

1. Proposed Research Title

The controversy surrounding the relevance of traditional Quantity Surveying skills arises from the fact that some experts argue that these skills are no longer necessary in today's construction industry due to AI possibilities.

2. Abstract

The proposed research will seek to understand if AI possibilities can help assist or replace traditional Quantity Surveying skills in today's construction industry.

3. Aims

The aim of the dissertation is to establish a greater understanding on, "The controversy surrounding the relevance of traditional Quantity Surveying skills arises from the fact that some experts argue that these skills are no longer necessary in today's construction industry due to AI possibilities."

Objectives

These findings can be determined by the following objectives:

1. Briefly understanding traditional Quantity Surveying skills.
2. Develop a greater understanding on the development of AI's possibilities in modern day society using secondary data. Linking to traditional Quantity Surveying skills where possible.
3. Examining the effect of the recession in the recent years to determine if there's still growth in the industry using secondary research. (compare cost to skills)
4. Expanding the research by developing a questionnaire which can fulfil the limited or missing data requirements. Then identifying a suitable group target which can expand on the initial data by providing essential viewpoints on the specified research question.

4. Initial understanding on the topic

The researcher invests and studies stocks alongside his full-time education and work hours. During this time, the researcher has observed a significant increase in funding across AI companies such as NVIDIA and Symbotic inc. Ultimately, this sparked the curiosity of the researcher in AI possibilities with the additional popularity in ChatGPT and automated AI image production. The incentive of AI driven possibilities questioned the researcher if his skills as a Quantity Surveyor would still be relevant in say 50 years time. Therefore, a brief overview of the topic was researched and found that Quantity Surveyors are already utilising AI to predict construction costs to enhance how surveyors can cost plan through regression modelling and automated data. Furthermore, this dissertation requires extensive research to be able to produce and achieve a strong critical comparison between the relevance of Quantity Surveyors skills and AI possibilities.

5. Why will this proposed research benefit the researcher?

The researcher of this dissertation takes a particular interest in modern day technology, and seeks to recognise if modern day technology will impact the relevance of traditional Quantity Surveying skills.

This researcher approaches the industry as a new construction professional who's openly minded to new technological views to develop and improve the industry for the better interest of the client and industry standards. Therefore, by being knowledgeable on this matter, the researcher can suggest and possibly adopt different technological approaches to industry standards. The impact of the research would prove highly beneficial for the researcher with practice in the industry. Therefore, this proposed research will confront and sync these two views in order to foresee if Quantity Surveyors skills will be challenged by technology or will it be the future for Quantity Surveyors moving forward.

6. Literature Review

6.1

6.2

6.3

7. Research Methodology(ies) and Justification

Through initial research into the topic area, it was clear that there's a great deal of research on how AI will transform the role of a Quantity Surveyor. As AI is a current 'hot topic', majority of the data is up to date and relevant for this dissertation. Therefore, through adequate secondary data; research can be gathered but not reduced to:

- Educational institution
- Journals
- Libraries
- Online data
- Commercial sources

To obtain a range of data, it's important to also include primary data which can be collected from a diverse range of current Quantity Surveyors working within the industry. Obtaining first-hand information from Quantity Surveyors who are directly involved with this topic area can contribute to crucial data and practical views that may not have been as apparent in secondary research.

Undertaking exploratory research through inductive reasoning will direct the researcher from a specific research question to a more general understanding of the topic area. Inductive reasoning will be utilised when analysing the results from the questionnaire to seek a further understanding of the generalised topic area.

The researcher was initially going to undertake exploratory research through deductive reasoning. This would've been achieved by drawing an initial conclusion from a hypothesis that's believed to be true. However, deductive reasoning would've been too consuming given the deadline of the dissertation. Additionally, solely deductive reasoning can become bias for the fact that this method of reasoning can be aimed to prove a logical conclusion through logical reasoning. Researchers who depend on deductive reasoning can become unwilling to consider other points of view. Therefore, it's most advantageous for the researcher to be open minded to different viewpoints through inductive reasoning; where expansive results can direct the researcher into further areas of study.

8.Primary Research Methods

A combination of both quantitative and qualitative data will be gathered for this dissertation. The researcher felt it was most appropriate to have a mixture of both data types; as quantitative data will help in cooperate several analytical views in the dissertation. Whereas qualitative data can help interpret the information through observing and understanding the data. If the data was solely Qualitative data, there would be a serious concern with completing the dissertation on time as Qualitative data is too time consuming given the deadline of the project.

As AI is forever changing and is relatively recent, there are no relevant case studies currently available to be able disprove the hypothesis between the relevance of Quantity Surveyors skills and AI possibilities. Additionally, given the time restrictions, interviewing enough people's opinions would not be feasible. Therefore, a more appropriate method of being able to survey enough people's opinions on time, is through a questionnaire.

However, the questionnaire will include a set of closed questions to improve the accuracy of the answers. This will be measured by grading the questionnaire. By doing this, the researcher will be able to ask indirect questions that are specifically associated with the topic area. These closed questions will limit the need to produce a second questionnaire if the questions are revised and carefully chosen. Subsequently, people submitting a questionnaire have the tendency to submit answers that the researcher wants to hear. To avoid this, the researcher will facilitate a mixture of:

- Both positive and negative statements to avoid encouraging a certain type of answer resulting to ensure accurate qualitative data.
- Being anonymous wherever possible
- Avoid skewing the questions to avoid a bias response
- Clarifying the language of the questions to avoid uncertainty and misconceptions
- Avoid using the title of the dissertation to avoid a preconceived opinion on the topic area

It's estimated that the questionnaire will include between 10-15 questions where a prearranged date for distribution will be given ahead of time. Once the questionnaire has been finalised and

compressed digitally, a letter will be sent out to the selected sample. This letter will confirm their anonymity in the questionnaire and ask for their consent to use their responses for research purposes. The questionnaire will then be sent by E-mail which will include a unique survey link for the proposed target audience.

The list of eligible candidates for the questionnaire will be inputted into Microsoft Excel. From this list, 50 Quantity Surveyors will be selected at random. This can be achieved by coding an active cell to '=RAND()' to produce a random list of suitable candidates. This sampling method is optimal to avoid any bias interferences through an automated spreadsheet system. This sampling method will also be used to for potential interviews.

The data will then be coded and inputted into Microsoft Excel; this system will be graded 1-10 where 10 will represent strongly agree and 1 will represent strongly disagree. Upon the return of the completed questionnaires, the data will be inputted into Microsoft excel to understand and identify any patterns or trends in the data.

Upon completion, the results from Microsoft Excel should support or contradict the original hypothesis and direct the researcher into further areas of research. Any gaps or limitations from the results of the questionnaire will fuel the questions during the interview stage.

To enhance the quality of the results, combining the data collected from the questionnaire and interviews can help develop a comprehensive knowledge to be able to produce accurate and informed conclusions. Data blending from a single data point is extremely beneficial for identifying trends when comparing against the original set of primary data.

9.Data analysis and consent

10.Timetable of the research proposal

