

Martin Edwards

University of Wales, Newport

Exploring the relationship between learning styles and learning spaces in Higher Education Libraries / Learning Centres

Rationale – Why even bother with this research?

- ▶ To try and understand why learners still wanted to use our library – not just for loan transactions etc – there must be learning activities going on (but what types and are we meeting these needs?)
 - ▶ A new university campus, faculty structures and an emphasis on a learning centre instead of a library...
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Rationale – Why even bother with this research? - ctd



From this...



...to this

So we wanted to know if there was an implied difference between a library and a learning centre.

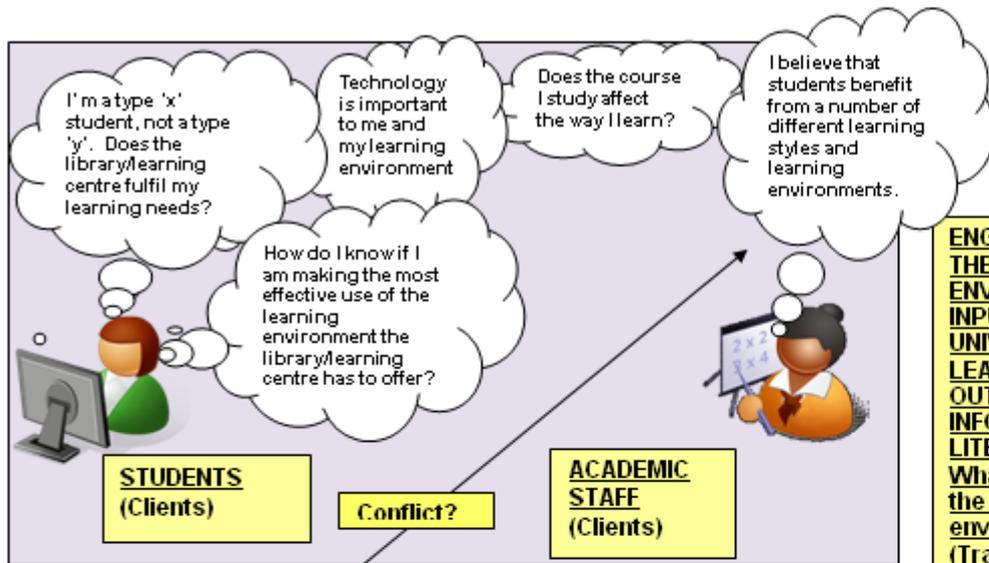
Looking at the rich(er) picture - CATWOE

Soft Systems Methodological approach to understanding libraries/learning centres as learning environments.

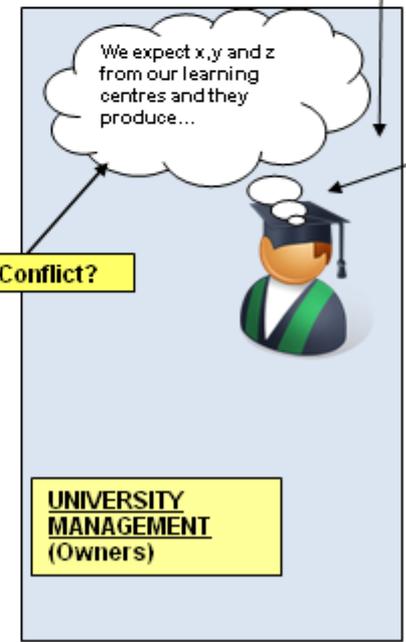
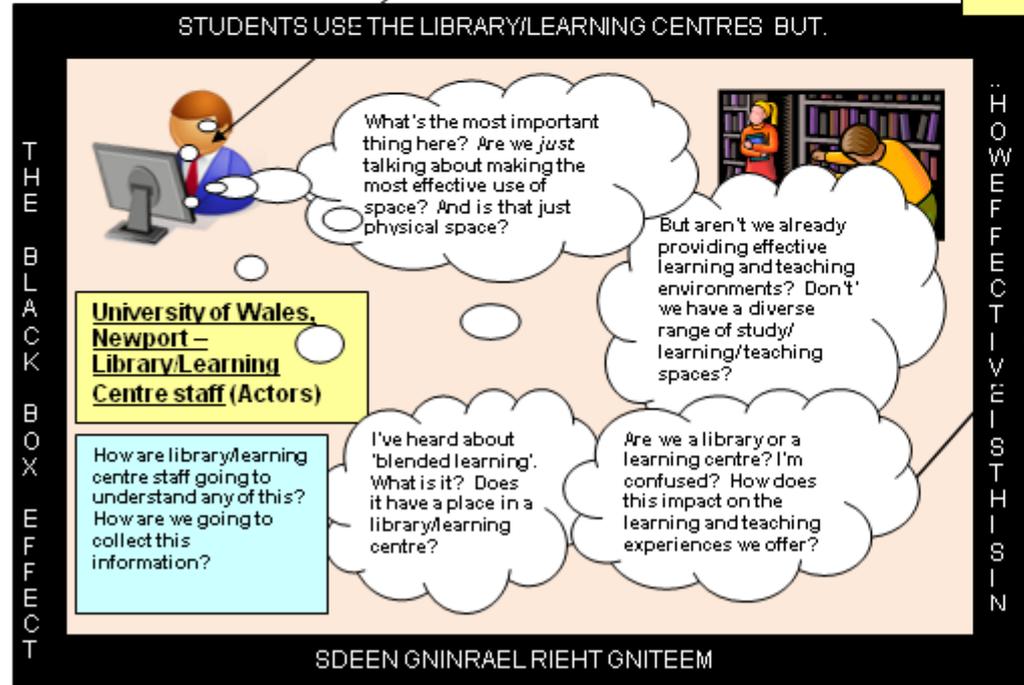
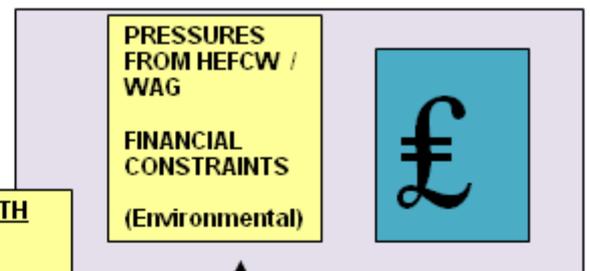
- ▶ **Clients** (students, staff and other users)
- ▶ **Actors** (staff (library / learning centre staff supporting the clients)
- ▶ **Transformations** (what takes place in learning environments), the level of effectiveness in providing learning (and teaching) spaces) and how synchronous they are with the university (and each other)
- ▶ **Weltanschauung** (the 'world view') the university's mission statement and goals, current drivers in HE in Wales, UK and beyond
- ▶ **Owners** (the people in charge at the university – is what we do in the libraries / learning centres in tune with them?)
- ▶ **Environment** (the likely restrictions to the system (financial, strategic, resources and time)

From this, a **root definition** of the system can be determined.

A rich picture (see below) can be used to explain and make sense of the system and shape the subject areas for the research.



ENGAGEMENT WITH THE LEARNING ENVIRONMENT:
INPUT = ARRIVE AT UNIVERSITY AS LEARNERS
OUTPUT = LEAVE AS INFORMATION LITERATE PEOPLE?
What is the impact of the learning environment upon this?
(Transformations)



Rationale

1. To gain a better understanding of our current space (physical and virtual) and how this meets the learning and research needs of our users (staff and students)
 2. To investigate whether there is a perceived difference between a learning centre and a library.
 3. *(To investigate whether teaching can be supported using our learning centre resources).*
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How was this done?

Undertook a 'multi-method' approach (the use of a questionnaire and focus groups – with the aim of widening the “view of the complexity of human behaviour” (Cohen, Manion and Morrison, 2003, pp.112-113)

- ▶ Review of literature
 - ▶ Pilot study phase – visits, focus groups and pilot questionnaire
 - ▶ Questionnaire (as an online / paper-based survey).
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Questions to consider during the process

Identified specific types of learners –e.g. Research students / staff and posed the following questions to them:

Question 1

How relevant is this research to you?
If you had to state how important this is within your student /research experience, then how would you rate it?

1. Very Important
2. Important
3. Neither Important / Unimportant
4. Unimportant
5. Very Unimportant

Question 2

What's in a name?
Does it make any difference to you whether we are known as a **library** or a **learning centre**?

Use of stimuli - Presented a series of stimuli (pictures) to generate discussion (methods of learning)

Group



Social



Individualized



Use of stimuli - Presented a series of stimuli (pictures) to generate discussion (methods of learning) - ctd



▶ Blended

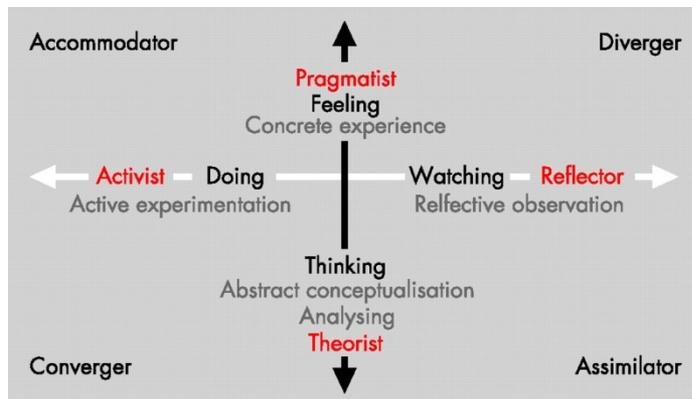
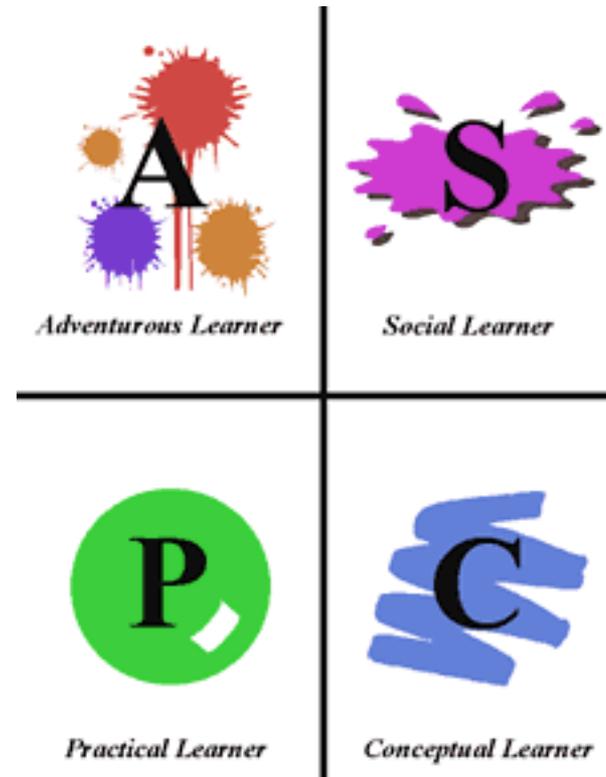
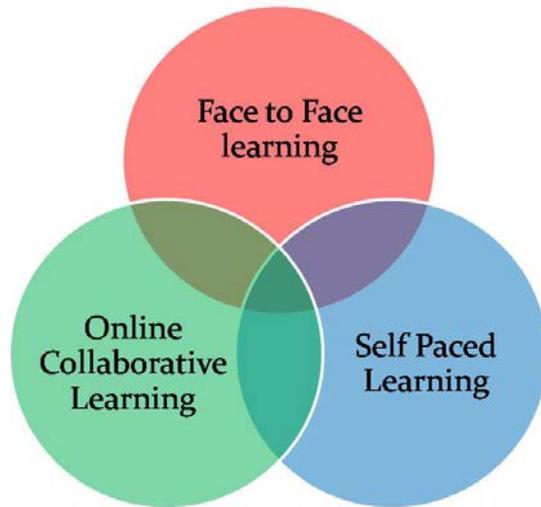
Use of stimuli - Presented a series of stimuli (pictures) to generate discussion (methods of learning) - ctd



Social...

..'traditional' / silent

Use of stimuli - Presented a series of stimuli (pictures) to generate discussion (methods of learning) - ctd



Questionnaire

Areas considered:

- ▶ Demographic information
 - ▶ Learning Styles (but not a 'learning inventory')
 - ▶ Study Spaces
 - ▶ Library v Learning Centre
- 

Question styles / types

- ▶ **Dichotomous (closed) questions** (in order to collect large data sets for calculating frequencies and statistical analysis (Newby, 2010, p.298))
 - ▶ **'Funnelling'** (Cohen, Manion and Morrison, 2003, p.250)
 - ▶ **Multiple choice and rank ordering** (Kumar, 2005, p.135)
 - ▶ **Rank ordering / rating scales** – (Likert scales – create “unidimensionality” (Oppenheim, 1992, p.195))
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Linking learning types with learning styles theory

The question wording about learning styles was categorised in reference to the learning styles set out by Honey and Mumford (1992)

- ▶ I learn through reflection and critical evaluation ('reflector')
- ▶ I learn through 'doing' tasks ('activist')
- ▶ I learn through discussion with others ('pragmatist')
- ▶ I learn by studying in a structured and purposeful way ('theorist').

Clearly, the statements are not wholly dependent on such learning style types (not mutually exclusive), but it was felt that these areas were matched best by each term (**limitation of the research: a learning style inventory was not undertaken**).

Findings – Focus Groups

Need for silent spaces?

Prefers study space to be silent to avoid distractions.
Different working areas need to be respected as distinct.

...the current silent study area at Caerleon was not really suitable as the staff activity back and forth was distracting.

Findings – Focus Groups

Need to meet diverse needs?

Space is at a premium at University and instead of turning the Library into a multifunctional space, people should use the dedicated spaces already provided to perform the related activity i.e. use the canteen to eat and the large open spaces like foyers to commune.

Your learning style preference will also be influenced by the activity you are involved in i.e. research work lends itself to silent work whereas group work works better in a noisy relaxed space

Commented that she did not use the library at all and preferred the comfort of home to study. Linked the library with silence.

Findings – Focus Groups

**Any opinions
on the virtual
learning
environment?**

it was a place
for resources,
but wondered
how learning
took place.

it worked as a
store for
resources but
not a
communal
space.

Agreed with its
function as a
storage space for
resources but not
as a space for
peer to peer
learning.

Findings – Questionnaire

- ▶ Questionnaire delivered both online and in print and the number of responses determined the sample (538), with a confidence interval of 4.1 - size seemed acceptable when considered against the sampling frame:

Determine Sample Size

Confidence Level: 95%

Confidence Interval: 4.1 (%)

Population: 9295

Sample Size: 538

Find Confidence Interval

Confidence Level: 95%

Sample Size: 538

Population: 9295

Percentage: 50 (%)

Confidence Interval: 4.1 (%)

Findings – some basic information

	Caerleon	City	Other	Totals
Full Time	273	118	6	397
Part Time	95	43	3	141
Totals	368	161	9	538

	Full Time	Part Time	Totals
Female	273	99	372
Male	124	42	166
Totals	397	141	538

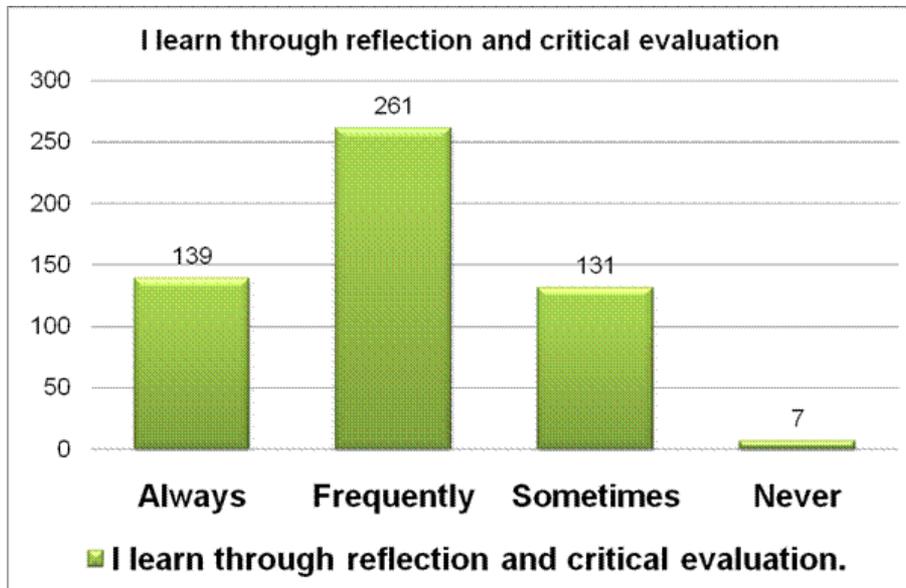
	Full Time	Part Time	Totals
18-21	193	7	200
22-30	122	52	174
31-45	73	55	128
46+	9	27	36
Totals	397	141	538

	Full Time	Part Time	Totals
Faculty of Arts and Business	183	40	223
Faculty of Education and Social Sciences	214	101	315
Totals	397	141	538

Findings – Questionnaire

Learning styles adopted by our learners

1. 'Reflector'

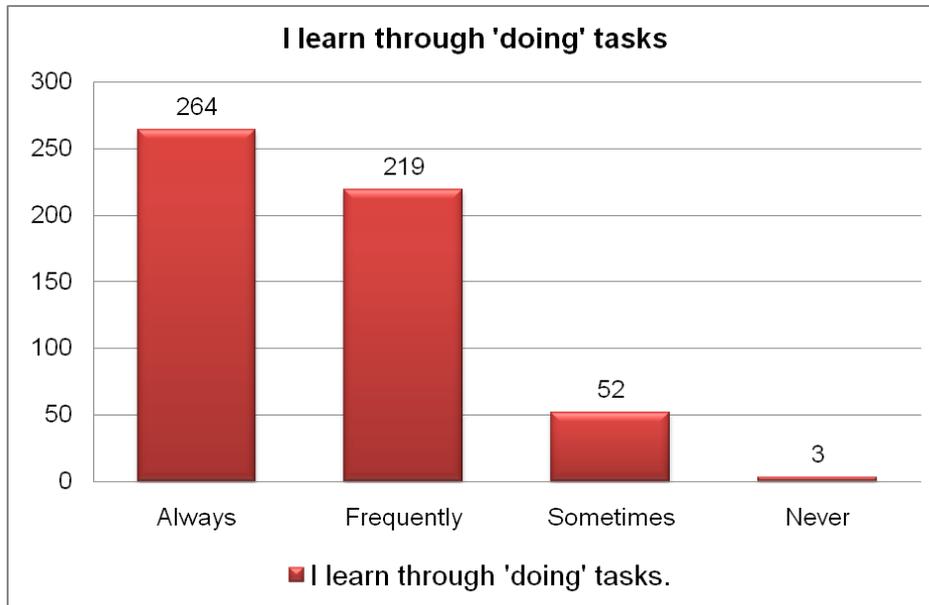


	Caerleon	City	Other	Totals
Always	97	41	1	139
Frequently	189	67	5	261
Sometimes	77	51	3	131
Never	5	2	0	7
Totals	368	161	9	538

Findings – Questionnaire

Learning styles adopted by our learners

1. 'Activist'

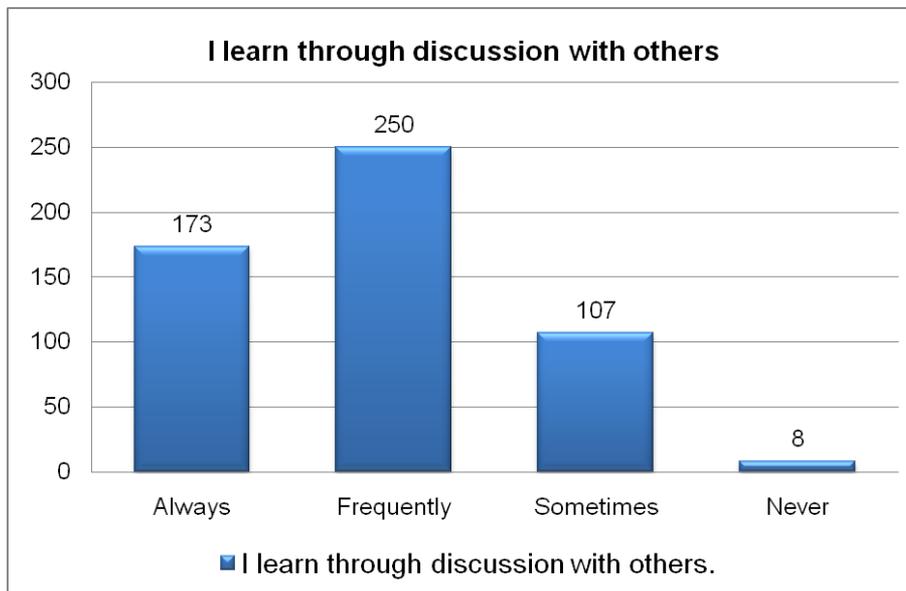


	Caerleon	City	Other	Totals
Always	173	86	5	264
Frequently	155	60	4	219
Sometimes	38	14	0	52
Never	2	1	0	3
Totals	368	161	9	538

Findings – Questionnaire

Learning styles adopted by our learners

▶ ‘Pragmatist’

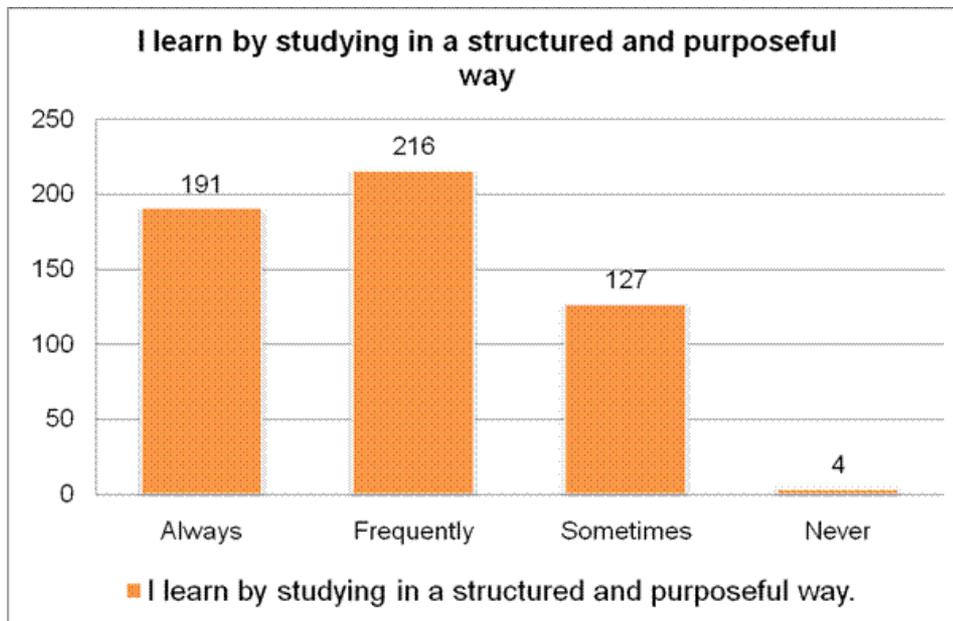


	Caerleon	City	Other	Totals
Always	125	45	3	173
Frequently	172	72	6	250
Sometimes	68	39	0	107
Never	3	5	0	8
Totals	368	161	9	538

Findings – Questionnaire

Learning styles adopted by our learners

▶ ‘Theorist’

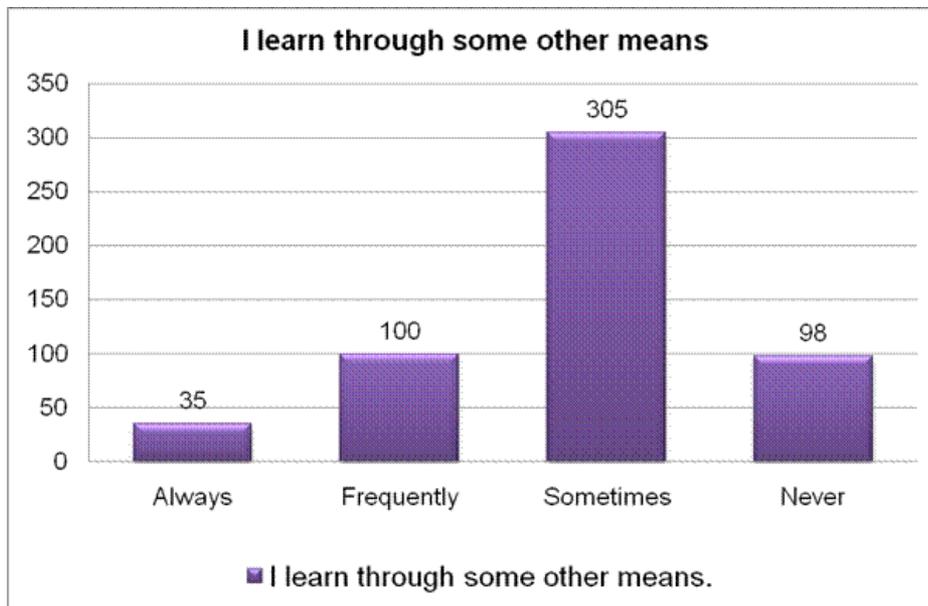


	Caerleon	City	Other	Totals
Always	129	58	4	191
Frequently	151	60	5	216
Sometimes	87	40	0	127
Never	1	3	0	4
Totals	368	161	9	538

Findings – Questionnaire

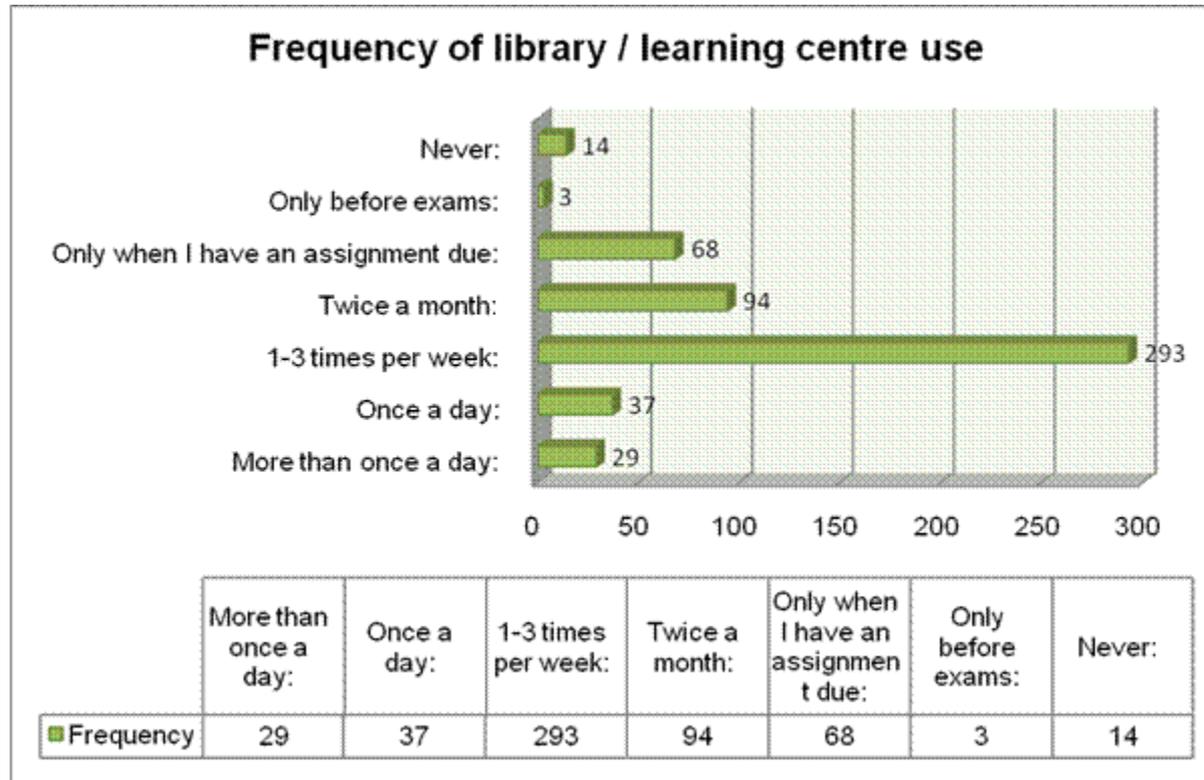
Learning styles adopted by our learners

- ▶ ‘Some other means’

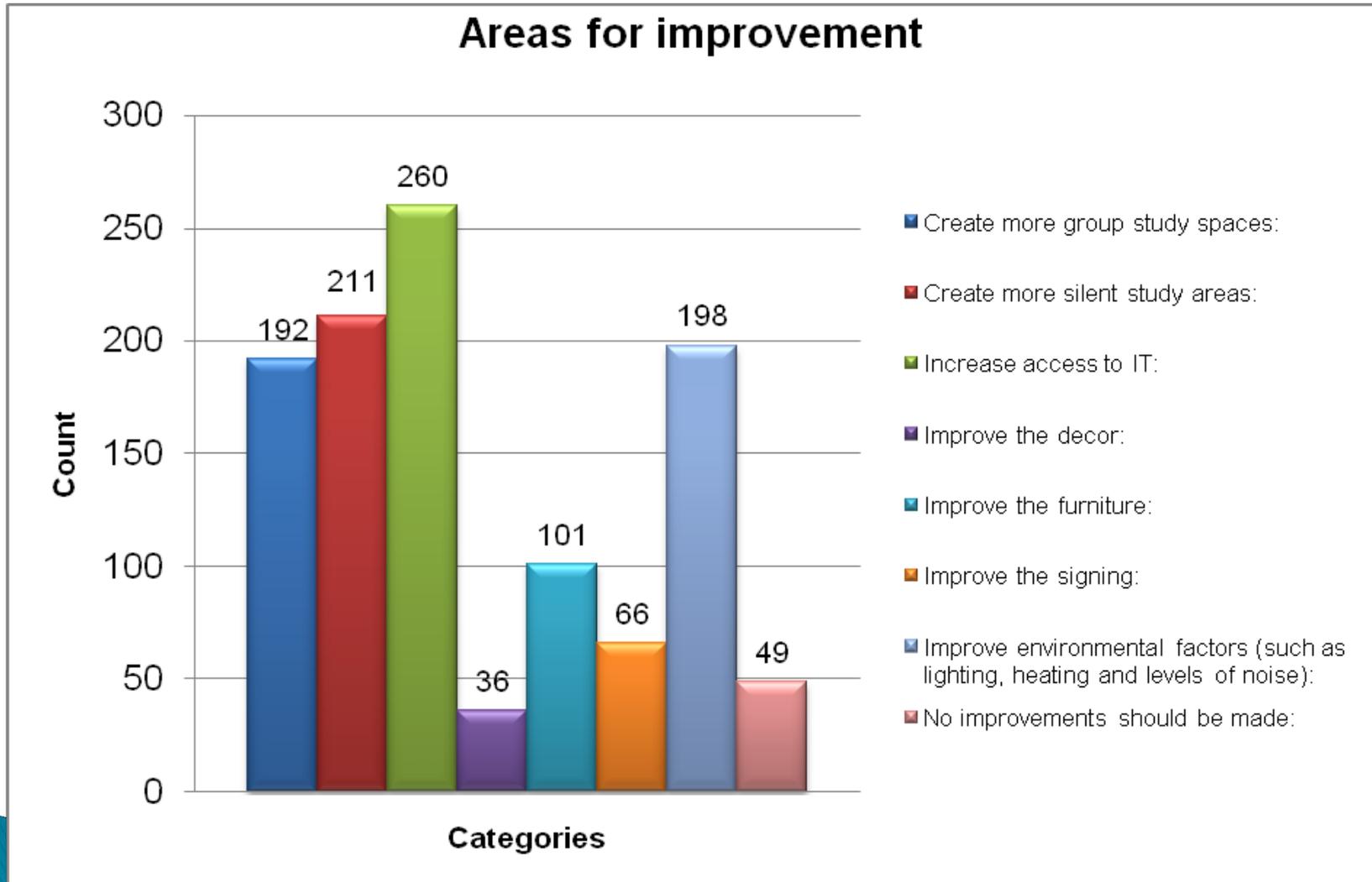


	Caerleon	City	Other	Totals
Always	17	18	0	35
Frequently	66	33	1	100
Sometimes	205	95	5	305
Never	80	15	3	98
Totals	368	161	9	538

Findings – use of library/learning centre



Findings – areas for improvement



Space needs – some open responses - Caerleon

Silent study areas:

Enforce the silent study spaces, have them in a separate room without the book cases, because people talk to each other when looking for books. It get distracting.

It would be good to have an area cordoned off as an absolutely silent area. Even the silent areas cannot be silent with people walking up and down, getting books, etc.

I understand that some people study in groups and have to talk. They need that space. It is unfortunate that there is only a very small space that a librarian showed me upstairs in the library. It is small and not even conducive for silent study...All in all, there is no space that meet silent study requirements.

The silent area needs to be more spacious and spread out so people are not cramped together.

I think the study area in the library should be more away from the books section area, or even separate from it, so students who look for or reading books there, wont be too disturb.

more booths for silent study

Create silent study rooms...

Space needs – some open responses - Caerleon

Group study areas:

It would be good to have more rooms designed for group study like the one on the second floor that we have to book for.

Group study areas can get very noisy and are sometimes being used for socialising, would be good to have an area for group study with limited noise levels.

The teaching experience room is often a place where many of us trainee teachers meet and discuss lessons and observations and carry out group work. This area appears to be perfect for this type of work as it is out of the way and any noise made would not disturb other workers...it already includes most of the books and resources that are needed for this type of work!

bigger area for group work and places to talk about work without disturbing others

Create rooms for group study, may include one table, 5-6 chairs and a board.

More study group areas/rooms where discussions can take place

the areas that are available for group study a lot of the time have been booked for lessons as are the PCs. this can prove to be a problem as there is no where else really to go as upstairs is silent area.

The group study area should be available all the time, and not booked out for teaching.

Space needs – some open responses - City

Problems with zoning and noise

City campus is an open plan library which in my experience is very noisy. there is no happy medium between silent and loud and as a student for me this centre is useless.

I find that people always talk and the noise distract my concentration.

The city campus is open plan, the noise from the coffee shop rises and distracts from study

Apart from in the silent study room, the noise pollution is very distracting in the City campus library - noise rising from the atrium / entrance, noise from upper floors of workmen's tools, for instance, loud talking / shouting, etc, etc

Environment should be generally quiet in the library and surrounding area as against present situation little too much talking & using of mobile phones. It seems some people come to chit chat and enjoy music and disturbing others.

Space needs – some open responses - City

Group work areas

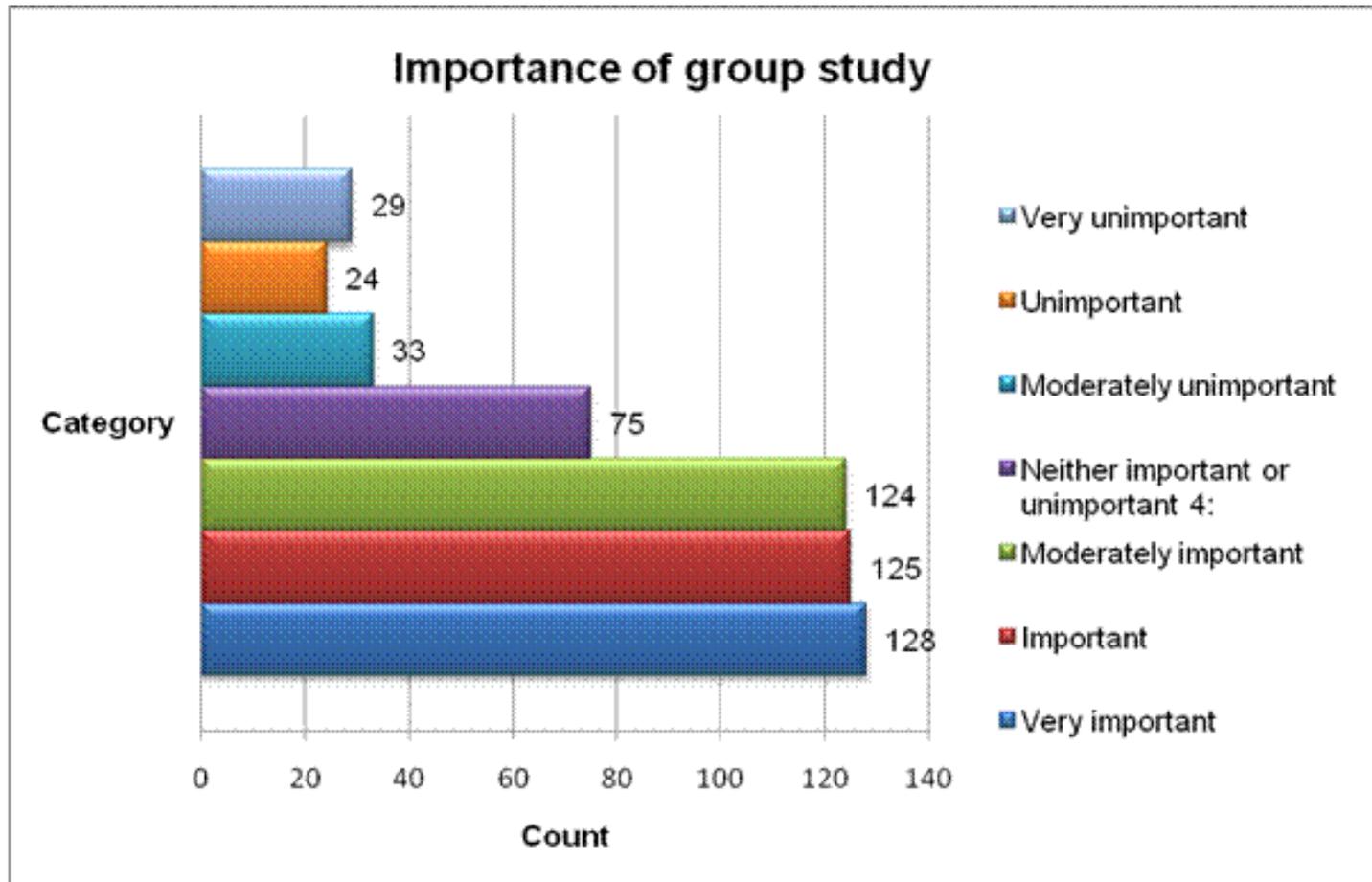
Larger work spaces for students to settle in groups without being distracting.

More group spaces with whiteboard etc to present ideas to group members

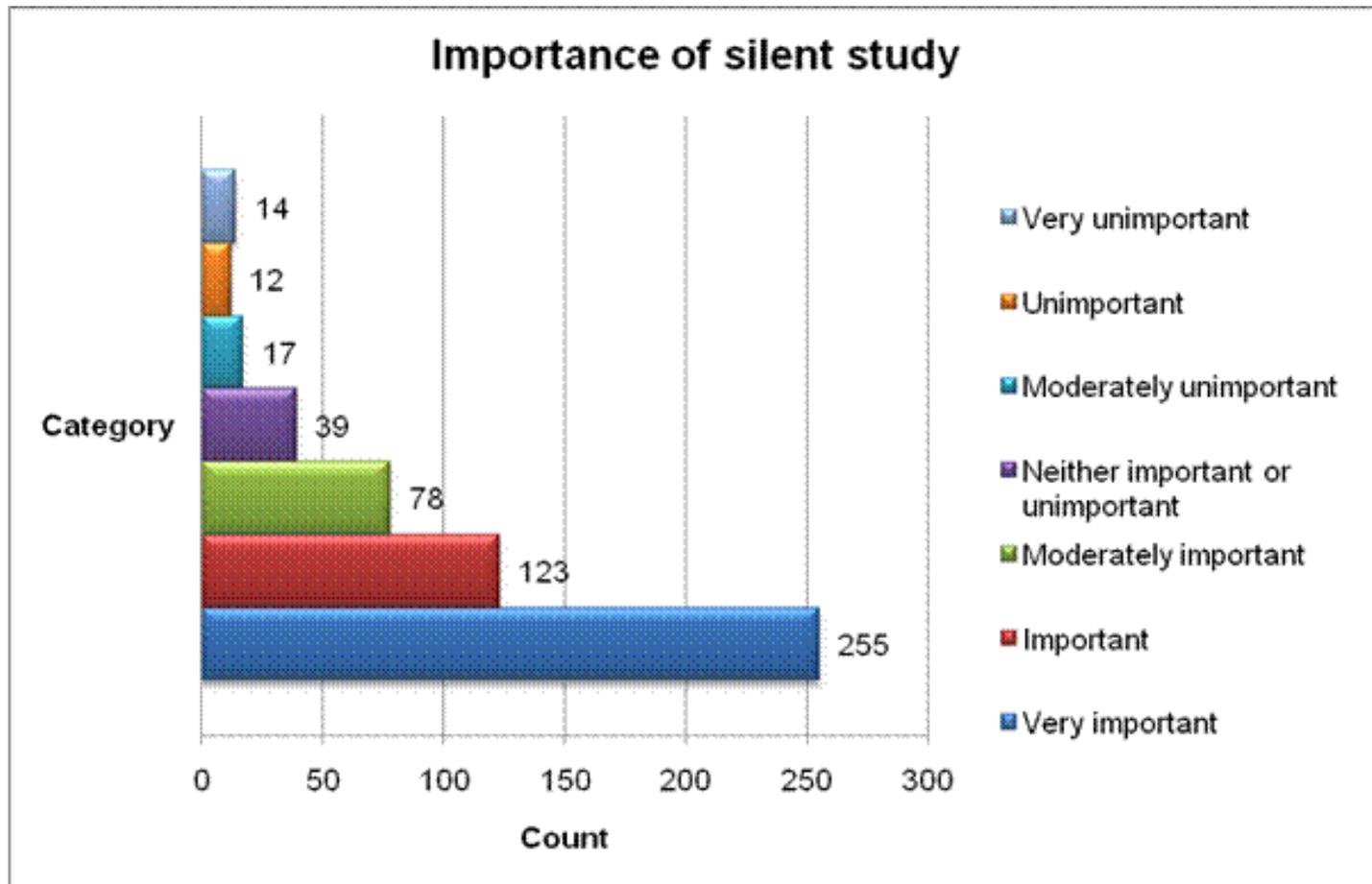
Use of social spaces

Lots of people use the computers in the library for social networking and games, this is unfair when other people have an assignment to do and there are no computers left. Maybe create a separate space for people who want to use a computer but aren't working? .

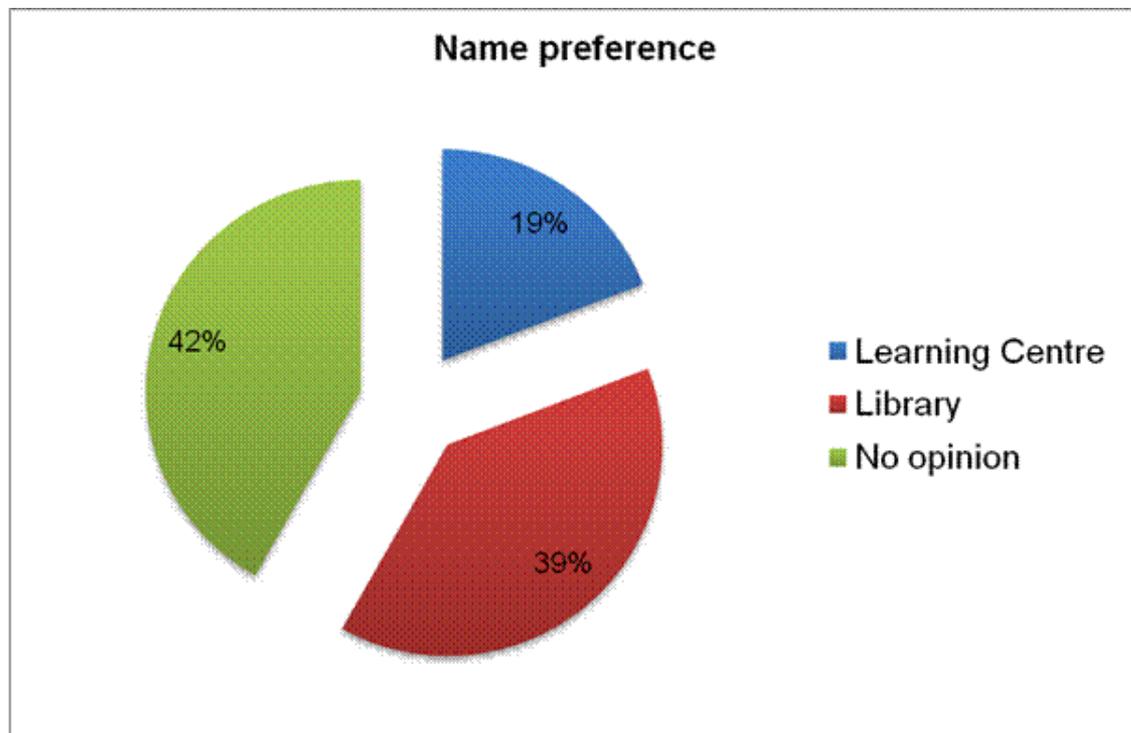
Findings – importance of particular study areas



Findings – importance of particular study areas



Findings – relevance of a name



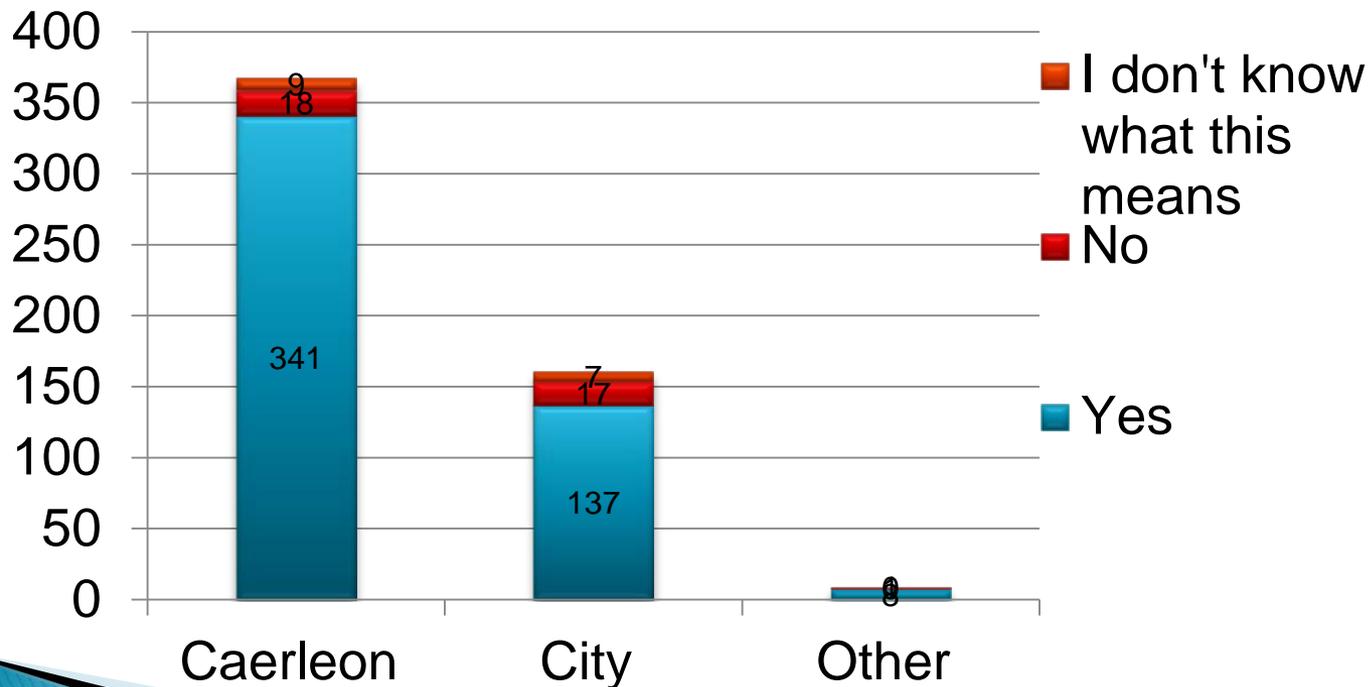
	Caerleon	City	Other	Totals
Learning Centre	61	40	2	103
Library	156	52	2	210
No opinion	151	69	5	225
Totals	368	161	9	538

Appreciating the value of virtual learning space

Do you make use of the resources within the library pages of the mLE (my.newport.ac.uk)?
(Please tick one)

Yes No

I don't know what this means



Conclusion

Clearly a strong need to:

- ▶ Reinforce zoning at both campuses
 - ▶ Regulate and develop silent, group and blended study areas
 - ▶ Financial issues aside, there is some means of continuing to meet these needs on both campuses (and this has started)
 - ▶ Perceived difference between library / learning centre and name choice - pro-library / indifference
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References (for this presentation)

- ▶ COHEN, L., MANION, L. and MORRISON, K. 2007. *Research methods in education*. 6th edn. London: Routledge.
 - ▶ HONEY, P. and MUMFORD, A. 1992. *The manual of learning styles*. 3rd edn. Maidenhead: Honey.
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