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Determining Return on Investment: The Importance and Development of Statistics Collection for Information Literacy Training at CPUT Libraries

Janine Lockhart
Cape Peninsula University of Technology, lockhartj@cput.ac.za

Deborah Becker
Cape Peninsula University of Technology, beckerd@cput.ac.za

DETERMINING RETURN ON INVESTMENT: THE IMPORTANCE AND DEVELOPMENT OF STATISTICS COLLECTION FOR INFORMATION LITERACY TRAINING AT CPUT LIBRARIES

Ms Janine Lockhart
Cape Peninsula University of Technology, South Africa
lockhartj@cput.ac.za

Ms Debbie Becker
Cape Peninsula University of Technology, South Africa
beckerd@cput.ac.za

Abstract

Academic libraries are increasingly required to prove their value as university management is demanding evidence of return on investment. The Information Literacy (IL) programme at Cape Peninsula University of Technology (CPUT) Libraries has undergone a process of development over many years from the initial random training sessions to the development and approval of a certified short course.

With these developments came the need for more relevant and detailed statistics. In a parallel process, the recording of the statistics for IL and other training done by library staff have therefore also evolved over the past few years.

This paper outlines the process and development of the recording of training statistics from the initial basic requirements to accommodating the current, more detailed need for reporting. It includes the further development of the library's statistical database to accommodate these requirements as well as the stringent report options demanded by staff and management.

Besides just recording and reporting the statistics, a very important development is how these statistics have influenced improvements or changes to the current status with the library. Therefore, some practical examples will be given as to how these statistics have been used to enhance the services of the library and add value to the user experience.

Keywords

Information Literacy, Statistics, Cape Peninsula University of Technology, South Africa

1. Introduction

Academic libraries are increasingly required to prove their value as university management is demanding evidence of return on investment. The Information Literacy (IL) programme at the Cape Peninsula University of Technology (CPUT) Libraries has undergone a process of development over many years from the initial random training sessions to the development and approval of a certified short course. With these developments came the need for more relevant and detailed statistics. In a parallel process, the recording of the statistics for IL and other training done by library staff have therefore also evolved over the past few years.

2. Overview of CPUT

CPUT has six faculties and over 33000 students. The faculties are:

- Applied Sciences
- Business
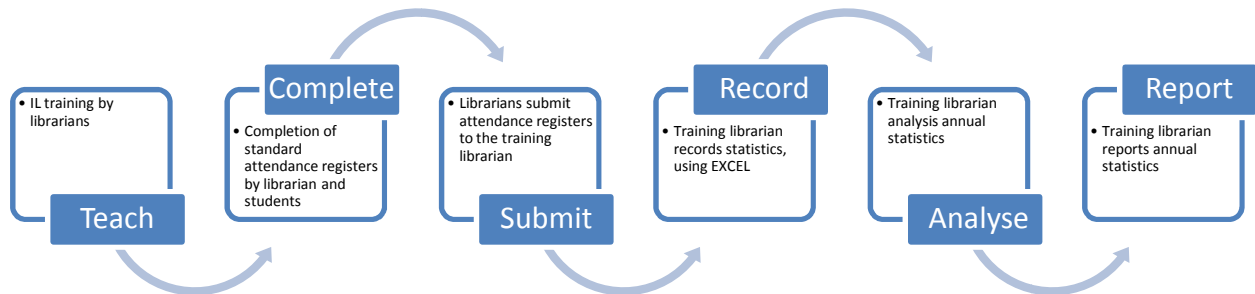- Education & Social Sciences
- Engineering
- Health & Wellness Sciences
- Informatics and Design

CPUT Libraries has eleven branches and a staff complement of 100 permanent staff members supporting the students. The IL training is done by eighteen librarians across the various branches. All librarians responsible for training students were required to complete an accredited "Train the Trainer" programme
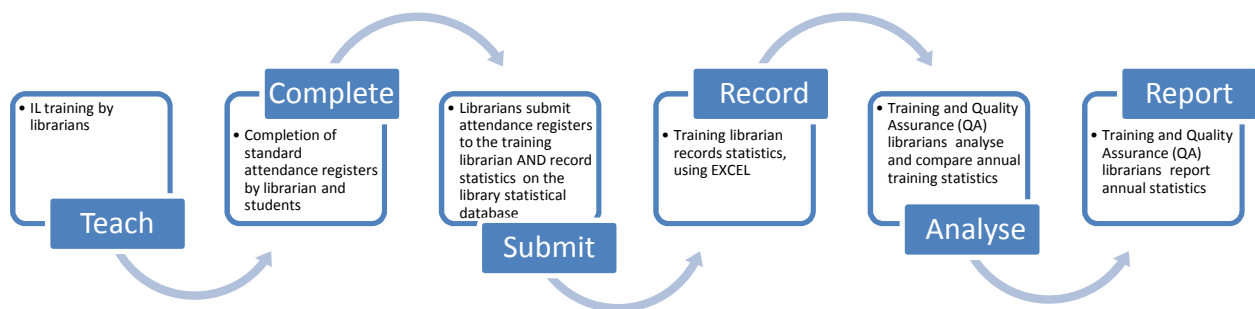
to ensure that the standard of training is consistent.

3. Process of recording IL statistics

In 2000, the process for recording IL training statistics was as follows:

Teach
- IL training by librarians

Complete
- Completion of standard attendance registers by librarian and students

Submit
- Librarians submit attendance registers to the training librarian

Record
- Training librarian records statistics, using EXCEL

Analyse
- Training librarian analysis annual statistics

Report
- Training librarian reports annual statistics

In 2011 this process was adapted to include the registering of statistics on the statistics database. Changes were also made to the type of training information that had to be recorded. This formed part of a quality assurance process to improve the quality of the statistical data.

Teach
- IL training by librarians

Complete
- Completion of standard attendance registers by librarian and students

Submit
- Librarians submit attendance registers to the training librarian AND record statistics on the library statistical database

Record
- Training librarian records statistics, using EXCEL

Analyse
- Training and Quality Assurance (QA) librarians analyse and compare annual training statistics

Report
- Training and Quality Assurance (QA) librarians report annual statistics

4. Record keeping and statistics

Initially the librarians registered the number of training interventions and students trained as part of their monthly statistics report. However, these statistics provided only totals without providing insight into the type of training done or details of the students.

In 2000 the above process whereby librarians had to submit copies of the attendance registers was introduced and has resulted in a more detailed and accurate recording of the statistics. The initial attendance register included all the fields that were seen as important at the time. These included the training course being presented, date, presenter as well as the branch library at which the training was presented (see Annexure A). Students noted their course and student number on the attendance registers.

At the beginning of 2009 the attendance register was slightly changed to include the name of an assistant if the librarian required extra support during the training session and faculty (see Annexure B). Also during this time, further developments were made with regard to the IL Policy. The Policy was finally approved in June 2009. The policy indicated that "all programmes must include a component that offers the student adequate training in the level and use of information skills needed to function within the programme" and that the "responsibility for the implementation of this policy is part of the normal

academic management process" (Cape Peninsula University of Technology, 2009). Due to the acceptance of the policy, the type of statistics to be recorded and reported was reconsidered.

During 2011 the attendance register was further adapted to include the year of study of the student and whether the session was presented in normal working hours or as an after-hour session. A further consideration was the length of a session (see Annexure C). According to CPUT academic standards, a single training session/lecture is 45 minutes in duration. However, in some cases the training given by librarians exceeded this standard and at times could be as long as three hours. In order to determine the depth of training, it was decided that the length of the training session be recorded by the librarian.

During 2012 a certificate was registered with the short courses department in the University, called Centre for Continuing Education (CCE) for implementation in 2013. The certificate included five modules and an online summative assessment administered via the university's Learning Management System, currently using Blackboard. Training was arranged in consultation with academics. Students who passed the course with a mark of 50% or more, would receive a certificate.

The reason for registering this short course was to formalise the library training and ensure that all areas of IL be covered and not just the usual sessions around catalogue and databases. Although based on the content of the already existing online IL course, each librarian customised the courseware to include examples relevant to the subject area of their faculty and department. The purpose was to ensure that the courseware was relevant to the learning experience of the student.

It was decided that there would be three approaches to obtaining the certificate:

- Lecturers offering the modules as part of their coursework, with the library assisting with selected modules and students completing and passing the library online assessment;
- Librarians training all modules and students completing and passing the library online assessment;
- Students completing the online course and passing the online assessment.

Due to the implementation of the certified course in 2013, the need for a much deeper level of recording statistics presented itself and significant changes were made to the attendance register (see Annexure D). One of the key issues with recording statistics for the certificate was to find a way of recording the depth of the training. There is a difference between training thousands of students only once, versus taking each student through a process of learning over five training sessions and an online assessment.

The implementation of the certificate also resulted in the development of assessments for each of the modules as well as a summative assessment which is made up of a random selection of the questions for each module.   The advantage of this development was that librarians could select to assess students with each module trained or do a summative assessment at the end of the course.

All librarians underwent training on how to teach and assess students. This process was done over a period of many years and is still continuing as more new librarians are being appointed. During 2013 senior library assistants were also required to complete the accredited "Train the Trainer" programme so that they could assist librarians with their training and develop their own skills in this area.

This table includes all the different types of statistics that had been recorded over the years, why it was important and how the statistics have been used for planning purposes:

YEAR	INDICATOR	DESCRIPTION	ACTION
2000+	Course being presented	This is a description of the course that is being taught to the students by the librarian. Traditionally, training was mostly around the library catalogue, databases and bibliographic referencing. Since the approval of the IL policy in 2009 these sessions included the five IL modules.	Librarians need more class time to cover all the modules. This affects the librarians' time allocated to training and venue availability.

2000+	Date	The date on which the training took place	The date is significant as it indicates during which months most training takes place. Librarians are supported during peak training periods by the provision of additional staff to assist and support them with other functions. Block booking of library venues for librarians during these periods has been initiated. Venues are not available to other university departments during this time.
2000+	Presenter	This is the name of the librarian presenting the course, normally the librarian who is responsible for assisting the faculty or department.	Allows for the training load per librarian to be determined and support to be allocated. Also serves as evidence of performance during performance management reviews.
2000+	Course of student	This indicates for which course of study the students who are attending the training are registered.	Enables the library to identify courses for which training takes place as well as gaps where librarians need to advocate their services actively.
2000+	Branch library	Indicates at which one of the 11 branch libraries the training was done.	Some librarians provide training at more than one branch, influencing their availability and need for support.
2009+	Faculty	The name of the faculty	Enables the library to determine the number of training sessions and level of service per faculty.
2009+	Assistant	At times it is necessary that a second staff member assist the librarian with training. This is normally necessary when training large classes.	Indicates the amount of time staff members spend assisting with training. It assists in providing a developmental and mentoring process for staff to improve their training skills.
2011+	Day or after-hours session	This selection indicates if the training was done during normal working hours or during extended working hours. After-hours training is done for part-time students and takes place from 17:00 and on Saturdays.	Indicates the amount of time spent on training during normal working hours and indicates the level of after-hours support needed. Currently librarians take this time off, resulting in the need for support during normal working hours when the librarian is unavailable. If the after-hours training support keeps on increasing, then it could be considered that the after-hours

			supervisors/librarians assist with presenting these sessions.
2011+	Length of session	The length of the session could vary as follows: 1 session: up to 60 minutes; 2 sessions: 60-90 minutes; 3 sessions: 90-120 minutes; 4 sessions: 120-150 minutes	This information reflects the training workload of library staff and because it is based on the same terms as the academic programme, the faculty can better understand the level of support the library is offering with regard to time and resources.
2013+	Modules 1 – 5 (IL curriculum)	The IL certificate course contains five modules. The librarian indicates which of the modules is being taught. Students have to sign the attendance register for every session/module attended.	It indicates how many students per course and faculty completed only some of the modules or the full certificate and where better integration of IL into a curriculum is needed.
2013+	Assessment	In some cases assessment may take place as part of the module training; however, in most cases, assessment is done as a separate session. Although recorded by librarians, the assessment session is not included as a training session for statistical purposes.	The results of the assessments allow the library to determine the success of the training interventions and benchmark at an academic level. It is being investigated that the assessment sessions be recorded as a statistic to account for librarians' time, but not as a training session.

5. Development of a library statistical database

In 2011 CPUT Libraries undertook the development of a statistical database (Becker, 2013). This database was not only developed to record annual data, but also to assist librarians with recording their monthly data. One of the data elements to be recorded was training statistics. Initially a simple form was developed which would allow librarians to record the number of sessions and trainees per faculty and department. However, it was soon noted that this information was insufficient and a form was developed which allowed the librarian to indicate the type of training provided as well as the time slot. The screen print below provides an example of the data which could be retrieved via the reporting module on the database.

In 2013 after some discussion between the Quality Assurance and Training librarians, it was decided that the student attendance register would be used as a template for the recording of statistics on the database. This meant further development of the fields available in the database to cover all the elements of the training statistics captured on the attendance registers.

The training statistics recorded on the statistics database is effectively a summary of the data captured on the attendance registers. All the relevant information is recorded, but instead of a list of names of attendees the number of attendees is recorded.

When librarians login to the database, they are automatically linked to the branch to which they are affiliated. Upon selection of the option to record training statistics the following selection screen is presented:

Data entry cycle:	2014 ▾
Month:	04 - Apr ▾
Training type:	InfoLit Module 1, Searching strategy ▾
Department:	Chemistry ▾
Presenter:	Becker, Ms Debbie (Other) ▾
Assistant:	Lockhart, Mrs J (Cape Town) ▾
Session Length:	0-60 ▾

The librarian uses the arrow on the right-hand side of the form to view the selections for each of the fields. Once the selections have been made and the form submitted, a further form is displayed:

CPUT/Other - **Faculty/Department:** Applied Sciences/Chemistry   **Cycle:** 2014/04

Training type: Searching strategy

Timeslot: Day

Year of Study	Number of sessions	Number of trainees
1) Certificate		
2) 1st year		
3) 2nd year		
4) 3rd year		
5) B.Tech		
6) Honours		
7) M&D		

Timeslot: A/H

Year of Study	Number of sessions	Number of trainees
1) Certificate		
2) 1st year		
3) 2nd year		
4) 3rd year		
5) B.Tech		
6) Honours		
7) M&D		

The selected details appear at the top of the screen and the librarian can input training details according to the year of study of the group trained as well as whether the training took place during normal working hours or after-hours. The reference to "certificate" in the table above pertains to the students completing certificate courses (one year in duration) at the University and not the IL Certificate. Ideally this form should be completed after each training session. However, most librarians complete the online form at the end of each month.

One advantage of recording the statistics on the database is the retrieval of statistics for reporting purposes. The reporting module allows for the selection of various filters, such as faculty, department, presenter, training type, year of study, year and month of training, branch and time slots.

Student training | Western Cape | CPUT | Other | Ms Debbie Becker | (Global) |
                                                    [Reports menu] [Main menu]

Department:	N/A ▾
Presenter:	N/A ▾
Training type:	All training types ▾
Year:	2014 ▾
Month(s):	Jan to Dec ▲ Jan - 01 Feb - 02 Mar - 03 Apr - 04 ▾ **Hold down [ctrl] to select multiple months**
Branch:	All branches for CPUT ▾
Time slot:	All time slots ▾

Run!

With the updating of the statistics, the reporting module is still to be updated to include filters such as assistant and length of session.

6. Quality Assurance

In order to ensure that information is correctly recorded and to comply with the QA process, it was decided that the information recorded on the statistical database would be compared with the statistics recorded from the attendance registers. By doing so, a number of problems were highlighted and these could be addressed with the relevant librarians and during general feedback meetings with staff.

Problems were largely due to librarians not completing the details on the attendance registers correctly or in some cases not submitting attendance registers at all. This resulted in the Training librarian having to return forms requesting more information. Often, if this is done too long after the training session was presented, information is difficult to remember and correct. With the number of changes made with the implementation of the new IL certificate, some librarians were unsure of how to record the sessions on the database, resulting in a variation in the recording of statistics.

An analysis of the two sets of data was done and a report compiled highlighting problem areas. The report was developed by the QA and Training librarians and submitted to library management.

7. How statistics have influenced improvements

A total of eighteen librarians across the eleven branches are involved in providing training for students. This includes IL certificate training, specialised training interventions based on needs identified by lecturers as well as 1-on-1 training of students who approach librarians individually. These 1-on-1 sessions are not submitted as training statistics on the database (only group training sessions are loaded), but are recorded as part of the monthly queries handled by each librarian. As from 2014 the librarians will be assisted in presenting their training sessions by six senior library assistants.

Training statistics have steadily grown over the past few years.

	2009	2010	2011	2012	2013
1-1 training	2054	3577	5312	3438	5520
Number of group training sessions	361	371	436	600	935
Number of students trained	6673	6873	9 577	12 193	16 206

IL Certificate statistics for 2013:

Number of courses registered	62
Number of students registered	2756

It has been noted that since the implementation of the IL Policy (2009), the number of training sessions and trainees have drastically increased. The impact of the IL Policy implementation was seen from 2011. With the introduction of the IL certificate in 2013, the statistics have shown a further increase.

The library has responded to the increase in the number of training sessions by:

- Increasing the number of training facilities at the bigger branches by using sections of computer laboratories for training when needed.
- Block booking of library venues for the use of librarians only, not allowing bookings from other university departments until the peak periods have passed.
- Providing librarians with access to laptops for presenting training at venues outside the library.
- Providing training for senior library assistants to assist with IL training and therefore develop their skills in this area.

- Providing regular training programmes for librarians who teach. Even though librarians have completed the "Train the Train" programmes, further programmes are encouraged, e.g. during 2014 five librarians were selected to attend the Training Development Programme offered to lecturers to improve their training skills by the Academic Staff Development Department, called Fundani, of the University. It was the first time that librarians were selected to attend this programme which is offered over sixteen weeks, one afternoon per week and aims to enhance training, learning and assessment practices.
- Offering other workshops around training large classes and using technology in training to librarians.
- Providing further training in recording training statistics.
- Ensuring back-up staff are available to assist users with reference queries while librarians are training.
- Providing staff to assist with the administration of certificates.

8. Conclusion

Recording and analysing statistics is imperative for showing return on investment and making informed decisions to improve library services to the rest of the university community. It is important to decide which statistics should be kept and why it is important. Therefore consistent review of the statistics to be collected should be undertaken.

Open communication channels and the development of processes for the recording and submission of training statistics are essential to capturing reliable data. The need for continual training of librarians with regard to this process should not be underestimated.

Bibliography

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Becker, D. A. 2013. Administrator's guide to the statistics database (version 2.0, June 2013). Unpublished manuscript.

Attendance Register

Course: ………………………..   Date:……………. Presenter: …………………..

Library: (Please tick one)	Cape Town	Granger Bay	Mowbray	Wellington

	SURNAME	NAME	COURSE	STUDENT NR
1				
2				
3				
4				
5				
6				
7				
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9				
10				
11				
12				
13				
14				
15				
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18				
19				
20				

Attendance Register

Course being presented: …………………………   Date: ……….…………

Presenter: ……………………………………………   For faculty: ………….…...

Assistant (if applicable): …………………………..   Course: …………………..

Library: (Please tick)	Bellville	Cape Town	Granger Bay	Groote Schuur	Mowbray	Tygerberg	Wellington
	Athlone	Thomas Pattulla					

	SURNAME	NAME	COURSE	STUDENT NR
1				
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Attendance Register

Course being presented (e.g. catalogue, databases, etc.):			

Presenter:		Date:	

Assistant (if applicable):	

For faculty:		Course:		Year of students:	

Length of session:		1 session Up to 60 min	2 sessions 60 – 90 min	3 sessions 90 – 120 min	4 sessions 120 – 150 min

Day session:			After-hours session: (17:00 onwards or Saturdays)	

Library: (Please tick)	Bellville	Cape Town	Granger Bay	Groote Schuur	Mowbray	Tygerberg	Wellington
	Athlone	Thomas Patullo	Worcester				

	SURNAME	NAME	COURSE	STUDENT NR
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Attendance Register
(Certificate: Information Literacy)

Presenter:					Assistant (if applicable):			

Dates:	1		2		3		4		5	

For faculty:		Course: (e.g. ND: Marketing)		Year of students:	

Length of session:		1 session Up to 60 min	2 sessions 60 – 90 min	3 sessions 90 – 120 min	4 sessions 120 – 150 min
Link the module number to length of session:					

Day session:		After-hours session: (17:00 onwards or Saturdays)	

Library: (please tick)	Bellville	Cape Town	Granger Bay	Groote Schuur	Mowbray	Tygerberg	Wellington
	Athlone	Thomas Pattullo	Worcester	George			

	Surname	Name	Student number	Module 1: *Searching strategy*	Assess	Module 2: *Info sources & tools*	Assess	Module 3: *Evaluating info*	Assess	Module 4: *Copyright & plagiarism*	Assess	Module 5: *Bib ref & in-text*	Assess
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