., Rhodes, 1983). Therefore, the proposed model addresses this need for theoretically based research on age differences in the increasingly important area of technology acceptance and usage in the workplace.

There is significant evidence (e.g., Davis, 1989; Davis et al., 1989; Mathieson, 1991; Taylor & Todd, 1995a) to suggest that the most critical belief underlying an individual's attitude toward the behavior of adopting a new technology in the "Workplace/is her or his perceptions about the usefulness of the technology. Perceived usefulness is defined as the extent to which a person believes that using a particular technology will enhance her or his job performance (Davis, 1989), and empirical evidence suggests that in the workplace attitude toward using a technology is, in fact, tied closely to instrumentality (Davis et al., 1989; Taylor & Todd, 1995a). Thus, in determining usage, it is important to understand differences between younger and older workers in the importance each group attaches to extrinsic factors related to usage of a new technology.

Age can impede IT implementation efforts because of differences in the way ITs are interpreted and given meaning. For example, if ITs are typically introduced by young people with recent technical education, then cultural values may support a particularly strong reluctance to avoid ITs by senior managers in those societies that link status to age. Watson and colleagues (1994) described ways in which culture shapes the adoption of technology while studying the cross-national adoption of group support systems.

## METHODOLOGY

The target population was a total of 450 administrative staff. These were 150 headteachers, 150 deputy headteachers, and 150 Directors of studies. School administrators (headteachers, deputy headteachers and Directors of Studies) are key people in doing school activities, such as monitoring teachers, monitoring students, communicating to parents and to the members of the School Management Committees, among other things. Therefore, their knowledge of ICT is necessary. Since, on average, each school has three administrators, a sample of 450 administrators was taken. There was no sampling of the respondents because of the administrators' limited number. Thus, all of them were requested to participate in the study.

The data on the relationship between administrative staff's age and their adoption of instructional technology was analysed using the t- since test the independent variable, age is numerical, and the dependent variable, the adoption of information and communication technology (ICT) is categorical.

### Limitations of the Study

The questionnaire on ICT adoption by school administrators was designed with an assumption that all respondents were functionally literate and enlightened to the extent of fully understanding the requirements of the questionnaire. It was further assumed that they would take the exercise with all seriousness and respond faithfully to the questions. There was also an additional assumption that the respondents would not read meanings into the exercise for example they would not think that the questionnaire was requiring information for the purpose of terminating some administrators or transferring them. It is however one thing to assume something and it is another thing for the assumed thing to be a reality or to be what is on the ground. The researcher could not ascertain this with 100% certainty. This may have affected the results of the investigation

## FINDINGS

**The question was, what is the relationship between administrative staff's age and their adoption of Information and Communication Technology (ICT) in secondary schools in Kampala district, Uganda?**

The finding on this was that administrative staff's adoption of information and communication technology (ICT) in secondary schools in Kampala district, Uganda is significantly influenced by their age ( $\text{sig} > 0.004$ ), as shown in table 1.

**Table 1 showing relationship between Age and between administrative staff's age and their adoption of Information and Communication Technology (ICT) in primary schools in Kampala district, Uganda**

Correlations			
		Age	ICT Adoption
Age	Pearson Correlation	1	.143**
	Sig. (2-tailed)		.004
	N	438	438
ICT Adoption	Pearson Correlation	.143**	1
	Sig. (2-tailed)	.004	

	N	438	438
**. Correlation is significant at the 0.01 level (2-tailed).			

The findings on this also were that the age of the school administrators in Kampala district has a significant influence on their adoption of ICT in Kampala district secondary schools (sig >.004). This means that on average, the primary school administrators of different age groups, such as the youth, those in middle adulthood or late adulthood, are different in their adoption of ICT in doing schoolwork. In other words, their ICT adoption in doing school differed much according to the age of the school administrators.

Qualitative data revealed what appeared very similar to quantitative data. Several youthful administrators such as the Directors of Studies said that they highly use the internet and social media platforms especially Whatsapp, Facebook, Twitter and Messenger. The only challenge they raised was that some teachers do not have smartphones; instead they have button phones. Therefore it is hard to communicate to them using those platforms. They also raised the concern that they are not given enough allowances to be able to have Data which is required to make those platforms functional. Therefore, many youthful school administrators know how to use some ICT platforms especially social media platforms. Unfortunately, they do not use them so much as they are doing school work because of the socio-economic factors.

Surprisingly, although some school administrators above the age of 50 reported not being so computer literate, almost all of them reported that they knew how to use basic computer packages, such as Word processing, The majority however were ignorant in using Microsoft Excell, Point and Access Data Base,

## Discussion

The findings on this research objective indicated that age is positively correlated with ICT adoption by the secondary school administrators in Kampala district. Though the respondents of the various age brackets were all using phone calls, a significant differences existed in the usage of social media platforms, computer software and computer hardware. Based on qualitative data, the cause of this was the fact that on some social media platforms such as Facebook, Twitter and Youtube there are many interesting things and photos as well as information. By getting access to it, one can share it with colleagues. This is more appealing to the young generation (youths) than the aged men and women. Hence, the significant difference in ICT adoption based on age groups was not accidental. As Owolabi (1988), Owolabi (2005) and Liff (2000) observe, different employees perceive things differently sometimes because of their age differences. Whereas the young can appreciate something, the aged may fail to appreciate it, or vice versa.

## Recommendation

The finding that there is a significant relationship between secondary school administrators' age and their adoption of ICT suggests that the aged administrators should be trained in different computer packages and then be urged to appreciate ICT just as the young ones do.

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