The effective role played by Health Sciences library towards realizing Academic and research priorities of Problem-Based Learning (PBL)/Community-Based Education (CBE) at Walter Sisulu University (WSU) Faculty of Health Sciences (FHS): case study
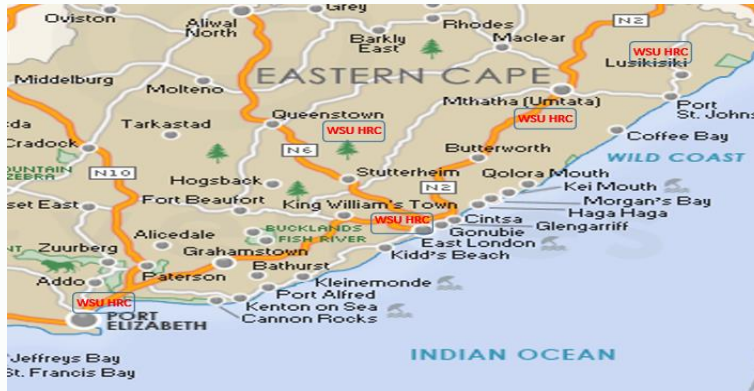
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Presentation outline

1. Background
2. Theoretical framework of PBL and CBE

Introduction

- Faculty of Health Sciences established in 1985- introduction of MBChB

- Spreading in various areas across Eastern Cape Province

- WSU Health Sciences faculty adopted the Problem-based Learning and Community-Based Education approach in 1993.

- Problem–Based Learning is a student-centred approach (Ngcobo and Hoskins, 2009; Spencer, 1999).

- CBE - interact with communities from wide range of social, cultural and ethnic background (Mennin and Petroni-Mennin (2006); Yogeswaran et.al).

- User education and information literacy programme in the Faculty of Health Sciences

Theoretical framework on PBL and CBE

According to ([Kenney and McMulen, 2006](#)), the main components of PBL are:

- Students work in groups to define and analyse the Problem

- Groups generate ideas: what they know, what they need to know

- Groups develop a strategy to collect information in order to solve the Problem

- Groups analyse information and generate solution(s)

- Problem has multiple possible solutions or avenues of enquiry

PBL method is characterised by the following:

- The acquiring of problem solving abilities and clinical reasoning skills;
- The integration of knowledge;
- Student self-directed learning; and
- Student-centred learning

Several benefits of PBL:

- It promotes deep learning than surface learning;
- It enhances and retains self-directed skills;
- It promotes interaction between students and staff;
- Learning environment is more stimulating;
- More enjoyable for students and teachers;
- It promotes retention of knowledge; and
- It improves motivation

Some library related benefits of PBL:

- Students on PBL curriculum make use of library services at early stage in their medical education;

- Students conduct literature searches more routinely;

- Students use journals in pre-clinical years;

- Students demonstrate a more independent approach to problem solving

- User education;

- Information literacy;

- Sufficient study space and areas;

- Appropriate collections and information sources (in various formats); and

- Information Technology

Scenario in the WSU Faculty of Health Sciences

➢ Students are admitted for undergraduate studies in MBChB and Clinical Associates The curriculum is organized in 3 phases:

➢ Phase 1 covers in the 1st and 2nd year

➢ Phase 2 covers in the 3rd year, and

➢ Phase 3 covers in 4th - 6th year.

Example of a case

NUTRITION, GIT METABOLISM BLOCK: 2016
CASE 6. THREE CHILDREN WITH DIARRHOEA

SCENARIO

It is a Wednesday afternoon. Yu are making rounds in the hospital's paediatric ward. You see three children, all have been undergoing investigations

Lucy is 27 months old.

She has had 3 months of continuous symptoms of diarrhoea and weight loss.

Ben is 9 months old.

He had had two weeks of continuous symptoms of diarrhoea and weight loss

Holly is a white girl, 12 years old. She has had 3 years of intermittent symptoms of diarrhoea and weight loss

TASKS

What are your initial thoughts regarding the cause of the patient's problems?

As a guide consider the following aspects:

- What is the definition of diarrhoea?
- What are the general causes of diarrhoea?
- What pathophysiologic mechanisms produce diarrhoea
- For each child, what mechanism may be at play?

What further information in the history would you like to have? Explain

The role of Faculty Librarian in the PBL environment:

➢ The librarian liaises with the teaching staff about the curriculum

➢ The librarian as an observer visits tutorial rooms with students (small-groups) and facilitators

➢ Librarian during the discussions introduces the library and its role in information provision, and identifies the information gap where students need information

➢ Librarian develops close links with students, so as to provide and informal and essential network that will help in monitoring the information needs of students.

➢ The librarian must guide the students in understanding on methods and skills of accessing all the resources from OPAC/ ENCORE Platform, including the online resources

Information literacy programme for Health Sciences students

Information Literacy (IL) objectives:

- Knowledge objectives

- Skills objectives

- Attitudinal Objectives

- IL enables library users to retrieve, evaluate and use information effectively

Methodology

- This study is a descriptive survey. This study covers medical students in the FHS at WSU. The total population of medical students at WSU in 2016 is 137.

Health Sciences undergraduate students statistics 2016
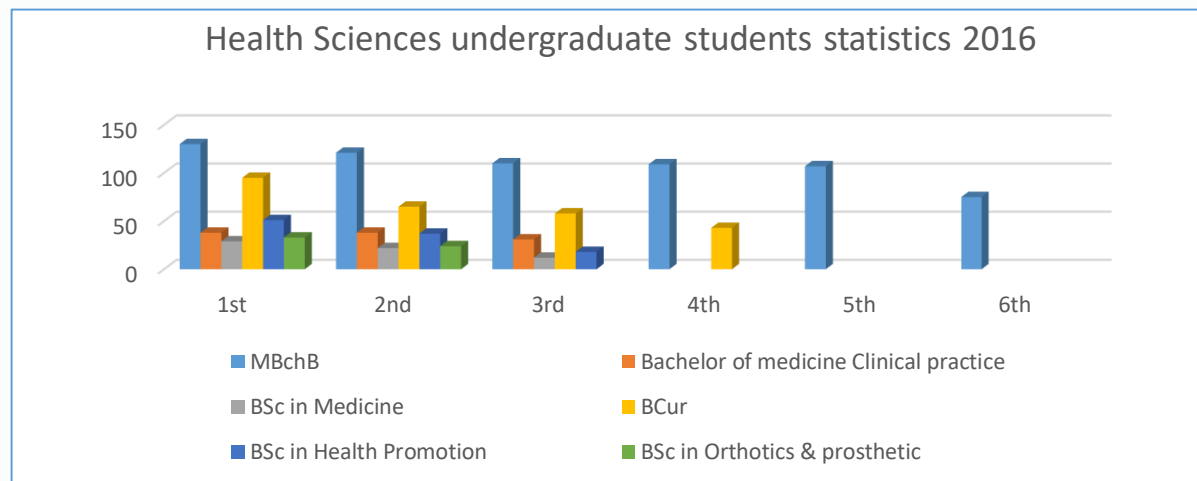
The graph above present the total number of FHS undergraduate students is 1,146 across all programmes, MBChB has the highest number of students with 652 (6 levels), BSc in Medicine Clinical Practice with 107 (3 levels), BSc in Orthotics & Prosthetics with 27 (2 levels), B.Cur with 261 (4 levels), and BSc in Health Promotion with 106 (3 levels).

- The questionnaire was developed and a random sampling technique was used.

- A total of 130 Questionnaires was distributed to students in their tutorial classrooms in all levels.

- A total of 88 completed and returned questionnaires were used and analysed.

- This yielded an overall response rate of 68 percent respondents.

- Presentation of data included the use of frequency tables.

Findings

Student category

		Frequency	Percent
Valid	Undergraduate	79	89.8
	Post graduate	9	10.2
	Total	88	100.0

The table presents the student category of the respondents of this study. The respondents total for 90 % came from Undergraduate students and 10% of respondents were from Post-graduate students.

Figure 5: Level of study

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1st year	16	18.2	20.3	20.3
	2nd year	16	18.2	20.3	40.5
	3rd year	21	23.9	26.6	67.1
	4th year	14	15.9	17.7	84.8
	5th year	8	9.1	10.1	94.9
	6th year	4	4.5	5.1	100.0
	Total	79	89.8	100.0	
Missing	System	9	10.2		
Total		88	100.0		

Figure 6: Which Course are you doing?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	MBChB	57	64.8	64.8	64.8
	BSc in Clinical Medicine	5	5.7	5.7	70.5
	Nursing	17	19.3	19.3	89.8
	Health Promotion	2	2.3	2.3	92.0
	Masters	2	2.3	2.3	94.3
	PhD	5	5.7	5.7	100.0
	Total	88	100.0	100.0	

Six levels of student study are presented in the figure 5 above. A total of 18% respondents from 1st and 2nd year levels, 24% are doing 3rd year, 16% from 4th year, 9% are doing 5th year, 5% from 6th year and 10% are at post-graduate study level.

Figure 6 above shows the respondents' courses. A total of 65% were MBChB students, 6% from BSc in Clinical medicine, 19% were nursing, 2% from Health Promotion, 2% for Masters and 6% were PhD students.

Information literacy skills

Figure 7: Have you attended Library orientation

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Yes	50	56.8	56.8	56.8
No	38	43.2	43.2	100.0
Total	88	100.0	100.0	

Figure 8: Do you know how to use OPAC to access library resources

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	53	60.2	60.2	60.2
	No	35	39.8	39.8	100.0
	Total	88	100.0	100.0	

Figure 8 above shows the respondents attended library orientation. A total of 57% answered "yes", they attended library orientation. 43% answered "no" they have not attended library orientation.

The table above presents respondents' knowledge to use Online Public Access Catalogue (OPAC). A total of 60% of respondents know how to access OPAC, 40% respondents do not know how to access OPAC.

continued

Figure 9: Do you have off campus access logins

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	11	12.5	12.5	12.5
	No	77	87.5	87.5	100.0
	Total	88	100.0	100.0	

Figure10: Know how to access online databases, like PubMED, Access Medicine etc.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	41	46.6	46.6	46.6
	No	47	53.4	53.4	100.0
	Total	88	100.0	100.0	

- The table above shows the off campus access. A total of 87% have not created off campus logins and only 13% have off campus access.

The knowledge on how to access Online Databases of respondents for this study is presented in figure 11 above. A total of 47% of respondents know how to access online databases, they were trained while 55% do not know how to access databases like PubMED, Access Medicine etc.

continued

Figure 11: Do you prefer to use print or e-resources

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Print	58	65.9	65.9	65.9
	E-resources	19	21.6	21.6	87.5
	Both	11	12.5	12.5	100.0
	Total	88	100.0	100.0	

Figure 12: Do you know how to access e-books available at WSU libraries

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	28	31.8	31.8	31.8
	No	60	68.2	68.2	100.0
	Total	88	100.0	100.0	

The table above presents respondents' preference to use print or e-resources.

A total of 66% of respondents prefer to use print material than e-resources, and other 22% prefer e-resources than print and 13% respondents prefer both print and e-resources.

The table above shows the respondents' knowledge to access e-books that WSU subscribed to. A total of 32% of respondents have a knowledge on how to access e-books and majority of 68% indicated that they do not know how to access e-books.

Figure 13: Does the library collection relevant and up-to date for your studies?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	75	85.2	85.2	85.2
	No	13	14.8	14.8	100.0
	Total	88	100.0	100.0	

Figure 14 above presents the respondents' perception about the library collection in terms of relevance and up-to date. A total of 85% of respondents agreed that the library collection is up to date and relevant to their studies, while 15% indicated that the library collection is not up-to date and not relevant.

Figure 14: Do you use e-journals for your studies?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	47	53.4	53.4	53.4
	No	41	46.6	46.6	100.0
	Total	88	100.0	100.0	

The table above shows e-journal use by students. A total of 53% of respondents use e-journals for their studies, and other 47% not use e-journals for their studies

Library and ICT facility data

Figure 15: Are the Library opening hours meet your needs?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	61	69.3	69.3	69.3
	No	27	30.7	30.7	100.0
	Total	88	100.0	100.0	

Figure 16: Does the library space enough your study needs?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	61	69.3	69.3	69.3
	No	27	30.7	30.7	100.0
	Total	88	100.0	100.0	

The figure above shows the respondents' view about library opening hours (09h00-24h00 during the week and 09h00-17h00 Saturday.

A total of 69% of respondents indicated that library hours do meet their needs and other 31% answered that library hours do not meet their needs, they want the library to open 24 hours doing the week.

The table above presents library space for students. A total of 69% of respondents said "yes" the library space is enough for their study needs and other 31% said "no" the space is not enough.

Figure 17: Are you able to connect Wi-Fi in the library?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	56	63.6	63.6	63.6
	No	32	36.4	36.4	100.0
	Total	88	100.0	100.0	

Figure 18: Does the university have enough computers in the laboratories

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	2	2.3	2.3	2.3
	No	86	97.7	97.7	100.0
	Total	88	100.0	100.0	

The table above represents Wi-Fi connection in the library. A total of 64% of respondents are able to connect Wi-Fi in the library, whereas 36% were not able to connect Wi-Fi in the library. Only a total of 39% of respondents indicated that Wi-Fi connection is working fast, majority of 61 % of respondents said, Wi-Fi is not working fast.

The table above represents the computer laboratory in the university. Only a total of 2% of respondents said, the university have enough computers in the laboratory, while the majority of 98% indicated that computers in the laboratory are not enough. A total of 69% of the respondents indicated that they have their personal computer laptop, and other 31% do not have laptop.

Challenges:

➢ Shortage of computer infrastructure, i.e. computers and Internet connection.

➢ Students turn up for orientations and library trainings.

➢ Lack of cooperation from lecturers when informing them on the new developments and information about the information literacy programs

➢ Lack of cooperation from the ICT Department staff who are not supporting the library, as the library has no ICT personnel to assist.

Conclusion

Health Sciences faculty working with Faculty Librarian should develop a plan to integrate Information literacy in the curriculum so that all students should have information skills. Academic staff should also be inducted and training on how to access library resources. Academic staff should work with the library to ensure that the collection is up to date according to the curriculum needs of the faculty. Library should purchase a lot of electronic materials than print so that students will have access even if they are in the hospitals and clinics. Computer laboratory should be up-to-date with working computers and printing facility.

Thank you!

Questions?

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