

The Influence of Infobesity on the Information Seeking Behaviour of Undergraduate Students in Tangaza University College

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Abstract

Infobesity is the condition of individuals who exhibit difficulty in understanding issues and effectively making decisions because they have too much information about that issue. Persons who suffer from infobesity exhibit queer information seeking behaviour characterised by skimming of just a few pages of information and then bouncing off never to return. Most of the undergraduate university students are netizens who are intensive users of emerging technologies to create, collect or share information. Available evidence indicates that although netizens wallow in vast volumes of information, they hardly benefit from the information due to the consequences of infobesity. This chapter investigates the characteristics and prevalence of infobesity amongst university students in Tangaza University College as well as its impact on their information seeking behaviour. The study leading to this chapter applied exploratory research design. Data was collected from undergraduate university students through online questionnaires using Google Forms. The collected data was analysed thematically and presented using descriptive statistics. The findings confirm the fact that infobesity is real amongst undergraduate students in Tangaza University College. It is evident that infobesity is a consequence of vast amounts of information they are exposed to and the ease with which they are able to create, use or share information.

Keywords: Infobesity, Information overload, Undergraduate students, Tangaza University College, Kenya.

1 Introduction

Maxwell (2014) explains that people presently operate in a world in which information is dominant. He further explains that access to information has been enhanced through technology to the extent that no one needs to leave their comfort spaces to look for or find information. Virtually anyone can access any information they need with just a few presses of keys or clicks on a mouse. As more and more information becomes available, the craving for more information is increasing thereby leading to infobesity. According to Brophy and Bawden (2005), the term infobesity was coined by James Morris, the Dean of the School of Computer Science at Carnegie Mellon University blending information with obesity. Scardamaglia (2013) states that the term is associated with information overload which refers to the sensory overload caused by an over-abundance of and over-indulgence on information. Thus, the term infobesity draws a parallel between excessive consumption of information and the consequences of unhealthy dietary practices of over-indulging in food. In this analogy, abundant, cheap but low quality information is compared to the less nutritious fast foods which are easily accessible but ultimately harmful to the health of the consumers.

Bell (2004) argues that infobesity is a term used to denote a situation of personal information overload, particularly if caused by a poor information “diet” akin to feasting on fast food. Kwanya (2016) explains that infobesity is a condition caused by an uncontrolled feasting on the vast volumes of data that is currently available in the infosphere as a consequence of the big data syndrome. According to Eppler and Mengis (2004), infobesity occurs when information received becomes a hindrance rather than a help, even though the information may be potentially useful. Generally, a lot of information is currently produced from all corners of the world especially from interactive communication media platforms such as email, WhatsApp, Facebook and YouTube among others.

There is consensus that infobesity is a consequence of the growing ubiquity of big data. Bohn and Short (2012) reported that as early as 2008, Americans consumed 1.3 trillion hours of information outside work daily translating to about 12 hours per day per person. Sturmer and Roy (2015), citing Jocelyn Brewer, estimated that people averagely consume the equivalent of the content of 174 newspapers every day from the mass media, social media and other information sources. Lewis (2018) argues that infobese persons consume information they really do not need in their circumstances. She opines that infobese people ironically concentrate on meaningless fluff for the purposes of instant entertainment. She further explains that the situation is getting worse each day with the presence of click bait headlines leading Internet users to visit sites of less informational value in cyberspace. The situation is further exacerbated by the fact that information is increasingly becoming cheap due to efficient production and consumption systems.

Maxwell (2014) argues that infobesity is currently an epidemic because of the readily-available sources and channels of

information making it easier for people to become infobese. Therefore, it is increasingly becoming practically possible for any web user to succumb to occasional or frequent bouts of infobesity. Bawden and Robinson (2009) observed that infobesity may be a mechanism through which users attempt to cope with information overload. The more information they come across, the more they consume leading to infobesity. Therefore, they keep searching for and collecting information endlessly as a means of ensuring that they keep abreast of developments in their diversified areas of interest. Infobesity can be caused by a rapidly increasing rate of new information being produced; the ease of duplication and transmission of data across the Internet; an increase in the available channels of incoming information; ever-increasing amounts of historical information to dig through; contradictions and inaccuracies in available information; a low signal-to-noise ratio; as well as lack of a method for comparing and processing different kinds of information. Therefore, infobesity manifests itself in many ways. Table 1 presents the symptoms of infobesity as suggested by Kwanya (2016).

Table 1: Symptoms of infobesity

S/N	Infobesity issue	Symptom
1	Information consumption	A compelling urge to consume available information without necessarily paying meaningful attention to it thereby doing more viewing rather than reading.
2	Fear of missing out	A deep feeling of an obligation to constantly stay connected to myriad sources and channels of information because of the fear of missing out (FOMO).
3	Tolerance levels	Low tolerance to delays in accessing and consuming information.
4	Information universe	A narrow information universe comprising of echo chambers confined by the Internet and associated technologies.
5	Information format	Preference for synthesised and ready-to-use information rather than raw data.
6	Information mind-set	A hyper-text mind-set conceiving issues in terms of hyperlinks, touch screens and clicks.
7	Information analysis	Perception of non-existent information patterns due to inability to correctly analyse and interpret available information leading to a condition known as apophenia.
8	Know-it-all attitude	Intoxication with information (infoxication) leading to a false sense of knowledge of everything.
9	Attention span	Reduced attention to information.
10	Physical/psychological condition	Physical or psychological conditions such as fatigue, stress, decision paralysis, distraction, sluggishness, irritability and low productivity.

Source: Kwanya (2016)

Other symptoms of infobesity include; never turning off digital devices even when they are not in use and preferring to keep them close by, using information without verifying it as long as it is easily accessible, an urge to multi-task leading to low productivity, and hurry syndrome in which people always perform tasks in a hurry so as to keep pace with time. Infobesity can also exhibit symptoms like habituation or over-stimulation of the brain making it to shut down into an illusory state; a plugged-in compulsion in which people feel a strong urge to check and attend to messages as a means of keeping in touch, inability to concentrate, inability to be creative because of the vast amounts of information to process leaving little time for reflection, burnout and procrastination leading to time wastage, and setting lower quality goals by accepting good-enough solutions rather than perfect ones, a situation referred to as satisficing.

Infobesity is evidence making the old adage “too much of something (good) is dangerous” seem true. Infobesity makes information users to suffer more from information than benefit from it. Ruff (2004) explains that excess information actually becomes noise which is unusable for decision making or performance of tasks. Infobesity is a facet of informational noise and has several effects on the information seekers which are mostly negative. One of the major implications of infobesity for information seekers is the fact that they have to face a whole range of challenges to locate the required information which results into information fatigue and associated anxieties. Some of the challenges include; less knowledge despite the quantum of what is known (which is insignificant to the available information), too much information can lead to brain freeze or fatigue and anxiety which can lead to information avoidance hence the loss of valuable information by the user or information seeker, information addictions due to the urge of getting more information leading to over-dependence on sources like the Internet, shorter attention spans due to too much information being available, ineffective long-range thinking resulting from the availability of virtual information in large quantities for users to select from and from varied information sources, information contamination which could lead to wrong and slow decision making thereby causing serious mistakes and failures, thinking of the past and immediate future without quite much attention of the present due to the presence of vast amounts of information.

Maxwell (2014) argues that people’s capacity to absorb information is not limitless. Therefore, infobesity leads to an information saturation level which may be described as content shock. This view is anchored on the cognitive-load theory which postulates that the human brain has limits on the information it can process effectively. Kwanya (2016) explains that persons who suffer from infobesity exhibit strange information-seeking behaviour characterised by the skimming of just a few pages of information and then bouncing off, never to return. He explains further that this behaviour can be perceived as a form of promiscuity in which people suffering from infobesity exhibit acute infolust in

cyberspace.

Whereas Kwanya (2016) suggests that people can deal with infobesity by going on a data diet, Sturmer and Roy (2015) recommend digital detox. Other strategies of preventing or coping with the effects of infobesity include; using content filtration and aggregation solutions, time planning, prioritising and task scheduling, strengthening information literacy skills, as well as reducing reliance on technology by using manual approaches and tools as much as possible.

2 Undergraduate Students as Netizens

Infobesity is a condition most netizens experience. The term netizen is used to refer to active, habitual users of the Internet. Such people are so committed to communities on the Internet to the extent that they can be considered citizens of the Internet (Hauben, 1995). Thompson (2014) avers that the term was adopted in the mid-1990s to describe those who “inhabit” the Internet. Michael Hauben, a pioneer Internet advocate and author, is credited with coining the word in 1995 (Horvath, 2001). He argued that although netizens may be citizens of and living in specific countries, they interact and create online communities with other people using the Internet. The Internet and associated technologies have broken down spatial barriers, thereby, eliminating restrictions to cross-border interactions.

Netizens use digital networks such as the Internet to find information, communicate and express ideas. Therefore, they spend time to create and share content, respond to queries, as well as discuss and debate pertinent issues with other people online. Netizens are not drawn to the Internet to make profit. Conversely, they devote their time and energy to make the Internet useful and “habitable”. Netizens have a strong desire to express themselves freely, be it in person or on any social media. When they have an opinion, they let it be known. They exhibit a need to be constantly connected to the web and demonstrate an intense desire to understand the digital environment, how it works and how to make it better. Netizens have shifted to digital forms of communication like texting, video calling and chatting as opposed to physical interactions or paper-based communication. Most netizens were born and raised with the Internet. Frand (2000) suggests that a large population of netizens comprise of the “Google” generation.

Current undergraduate students in Kenya fit this description because they are typically in their late teens or early twenties. While the age-brackets may vary globally, the general trends are similar. According to Frand (2000) most students (except mature students) entering colleges and universities then were younger than the microcomputer and even younger now; are more comfortable working on a keyboard than writing in a spiral notebook; and are happier reading from a computer screen than from paper in their hands. He adds that they prefer being connected to and remaining in touch with friends and family at any time and from any place. Oblinger and Hagner (2005) observe that the digital-age students express a need to move between varied forms of communication and are easily bored with traditional learning methods.

Currently, the Internet and associated technologies have influenced many aspects of university students’ social life, ideas and behaviour. To netizen students, the Internet provides a virtual school, virtual library, virtual mall, and virtual everything. The heavy reliance on the Internet as the platform for socio-economic activities by netizen students have been facilitated by the availability of affordable smart phones and bundles for Internet connectivity. Similarly, information technology skills amongst netizen students have advanced due to the emergence of enhanced user-friendly interfaces on hardware and software of most technologies. Given that they have had access to the Internet, computers and smart phones from an early age, they are familiar with the multimedia environment, and prefer figuring out things by themselves. Netizen students have very little regard for manual and traditional ways of doing research such as consulting the library catalogue. The world-wide web is their information universe. They are dependent on search engines such as Google and rely on audios to incorporate their work and graphic cues to interpret relevant pages.

The netizens’ knowledge universe revolves around the Internet and not libraries or information centres (Kwanya *et al.*, 2014). This information behaviour has emerged from the fact that they were raised in the era of ready access to information through networked technologies. These net-savvy students are assertive information seekers and have a preference for immediacy, immediate gratification, answers and information. They do not find the resources provided in the library intuitive and prefer to use search engines such as Google and Yahoo! instead. They are more competent with technology and find their peers as more credible information sources than authority figures and books. Due to the prevalence of plagiarism, netizen students are seen as the “cut and paste” generation. They think that everything is found on the web. They have access to the Internet and smart phones but lack the requisite knowledge to use digital information in ways appropriate to academics. Therefore, they cannot develop effective search strategies and end up wasting so much time on the Internet leaving very little time for evaluating information for authority and accuracy. The web offers them several search hits, making it difficult for them to assess the relevance of the materials presented. This results to them printing off pages with no more than a desultory glance at them.

Static information does not work for them; as they prefer interactive systems, viewing interactive media such as PowerPoint slides which enable them to get feedback instantly. The Internet is becoming a dominant infrastructure for knowledge and having grown up in the digital waves and cyber technologies, they have very high expectations of

information technologies. They prefer visual information such as video links over text.

3 Rationale of study

As pointed out earlier, most of the undergraduate university students are netizens who are intensive users of emerging technologies to create, collect or share information. They wallow in vast volumes of information yet hardly benefit from the information due to the consequences of infobesity. In spite of this challenge, very little research has been done on the consequences of infobesity on the information seeking behaviour of young people. Williams and Rowlands (2007) asserted that research into how young people become competent in using the Internet and associated technologies as information systems is patchy.

A search on Google Scholar through Harzing's "Publish or Perish" software using "infobesity" and "Kenya" as keywords yielded five articles. After analysis, three of them were found to have just mentioned infobesity and Kenya in passing. The other two had relatively substantial consideration of infobesity. The first article by Muruli (2016) advocated for the use of call centres as a means of helping information users to cope with the consequences of infobesity, among other challenges. However, this study did not delve into the causes, symptoms or the consequences of infobesity. Furthermore, the study did not pay attention to the condition of undergraduate library users in the context of infobesity. The second study by Ogendi (2017) proposes the use of effective knowledge management strategies by librarians as a means of coping with infobesity. This study does not assess the prevalence of infobesity or its impact on library information usage.

It is evident from the foregoing that no meaningful study has been conducted to explore infobesity amongst undergraduate university students in Kenya. Recognising that infobesity is real among undergraduate students, as netizens, their capacity to make the best use of information services for their personal and academic endeavours is likely to be curtailed if the consequences of infobesity amongst them are not addressed. One of the best ways of addressing this challenge is by determining the nature of infobesity they exhibit as well as its impact on their information needs and seeking behaviour. This chapter investigates the characteristics and prevalence of infobesity amongst university students in Tangaza University College as well as its impact on their information seeking behaviour.

4 Methodology

The study leading to this chapter was conducted using a cross-sectional survey design. According to Levin (2006), a cross-sectional study is conducted to ascertain the status of a phenomenon at a specific point in time. She adds that such a study can help find out the prevalence of an outcome of interest, for the population or subgroups within the population at a given point in time. A cross-sectional survey design was found suitable because it caters for issues that vary with time.

The population of the study comprised of 200 undergraduate students in session during the May-August 2018 trimester at Tangaza University College in Nairobi, Kenya. According to Gall *et al.* (2003) at least 30% of the total population is considered representative of a population. Thus, 30% of the accessible population is adequate to represent the perceptions of the population. Using this approach, the authors determined the sample size at 60 respondents. Data was collected using self-administered online questionnaires hosted on Google Forms. The specific respondents were selected through simple random sampling using their email addresses with the help of the university ICT office. The link to the questionnaire was sent to the email addresses of the selected respondents. The collected data was analysed and presented using descriptive statistics.

5 Findings and Discussions

Of the 60 potential respondents identified, 46(76.7%) filled the questionnaires. The response shows that 22 (48%) of the respondents were female, while 24(52%) were male. This gender distribution of the respondents was statistically insignificant. The majority 21(46%) of the respondents were between 22 and 26 years of age. There were 10(22%) respondents aged between 27 and 31 years old, while a similar number was aged above 31 years. Also, 5(11%) of the respondents were aged between 17 and 21 years. This age distribution indicates that the majority of undergraduate students in Kenya are between 22 and 26 years. Those above this age bracket may have progressed through a diploma before joining undergraduate programmes. It is also possible that they are "fresh" students but did not join university immediately after completing their secondary school education.

Regarding the year of study, the majority 19(41%) of the respondents were fourth year students. They were followed by third years 10(22%), first years 8(17%) and second years 6(13%). Three respondents declined to indicate their year of study. The high response rate by fourth and third year students may be attributed to their maturity and interest in research. The low response rate by second years may be explained by the perception that students at this level are carefree and do not take issues seriously as they concretise their place in the university after completing their first year of study. Data analysed revealed that the majority (43) of the respondents were pursuing courses in education. There

was one response each for Computer and Biology, Leadership and Management, and Theology. This is not surprising because the majority of the students at Tangaza University College are pursuing programmes in Education.

5.1 Information universe

Most 16(35%) of the respondents described their information universe as being characterised by vast amounts of information as well as diverse formats of content. This was followed by interlinked information sources and resources at 11(24%). The other characteristics identified by the respondents were fast speed of information flow, presumption (production and consumption of content), and unclear veracity (true and untrue context mixed together). These findings confirm that library users currently operate in an information universe of abundance. The situation is created through presumption in which users produce and consume vast amounts of information. Hartzer (2018) estimates that in one minute, 973,000 people log into Facebook; 18 million text messages are sent; 4.3 million videos are viewed on YouTube; 375,000 apps are downloaded on the Google Play Store and the App Store; 174,000 people are scrolling through Instagram; while 481,000 tweets are sent. He also estimates that in one Internet-minute, 1.1 million swipes occur on Tinder; 187 million emails are sent; 936,073 views on Twitch; 67 voice-activated devices are shipped; 38 million voice mail messages are left; 25,000 GIFs are sent via Facebook Messenger; 2.4 Million Snaps are created on Snapchat; \$862,823 US dollars are spent online; 266,000 hours are watched on Netflix; and 3.7 million search queries are performed on Google. Although the veracity of these estimates is not confirmed, they paint an overall picture of an information universe which is dominated by vast amounts of interlinked information which is largely created, consumed and shared fast by the users through myriad communication channels facilitated by the Internet.

Most 18(39%) are excited about the information universe. 9(19%), however, are overwhelmed. The others are confused 6(13%), anxious 6(13%), fascinated 3(7%), fatigued 1(2%), fearful 1(2%), disappointed 1(2%), and frustrated 1(2%). The findings indicate that the majority 28(61%) of the respondents are generally unhappy or stressed about the prevailing information universe. The findings imply that most of the undergraduate library users are not in a position to make the best use of information resources and sources in the prevailing information universe. This calls for an intervention by librarians to devise ways of helping the library users to gain control over their information universe.

5.2 Prevalence of infobesity

The majority of the respondents, 29(63%) described themselves as experiencing infobesity. Some explained their experience as reported verbatim hereunder:

"I source for a lot of material that I eventually get confused with which information is relevant for me."

"In the process of reading different sources of information, I sometimes get confused to know who is right and wrong since the same thing is explained differently by different people."

"There is too much information which is different therefore I do not know which to believe or accept."

"It takes me long when I have to sit and write on something, I have so much information that I do not know which is appropriate especially online."

"Too much information gets you confused and of course it affects the person's wellbeing."

"Over excitement sometimes leads me into a lot of complications that's difficult to handle."

"I get myself glued to the Internet in search of information and content given seems to be interesting so I can't tell which is which within the limited time I have."

Therefore, most of the library users are largely overwhelmed by the volume of information available to the extent that they are not able to make the best use of it. Some also get lost in the sophisticated web of information sources not knowing what is right or wrong. Similarly, some get hooked by the easily available information that they keep accessing thereby wasting valuable time doing more searching than actual use.

The respondents who said they do not experience infobesity had the following to say:

"I am particular about the sources of information; I confine myself to peer-reviewed scientific material."

"Before I make a decision, I make sure I have researched enough and sought enough guidance from professionals if need be."

"I do not complicate life; I use simple information...I do not need boring information...to make a decision."

"I tend to get information on what I only read and what I only require at that point in time."

"I only look for information I need for knowledge's sake."

The responses above suggest that students seem to imply that they are aware that there is a lot of information out there. They also seem aware of the dangers of immersing oneself into this vast information. Therefore, they exercise caution, for instance, by getting support from professional librarians or mapping their information search beforehand. These comments imply that they are aware of infobesity and risks therein. Consequently, they have taken steps to avoid

it. These responses further demonstrate that although it is seemingly easy to succumb to infobesity, it is possible to overcome it. Library users are not entirely helpless before the allure of infobesity. Therefore, it can be concluded that infobesity is avoidable.

5.3 Information seeking behaviour

The majority (40.4%) of the respondents use the information they seek for academic purposes while 21.2 per cent use it for career and professional development. The other uses the students apply information to include general purposes (19.2%), social networking (9.6%), entertainment (3.8%), political participation (3.8%), and religious purposes (1.9%). Given the respondents were undergraduate students, it is pretty obvious why the majority (61.6%) of them sought information for academic as well as career and professional development.

The majority (62.8%) of the respondents began their information searching for the information they needed on the Internet. Only 16.3 per cent stated that they began their information searching from the library. The other respondents identified their first point of information searching as mass media (14%), family (4.7%), as well as peers and friends (2.3%). These findings confirm that libraries are no longer the first source of information especially for youngsters. The findings also reveal the prominence of the Internet in the current academic information universe. Modern academic library users believe that the information they need is on the Internet. They only turn to the library when they fail to get what they are looking for on the Internet or mass media.

Regarding information resources used, the majority (27.1%) stated that they preferred online databases while 25.4 per cent preferred electronic books and journals. The other information resources used by the respondents include print books and journals (23.7%), audio-visual materials (8.5%), reference materials (6.7%), grey literature (5.1%), and information repository (3.4%). Given that the majority of the respondents indicated that they used the Internet, it is not surprising that the majority (52.6%) of them preferred electronic and online resources. It is also evident from the findings that print books and journals as well as reference materials are still important for undergraduate students. The Table 2 below presents the statements which summarise the information seeking behaviour of the respondents:

Table 2: Information seeking behaviour

Information seeking behaviour	%
I wish to apply the least effort searching for information	6.8
I can use information whose authenticity I am not sure of as long as it is easy to access	5.5
I prefer information digital formats	9.6
I use multiple information sources at the same time	34.2
I do not read complete sources; I only use the relevant sections	11.0
I do not save or own the information sources I use; I only download them when I need them	4.1
I prefer synthesised or summarised information	6.8
I am willing to pay (money, time) for relevant information	12.3
I do not necessarily plan my information seeking in advance; I just use what I find	0.0
I am disappointed when I cannot get the information I am seeking promptly	9.6

The findings indicate that most of the respondents use multiple information sources at the same time; do not read complete sources, only the sections which are relevant for specific tasks at hand; are willing to spend money and time to get relevant information; and prefer information in digital formats.

5.4 Impact of infobesity

Most (27%) of the respondents reported that infobesity has caused them to procrastinate. This is because they encounter a lot of information which they spend a lot of time filtering. This way, they are unable to take actions expected of them promptly. They keep postponing actions as they spend more time on the Internet and other information sources. Almost one quarter (22.2%) of the respondents reported that they are infoxicated. They have more information than they need. Table 3 presents the other responses regarding the impact of infobesity on undergraduate students in Kenya.

Table 3: Impact of infobesity

Impact	%
Procrastination	27.0
Infocation (being intoxicated with information)	22.2
Poor time management	15.9
Attention deficit (poor concentration)	11.1
Poor decision making	12.7
Social isolation	11.1

The respondents were asked to suggest ways undergraduate students can avoid or cope with the consequences of

infobesity. Some of their responses are reported verbatim hereunder:

"Use one source at a time, proper time management; use credible sources to acquire information."

"Know what material is needed and relevant sources for the material hence manage available material."

"They should focus on the valid and reliable sources; one can make rational decisions as long as it is helpful."

"People should only consume that information that is important and necessary and leave out the rest."

"I suggest a balanced information absorption and synthesis and general social life."

"Focus on one thing and finish up with it before getting to another duty."

"Be focused and decided on what to search for; maintain concentration and do not divert to social media like WhatsApp and Facebook during research; visit the library to get hard copies to use when not able to access online materials."

It is evident from the foregoing that the respondents are of the view that undergraduate students can avoid or generally mitigate infobesity by being selective in their information searching and use. They also recommend heightened focus and discourage multi-tasking which they posit can lead to confusion and poor use of time.

6 Conclusion

The findings of this study confirm the fact that infobesity is real amongst undergraduate students in Kenyan universities and colleges. It is evident that infobesity is a consequence of vast amounts of information they are exposed to and the ease with which they are able to create, use or share information. The information universe around undergraduate students in Kenya is characterised by huge volumes of information in diverse formats from interlinked sources; fast flow of ideas and information; and presumption. Thus, current students operate in an environment of information abundance to the extent that they are overwhelmed, fearful, frustrated, fatigued and anxious. They are infocinated and are unable to make the best use of the information for academics, career development, and general information. Academic libraries need to put in place strategies to build the capacity of undergraduate students to avoid or mitigate the consequences of infobesity.

7 Recommendations

The authors propose the following actions to reduce the prevalence and impact of infobesity on undergraduate students in Kenya:

1. Librarians should develop and roll out comprehensive information literacy programmes which build the capacity of the students to understand their information needs and conceptualise a searching strategy that meets these needs effectively. The students should also be trained on how to assess the veracity of information especially from less conventional sources.
2. The students should be encouraged to go on a data diet through which they will identify and consume useful information only. They should be encouraged to understand that it is not the quantity but quality of information which matters.
3. Academic librarians should make available credible information sources and resources. This way, the less credible sources will be eliminated through natural selection. Many students use less credible largely because they do not have adequate credible sources. As the librarians do this, they should pay attention to the information formats and types that undergraduate students prefer as a means of increasing appreciation and use.
4. Academic librarians should reengineer library services by customising them to the information needs and seeking behaviour of the users. A hint of the services which are likely to be appreciated by current undergraduate students is given by the information sources and services they prefer. Taking Google as an example, academic librarians should make library services convenient and easy to use to attract fleeing undergraduate students.

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