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Uses and Gratifications of the Internet and Library Information Resources: An Integrated Model Proposal

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ABSTRACT

This study sought to argue the assumptions of the uses and gratifications theory (UGT) in information media selection and use among iGenerations undergraduate students. One of the propositions of UGT is that audiences consciously interact with media with the determination to satisfy a number of information needs. Taking into perspective of the library and the Internet as information media, the limitations of UGT in illustrating the gratifications sought and gratifications obtained in the use of the Internet as well as the library as information media is highlighted. Empirical data were collected from undergraduate students who were mainly iGenerations at two universities in South Africa. Two media were evaluated: The Internet and the library. Although the Internet was the preferred media by the majority of the respondents, the purpose why undergraduate students predominantly use the Internet is not in sync with their primary information needs as students. Also, the Internet was not revealed to be an alternative media to the library although the library sometimes failed in meeting the information needs of users. The study concluded that the assumption that users seek out other media when gratifications obtained from media use does not equate gratifications sought, is not always correct. An integrated model for information media use supplemented by the expectation confirmation theory was therefore conceptualised to justify the preference in information media by iGeneration undergraduate students.

Keywords: Undergraduate students; iGenerations; Library information resources; Internet use; Uses and gratification theory

1. INTRODUCTION

The central theme of this study was to challenge the assumptions of the uses and gratifications theory (UGT) among iGenerations undergraduate students in information media selection and use. The theory of uses and gratifications (UGT), is primarily associated with Katz[1], *et al*. The trio observed that mass media use served functions either through a particular content or by the media in question: "to match one's wits against others, to get information and advice for daily living, to provide a framework for one's day, to prepare oneself culturally for the demands of upward mobility, or to be reassured about the dignity and usefulness of one's role"[1]. UGTs main supposition is that audiences consciously interact with media with the determination to satisfy a number of information needs[1,2]. In other words, media is being used to satisfy needs.

According to Katz[1], *et al*. UGT research bothers on seven main issues with media use: (1) the societal and mental origins of (2) desires, that eventually produce (3) expectancies from (4) the media or other medium, which results in (5) distinctive ways of media exposure culminating into (6) satisfaction of needs as well as (7) other consequences, perchance commonly unpremeditated ones. The assumption is that media users have instinctive desires that can be satisfied by media otherwise referred to as gratifications. Conceptually, gratifications are ''need satisfaction'', which are obtained when an individual's needs are met by some types of media sources that equates their expectations[1].

Several theories including uses and gratifications theory and hypodermic needle model have been put forth in explaining the use of different information media. Reports suggests that it appears that many iGenerations children and teens spend nearly all their waking hours using media and technology[3]. iGenerations also known as digital natives are those born in the 1990s and beyond. The 'i' represents both the types of digital technologies and the information access they provide. iGenerations are defined by their technology and media use and their love of electronic communication[4]. Most of these media usages theories have not been able to adequately accommodate within their various constructs, media usage among digital natives. This paper therefore, intends on proposing an empirically suitable model that can adequately explain information media use by digital natives.

2. RESEARCH OBJECTIVES

The primary aim of this paper was to argue the assumptions of the UGT in information media selection and utilisation, in

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particular, the use of library information resources among iGenerations undergraduate students. The specific objectives of the study are as follows:

- Identify iGeneration undergraduate students' Internet and library information resources use pattern
- Ascertain the level of satisfaction with library services provision
- Propose a model for library information resources use by iGenerations based on uses and gratifications theory

3. RESEARCH QUESTIONS

To achieve the main aim of the study, the following research questions were raised based on the research objectives:

- What are the Internet and library information resources use pattern of iGeneration students?
- How satisfied are users with library services provision?
- In what way could uses and gratifications theory be improved upon to explain library information resources use?

4. REVIEW OF THEORETICAL BASIS

A widespread impression during the early mid-twentieth century was the "effects model" which focused on what the media did to the audience. As explained by Shoemaker and Reese[5], it was like an early moral panic which submitted that audiences are impassive and at the control of whatever the media conveys to them. In this model, the media has the power. UGT assumes the viewpoint that audiences are conscious partakers in the use and exchange of media and that they utilise the media for needs satisfaction. A remarkable aspect of UGT is the accentuation media users as seemingly coherent and active self-aware entity[6]. Also, the theory suggests a deeper examination of the very nature of humans by uncovering the several aspects of needs to "be connected" socially and psychologically via communication[1]. The basic assumption of UGT therefore, is that information seekers undertake a conscious role in understanding and assimilating the media into their individual lives. A student may choose to visit the library to do some research/ get an assignment done, or for escapism, or merely use the discussion room with friends. An individual may write a blog to fulfil needs for assertiveness. Contingent on supposed needs, social and psychological features, and media qualities, individuals use media related to gratifications[7].

According to Shao[8], people react to media on the basis of how they intend to contribute, generate, or consume content. The proliferation of user-generated online media content has become very rich (but not necessarily creative primarily as a result of the assumptions of UGT and its appeal to users. Information seeking, in general, is a complex activity, but applying this theory when studying information seeking processes and behaviour helps to gain an understanding as to why certain decisions are made in the use of certain information sources and resources. Five different constructs were identified from the theory as reflected in Table 1.

In UGT theory, the word gratification is defined as a "feeling of satisfaction". The expectation confirmation theory (ECT) was, therefore, used to evaluate the resources/services that the library provides to library users and to measure satisfaction levels. ECT better provided a deeper understanding of the level of satisfaction that users obtain from the consumption of library information resources as it measures expectations from a media resource, the satisfaction level and a reuse intention.

ECT initiated in the Marketing field and was originally proposed by Oliver[10]. It has widespread usage in customer behaviour studies mainly to understand buyer contentment, post-consumption behaviour and service marketing as a whole[10-12]. ECT consists of five distinct paradigms: expectation, performance, confirmation, satisfaction and repurchase intention. It proposes that consumers' expectations in addition to perceived performance will result in a post-consumption satisfaction[10]. ECT stresses its expounding influence of post-acceptance behaviour and proposes that before consumption and after interaction behaviours mutually influence validation, which in turn affects gratification and continuation intents[10]. This judgement is usually a result of negative or positive confirmation of expectation. When a product performs beyond the expectations of the consumer (positive confirmation), after-purchase gratification occurs. Similarly, disappointment will likely occur when a product/service falls short of consumers' anticipations (negative confirmation[10,13].

In this paper, respondents' expectation denotes library users' anticipation about library information services. These preconceived perceptions are usually formed before interaction with library resources. According to ECT, perceptions of performance are influenced directly by before-use expectations, and in turn, influence validation or otherwise of beliefs as well as post-adoption satisfaction with library resources. These assessments and/or judgments are made in contrast to the

Table 1. UGT constructs/needs gratified by media

Need type	Description	Media example
Cognitive	Acquisition of knowledge and information	Internet (blogs, websites, library, television news)
Affective	Emotive, pleasurable or aesthetic experience	Movies, Internet (online TVs, video streaming/sharing websites)
Personal interaction	Enhancement of trustworthiness, assurance, and position	Video (speaking with conviction)
Social interaction	Enhancement of connectedness with friends, classmates, family, and lecturers	Internet (email, instant messaging, facebook)
Tension release	Escape and diversion	Television, movies, Internet, library (fiction and escapist section)

Sources: Adapted from Katz[1], *et al*.

library user's earlier expectations.

Although media users, as assumed by UGT, are responsible for media choices, the quality of the services rendered can be measured and determined with the ECT based on confirmation of their expectation from the media. Hence, when a library offers quality services and information materials that satisfy the information needs and confirm the expectation of users, there is the possibility of a reuse intention.

5. RATIONALE FOR THE STUDY

The focus of this paper was not on how the media (library and the Internet) affects undergraduate students but it sought to understand and argue what leads undergraduate students to use a particular information source/resource, in this case, either the Internet or the library. The results of UGT studies have subsequently not been applied to library information resources use. Hence, there is a need to develop and test UGT constructs not only to the Internet but also to the distinctive information resources and service provision of libraries in understanding users' motivations.

Since individual users manage the communicative method of the medium in question because of their consciousness to initiate access, the user-centered view of UGT offers a basis for understanding the exact motives that make students have a preference for one medium of accessing information over another. This approach concentrates on why a particular media is utilised rather than on media content. Because many Internet and library services are interactive in nature and necessitate high user involvement, the argument of utilising UGT to understand the Internet and especially library information resources use seems legitimate.

6. METHODOLOGY

The survey research design was adopted for the study with both qualitative and quantitative data collected using focus group discussion sessions and questionnaires. Students registered for a 3-yr or 4-yr Bachelor's degree/ diploma from two selected universities: Nelson Mandela University (NMU) and Fort Hare University (UFH) in the Eastern Cape Province made up the study population. The study did not include fresh students as they had only spent a few weeks on campus when collection of data was done. With a population of 11,416 undergraduate registered students at both universities, the stratified sampling technique was adopted for this study and five strata were constituted along faculties which consisted of Faculties of: Law, Science, Social Science & Humanities/ Arts (SSH/Arts), Economic/Management Science (E/MS), and Education. Only degree programmes that run for at least 3 years or 4 years, and were common to both universities were considered during stratification.

Using the Raosoft® sample size calculator, the specific sample size was calculated with a 5 per cent margin of error, a 95 per cent level of significance, a 50 per cent response distribution and a total population of 11,416. The result yielded 372 as the least representative operational sample size for the population. 450 questionnaires were distributed and 412 retrieved. Only 390 of the retrieved questionnaires were usable, which amounted to a response rate of 86.7 per cent. Qualitative data were collected using focus group discussion (FGD) sessions with undergraduate students. A total of six FGDs consisting of five to eight participants were conducted. The overall reliability and internal consistency of the questionnaire were determined for each variable using Cronbach Alpha and the coefficient alpha for the entire instrument was 0.90.

In keeping up with ethical research standards for human subjects, the research proposal and research instruments were submitted to the research and ethics committees of UFH and NMU. Ethical clearance certificates were issued to the researchers from both universities.

7. LIMITATIONS OF THE STUDY

The study's sample size consisting of 390 respondents at two universities in South Africa is only a small proportion of the whole population of iGeneration undergraduate students in the country given that 20 per cent of South Africa's population falls within this category. Research studies with comprising of larger sample sizes is therefore suggested to test this model in order to make a sweeping generalisation of the findings of the study.

8. FINDINGS AND DISCUSSIONS

Results from the study revealed that majority of the respondents (82.3 %) were still teenagers. The library use pattern of respondents was measured and it was revealed 105 (27.3 %) visit the library every other day, with 170 (44.3 %) being occasional library users. Only 50 (13 %) use the library daily while 59 (15.7 %) almost never or have never visited the library. The total spent in the library by respondents was revealed minimal.

The amount of time spent in the library was also polled and it was discovered that most of the respondents 191 (49.9 %) use the library for between 1 hrs - 3 hrs, 86 (22.5 %) spend less than 1 hr, 86 (22.5 %) spend between 4 hrs - 6 hrs, while 20 (5.2 %) spend between 7 hrs - 10 hrs or more in the library. A similar study reported 80 per cent of US college students make use of the library for 3 hrs or less a week[14].

The Internet use pattern of respondents showed that 282 (72.3 %) use the Internet daily, 96 (24.6 %) use it every other day while 12 (3.1 %) occasionally make use of the Internet. The utilisation of the Internet has become very essential for students as it has become a daily necessity for academic work[15]. Daily Internet use by students has also been reported in previous studies[16-18]. Internet usage has also been reported to be most ubiquitous amongst younger and more educated people[19]. This result is in contrast with findings from Adekunmisi[20], *et al.* where results revealed that most respondents (70 %) used the Internet weekly. The researchers attributed this factor to the high cost of accessing the Internet in Nigeria as the majority of the Internet centres were privately owned by individuals whose aim was purely for profit[20]. A report by the Pew Research Center[21] stated that Internet access has been rising in emerging and developing nations and those in developed countries who have the Internet access are voracious users.

Students were asked to indicate how much time they spent accessing the Internet daily and it was revealed that 56 (14.6 %) of the respondents spend less than 1 hr accessing the Internet,

98 (25.5 %) spend between 1 hrs - 3 hrs while majority of the respondents 132 (34.4 %) spend 10 hrs or more accessing the Internet every day. Qualitative results from the focus group sessions also indicated that respondents spend an average of 4 hrs - 6 hrs daily Internet using the Internet. A student reported, "just think of how much you spend on your phone, you just keep going and going, 6 hrs minimum". This result amplifies the research findings from a study at Baylor University reported by Wood[22] where Internet use among female college students was found to be an average of 10 hrs a day on their cell phones, while male students spent nearly 8 hrs.

The activities of respondents when they engage in when using the Internet were also polled. Respondents were asked to indicate their use of the Internet for activities such as academic, communication, entertainment, social networking, among others. In all categories listed in this study, Internet use for communication purposes ranked first ($\bar{x}$ 3.4), followed by social networking ($\bar{x}$ 3.17), Entertainment ($\bar{x}$ 3.02) with academic purposes in the fourth place ($\bar{x}$ 2.95). A study of Economics students' uses of the Internet at Istanbul University revealed that the most of the participants (about 76 %) make use of electronic resources for purposes including social networking, download of movies and music, entertainment as well as pastime such as shopping and playing games. The use of electronic resources for homework and getting knowledge for academic purposes via the Internet (24 %) of the participants ranked below shopping online, playing games and Internet surfing[23]. The researchers concluded that information technologies and the Internet was an important part of university students' daily life, but most of the students do not utilse the Internet for academic-related readings and research needs[23].

The academic library provides several information services to fulfil its role in support of teaching, learning and research purposes. Results from the study indicates that when respondents visit the library, the most utilised information resources/services were: Wi-Fi 324 (83.5 %), computer laboratories 244 (63 %), study personal books 271 (70.4 %) as well as study with library books 218 (57.4 %). Library resources/services that are rarely/ never used by respondents include: information literacy and library training 324 (83.5 %) seeking help from information services librarians 280 (72.2 %) usage of ebooks 267 (69.7 %) and library databases 216 (56.3 %).

Most of the respondents (62 %) expressed satisfaction with library services/ information resources. It can be inferred from the above result that iGeneration undergraduate students engage less with electronic resources (journals, books and library databases compared to print resources. Research reports supporting this result from Muniandy[24] revealed that the approach for searching for information particularly on the utilisation of academic databases such as Proquest and electronic learning resources are still low.

9. RESEARCH HYPOTHESIS

There is no significant relationship between library services dissatisfaction and higher Internet use time among undergraduate students.

The Internet as an alternative media for meeting academic information needs by undergraduate students could receive an increased amount of usage when libraries are unable to satisfactorily provide users with the needed information materials. The results of this hypothesis are shown in Tables 2 and 3.

Table 2. Library services dissatisfaction and internet use time

ANOVA[b]					
Model	**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
Regression	5.445	1	5.445	4.139	.043[a]
Residual	506.462	385	1.315		
Total	511.907	386			

Table 3. Regression coefficient

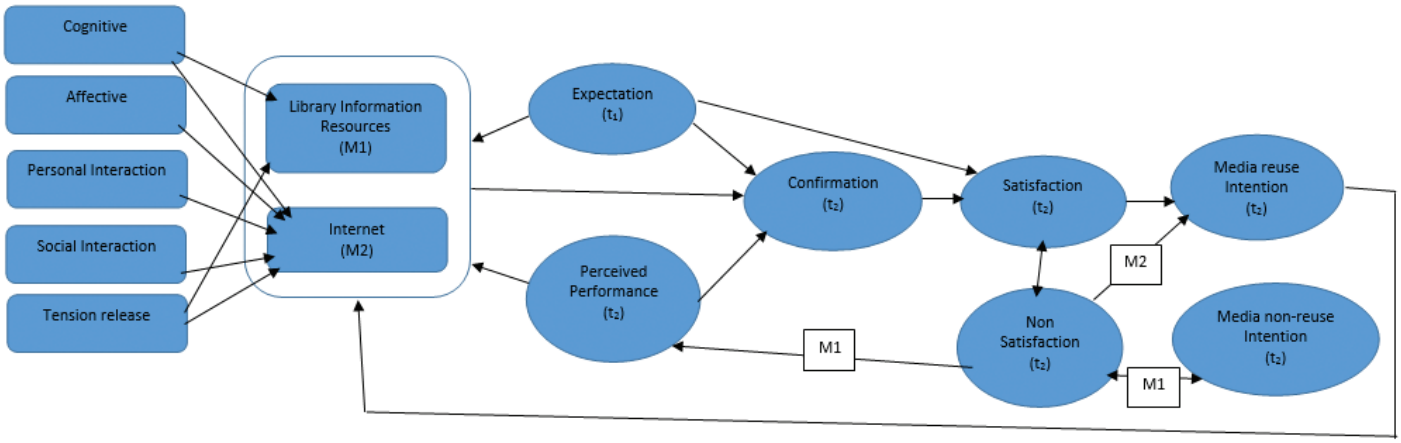
Coefficients[a]					
Model	**Unstandardised coefficients**		**Standardised coefficients**	**t**	**Sig.**
	B	**Std. error**	**Beta**		
(Constant	3.047	.203		14.998	.000
Library services dissatisfaction	-.244	.120	-.103	-2.034	.043

The analysis of variance (ANOVA test in Table 2 reveals that $F = 4.139$, $df = 386$ and $p = 0.043$. Since $p\text{-value} < 0.05$, this result reveals that library users' dissatisfaction is of significance with the amount of time undergraduate students spend using the internet.

A four-point measurement was used to measure the satisfaction level of respondents. As Table 3 above reveals, the regression coefficient for library information resources use dissatisfaction is -0.244, which means that for every unit increase in dissatisfaction level with library services, there is a 0.244 decrease in the amount of time respondents spend in using the Internet. It is concluded from the above that the library's inability to provide satisfactory services is not responsible for an increased amount of Internet use time by undergraduate students. This could be attributed to the fact that academic use of the Internet does not rank first in undergraduate students' Internet use pattern. Furthermore, undergraduate students' decreased use of the library as a media when compared to the Internet is not attributive to gratifications not obtained from the library as assumed by UGT that audiences consciously interact with media in a goal-oriented manner which avails them the means of satisfying a wide variability of needs[1]. Although gratifications sought (dissatisfaction with library services) were not obtained, this did not directly increase the amount of time undergraduate students use the Internet (B = -0.244, t = -2.034, $p<0.05$; as shown in Table 3).

9.1 Implication of the Results

Considering the findings summarised above, it becomes



Source: Derived from the theoretical and conceptual framework coupled with empirical findings of the study

Note: t_1 = pre-interaction with Information media;
t_2 = post-interaction with Information media.
M1 = Information media 1 (Library Information Resources)
M2 = Information media 2 (Internet)

Figure 1. Conceptual framework based on empirical findings.

necessary to appraise the results in the light of UGT. The use of the Internet as an information media is very prevalent among undergraduate students; however, its use is predominantly not for academic purposes. The use of the Internet is not an alternative to library information resources.

The choice of media by undergraduate students which the UGT assume serve functions by some specific content or by the medium in question, has revealed that such needs may not be the media users' objectives for seeking the media in question. Put differently, although the Internet is a preferred media by the majority of the respondents, the purpose that it serves in the life of iGeneration undergraduate students is not in sync with their primary objective of studying on campus. This means that academic-related needs are not the reason for media preference in satisfying information needs arising from academics. Another basic assumption of the UGT is that the audience is active and goal oriented in the usage of media; people have various uses (needs) they seek to satisfy through media. In this study, it is difficult to conclude that the motivation of undergraduate students' use of the Internet over the library is goal-oriented, given that the primary use of the Internet is not directed towards school work or academic-related activities.

Furthermore, although as many as 38 per cent of the respondents were not satisfied with library services provision, this did not significantly raise the total amount of time Internet use time among undergraduate students. Hence, students did not seek the Internet as alternative media for the purpose of fulfilling their academic information need, which negates UGT's assumption that audience members take the initiative to link need gratification to a specific media and that media compete with other sources for need satisfaction. Since users' expectations were not satisfactorily met, which significantly led to a non-reuse intention of library information resources among respondents, this should have automatically led students to seek their information needs from other media sources (in this case Internet) as suggested by UGT. The theory's assumption that users seek out media in a goal-oriented manner can be asserted in this case to be a non-academic oriented manner of seeking out media.

The gratifications that users sought from the Internet are basically non-academic related; as such, a user's inability to obtain gratifications sought from one media (library has not made them seek out new forms of media. However, the urge to meet the affective, personal and social interaction need type has led users to seek out other media for the purpose of meeting other information needs other than the cognitive need type which the library is basically set up to provide. Individuals form habits over time, and these habits also come to play in the use of media for educational purposes, information seeking, entertainment and recreation. Larose[25] stated that habits might be stimulated through internal and external cues which were present in the context in which the habit was originally moulded. Media such as the Internet and libraries are well-known sources of information resources, but while the Internet requires a careful examination of its resources, the library provides access to accurate and relevant scholarly as well as other information resources[26]. The initial selection of media such as the library or the Internet as a medium of satisfying information needs is guided by active choice based on gratifications sought[27]. The control of this choice of chosen media is transmitted to non-conscious processes with the repetitive utilisation of identical media[28]. Thus Larose[25] noted that uses and gratifications initially make habits to form as a result of a recurrence of behaviours that are firstly under mindful control.

10. CONCLUSIONS

The formation of the habit that leads to the Internet being preferred more than the library is as a result of perceived ease of use of the Internet when sourcing for information materials. According to a respondent, "you have to pace through the shelf and it takes time" signifying it is difficult and time-consuming locating information materials in the library. However, this is not generally correct as electronic resources and library databases usually have searchable contents with the use of vocabulary control tools which make for relevant search result

as well as the retrieval of precise and accurate information materials.

The cognitive variable, which explains the acquisition of information, knowledge and comprehension seem to be on the negative side of media utilisation for academic purpose considering the above result. Going by the findings discussed above, the Internet which is undergraduate students' preferred media does not have a foremost place when acquiring information and knowledge for academic-related purposes. The primary aim of making Internet access available and free on campus is, therefore, endangered because although the Internet receives a high amount of usage time among undergraduate students, the activities carried out on the Internet are not tailored towards academic productivity.

According to the result, the library users' dissatisfaction did not in any way increase the amount of time undergraduate students spend using the Internet. Unarguably, therefore, although the non-confirmation of users' expectation leads to a reduction in library information resources reuse intentions, this does not result in users resorting to the Internet for academic purposes, which should have significantly led to an increase in the amount of time users spend using the Internet.

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Contribution to the study is in the writing of the final manuscript.