

## Perceived Ease and Usefulness of Work-Based Learning (WBL) and its Practice among Baccalaureate Nurses in Central Uganda

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### Abstract

*The continuous update of knowledge and skills among nurses and midwives is a global, regional, and national requirement to meet the change in the disease burden, technology, and treatment modalities. Work-Based Learning (WBL) provides real-life work experiences by enhancing skills, ability to learn throughout one's career and providing quality care. This article describes baccalaureate nurses' ease to engage in and practice WBL, perceived usefulness, and the relationships between perceived ease and usefulness to practice. A descriptive cross-sectional survey was carried out at 11 hospitals in central Uganda. An Open Data Kit (ODK) designed, and the pre-tested structured tool was used to collect data from 251 purposively selected baccalaureate nurses. Measurement of ease, usefulness, and practice was guided by four competencies: self-regulation, effective communication, teamwork, and evidence-based practice. Descriptive and logistic analysis using SPSS 20 was performed. More than half of the respondents perceived it as easy to engage in WBL (Mean 1.65; SD 0.48). The Majority perceived WBL as useful to the individual, institution, patient or family, and care delivery (Mean 3.37; SD 0.45). The Majority practiced WBL (Mean 1.99; SD 0.11). Perceived usefulness of WBL to the institution was the statistically significant predictor for practice ( $B=3.97$ ;  $p<0.05$ ; 95% CI. 4.40). Baccalaureate nurses' ease to engage in and practice WBL was at the borderline, but they perceive it useful. Perceived usefulness to institutions may require strong policies and guidelines for WBL to support nurses' engagement and promote up-to-date knowledge and skills for better service delivery. There is a need to test the model and explore other factors that influence WBL among baccalaureate nurses.*

**Keywords:** *Baccalaureate nurses, Ease, Practice, Survey, Usefulness, Work-Based Learning.*

### Introduction

The change in the disease burden is a global challenge that requires health workers to keep abreast with the evolving diseases and illnesses associated with the change in the population's lifestyle and technology. Continuous update of knowledge and skills among all healthcare

professionals, including nurses and midwives, is a global, regional, and national requirement to meet the challenge. Knowledgeable and skilled nurses can be able to plan adequately and implement care for their patients, which is likely to improve their patients' outcomes [1]. Nurses with up-to-date knowledge and skills find it easy to grow in their careers and get employed.

Failure by nurses to engage in knowledge and skill enhancement compromises nursing and healthcare outcomes. It may result in inappropriate patient assessment, care plans, and interventions leading to the patient deterioration [2], ineffective intrapersonal relationships, and failure to develop professionally [3], hence reduced quality of care provided.

Mandatory Continuous Professional Development (CPD) for nurses and midwives has been put in place to ensure that professionals maintain, improve, update, and broaden their knowledge and competencies to provide ethical, effective, safe, and evidence-based practice [4, 5, 6]. Work-Based Learning is a category of CPD that is attributed to a number of individuals, institutional, patient, and cares delivery benefits [7, 8, 9, 10]. Work-Based Learning (WBL) is a form of CPD used by individuals to enhance their own knowledge and skills, as well as assume additional qualifications for personal, professional, or community development in a work context [11].

According to the UNMC database of 2018, there are 1413 licensed baccalaureate nurses in Uganda, and on average, 313 graduate annually. The baccalaureate nurses in Uganda undergo different forms of WBL: clinical attachments during the BNS program, internship after graduation, on-the-job training, and all these accounts for the mandatory CPDs by the Uganda Nurses and Midwives Council. Baccalaureate nurses in this context referred to those that had obtained a Bachelor of Science in Nursing or Midwifery.

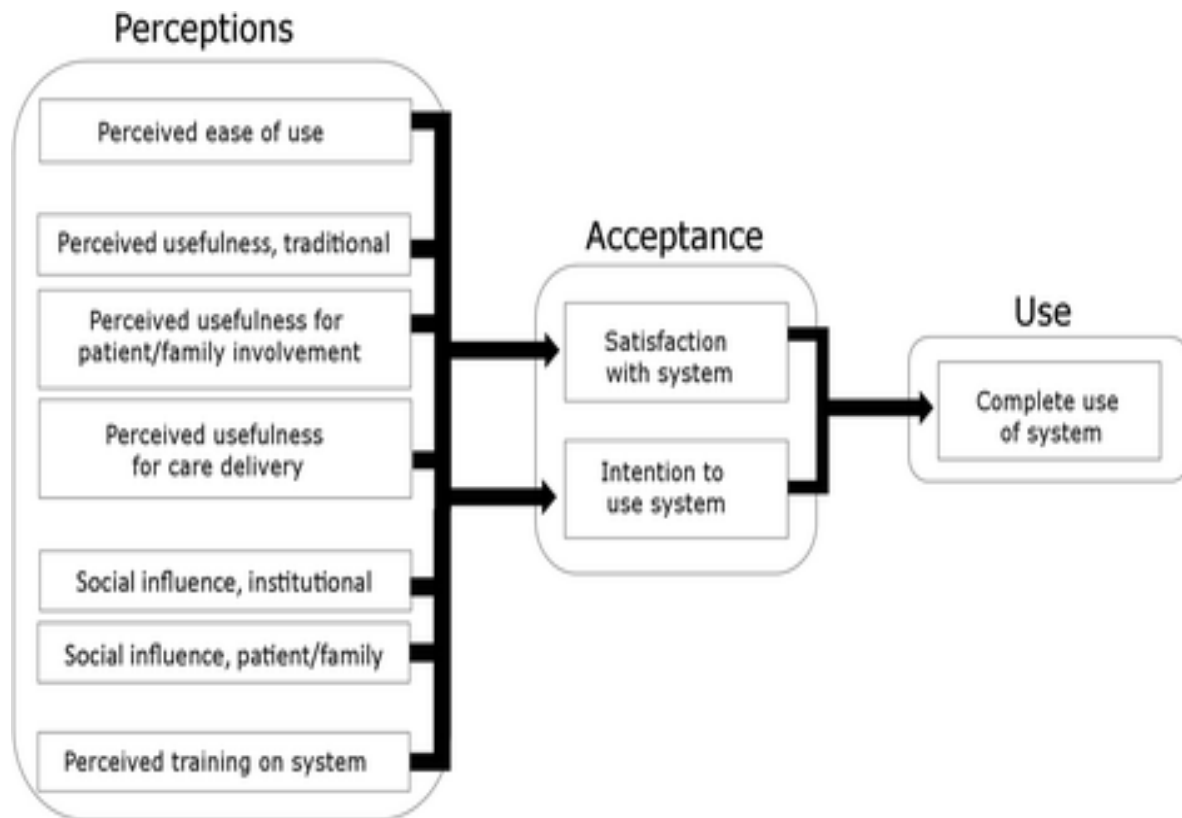
A baccalaureate degree equips nurses and midwives with more in-depth content of the

physical and social sciences, humanities, nursing research, nursing leadership and management, community, and public health nursing. This broader and in-depth education augments the nurse's professional development, giving the baccalaureate graduate a better understanding of the many social, cultural, economic, and political issues that impact patients and influence healthcare [12].

Learning is influenced by several factors, perception being one of them. Perception is the process of selecting, organizing, and interpreting the world around us [13]. The way one perceives what is seen or done determines their behaviour. Furthermore, one's perception causes a movement either toward or away after determining the possible outcome [14]. It is a perception that builds character so that different roles can be executed.

While baccalaureate nurses in Uganda engage in different forms of WBL during their time of training and pre-licensure, there was no clear evidence of their perception or ease and usefulness in their day-to-day clinical practice to facilitate the mandatory requirement of CDP credits by UNMC before renewal of licensure. This article describes the perception in terms of ease and usefulness; and the practice of WBL among baccalaureate nurses in 11 hospitals found in Central Uganda. It also documents the relationship between the perceived usefulness of WBL and its practice.

In this study, determining baccalaureate nurses' perception of WBL was guided by the Perception, Acceptance, and Use Model (PAUM) shown in Figure 1.



**Figure 1.** Perceptions, Acceptance, and Use Model

According to [15], perceptions can be determined by the ease with which one uses, and the usefulness attached to the phenomena. Perceived social influence by the institution and patient or family too helps to determine perception. Perceived ease acts as an inward drive to acceptance. Acceptance has an element of proof and satisfaction from within, hence, a strong indication for use [16].

Work-based learning involves identifying the task to be completed or learning need [17, 10]. Therefore, self-reflection is needed to create self-awareness. Knowing who you are in relation to what you must do is important in identifying what you need and how to access it. This calls for an assessment of the workplace environment [10]. It is also important to assess how often nurses engage in the actual activities of learning, like asking, listening, reading, and attending planned learning sessions like workshops or meetings. Another important step in WBL is documenting what is learned, and finally, self-evaluation. A nurse who always engages in the

different steps outlined is thought to perceive WBL as an easy engagement.

It was envisaged that when nurses and midwives perceive WBL as useful, they are likely to embrace and use it to promote health care delivery. The usefulness of WBL is its benefits which spread out from an individual to the team of workers, the institution, service delivery, and patient or community being served. An individual who engages in WBL is said to gain skills like critical thinking, creativity, effective communication, realistic and evaluation [18, 19]. Institutions that support WBL benefit by having strong teams, collaboration & networking, strong partnerships, clear reporting lines, evidence-based projects, patient-tailored programs, and reduced employee turnover [20, 21]. Baccalaureate nurses with improved individual knowledge and skills are likely to engage in effective teamwork, attributes that reduce delays in handling emergencies, leading to quick patient recovery.

An institutional policy or defined culture that requires baccalaureate nurses to engage in WBL and recognize the achieved learning is likely to influence their involvement. Other influences may be the supervisors, mentors, coaches, or peers, as well as the availability of learning materials, equipment, and patients. In addition to describing the perceived ease, usefulness, and practice of WBL among baccalaureate nurses, the researchers too sought to answer: what is the relationship between the perceived ease and usefulness of WBL and practice?

### **Hypothesis**

Null ( $H_0$ ): The current practice of work-based learning among baccalaureate nurses is not directly influenced by their perception of its usefulness.

Alt: The current practice of work-based learning among baccalaureate nurses is influenced by their perception of its usefulness.

### **Methods and Materials**

A cross-sectional descriptive design was employed at eleven study sites in central Uganda. The study was based in the central region, given the heavy distribution of public and private health facilities that are at National, Regional, and district levels. All the National referral hospitals are found in the central region of Uganda. The higher the level of the health facility, the bigger the number of baccalaureate nurses hired, especially in public hospitals.

The National and regional public hospitals were purposively selected. The public and Private-Not For-Profit hospitals were selected using simple random sampling. The population of registered baccalaureate nurses in Uganda as of October 2019 was 1413. Since the study population was for baccalaureate nurses in the central region of Uganda, a formula for small sample techniques by [22] was used. A 34% population proportion of health workers that had ever been trained and used the WBL model [23] was used. Purposive sampling was used to recruit 251 participants.

A structured pre-tested questionnaire designed using Open Data Kit (ODK) software was used. Statements to determine baccalaureate nurses' perceptions were derived from the earlier studies [17, 24, 25]. The Perception was further understood by determining the ease and usefulness as guided by the PAUM model [15]. Statements to describe the practice were formulated from the four competencies: self-regulation, effective communication, teamwork, and evidence-based practice adopted from the clinical evaluation tool by [26]. The Ease of WBL was assessed using a Likert scale ranging from never as the lowest (score 0) to always as the highest (score 3). The Usefulness and practice of WBL were assessed on the scale of strongly disagree (score 1) to strongly agree (score 4). Usefulness was evaluated regarding individual, institution, patient, and care delivery.

Data were collected using ODK, downloaded into a CSV file format for cleaning, and exported to IBM SPSS 20 for analysis. To analyze the ease of engaging in WBL: 1) the scale of 'never' and 'sometimes' was combined and categorized as "not with ease" while 2) the scale of 'often' and 'always' was combined and regarded as "with ease". Usefulness of WBL was also categorized into two: 1) "Useful", which summed the scale of "strongly agree" with "agree", and 2) "Not useful", which added up the scale of "strongly disagree" and "disagree". Useful was regarded as positive perception while not useful represented negative perception. Practice was determined by categories of "strongly agree" and "agree" and "disagree" and "strongly disagree" was combined to represent "Not practiced".

### **Ethical Considerations**

A Bonafide certificate was obtained from Texila American University and presented to the different institutions for ethical approval and administrative clearances. Ethical approvals were obtained from Mulago Hospital Research and Ethics Committee (MHREC 1688) and Uganda National Council of Science and

Technology (UNCST), Ref. HS810ES. Written informed consent to participate in the study was obtained from all participants prior to their enrolment. Participation in the study was voluntary, and non-participation had no personal or job-related implications. Respondents had a right to withdraw from the study at any given time. It was made clear that the information obtained was to be kept confidential and specifically for study purposes.

## Results

### Characteristics of the Study Population

A total of 1413 registered baccalaureate nurses (nurses and midwives) with a bachelor's degree were screened to include only those that were working in a clinical setting and strictly

with a bachelors' degree in either nursing or midwifery. Two hundred and fifty-one (251) participants were recruited, making a 90.6% of the desired sample size. Gender, age, workplace and working experience were the characteristics of interest in this study. The study had more (79.3%) female baccalaureate nurses than male. The highest age was 59 and the lowest 22. The modal age was 42 while the median was 36 years. The study respondents were from eight public hospitals: five national referrals, one regional referral and two general hospitals; and three private-not-for-profit. The mean for working experience was about 11 and half years. Table 1 provides details of the participants' demographic characteristics.

**Table 1.** Demographic Characteristics of the Study Respondents: N=251

Variable	<i>f</i> (N=251)	%	Mean	Std. Deviation
<b>Gender</b>				
Male	52	20.7	-	-
Female	199	79.3		
<b>Age in Years</b>				
20-29	73	29.1	36.8	9.47
30-39	73	29.1		
40-49	77	30.7		
50-59	28	11.2		
<b>Working Experience</b>				
below 1 year	41	16.3	11.49	8.95
1-10 years	86	34.3		
11-20 years	86	34.3		
21-30 years	32	12.7		
31-40 years	6	2.4		
<b>Workplace</b>				
Public National and Regional Referral hospitals	216	86	-	-
Public General hospitals	8	3.2		
Private Not for Profit hospitals	27	10.8		

### Perception of Baccalaureate Nurses on the Ease of Engaging in WBL

Findings of the survey revealed that slightly more than half (64.5%) of the respondents found it easy to engage in WBL (Mean 1.65, SD 0.48). Specifically, Majority (93.6%) of the

respondents had the zeal to engage in WBL. Those who easily engage supervisors for their learning were 81% and mentors 72%. Respondents who prefer formal training to enhance their learning were 64%. Details of the findings are as shown in Table 2.

**Table 2.** Participant's Perception on the Ease of Engaging in WBL (N=251)

<b>Variable</b>	<b>Frequency</b>	<b>Age %</b>	<b>Mean</b>	<b>Std. Deviation</b>
<b>Overall respondent's perception of the ease to engage in WBL</b>				
With ease	162	64.5	1.65	0.48
Not with ease	89	35.5		
<b>The zeal to engage in new learning</b>				
With ease	235	93.6	2.72	0.57
Not with ease	16	6.4		
<b>Explores surrounding circumstances to identify what must be done</b>				
With ease	210	83.6	2.49	0.76
Not with ease	41	16.3		
<b>Does self-reflection before starting on a given task</b>				
With ease	209	83.2	2.49	0.78
Not with ease	42	17.1		
<b>First understands the organizational culture before embarking on given task</b>				
With ease	207	82.4	2.47	0.82
Not with ease	44	17.5		
<b>Explores environment to identify available resources</b>				
With ease	229	91.2	2.65	0.64
Not with ease	22	8.8		
<b>Sets clear goals for the desired learning</b>				
With ease	205	81.7	2.35	0.78
Not with ease	46	18.3		
<b>Learns through trial and error</b>				
With ease	63	25.1	1.16	0.94
Not with ease	188	74.9		
<b>Observes others do what is not known before doing</b>				
With ease	176	70.1	2.25	0.93
Not with ease	75	29.9		
<b>Asks supervisor to teach what he/she does not know</b>				
With ease	204	81.2	2.48	0.83
Not with ease	47	18.7		
<b>Engages peers to address knowledge/skills gap</b>				
With ease	149	59.4	1.88	0.92
Not with ease	102	40.6		
<b>Engages mentor to guide in what he/she does not know</b>				
With ease	180	71.7	2.25	0.90
Not with ease	71	28.3		
<b>Consults expert in a difficult task/procedure</b>				
With ease	217	86.5	2.63	0.71
Not with ease	34	13.5		

## Perception of Baccalaureate Nurses on the Usefulness of WBL

The Majority of the participants recognized WBL to be useful to the individual (92%), to the

institution (83%), to the patients (89%), and to the care delivery (80%). Details of overall perception are shown in Table 3.

**Table 3.** Overall Perception of Baccalaureate Nurses on the Usefulness of WBL

Characteristics	Frequency	Percentage	Mean	Std. Dev.
	N=251			
<b>Overall perception of the usefulness of WBL</b>				
Useful	243	96.8	3.37	0.45
Not useful	8	3.2		
<b>Perceived usefulness of WBL to Individual</b>				
Useful	241	96	0.96	0.196
Not useful	10	4		
<b>Perceived usefulness of WBL to Institution</b>				
Useful	240	95.6	0.96	0.205
Not useful	11	4.4		
<b>Perceived usefulness of WBL to Patient or Family</b>				
Useful	242	96.4	0.96	0.186
Not useful	9	3.6		
<b>Perceived usefulness of WBL to Care delivery</b>				
Useful	230	91.6	0.92	-
Not useful	21	8.4		

Specifically, 22% of the respondents disagreed on WBL reducing delays to the care delivery and increasing client flow, 21% of the respondents disagreed on WBL transforming individuals into effective time managers, 11.6%

disagreed on WBL enhancing patient-tailored programs, and 11% disagreed on WBL reducing morbidity and mortality. The details for the perceived usefulness of WBL are shown in Table 4.

**Table 4.** Details of Perceived Usefulness of WBL

Items	Strongly Disagree	Disagree	Agree	Strongly Agree	Mean	Std. Dev.
	f (%age)	f (%age)	f (%age)	f (%age)		
<b>Perceived usefulness of WBL to individuals</b>						
Evaluator of own leaning	5 (2.0)	3 (1.2)	106 (42.2)	137 (54.6)	3.49	0.63
Positive developers & critical thinkers	3 (1.2)	9 (3.6)	82 (32.7)	157 (62.5)	3.57	0.63
Academicians with a practice focus	6 (2.4)	14 (5.6)	104 (41.4)	127 (50.6)	3.40	0.71
Effective time managers	6 (2.4)	47 (18.7)	110 (43.8)	88 (35.1)	3.12	0.79
Practical applicants of learning	6 (2.4)	7 (2.8)	92 (36.7)	146 (58.2)	3.51	0.67
Creative and reflexive employees	4 (1.6)	7 (2.8)	108 (43.0)	132 (52.6)	3.47	0.63

Confident employees	5 (2.0)	9 (3.6)	75 (29.9)	162 (64.5)	3.57	0.66
<b>Perceived usefulness of WBL to the institution</b>						
Social bonding	4 (1.6)	15 (6.0)	148 (59.0)	84 (33.5)	3.24	0.63
Effective teamwork	6 (2.4)	11 (4.4)	112 (44.6)	122 (48.6)	3.39	0.69
Collaboration & networking	8 (3.2)	10 (4.0)	113 (45.0)	120 (47.8)	3.37	0.71
Institutional partnerships	6 (2.4)	21 (8.4)	136 (54.2)	88 (35.1)	3.22	0.70
Interprofessional learning	3 (1.2)	11 (4.4)	99 (39.4)	138 (55.0)	3.48	0.64
Employee turnover	11 (4.4)	58 (23.1)	118 (47.0)	64 (25.5)	2.94	0.81
Growth and visibility	3 (1.2)	11 (4.4)	116 (46.2)	121 (48.2)	3.41	0.64
<b>Perceived usefulness of WBL to the patient or family</b>						
Patient-centered care	3 (1.2)	10 (4.0)	103 (41.0)	135 (53.8)	3.47	0.63
Strong nurse-patient relationship	4 (1.6)	10 (4.0)	88 (35.1)	149 (59.4)	3.52	0.65
Patient or client advocacy	4 (1.6)	10 (4.0)	111 (44.2)	126 (50.2)	3.43	0.65
Patient safety	3 (1.2)	14 (5.6)	108 (43.0)	126 (50.2)	3.42	0.66
Patient-tailored programs	3 (1.2)	26 (10.4)	151 (60.2)	71 (28.3)	3.16	0.64
<b>Perceive usefulness of WBL to the care delivery</b>						
Reduced delays	8 (3.2)	46 (18.3)	105 (41.8)	92 (36.7)	3.12	0.816
Emergency care	6 (2.4)	16 (6.4)	87 (34.7)	142 (56.6)	3.45	0.722
Overall quality of care	6 (2.4)	11 (4.4)	69 (27.5)	165 (65.7)	3.57	0.692
Increased client flow	7 (2.8)	48 (19.1)	106 (42.2)	90 (35.9)	3.11	0.807
Reduced morbidity and mortality	7 (2.8)	20 (8)	85 (33.9)	139 (55.4)	3.42	0.757

### Practice of WBL among Baccalaureate Nurses

Nineteen items on a Likert scale of 1-4 were used to determine the practice of WBL among baccalaureate nurses. Almost all participants (98.8%) of the participants practiced WBL. The practice was borderline (mean 1.99, SD 0.11). WBL was mainly done through trainings or workshops (93.2%) organized by unit managers with identified facilitators (85.3%). The Majority (79.3%) of the participants viewed their workplaces as conducive for day-to-day learning. Those who did not practice WBL

(1.2%) were from public health facilities and among the age group of 30 – 39 years. Much as majority (248) of the nurses engaged in WBL, 35.5% did not find it easy to practice WBL.

### Availability of Tools and Resources at the Workplace to Support WBL

Study respondents were assessed on several tools and resources that had been found to support WBL in the existing literature. Other than the tools, the resources were categorized under materials and humans. Table 5 gives the details on the availability of tools and resources in the hospitals to support WBL.

**Table 5.** Tools to Support WBL at the Participant’s Workplaces

Variable	Frequency (N=251)	Percentage
<b>Hospital rules and regulations on Work-based learning</b>		
Present	135	53.8
Absent	116	46.2



<b>Practice guidelines for different procedures</b>		
Present	221	88
Absent	30	12
<b>Ethical code of conduct</b>		
Present	214	85.3
Absent	37	14.7
<b>Professional code of conduct</b>		
Present	213	84.9
Absent	38	15.1
<b>Eligibility assessment criteria</b>		
Present	132	52.6
Absent	119	47.4
<b>Self-evaluation tools</b>		
Present	95	37.8
Absent	156	62.2
<b>Appraisal forms</b>		
Present	228	90.8
Absent	23	9.2

Slightly more than half (54%) of the respondents reported availability of rules and regulations on WBL, and 53% reported

availability of eligibility assessment criteria. About 38% reported the absence of self-evaluation tools.

**Table 6.** Resources to Support WBL at the Participant’s Workplaces

<b>Variable</b>	<b>Frequency (N=251)</b>	<b>Percentage</b>
<b>Documents and manuals related to the task</b>		
Present	203	80.9
Absent	48	19.1
<b>Library at the workplace</b>		
Present	94	37.1
Absent	157	62.9
<b>Simulation Lab</b>		
Present	47	18.7
Absent	204	81.3
<b>Professional reports for reference</b>		
Present	195	77.7
Absent	56	22.3
<b>Conference materials</b>		
Present	145	57.8
Absent	106	42.2
<b>Discussion forums or in-house presentations</b>		
Present	207	82.5
Absent	44	17.5
<b>Workshops</b>		
Present	197	78.5

Absent	54	21.5
<b>Peers as learning human resource</b>		
Present	218	86.6
Absent	33	13.2
<b>Supervisors</b>		
Present	242	96.4
Absent	9	3.6
<b>Mentors</b>		
Present	206	82.1
Absent	45	17.9
<b>Coaches</b>		
Present	73	29.1
Absent	178	70.9
<b>Other members of the health care team</b>		
Present	181	72.1
Absent	70	27.9

Most (62.9%) of the respondents reported no library, and majority (81.3%) reported no simulation lab at their workplace. Slightly more than half (57.8%) of the respondents reported the presence of conference materials. The Majority (70.9%) reported no coaches at their workplace, and 27.9% reported other members of the health care team not acting as support resources for WBL.

Access to the internet was not easy for 40.2% of the respondents. Attendance of workshops and CPD for the required learning was not easy for 61.8% (mean =1.52) and 47.4% (mean=1.78), respectively. More than half

(59%) reported having no diary to record their learning, and 62.9% reported they do not consult diaries for any forgotten procedure.

### **Relationship between Perceived Ease of Engaging in WBL and its Practice**

Out of the 248 baccalaureate nurses who reported to practice WBL, 88 (35.5%) did not perceive it easy to engage in the learning. Of the 162 who perceived it easy to engage in WBL, two were among those who did not practice it. No significant relationship was found to exist between perceived ease to engage in WBL and practice, as shown in Table 6.

**Table 7.** Perceived Ease and Practice of WBL

Participant's overall practice of WBL	Participant's Perceived Ease to engage in WBL		Total	Chi-Square	P value
	With Ease	Not with Ease			
Practiced	160	88	248	0.06 <sup>a</sup>	0.94
Not Practiced	2	1	3		
<b>Total</b>	162	89	251		

### **Relationship between Perceived Usefulness and Practice of WBL**

The Null (H<sub>0</sub>) hypothesis was tested through logistic regression to determine the relationship between respondents' perceived usefulness for

WBL and practice. There was a positive linear relationship for each independent variable (perceived usefulness of WBL to: individual, institution, patient, and care delivery) and practice. Logistic regression revealed that only

participants who perceive WBL as useful to institutions are four times more likely to practice

it (B=3.97;  $p<0.05$ ; 95% CI. 4.40-641.23). Details are shown in Table 7.

**Table 8.** Results of Logistic Regression

Characteristics (WBL)	n/N %	Unadjusted B (95% CI)	P-value	Adjusted B (95% CI)	P-value
<b>Usefulness to Individuals</b>					
Not useful	4	2.58(1.10-160.31)	0.042	-0.759 (0.00-612379.34)	0.916
Useful	96				
<b>Usefulness to Institution</b>					
Not useful	4.4	3.97(4.40-641.23)	0.002	3.97(4.40-641.23)	0.002
Useful	95.6				
<b>Usefulness to Patient/Family</b>					
Not useful	3.6	2.71 (1.23-183.04)	0.034	1.69 (0.04-802.94)	0.509
Useful	96.4				
<b>Usefulness to care delivery</b>					
Not useful	8.4	1.74 (0.50-65.63)	0.163	-0.76 (0.02-9.37)	0.618
Useful	91.6				

After testing for interactions and confounders, the perceived usefulness of WBL to institutions remained the significant predictor for its practice.

## Discussion

This study aimed at describing the perceived ease and usefulness of WBL by baccalaureate nurses and how they practice it; and determining the relationship between perceived ease and usefulness of WBL and its practice. To our knowledge, this is the first published study to investigate the ease of engaging in WBL.

Findings of the survey revealed that a good number of the respondents engaged in WBL with ease, indicating positive perception. These findings agree with the findings of [15] much as there is a big difference in the means for the nurses' perception (1.65:3.88). The difference in the means may be attributed to several factors and not limited to the difference in what was tested (WBL: Technology), the scales used, the setting, and the background of the nurses.

Much as a good number of baccalaureate nurses engaged in WBL with ease, it was noted that most of the mean scores were borderline. The remaining number of baccalaureate nurses

that does not engage in WBL with ease is of dire concern. WBL is a requirement for enhancing practice knowledge, skills, and career growth [27]. Difficulty to engage in day-to-day learning may compromise one's opportunities in being part of the unfolding health circumstances, diseases, and illnesses.

Learning through trial and error was perceived as 'not easy' by most of the baccalaureate nurses who participated in this study. This finding does not agree with the findings of [8] in their literature review on the benefits and obstacles for WBL, where it was noted that learning was through reflection on past mistakes. Trial and error are a mode of learning experienced by almost all health care professionals during the first procedural encounter. Much as one may perform under supervision, the actual navigation that leads to the success of the expected outcome is between trial and error, as narrated by [28] in the article: *The Art of Medicine: Trial and error*. The experience of trial-and-error calls for a demonstration of tacit knowledge that results into discovery and eventually builds confidence.

The findings revealed that more than half and almost half of the baccalaureate nurses who

participated in this study do not find it easy to attend workshops and continuous professional developments. It has been noted that attending workshops and CPDs instills confidence, promotes professional knowledge and networking [29]. Uneasiness to attend workshops and CPDs compromises the expected benefits and acquisition of the up-to-date knowledge and skills required for professional practice. This may translate into the delayed accumulation of the required credit units in a given period for licensure renewal [5].

Engaging peers to address the knowledge and skills gap is reported as one of the strategies for WBL [30]. Findings of this study revealed that 41% of the baccalaureate nurses did not find it easy to engage peers in addressing their knowledge and skills gaps. This may be attributed to fewer numbers of staff, especially where baccalaureate nurses work as the unit in-charges with a few of the lower cadres.

Forty percent (40%) of the baccalaureate nurses in this study could not easily access the internet to facilitate their WBL. This contradicts the findings reported by [31] in a literature review on Nurses and internet health-related information in terms of access and utility; nurses were reported to access the internet and information that improves their clinical practice. The findings of this study may be attributed to the low broadband coverage in Uganda, as reported by [32]. However, the inability to access the internet may also be due to nurse's workload where they may be too busy or a technology skills deficiency, as revealed in the literature review by [30]. Access and use of the internet to facilitate learning is becoming a basic requirement as eLearning takes the stage.

Baccalaureate nurses perceived WBL as useful. This contradicts the findings of [15], where nurses rated the perceived usefulness of the technology as low. In this study, the perceived usefulness of WBL attributed to individuals, patients, the institution, and the care delivery was statistically significant. It was noted that baccalaureate nurses' perception for

the usefulness of WBL to institutions would four times translate into their practice. This finding agrees with the definition of perception by [33] that it translates into performance. The importance of WBL attached to the institution by the baccalaureate nurses means that their engagement would increase if the workplace had a strong influence.

The Majority of the baccalaureate nurses practice WBL. However, it was noted that most of the baccalaureate nurses preferred attending organized training or workshops outside the workplace to enhance their own learning. Additionally, most of the learning at the workplaces was organized by the unit managers with identified facilitators. These findings contradict the previous report from a scoping literature review by [34], where the process of WBL requires individual initiatives to identify the gap and set goals to achieve the desired learning. These findings may be attributed to the inability of the nurses to easily access the internet, the probability of not having peers and supervisors to learn from, and the lack of clear guidelines for WBL, as reported by some of the respondents. These findings are likely to translate into funding costs for the institution and understaffing if one must leave the institution for short-term training or workshop.

Generally, there were inadequate tools and resources that support WBL, especially in public hospitals. This may partly explain the difficulty some of the baccalaureate nurses find to engage in WBL. Tools and materials are an integral part of the structure for WBL [10, 24]. A Library and simulation lab was reported as missing by majority of the respondents (63% and 81%, respectively). The role of clinical simulation labs cannot be underestimated in building the nurses' competence to ensure safer practice and promote quality health care services [35]. Simulation training in the COVID-19 pandemic has been reported to impact health workers' familiarizing with new management protocols [36].

Among the human resource, coaches were reported to be absent by majority of the

respondents. Coaching is one of the strategies recommended to improve the quality of health care through evidence-based practice [37]. To achieve this, there should be technically prepared coaches in health institutions. The absence of coaches reported by 72% percent of the respondents may partly explain why 35.5% of them do not engage in WBL with ease.

The number of respondents who reported uneasiness to engage in workshops and CPDs for the required learning is of concern. CPDs are mandatory across the globe to enhance competent, effective, and quality health care delivery [4, 5]. The findings of this study are in agreement with those of [38] in their review of a five-year's literature and professional web search on mandatory CPDs. The Engagement of nurses and midwives in CPDS was found to be less. This was attributed to challenges like staff shortage, which may be equated to where this study was carried out.

## Limitations

The study focused on nurses in the clinical setting for purposes of homogeneity, although it may limit the generalization of findings to nurses in other work settings or contexts.

## Conclusion

The perceived ease of baccalaureate nurses to engage in and practice WBL was borderline. Not all who practice WBL find it easy to engage in it. Baccalaureate nurses perceive WBL as useful to them as individuals, to the institution, patients, and to the care delivery. The practice of WBL among baccalaureate nurses may be influenced

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by their perception of its usefulness but not the ease. Perceived usefulness to institutions may require strong policies and guidelines for WBL to support nurses' engagement and promote up-to-date knowledge and skills for better service delivery. Availability of tools that support WBL were generally inadequate, especially in public hospitals. There is a need to test the model and explore other factors that influence WBL among baccalaureate nurses.

## Contribution of this Study to the Body of Nursing Knowledge

1. Perceived ease of engaging in WBL may not directly influence practice since uneasiness is characterized by personal and institutional factors.
2. WBL is perceived as useful to individuals, the institution, patients, and care delivery.
3. Perceived usefulness of WBL to institutions is more likely to influence its practice.
4. Availability of libraries, simulation labs, and coaches in clinical settings seems to be a challenge in low-resource countries like Uganda.

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## Conflict of Interest

The Authors declare no conflict of interest.

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