

# Digital Information Literacy of Undergraduate Students in Higher Education Institutions in Malawi: Challenges and Policy Implications

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## Introduction

- ▶ Digital Information Literacy (DIL) skills have been recognized as critical skills in the 21<sup>st</sup> Century.
- ▶ DIL is defined as set of abilities to recognize when information is needed and have the ability to locate, evaluate, and use the needed information effectively (American Library Association, 2000)
- ▶ Students are faced with diverse and abundant information choices in their academic studies.

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- ▶ Information is available in unfiltered formats, raising question about its authenticity, validity, and reliability (Baro, 2011).
- ▶ Effective use of information by students has become a necessity.
- ▶ Information has become a factor that enables students at all levels to achieve better results in their academic undertaking and even at work after graduation (Mertes, 2014)

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- In Malawi like other developing countries, DIL in HEIs is not well conceptualized (Malanga & Jorosi, 2018; Kimani, 2014; Baro, 2011).
- Consequently, few extant studies on DIL Skills exist (Malanga & Jorosi, 2018; Chipeta, 2009; Stima- Ndaou, 2010).
- The findings from these studies demonstrate that DIL programs' efforts are still at their infant stage.

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- DIL programs are hampered by inadequate facilities, absence of IL policies and lack of qualified librarians to teach DIL.
- The death of DIL literature in Malawi has also led to lack of informed policy decisions.
- This study sought to assess the current status of DIL skills of students in HEIs in Malawi.
- Findings would inform policy direction. The University of Livingstonia was adopted as a case study, targeting first year undergraduate students.

# Research Questions

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- ❑ **What is the level of DIL Skills among the First-Year Undergraduate Students at the University of Livingstonia?**
- What is the current knowledge of first year students on different types of digital information sources?
- Do first year students possess basic ICT skills to effectively locate and access digital information sources?
- Do first years students have abilities to search digital information sources?
- What criteria do first year students use to evaluate digital information?
- What are the challenges the first year students face in learning DIL course?

# Theoretical Framework

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- This study was guided by SCONUL's Seven Pillars of Information Literacy.
- **Pillar 1: Identify**-Ability to recognize a need for information. This is the stage where a user is considered to be blank in terms of one's information needs.
- **Pillar 2: Scope**- This pillar recognizes a student or a user being knowledgeable about both print and non-print information resources, in selecting the information resources(SCONUL, 2011).
- **Pillar 3: Plan**-Ability to construct strategies for locating information (Chipeta, 2009).
- **Pillar 4: Gather**- Ability to locate and access information needed (SCONUL, 2011).
- **Pillar 5: Evaluate**- Ability to compare and evaluate information obtained from various sources(Chipeta, 2009).
- **Pillar 6: Manage**-Ability to organize, apply and communicate information to others in ways appropriate to the situation.
- **Pillar 7: Present**-Ability to synthesize and build upon the existing information that contributes to the creation of new knowledge.





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# Methodology

- ▶ The study adopted a positivist approach, employing objectivism as its epistemological stance (Creswell, 2014).
- ▶ A cross-sectional descriptive study design.
- ▶ First-year students registered in the 2016/2017 batch at the University of Livingstonia (go to [www.unilia.ac.mw](http://www.unilia.ac.mw) for details).
- ▶ Structured questionnaire was used to collect data.

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- ▶ Altogether, 160 questionnaires were distributed to respondents and 123 were returned successfully with a response rate of 76.9 %.
- ▶ Statistical package for social sciences (SPSS) version 23 was used to analyze data.
- ▶ Permissions to conduct the study was sought from the University Authority.
- ▶ All ethical issues pertaining to privacy, protection and confidentiality of respondents were complied with.

# Summary of Findings

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## A. Demographic Profile of Respondents

Demographic Characteristics	Number (N=123)	Percentage (%)
<b>Age</b>		
16-20	29	24.1
21-25	54	43.8
26-30	19	15.3
31 and above	21	16.5
<b>Total</b>	<b>123</b>	<b>100</b>
<b>Gender</b>		
Male	65	52.9
Female	58	47.4
<b>Total</b>	<b>123</b>	<b>100</b>
<b>Programme of Study</b>		
Food Security and Nutrition	11	9.0
Environment Management	15	11.6
Computer Engineering	12	10.4
Education ICT	5	3.9
Education	25	20.3
Development Studies	17	13.8
Human Rights	8	7.1
Public Health	30	24.2
<b>Total</b>	<b>123</b>	<b>100</b>

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- The largest number of students participated in the survey questionnaires were from Public Health (24.2%)
- Education ICT had the least participants (3.9%).
- The age range of 21-25 years had a large number of participants (43.8%)
- Age range of 31 years and above had the least participants (16.5%).
- Similarly, majority of participants were males (52.9%).

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- **Knowledge of Different Types of Digital Information Sources**
- The results indicated that sampled students had high level of awareness of types of information sources (85.7% or 106).
- However, there was low usage of digital information sources (e-books=42.4%; and e-journals=39.8%) among the students, an indication that they possessed moderate IL skills.
- Ilogho and Nkiko (2014) reported similar findings that the majority of the students in five Nigerian universities showed high deficiency in identifying diverse online information sources including their usage.

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## Level of Awareness

Response	Frequency	Percentage (%)
YES	106	85.7
NO	17	14.4
<b>TOTAL</b>	<b>123</b>	<b>100</b>

## Frequency of Using Digital Information Sources

Electronic Information Sources	Multiple Responses	
	Frequency (N)	Percent (%)
Electronic journals	58	39.8
Electronic books	61	42.4
Online databases	28	13.1
Social media	41	31.6
CD-ROMs	8	4.2
Others	2	0.5

## Basic ICT Skills

- About 107 (45.6%) respondents indicated that they were competent in using Internet; 89 (36.5%) used Microsoft Word; 73 (29.8%) used electronic mails.
- It was further revealed that only 4 (4.1%) rated their own ICT skills as excellent. This meant that the sampled students were deficient in various basic ICT skills such as SPSS, computer software packages and Internet.
- Kimani (2014) also observed a similar pattern in Kenya when it was established that 21.2% of the students selected length/scope/coverage of the information, while 15.3% of the students' evaluated information based on accuracy

Competence in Usage of ICT tools	Multiple Responses	
	Frequency (N)	Percent (%)
I use Internet competently	107	45.6
I use SPSS competently	23	5.3
I use e-mails competently	73	29.8
I use PowerPoint presentation competently	62	25.0
I use Microsoft word competently	89	36.5
I use social media competently	62	25.0
I use Microsoft excel competently	43	12.8
Others	5	2.9



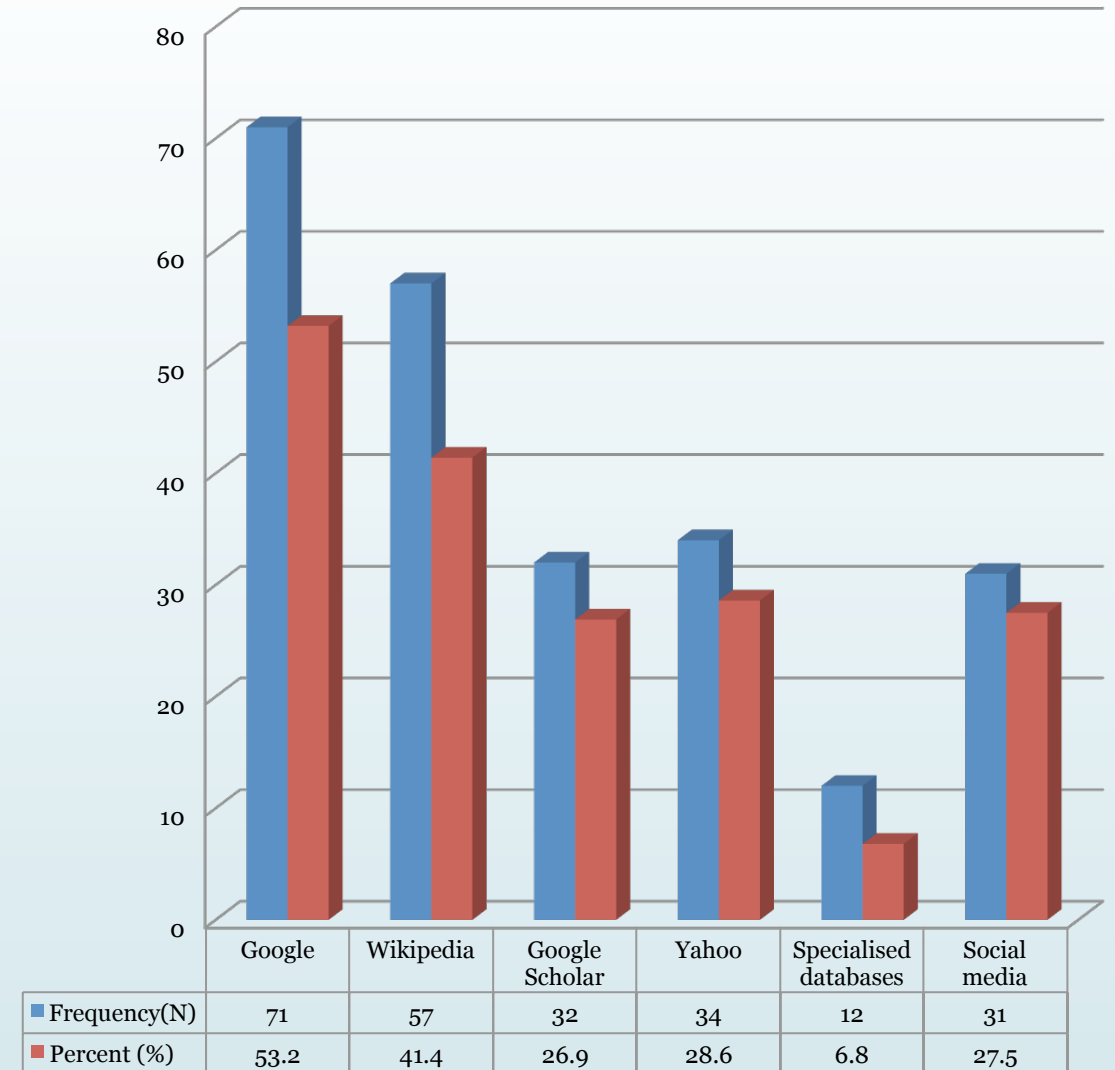
# Online Search Strategies

- The study revealed that sampled students demonstrated deficiency in search strategies/techniques and Web retrieval tools.
- The students did not know how to use the Boolean Operators and Truncation which are also very important techniques for broadening and narrowing an information search query

Search Strategies/ techniques	Multiple Responses	
	Frequency (N)	Percentage (%)
Keyword searching	75	55.4
Phrase searching	61	48.3
Proximate searching	19	22.7
Boolean Operators (AND, OR and NOT)	13	12.0
Truncation	4	3.4
Advanced Searching	6	5.9
None of the above	5	4.2

## Web retrieval tools

- Majority of the sampled students lacked knowledge of important web retrieval tools like Google Scholar (26.9%) and Online databases (6.8%) which are considered very rich in scholarly information resources compared to Google and Wikipedia.
- Singh and Singh (2014) also noted that less than 14.5% of the students in India did not use online databases and Google Scholar which are better and enhanced for retrieving scholarly information resources.



# Evaluating Digital Information

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- Sample students used qualification of the author (54.3%) and scope of an information source (42.1%) as major evaluation criteria.
- The students might have lacked adequate training on evaluating information sources
- Ekenna and Iyabo (2013) who found that 42.4% of students in ten universities in Nigeria had not training on evaluation of information sources.
- The sampled students did not possess adequate skills for evaluating digital information sources.

Importance of evaluating information	Frequency (N)	Percentage (%)
Establish credibility of information	66	53.9
Establish authenticity of information	27	21.5
Establish objectivity of information	22	18.3
Establish authoritativeness of information	6	4.7
Others	2	2.0
<b>Total</b>	<b>123</b>	<b>100</b>

## Challenges

- The sampled students revealed that inadequate ICT facilities (51 or 41.9%), inadequate time allocated to the course (30 or 23.7%), lack of interest (17 or 14.4%) and the classroom congestion (16 or 12.6%) as some of the challenges that affected the delivery of DIL course at the University.
- Likewise, Chipeta (2009) found that inadequate time, inadequate venues and equipment for teaching, lack of collaboration between librarians and faculty members in teaching DIL were major concerns at Mzuzu University in Malawi.

Challenges	Frequency (N)	Percentage (%)
Time is not enough	30	23.7
The course is boring	17	14.4
ICT facilities are inadequate	51	41.9
There is classroom congestion	9	7.1
The course is taught theoretically	16	12.6
<b>Total</b>	<b>123</b>	<b>100</b>

# Conclusion and Policy Implications

## Conclusion

- Overall, findings revealed that the majority of the sampled first year students did not demonstrate adequate DIL skills due to number of challenges.
- The findings could be mirrored to other HEIs in Malawi since they are under the same local contextual environment.
- The use of the SCONUL's Seven Pillars of Information Literacy as a theoretical lens for this study advances the theoretical conceptualization of DIL in HEIs.
- The discussion of the findings also offer contribution to research practice in DIL space for HEIs in Malawi and beyond.

## Policy Implications

- Based on the study findings, the following recommendations are made:
- Improve the ICT infrastructure by procuring more computers and increasing the bandwidth of Internet
- Allocation of more time to DIL course
- Design a formal DIL curriculum as a credit-earning course.
- Collaboration between Librarians and Faculty members in the delivery of DIL programs.
- Develop an DIL policy to guide the implementation and sustainability of DIL programs
- Advocate for DIL so that students and other stakeholders can appreciate the importance of DIL for academic purpose and lifelong learning

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