

CHOBÉ

Council of Heads of the Built Environment
Heads of Department of Construction, Property and Surveying

Quantity Surveying Seminar Number 9

Analysis of the Delegate Survey

How to educate quantity surveyors to meet future needs

Professor Srinath Perera

Dr Lei Zhou

Damilola Ekundayo

Construction Economics & Management

Research Group www.northumbria-qs.org

Northumbria University

Professor Allan Ashworth

Barry Symonds

CHOBÉ Executive

Part 1: Respondent Profile

The survey was conducted among the participants of the CHOBE QS seminar IX held at Birmingham City University on 29 November 2012.

There were primarily 3 types of respondents: academics, students and industry practitioners. A total of 21 responses were received and their types and experience profile are indicated in respectively.

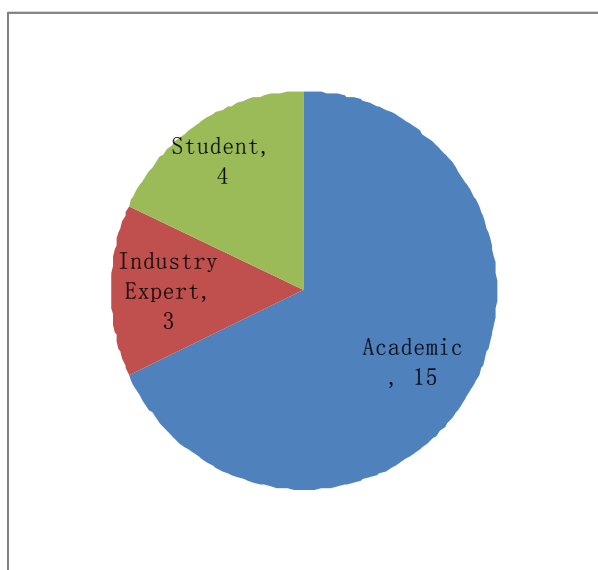


Figure 1 Type of respondents

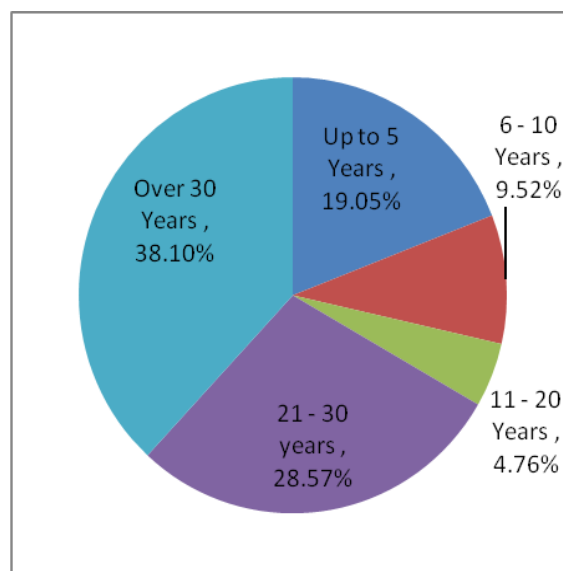


Figure 2 Respondent experience profile

Part 2: General

Please choose the appropriate response for each item based on your perspective of what should be included in QS graduate education and/or expected of a QS graduate

1. Should professional bodies decide the content of the curriculum if accreditation is required?

	Yes	Uncertain	No
QS Undergraduate study	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
QS Postgraduate study	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

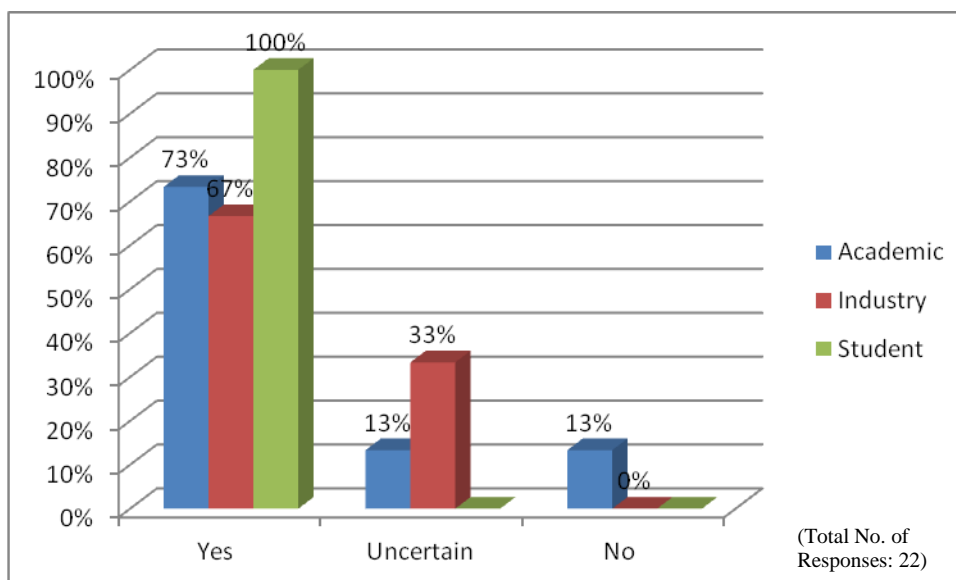


Figure 3 Views on whether the Professional Body should decide on the undergraduate programme curricular

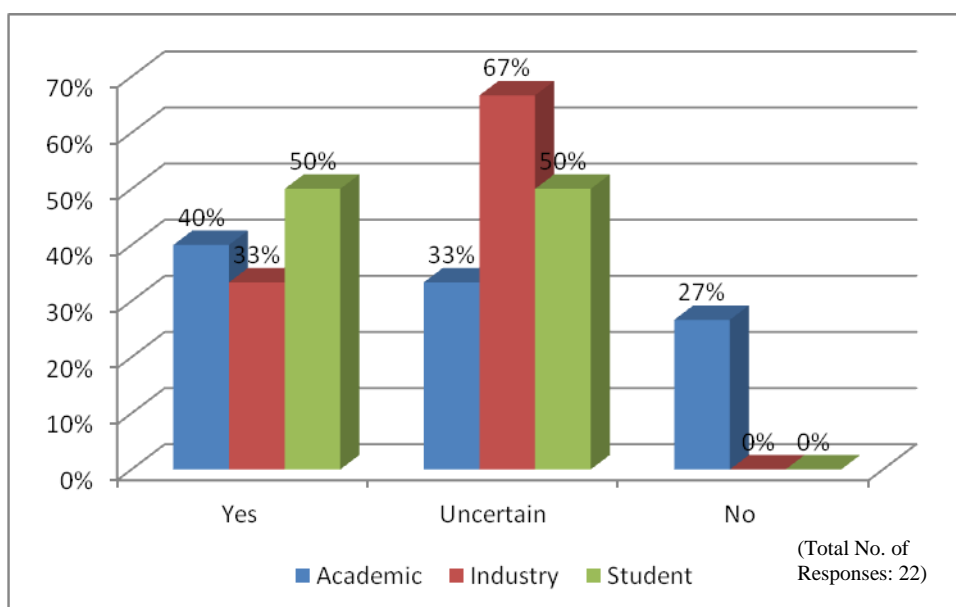


Figure 4 Views on whether the Professional Body should decide on the postgraduate programme curricular

2. Should universities focus more on education rather than training?

	Yes	Uncertain	No
QS Undergraduate study	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
QS Postgraduate study	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

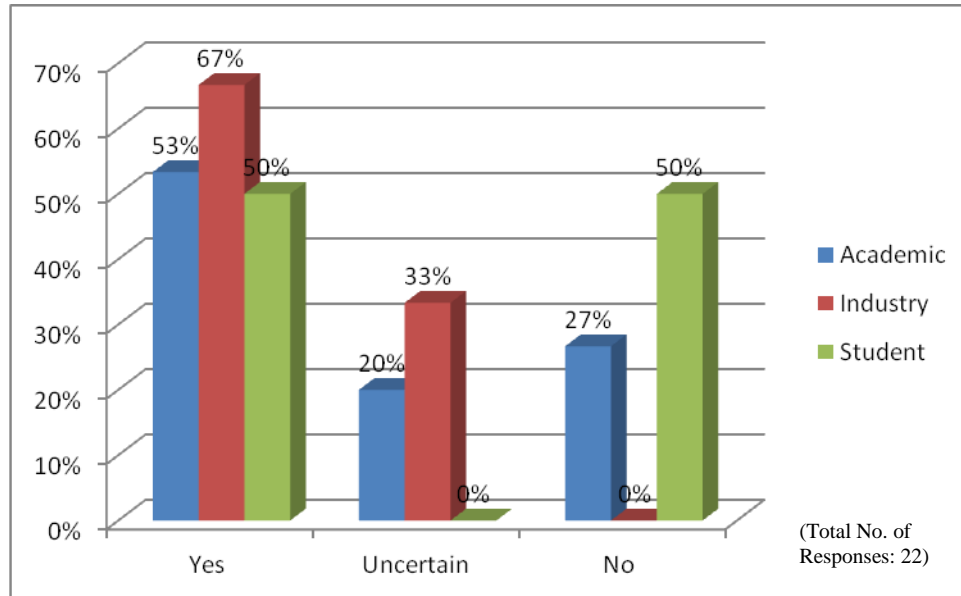


Figure 5 Views on whether focus should be on Education or Training at undergraduate level

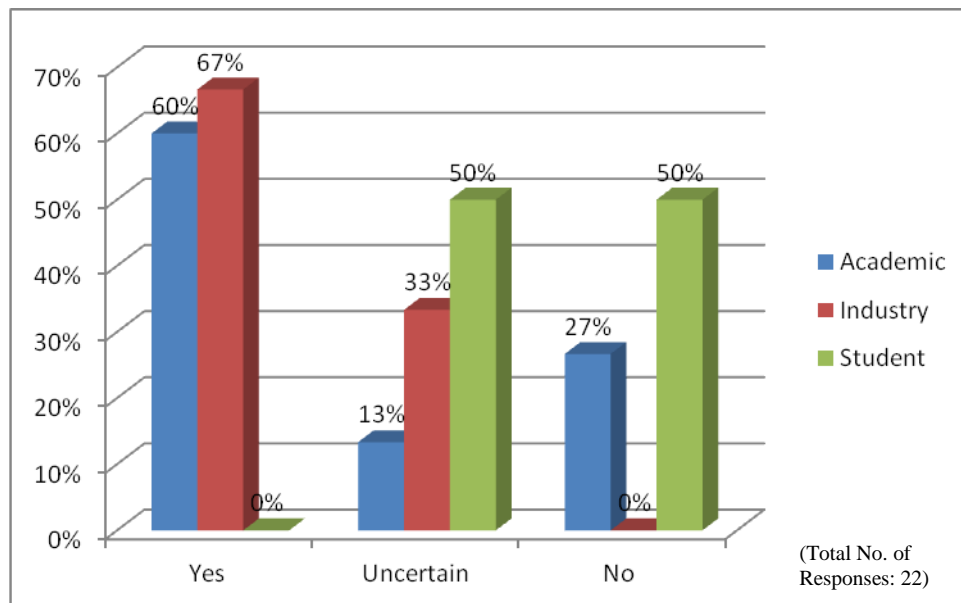


Figure 6 Views on whether focus should be on Education or Training at postgraduate level

3. Please indicate the extent to which QS programmes should include technical content?

- | QS Undergraduate study | | QS Postgraduate study | |
|--|--|--|--|
| <input type="checkbox"/> 1: Not at All | <input type="checkbox"/> 3: Some Extent | <input type="checkbox"/> 1: Not at All | <input type="checkbox"/> 3: Some Extent |
| <input type="checkbox"/> 2: Limited Extent | <input type="checkbox"/> 4: Great Extent | <input type="checkbox"/> 2: Limited Extent | <input type="checkbox"/> 4: Great Extent |

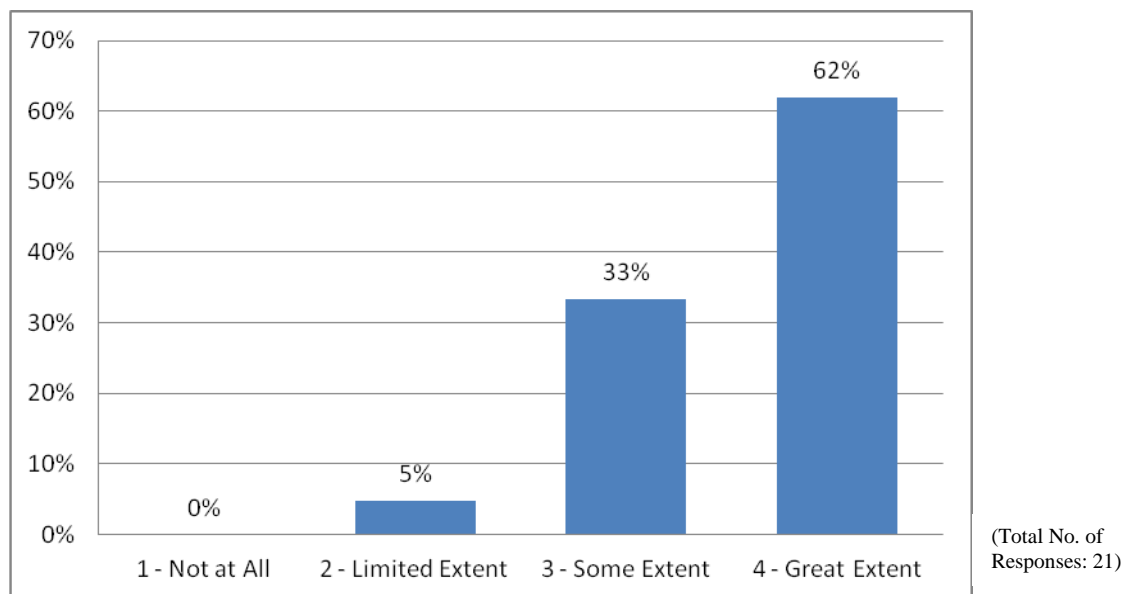


Figure 7 Views on whether QS programmes should include technical content (Undergraduate)

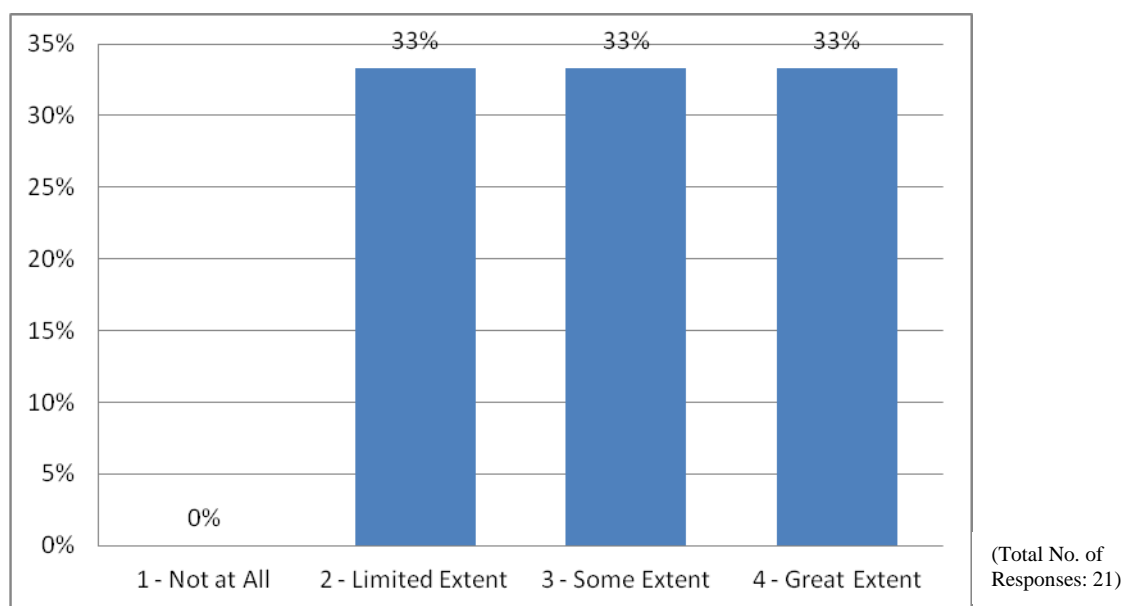


Figure 8 Views on whether QS programmes should include technical content (Postgraduate)

4. Should QS Undergraduate study include a mandatory placement module?

Yes Uncertain No
☐ ☐ ☐

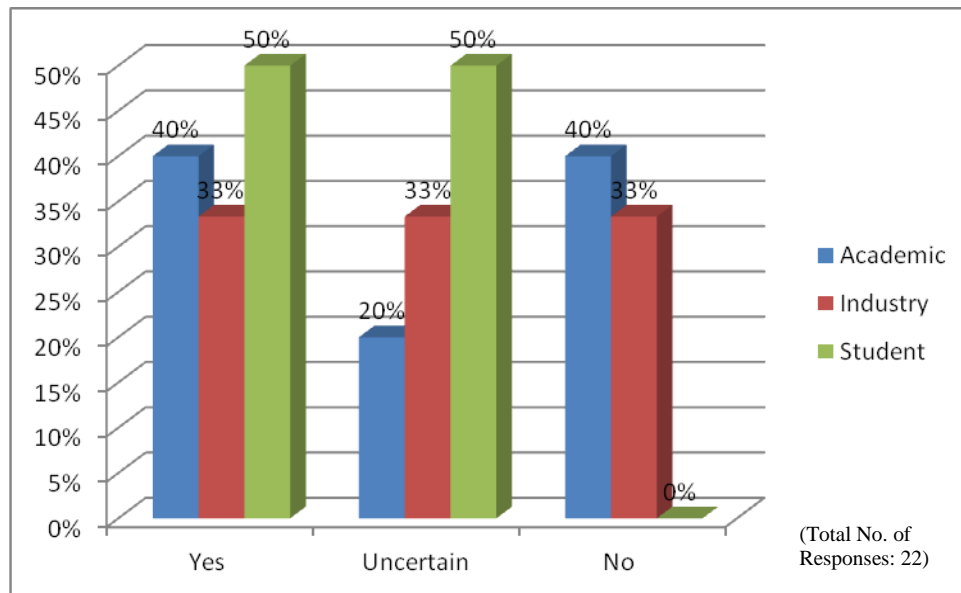


Figure 9 Views on whether placement should be compulsory

5. Should a QS master's programme be about (Please choose only one answer):

- ☐ Learning advance technology and techniques applicable to industry
☐ Developing and advancing theoretical knowledge and understanding
☐ Advancing technical ability in a specific area

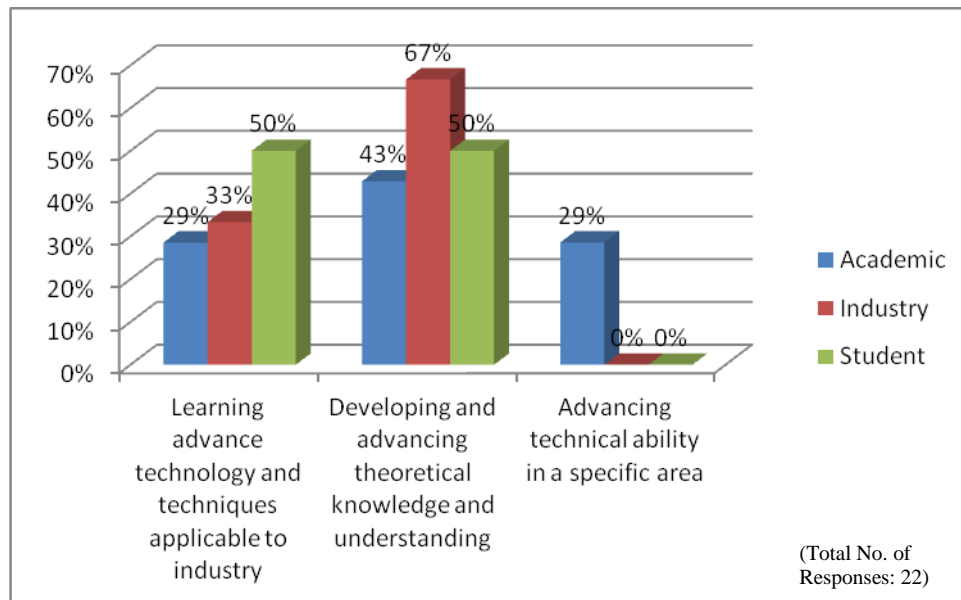


Figure 10 Nature of QS master's programmes

6. Do non cognate QS master programmes produce good quantity surveyors?

Yes Uncertain No
☐ ☐ ☐

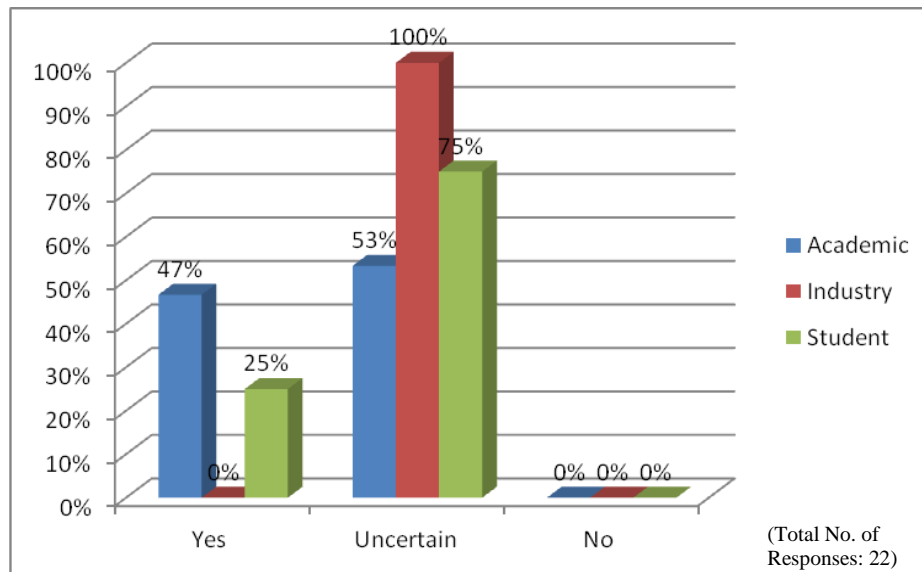


Figure 11 Views on whether non cognate QS master programmes produce good Quantity surveyors

7. How important is it that all QS staff teaching on programmes have continuous or periodic practical involvement in the construction industry?

☐ 1: Unimportant ☐ 2: Of Little Importance ☐ 3: Moderately Important ☐ 4: Very Important

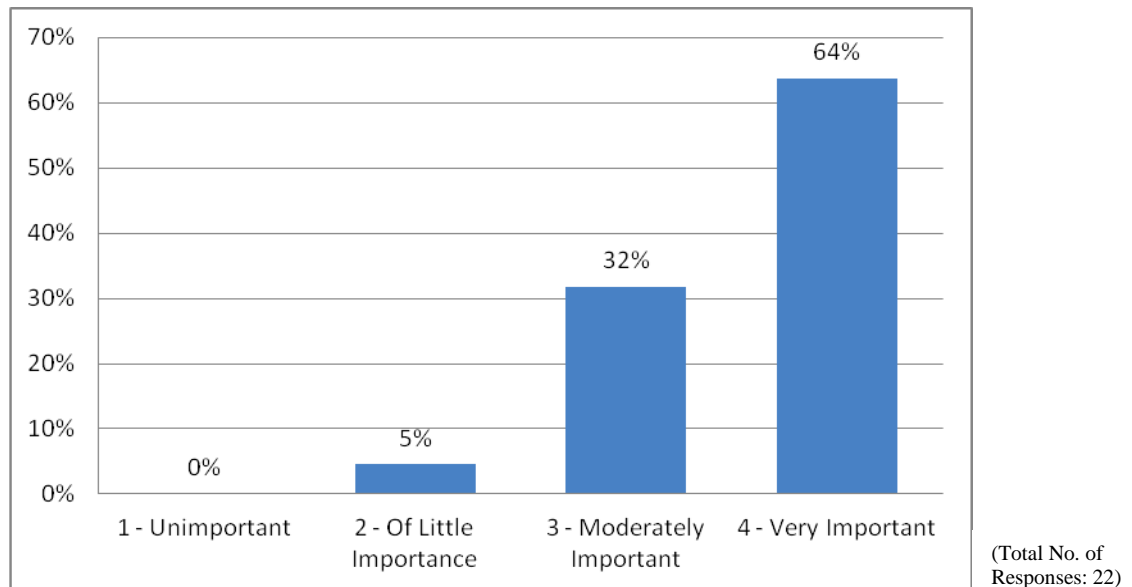


Figure 12 Importance of continuous or periodic practical involvement in the construction industry

8. How important is it for staff teaching on QS programmes to be involved in ongoing research?

☐ 1: Unimportant ☐ 2: Of Little Importance ☐ 3: Moderately Important ☐ 4: Very Important

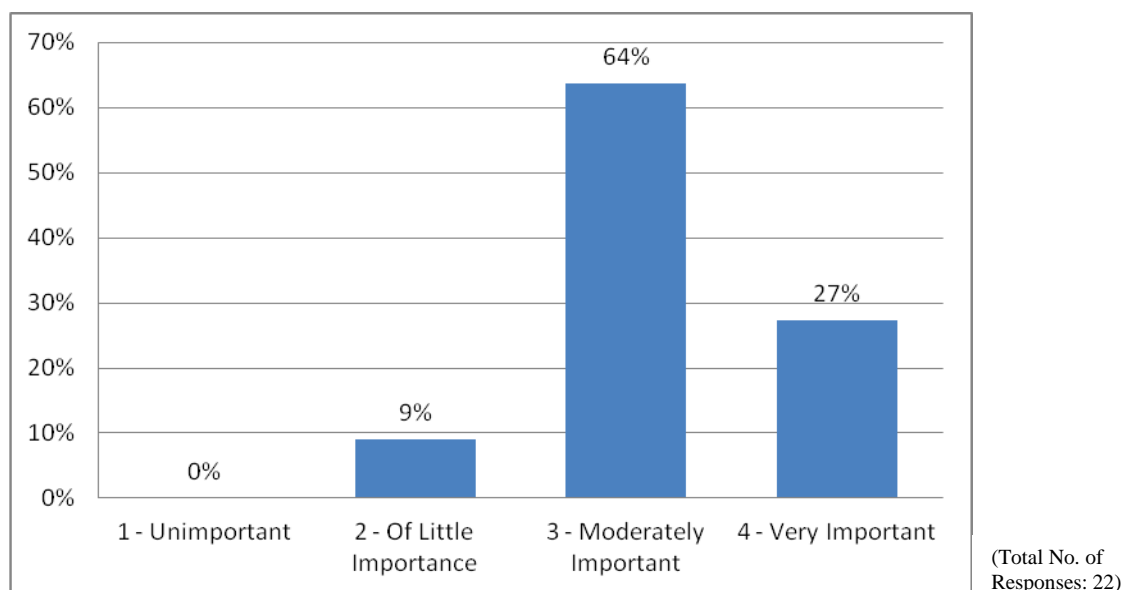


Figure 13 Importance of involvement in research

9. If there is a shortage of research-active QS staff, is there a danger that QS programmes could be relegated to teaching only technical universities in the future?

☐ 1: Not at All ☐ 2: Probably Not ☐ 3: Probably ☐ 4: Definitely

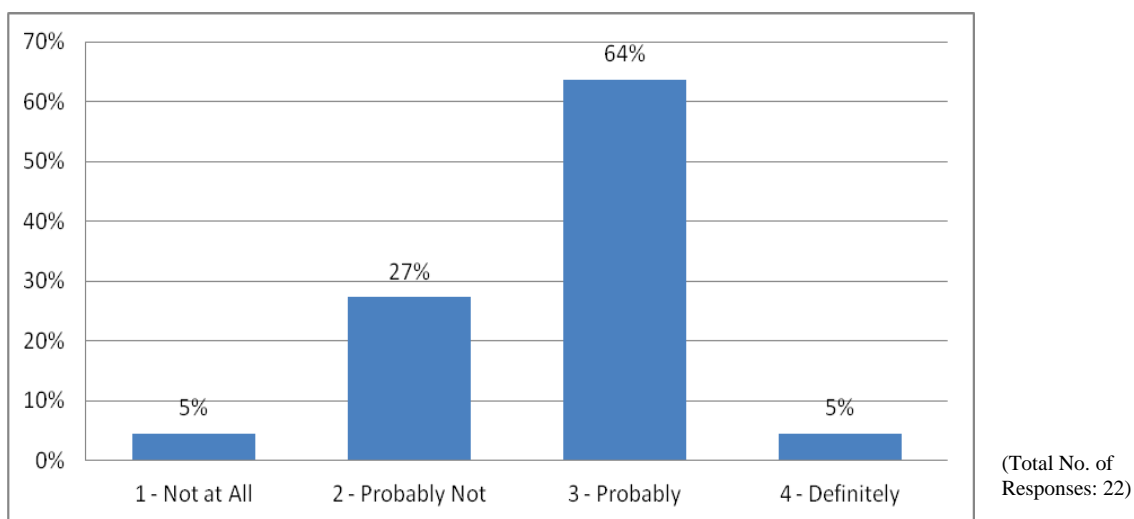


Figure 14 Level of probability that QS programmes could be relegated to teaching only technical universities in the future

Part 3: RICS New Rules of Measurement (NRM)

NRM 1: Order of cost estimating and cost planning for capital building works

NRM 2: Detailed measurement for building works - an alternative to SMM7

NRM 3: Order of cost estimating and cost planning for building maintenance works

1. Indicate your level of awareness of the following three NRM documents?

	1	2	3	4
NRM 1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NRM 2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NRM 3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(1- Not at all aware; 2- Slightly aware; 3- Moderately aware; 4- Extremely aware)

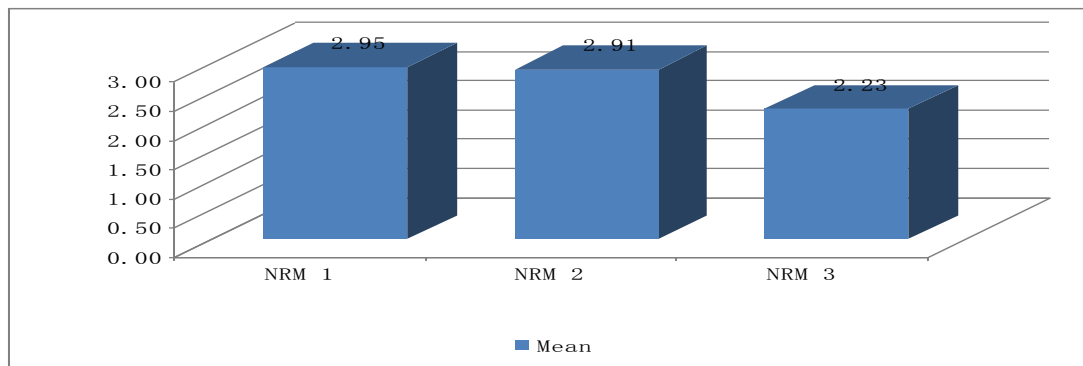


Figure 15 Awareness of the three NRM documents

2. How important is the NRM suite of documents in a world that has become more global?

	1	2	3	4
NRM 1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NRM 2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NRM 3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(Total No. of Responses: 22)

(1- Not at all important; 2- Slightly important; 3- Moderately important; 4- Extremely important)

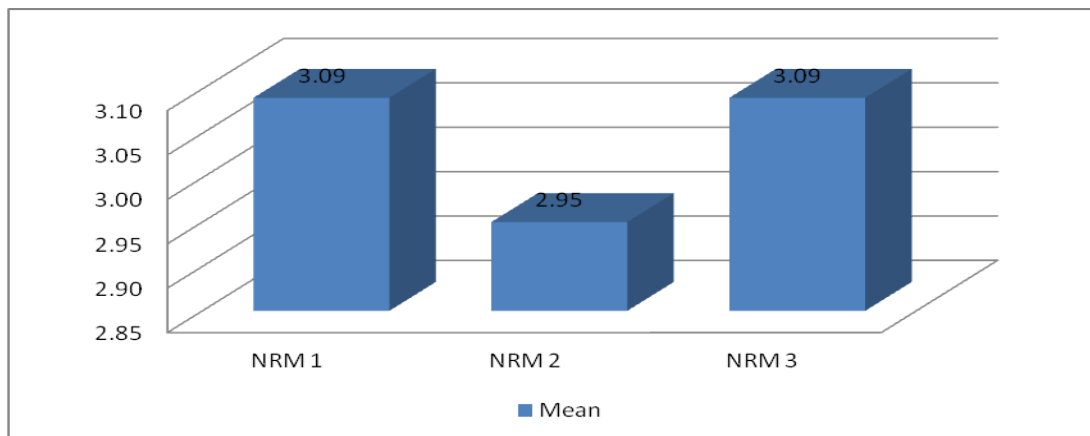


Figure 16 Importance of NRM suite of documents

3. How confident are you in the level of knowledge you have in the following (published NRM documents):

	1	2	3	4
NRM 1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NRM 2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(1- Not at all confident; 2- Partially confident; 3- Reasonably confident; 4- Fully confident)

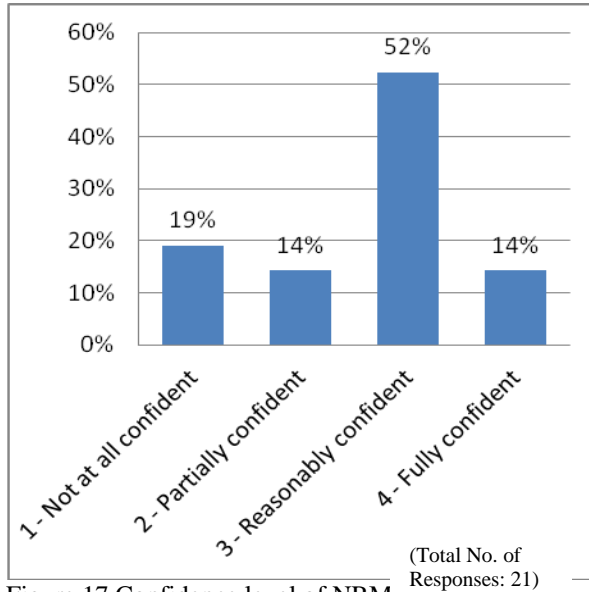


Figure 17 Confidence level of NRM 1

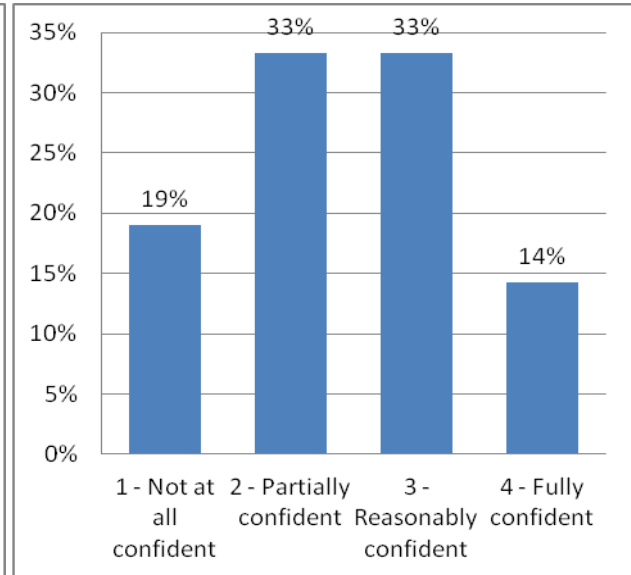


Figure 18 Confidence level of NRM 2

4. How likely are you to be able to get guidance on the use of the published NRM documents?

	1	2	3	4
NRM 1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NRM 2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(1- Very unlikely; 2- unlikely; 3- likely; 4- Very likely)

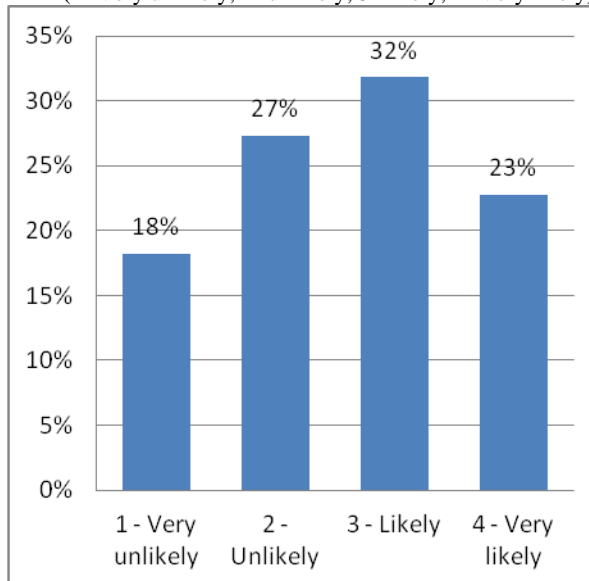


Figure 19 Confidence level of NRM 1

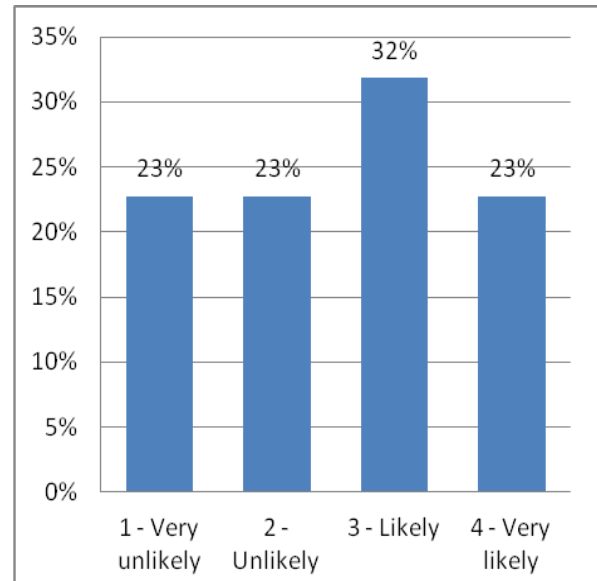


Figure 20 Confidence level of NRM 2

5. Please indicate your view on the level of accessibility/availability of data for NRM 1:

- ☐ 1: Not at All ☐ 2: Somewhat Available ☐ 3: Not Sure
☐ 4: Available ☐ 5: Largely Available

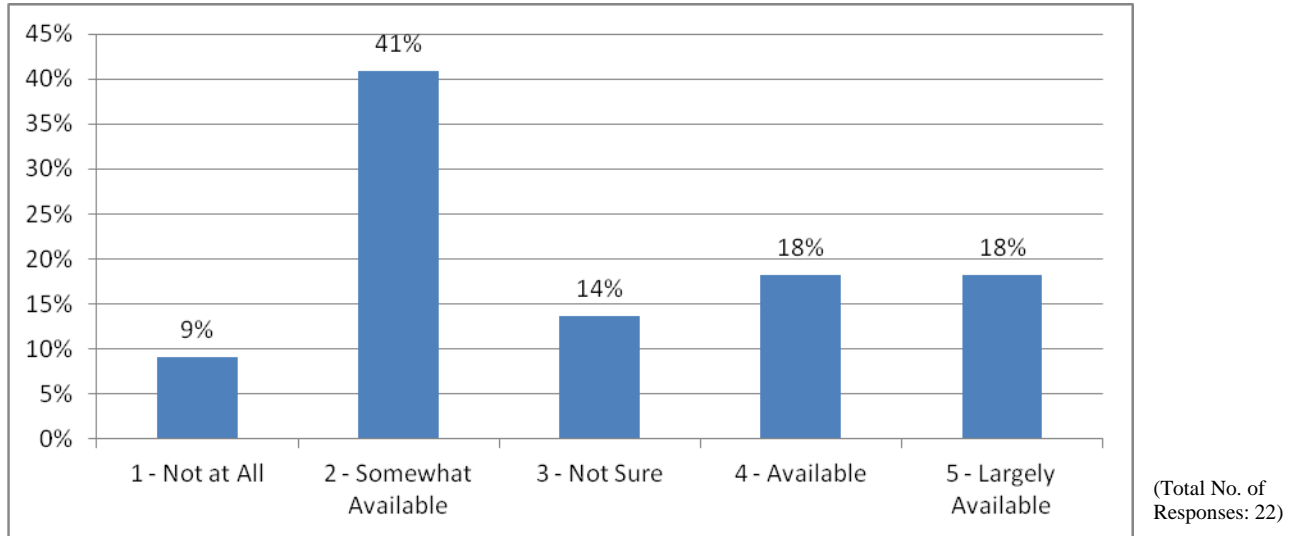


Figure 21 Views on the level of accessibility/availability of data for NRM1

6. Does NRM 2 present better rules of measurement than SMM7?

- ☐ 1: No ☐ 2: Somewhat ☐ 3: Not Sure
☐ 4: Yes ☐ 5: Very much

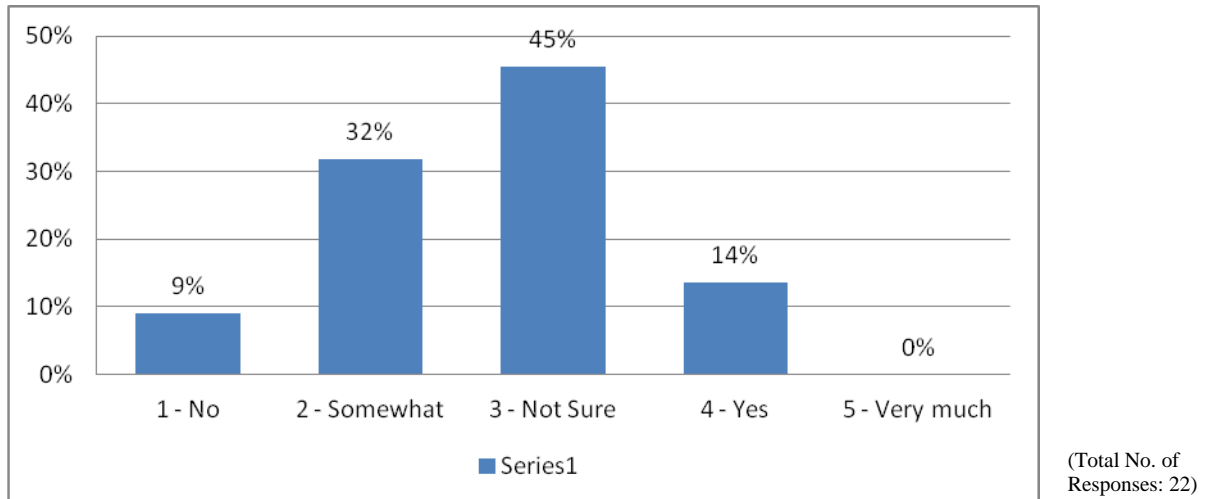


Figure 22 NRM 2 present better rules of measurement than SMM7

7. What is the extent of usage of the published NRM documents for teaching on your QS programmes?

	1	2	3	4
NRM 1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NRM 2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(1- Never use; 2- Occasionally/Sometimes; 3- Almost every time; 4- Frequently use)

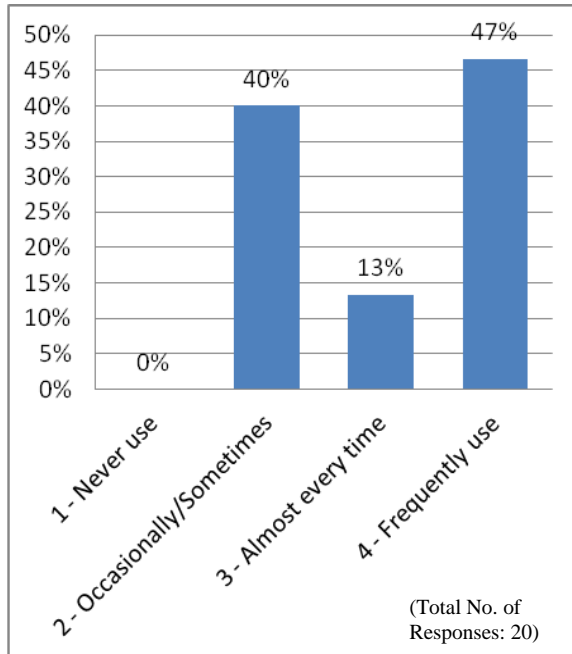


Figure 23 Usage of NRM1 for teaching

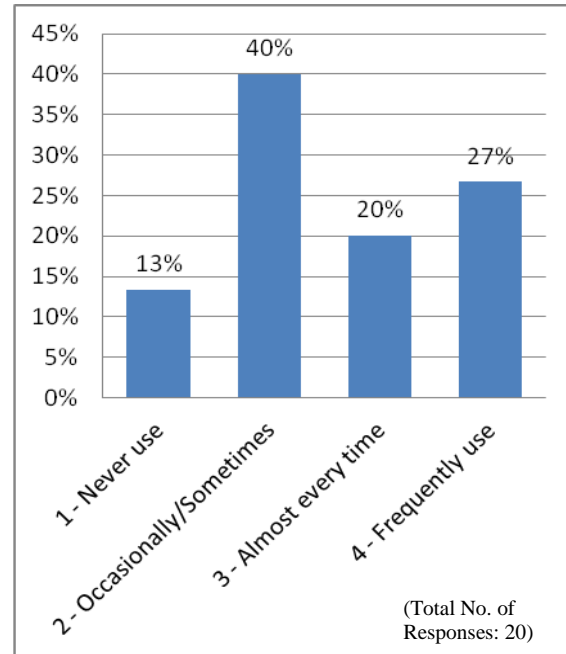


Figure 24 Usage of NRM2 for teaching

8. Any other comment(s) related to NRM?

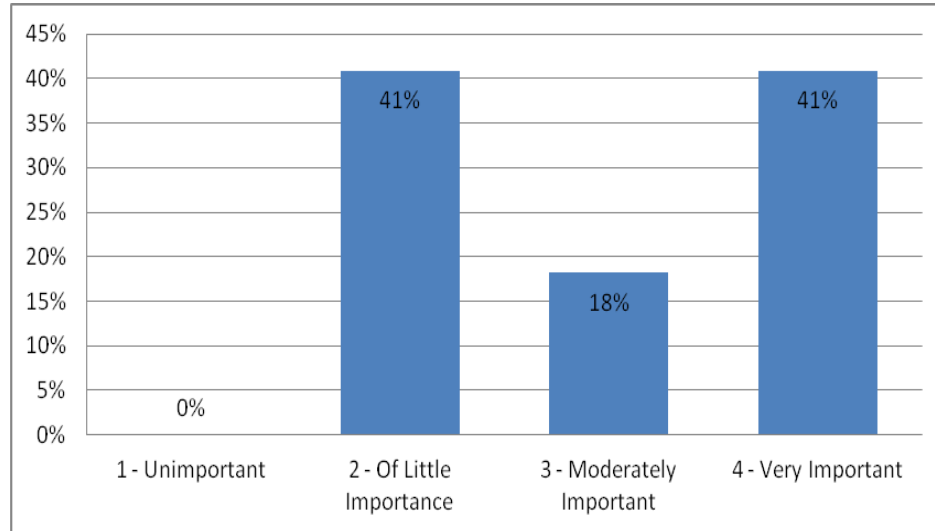
- Urgently require examples from industry to demonstrate best practice
- There is a problem in that to make graduates employable contractors and clients in my area are still involved with SMM7 projects
- I have found that the NRM 2 document does not provide sufficient explanation and justification of the measure. Levels 1- 4 confusing. No references for comments or notes e.g. SMM7 D1-6, M1-7 etc. Referencing in the appendix unclear.
- Use of NRM2 being compulsory for UK students from Sept 2013
- No guidance produced regarding coverage and usage. More open to interpretation than SMM. NRM is more up to date than SMM but less standardisation
- NRM will become part of syllabus for new academic year 2012/13
- NRM2 to be used frequently next year
- Very limited books other than NRM itself to assist in use. No actual NRM2 BQ's / Cost Documents
- It complements BIM. BIM is not a replacement for Quantity Surveying
- The link to BIM needs to be explored and developed
- We have been told about it. I am aware but not used it

Part 4: RICS QS and construction standards (the Black Book)

1. Rate the level of importance of the black book

(1- Unimportant to 4- Very important)

1 2 3 4
☐ ☐ ☐ ☐



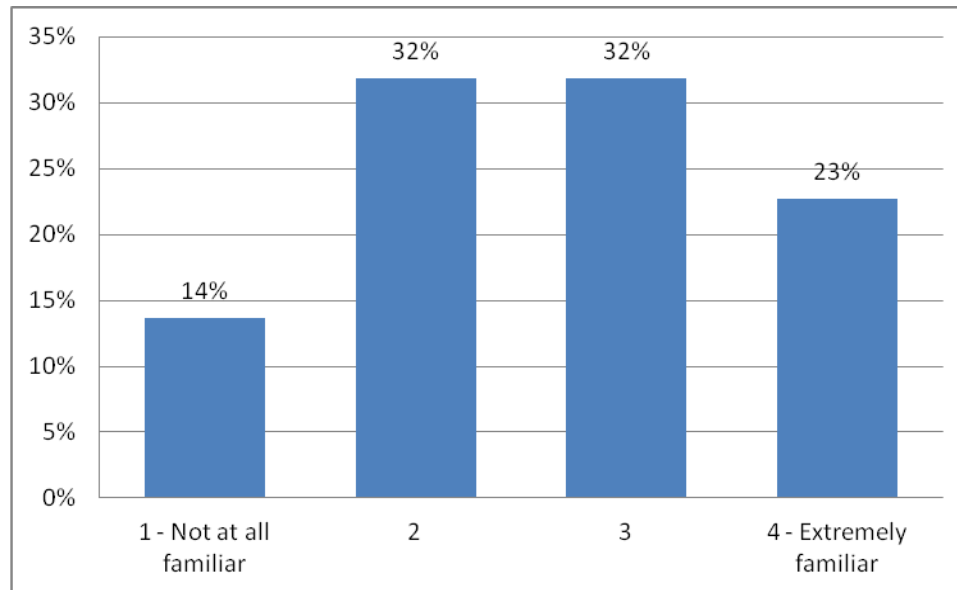
(Total No. of Responses: 20)

Figure 25 Importance of the black book

2. How familiar are you with the black book

(1- Not at all familiar to 4- Extremely familiar)

1 2 3 4
☐ ☐ ☐ ☐



(Total No. of Responses: 20)

Figure 26 Familiarity with the black book

3. Is the black book nothing more than current good practice? Yes Uncertain No
- ☐ ☐ ☐

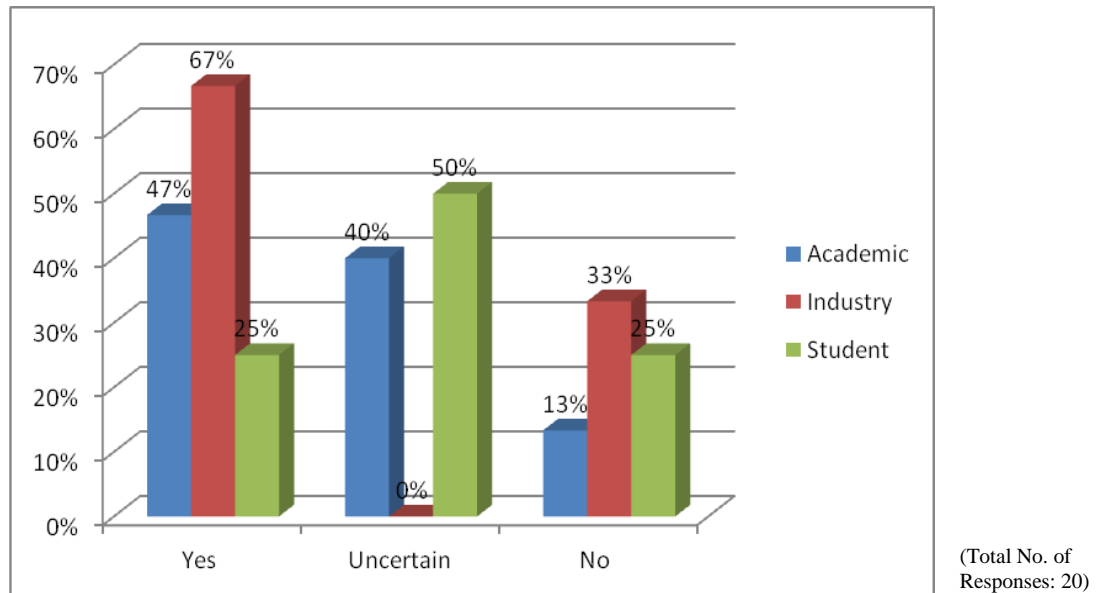


Figure 27 Views on whether the black book is nothing more than current good practices

4. Do you currently use any of the published standards for teaching on your QS programmes?

	Yes	No
Acceleration	<input type="checkbox"/>	<input type="checkbox"/>
Cash flow forecasting	<input type="checkbox"/>	<input type="checkbox"/>
Conflict avoidance and dispute resolution in construction	<input type="checkbox"/>	<input type="checkbox"/>
Construction insurance	<input type="checkbox"/>	<input type="checkbox"/>
Cost analysis and benchmark	<input type="checkbox"/>	<input type="checkbox"/>
Damages for delay to completion	<input type="checkbox"/>	<input type="checkbox"/>
Defining completion of construction works	<input type="checkbox"/>	<input type="checkbox"/>
Electronic document management	<input type="checkbox"/>	<input type="checkbox"/>
E-tendering	<input type="checkbox"/>	<input type="checkbox"/>
Retention	<input type="checkbox"/>	<input type="checkbox"/>
Valuing change	<input type="checkbox"/>	<input type="checkbox"/>

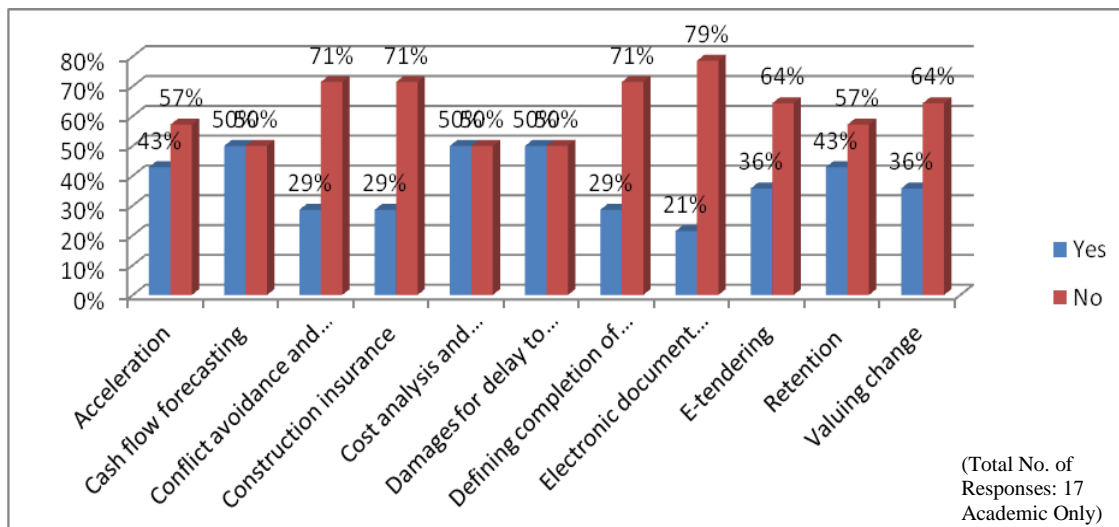
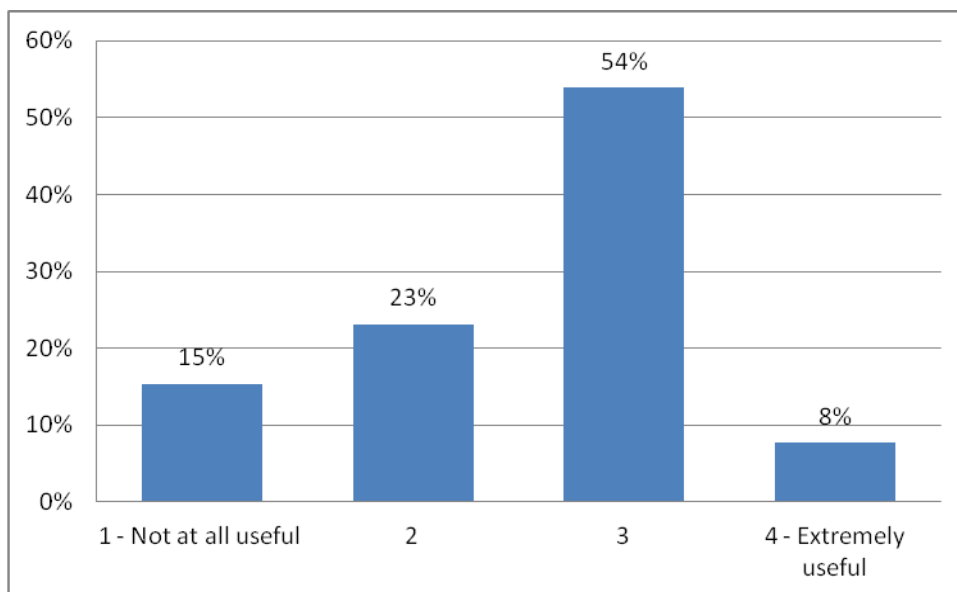


Figure 28 Usage of the black book for teaching

5. How useful is/are the standard(s) for teaching? 1 2 3 4
 (1- Not at all useful to 4- Extremely useful) ☐ ☐ ☐ ☐



(Total No. of
Responses: 17
Academic only)

Figure 29 Usefulness of the black book for teaching

6. Any other comment(s) related to the black book?
- Would benefit from greater academic input when writing/developing the Black Book standards
 - Seems to be aimed more at APC candidates than experienced professionals. Best practice guidance is not easily transferred globally
 - Will use other guidance notes as we progress through the academic year
 - About to be used for teaching
 - It defines “good” and best practice

Part 5: Building Information Modeling (BIM)

1. Please choose which of the following definitions most closely describes BIM (please select one):

- ☐ BIM is the process of generating and managing information about a building during its entire life cycle
- ☐ BIM is essentially a design tool
- ☐ BIM is a process involving the generation and management of digital representations of physical and functional characteristics of a facility
- ☐ BIM is an integrated tool for planning, design, construction and management of projects

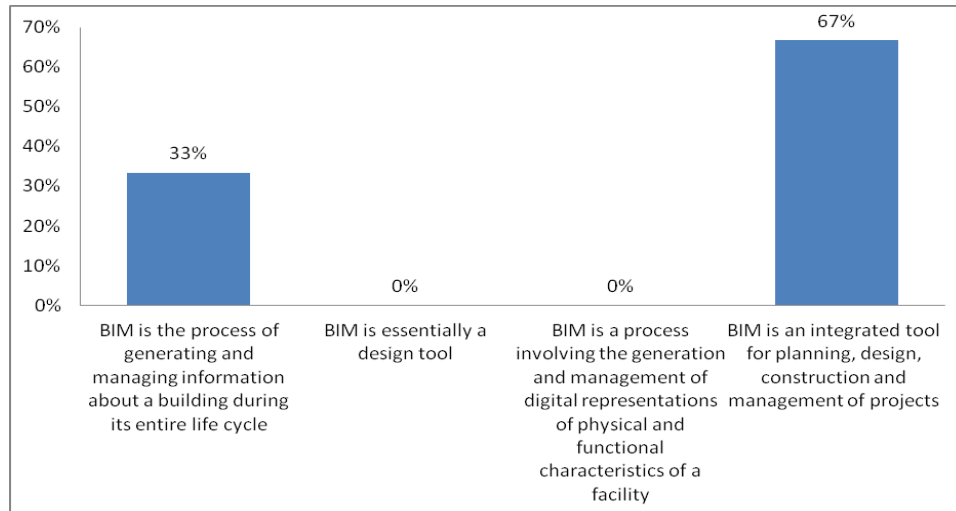


Figure 30 BIM Definitions

(Total No. of Responses: 21)

2. How familiar are you with BIM?

(1- Not at all familiar to 4- Extremely familiar)

- 1 2 3 4
- ☐ ☐ ☐ ☐

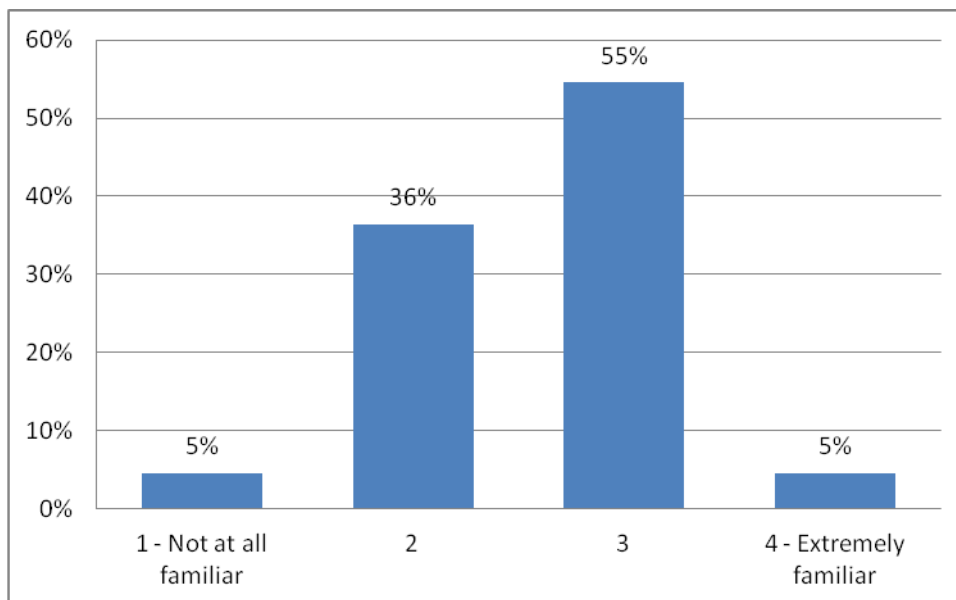


Figure 31 Familiarity with BIM

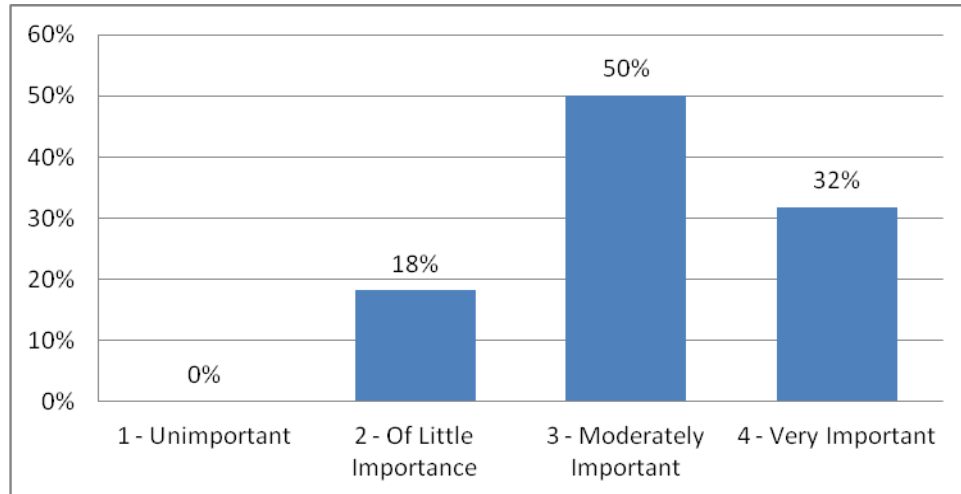
(Total No. of Responses: 22)

3. What is your perception on the importance of BIM to the role of QS?

(1- Unimportant to 4- Very important)

1 2 3 4

☐ ☐ ☐ ☐

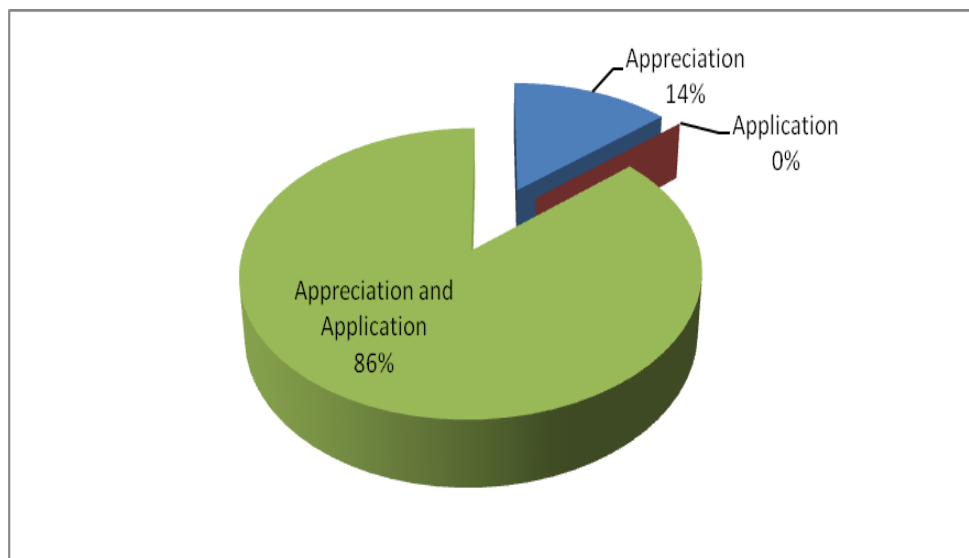


(Total No. of Responses: 22)

Figure 32 Importance of BIM to the role of QS

4. If BIM is to be included in QS curricula should it be:

☐ Appreciation ☐ Application ☐ Both ☐ Other, please specify:



(Total No. of Responses: 22)

Figure 33 Including BIM in QS curricula

5. How should BIM be introduced to QS programme? (Please choose only one answer):

- ☐ Replacing existing module with 10 credits BIM module
- ☐ Replacing existing module with 20 credits BIM module
- ☐ Integrating it with relevant existing modules
- ☐ Taught as an optional module
- ☐ Taught at postgraduate level
- ☐ Should not be taught in universities

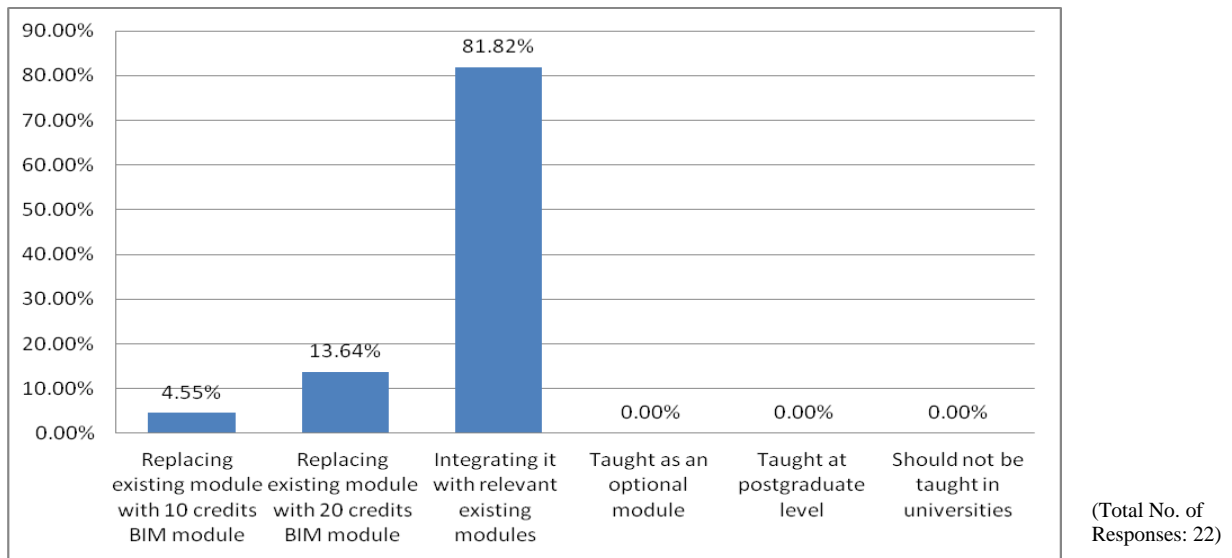


Figure 34 Views on how BIM introduced to QS programme

6. Do you currently teach BIM on your QS programmes? Yes No
- ☐ ☐

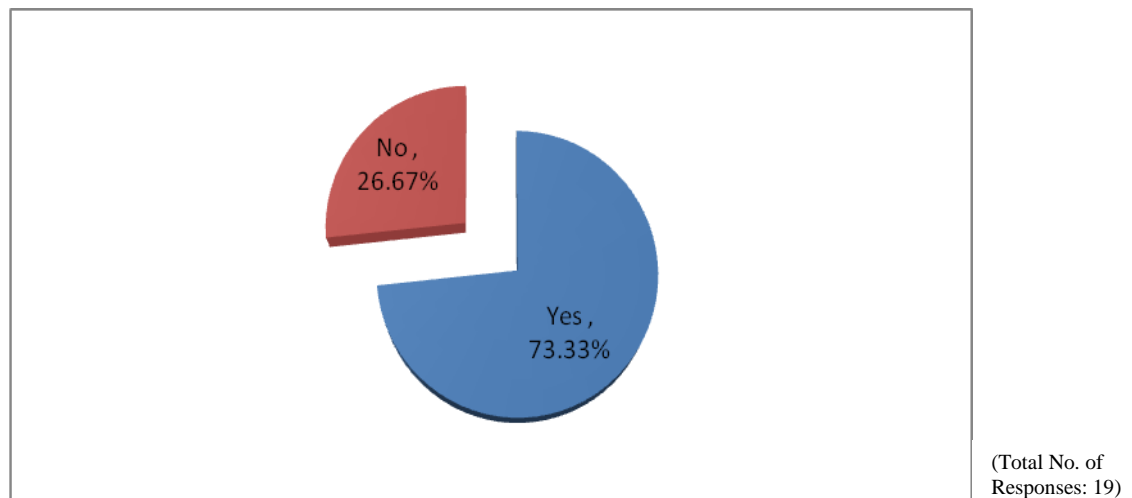


Figure 35 Teaching BIM on your QS programme

7. What are the barriers to the teaching of BIM on your QS programmes?

- ☐ Shortage of skills
- ☐ A lack of facilities e.g. software, hardware etc.
- ☐ Not a priority in the QS programme agenda
- ☐ Other, please specify:

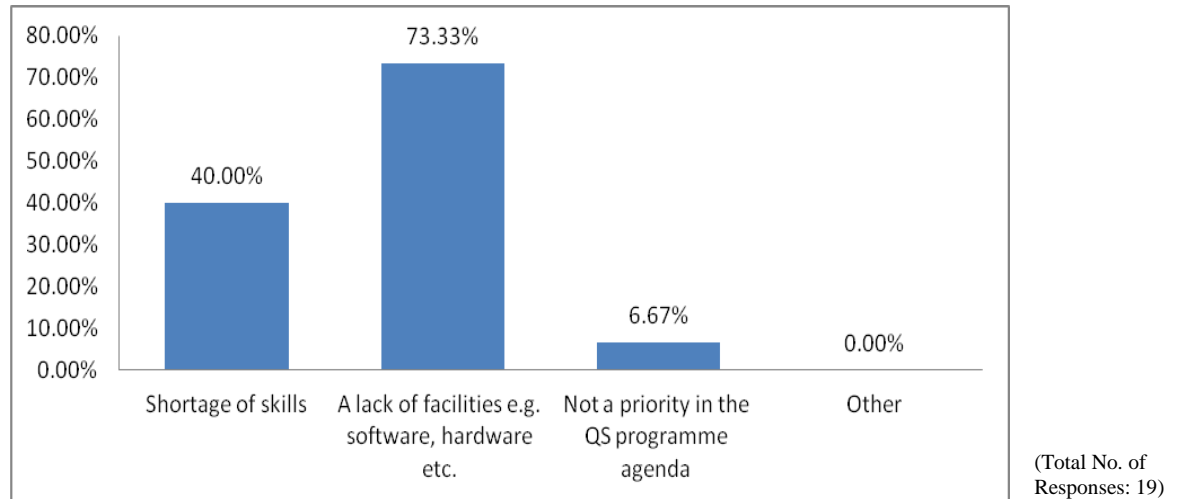


Figure 36 Barriers to the teaching BIM on your QS programme

8. Any other comment(s) related to BIM?

- BIM is fundamental to QS education as the overall understanding of the process of construction is vital - the QS in cost management are therefore crucial and they need to appreciate the value of BIM and integrated working
- Which classification system to use? Purchase?
- Funding - to develop software BIM/QS Slant. It would be excellent if universities all come together and funded the development of a model that was linked to BCIS/CATO etc. to support the QS role.
- Still only used to a limited extent in practice, therefore difficult to predict whether industry will adopt it on a wide range of projects
- As more people become aware of its use and availability (software) then it will be a better tool
- There is too much hype about BIM. Concentrate on teaching the basics of Quantity Surveying first!
- The growth of 'BIM' based tools is inevitable. The application of a project 'level 2' BIM will be adopted by the government, its under application is less certain
- We want it to be incorporated into our studies
- BIM is not easy to teach, as the industry is still not aware of how it will work within the current construction industry