

Architecture | Media | Representations Survey- (Exigencies at a Media Crossroad)

Verdy Kwee, Antony Radford, Dean Bruton and Ian Roberts

The University of Adelaide, Adelaide, Australia

ABSTRACT: Architectural information has been presented in a myriad of ways through various media for the purpose of public education. Rapid technological change tremendously affects the modes and techniques of communication media necessitating a reassessment of these vehicles. This paper suggests that if the medium should continue to be the 'massage' (McLuhan, 1967), it is imperative that we should understand the implications our choice and use of various media for communication of specific data, especially in relation to a targeted audience.

The paper presents the results and analyses of an online user survey which considers the use of currently available media, their roles and performance in the delivery of information of architectural works. It proposes suggestions for the manner and reasons these factors fashion users' preferences. It also highlights several aspects of architectural data (e.g. forms, lighting, materials, etc) as well as those of the respective media used to represent them while indicating how significant end-users perceive these aspects in the process of understanding architecture. The interpretations of the results outlined in this paper may suggest some answers to the questions relating to current media use, but they may also pose more questions about the types of and the manner in which information should be delivered to architecture enthusiasts/readers. This reassessment is intended to help anticipate future directions in the application of these media in presenting architectural information. Special attention is particularly paid to the opportunities afforded by the digital platform.

Conference theme: Architecture and media, Education of Future Architects, Human issues, Information delivery.

Keywords: media, representation, survey, information, communication, education

INTRODUCTION

In the field of architectural education, the modes of lecturers' deliveries are constantly assessed and rightly so, for their performance and effectiveness in disseminating information or imparting knowledge. This is normally done through institution-wide student satisfaction surveys. But are lectures the only source of knowledge? As we understand, in the process of understanding an architecture/building, this is not entirely the case. Interestingly enough, as our survey shows, lectures are not the most preferred mode of information delivery.

Architectural monographs (of Alvar Aalto, Frank Lloyd Wright, etc) mostly appear to be author-driven, often seemingly written with unrealistic expectations that readers should have prior knowledge of the subject matters in order to fully understand. Thus far, there has not been any continued assessment done on the effectiveness of this long-established source of architectural information (Kwee et al, 2006b). Further, the academic circle does not seem to recognise their presence and contributions and how their form might be improved. Consider for example, 'Educating Architects', a compilation of articles with rich ideas of how architectural education should and have been carried out with a degree of comprehensiveness. This compilation appears to shy away from mentioning publications of architectural works as one of the sources of knowledge. (Pearce, M., Toy M., 1995)

Does the reclusive nature of consulting these publications, effectively shield them from having their contents questioned/-able and thus strip them away from the recognition they deserve in the teaching enterprise? Or have they become so effective that their positions are beyond reproach? Has the academic circle just innocently overlooked acknowledging their presence and contributions?

Increasing interactive electronic delivery of information suggests it is time for a reassessment of the currently available media in relation to message recipients. Have the available sources of information really been effective? Will/Should Technology see mere replicas of traditional modes of delivery, merely adapting its core structure and organisation in digital forms? Could we see possible shifts of delivery methods in the future? What should we be prepared for? These questions were springboards that prompted the need for the survey outlined in this paper. The collected data may be used both to examine the present scenario and to serve as basis to drive the future direction/s in architectural information representation.

1. SURVEY CONSIDERATIONS

In an attempt to establish criteria for the survey, the following are emergent questions need addressing: What are the expected variables? How do we measure performance aspects of architectural publications?

- The media and conduits of information do exert some influence. Availability and popularity of certain media types - i.e. texts, photographs, animations, drawings, video footages, etc - and the vehicles - i.e. books, the Internet, lectures, etc - would obviously 'massage' (to borrow McLuhan's term) not just the attached messages, but the entire perception of the delivery and thus, effectively, the audience response to them.
- Architecture is a multi-faceted subject that justifies equally multi-dimensional approaches and explanations of relevant factors to understand. It is only fair that Performance be measured in relation to the factors that are dealt with in these approaches. In outlining these factors, considerations are taken from Steen Eiler Rasmussen's 'Experiencing Architecture' (Rasmussen, 1964) for its commendable introductory guide to architectural study. Feedbacks from key-informants in the architecture education field are also taken into account in establishing other relevant factors for which publication performance needs to be measured.
From these, the survey derived a few selections, namely:
The form, The purpose/s, The spaces, The circulation paths, The use of artificial lights, The air quality, The social context, The cultural context, The political context, The history, The scale, The users/visitors' feedback, The daylight (shade/shadow), The acoustics /sound, The designers' explanation, The proportion, The temperature, The colour scheme, The immediate surrounding, The smell, The views, The construction method, The materials used & textures, The cost, The air movement/ventilation.
- Other aspects of media performance that we are interested in, deal with the characteristics or quality of information delivery and users' perceptions of them. This aims to provide an insight into the areas of delivery qualities that might need addressing in the design or implementation of a particular method of architectural information presentation.
- The selection of interview subjects, therefore, is aimed specifically at a pool of candidates with some degree of exposure to the media in their various forms (including digital) and experience in the process of searching for architectural information. This consideration consequently affects the methodology used in the call for participation. Survey announcements are made to relevant discussion groups on the Internet, namely Archiseek.com, Pushpullbar.com, arch.designcommunity.com and Archnet.org, as well as academic circles in the field using the same platform. The online survey further ensures that participants have access to the Internet as a source of information. These candidates (judging from the demographics and responses of those who finally participated), may already be well-acquainted with both digital and traditional approaches of information dissemination.

This survey has been conducted under the assumption that participants have equal access to different architectural resources. Its results need to be interpreted in the context of the reality of imbalanced access found in different countries and places, and a necessary bias introduced in the survey by sampling an audience that is inherently familiar with internet use.

2. PILOT STUDY

Prior to the implementation of the online survey, a paper-based pilot survey was conducted among a small pool of students at The University of Adelaide School of Architecture, Landscape Architecture and Urban Design. Their responses were analysed, and some formatting and redesign of questions had been performed to reduce ambiguity and thus, unexpected disparities of answers. For clarity, the responses from this pilot survey are not used in the following final survey report and analyses.

3 DEMOGRAPHICS

The survey is represented by sections of samples with backgrounds described below.

Table 1: Demographics

		Sex			Total
		Female	Male	Skipped	
Professions	Skipped	2	7	2	11
	1st year architecture students	10	6	8	24
	2nd year architecture students	11	7	7	25
	3rd year architecture students	5	4	4	13
	4th year architecture students	4	4	8	16
	Advanced year architecture students	2	7	2	11
	Post graduate students	5	13	4	22
	Lecturers/ Instructors/ Professors	13	17	3	33
	Architects	7	19	15	41
	Others	6	15	7	28
Total		65	99	60	224

source: (Kwee et al, 2006-a)

From the above table, it is clear that most of respondents have some background in architecture. The common interest/background of the respondents could be an indicative factor that they have had genuinely searched for information pertaining to particular building/s in the past, thus making them suitable survey participants. This is further ascertained by the 93 percent who responded to the question that requests details of architectural works most

recently studied. The female to male ratio may have some effect on overall response pattern; however, this paper will not be investigating the differences of individual patterns between the sexes.

Table 2: Country distribution

b. Country					
Countries	Response Percent	Response Total			
Algeria	0.46	1	Jordan	0.46	1
Argentina	1.39	3	Korea	0.93	2
Australia	16.20	35	Malaysia	2.78	6
Austria	0.46	1	Mexico	0.46	1
Bangladesh	0.46	1	Netherlands	2.78	6
Belgium	2.31	5	New Zealand	0.46	1
Brazil	3.24	7	Norway	0.93	2
Canada	2.31	5	Paraguay	0.46	1
Czech Republic	0.46	1	Philippines	0.93	2
Dominican Republic	0.46	1	Portugal	2.78	6
Egypt	0.46	1	Scotland	0.46	1
France	0.93	2	Singapore	26.39	57
Germany	2.31	5	Spain	0.93	2
Greece	0.46	1	Taiwan	1.85	4
India	6.02	13	Thailand	1.39	3
Indonesia	1.85	4	Turkey	0.93	2
Ireland	1.39	3	UAE	0.46	1
Italy	0.46	1	UK	1.39	3
Jamaica	0.46	1	USA	11.11	24
			Total Respondents:		216
			(skipped this question):		8

source: (Kwee et al, 2006a)

In total, there are 38 countries represented (Table 2). However, the distribution of the number of responses is not even. Since there are not sufficient responses for most countries to distinguish geographical differences of survey results, how the education, social and technological standards in each country which possibly shape the data will not be dealt with in this paper.

4. RESOURCES AND MEDIA

Table 3: Resources which participants have relied on

2	In studying this architecture, where have you obtained your information from?			
	Resources	Response Percent	Response Total	
	Books	62.61	139	
	Journal(s)/Magazine(s)	55.41	123	
	Lectures	27.93	62	
	The Internet/Computer	72.52	161	
	Video documentary(s)	13.51	30	
	Others	10.81	24	
			Total Respondents:	222
			(skipped this question):	2

source: (Kwee et al, 2006a)

When participants are asked what resources that they look at in their recent study of architectural works, most have responded 'the Internet/Computer' (Table 3), surpassing the traditional means such as books or journals. This is understandable since the Internet is currently the most accessible source of information and as this is an internet-based survey, it is understood they do have access to this convenient facility. As more comprehensive, reliable materials are still perceived to be found in the traditional sources, the gap between the internet and books is not significant. However, could there be a potential of this drifting wider? There are a several main factors that facilitate the gravitation to a greater reliance on digital resources:

- *The availability and acceptance of the technology.* We are still in a period of transition where familiarisation to a particular new system is constantly taking place resulting in some conflicting demands/preferences. This is hinted at from some of the survey participants' answers to the open-ended questions.
- *The availability of content providers/authors who would be willing to explore methods of delivery.* The print mode of delivery possesses technical limitations and the digital counterparts could help in addressing some of these shortcomings. Undeniably, there are other factors for consideration before digital technology would be fully explored and deployed. (for more details, please refer to: Kwee et al, 2006b)
- *The availability of reliable materials.* Digital content on the internet may be less controlled in its quality. However, the platform does facilitate larger volume or quantity of sources due to the less restrictive nature of its publication. Currently, coupled with the instant access, the quality issues appear to be regarded as an acceptable trade-off.

Table 4: Media used in the resources.

3	Do the resources you selected above include any of the following?		
	Media	Response Percent	Response Total
	Texts (written or spoken)	89.24	199
	Sketches	55.16	123
	Drafted drawings (plans, etc)	64.13	143
	Photographs of the building/place	90.13	201
	Photographs/pictures of models	49.78	111
	Video footage of the building/place	15.25	34
	Computer animations	17.04	38
	Others:	3.59	8
	Total Respondents:		223
	(skipped this question):		1

source: (Kwee et al, 2006a)

Most publications/resources are shown to rely heavily on photographs and texts to explain the multi-faceted subject of architecture (Table 4). Presumably, the types of chosen media are based on authors' preferences and judgments which could be due to economical and skill factors. In any publication, an author's bias is unavoidable. In this case, the selections and uses of media do exert some influence both on the information and the level of the audience understanding, while possibly contributing to further unintended biases.

5. FACTORS

The following sub-sections investigate participants' perception of the importance of listed factors and how they think the resources have assisted them in their own process of understanding the architecture of their choice.

Answers are based on a Likert Scale of 1-7: Strongly disagree, disagree, slightly disagree, neither agree nor disagree, slightly agree, agree, strongly agree, and based on this scale, the following sub-sections are particularly interested in the combined positive responses – i.e. slightly agree, agree, strongly agree.

5.1. Importance and Understanding Scales

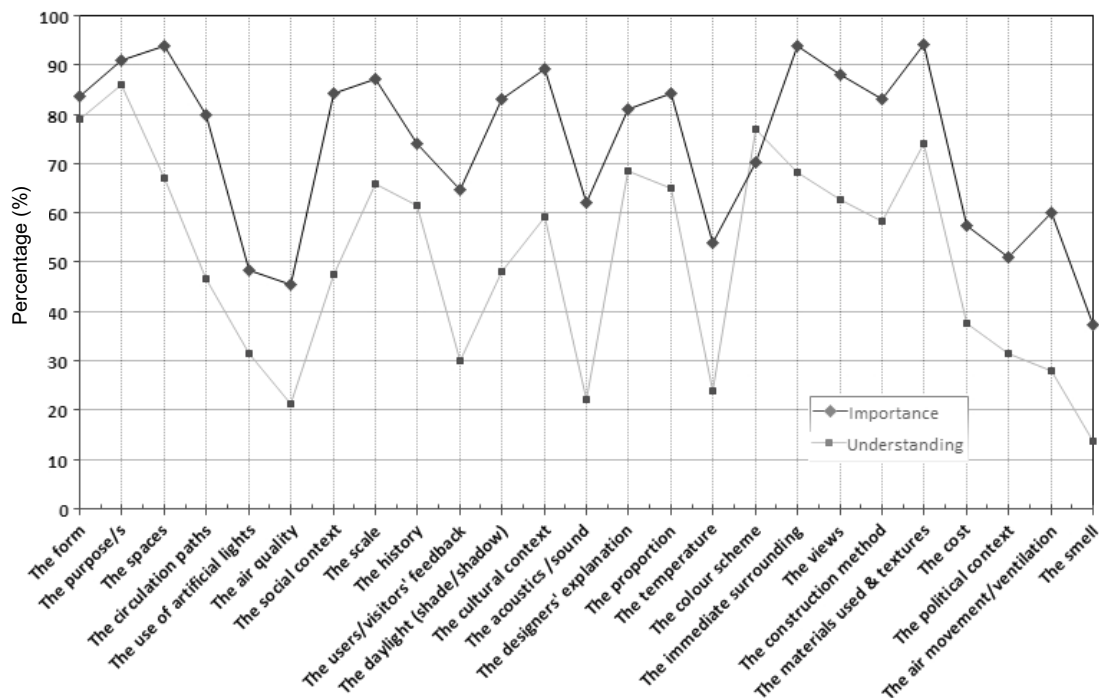


Figure 1: Scales of Importance vs Understanding

With the exception of 'the colour scheme', current publications appear to provide participants with an understanding level that is consistently lower than the degree of importance that they assign to each factor (see Fig.1). This may suggest the dissatisfaction of respondents with the current resources in explaining the factors to the level of understanding they expect.

The understanding level of the colour scheme exceeding the level of importance may be attributed to the availability of (colour) photographs in most publications. This is well-supported by the figure in Table 3 which reflects 'photographs' as the most frequently used media in the available resources participants have looked at. Understandably and as clearly depicted, the nature of these two-dimensional photographs, does not contribute to a deeper understanding level of other factors – e.g. form, spaces, proportion, etc. - which may also be shown in photographs.

5.2. Factor Importance Ranking

The distribution chart below (Fig. 2) shows ranks of factors of importance relative to the median value as perceived by the survey respondents. This median value only serves as a visual 'benchmark' and does not suggest that some factors are insignificant. However, they do reflect the general audience perception of what they regard as important in order to understand architectural works.

Does this perception pattern correspond with the current level of information covered in most publications available? Has it been conditioned by their current content? The answers can only be assumed. For this to be fairly assessed published works need to be studied in extensive detail but that is beyond the scope of this paper.

Within the field of architecture, a set of specialised interest areas do exist. Therefore, although this ranking may reflect the preferences of a general audience, it may not entirely be applicable to certain specific targeted groups. Nonetheless, as a rough general guide on areas to investigate, disregarding biases, this could prove useful for authors in their selections of information types to be included.

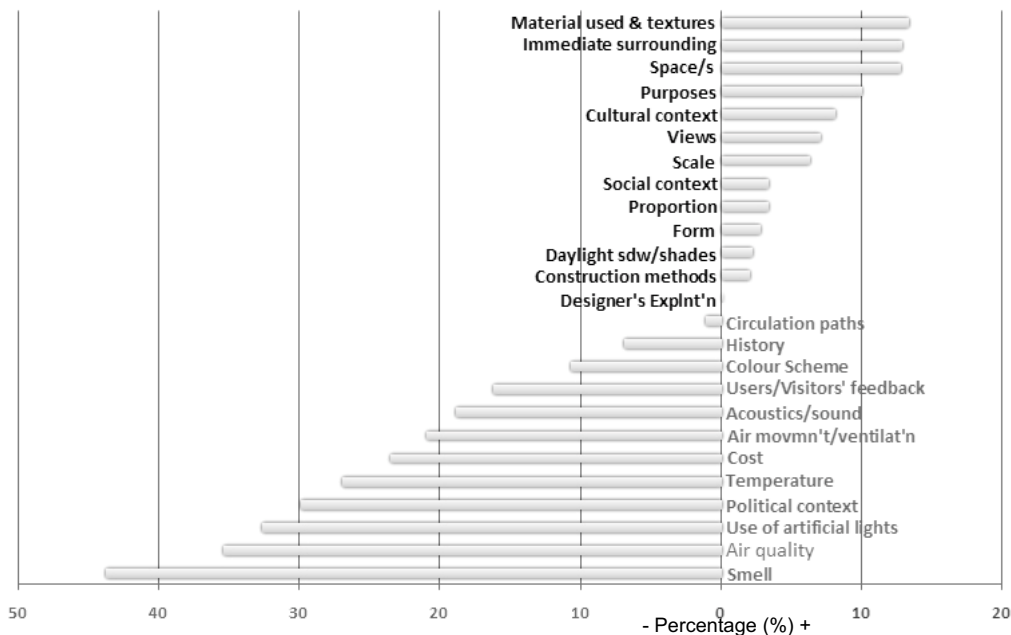


Figure 2: Perceived 'importance' scale of factors in relation to the median value

5.3. How Architecture Should be Represented

Participants have various answers to this question on how architecture should be represented to aid their understanding. However, one theme that occurs often is the demand for more use of particular media types, vehicles or features – e.g. inclusion of animations, texts, sketches, models, processes, movies, videos, etc. Could the provisions of these necessarily assist in augmenting their comprehension level? Does it reveal the lack of media vehicles or does it expose the poor delivery techniques of the existing ones? There seems to be sufficient ways of presenting architectural information given the list that participants suggest, but not all of these have been appropriately deployed or at all included in most publications. Some obvious reasons might be cost, time and the skills associated with producing a high quality publication of an architectural work. To avoid forsaking several of the more significant issues in effective delivery (such as whom this information is targeted for, how important it is for the audience to understand the message, etc) these issues, although understandable, are not impossible to overcome and need to be critically addressed.

6. MEDIA/RESOURCES QUALITIES

The conditions and quality could impact both the acceptance of media/resources and the recipients' understanding of the relayed messages. The total percentages of participants who rated accessibility, clarity, appeal, coherence, organisation, completeness and immersive-ness of information as slightly important, important and extremely important are relatively and almost consistently high (Figure 3). The bold line across the chart indicates only slight differences in the 'importance' percentages between these quality factors.

On the other hand, participants rank the performance of the resources they obtained (Figure 3 - lighter line) in terms of the above factors lower than they rank the importance scale. This reflects the lower-than-expected performance of

current resources in all these aspects, markedly on immersive-ness, completeness, coherence and organisation of information. Could the popularity of digital content change this in the future? Unless there is an improvement in delivery techniques beyond mere transformations of their print cousins onto the digital platform with hyperlinks (e.g. Great Buildings Online, Archined.com), we may not expect to see the performance level increase much more. Unfortunately, in their present state, most of architectural material delivery techniques in digital format have not developed in parallel with and to take advantage of what the technology could actually facilitate – hence, perhaps the graph pattern.

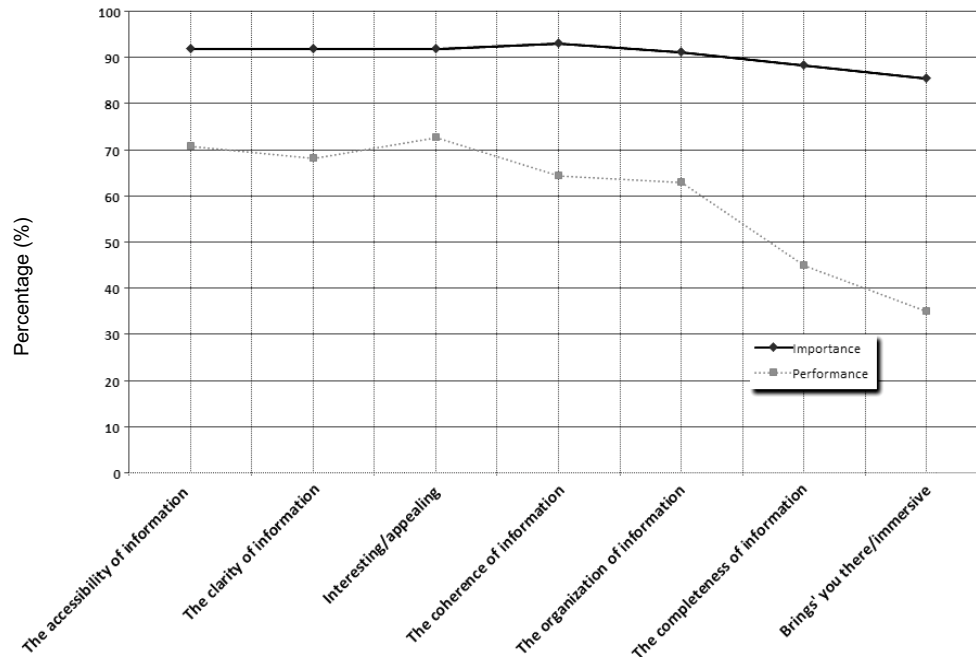


Figure 3: How participants weigh aspects of resources in terms of importance and their performance

7. MEDIA ASSESSMENT

How important are media valued and how effective are they in enabling the understanding of architectural works? These are also the questions posed to the survey participants.

Figure 4a indicates how participants perceive the roles of texts, sketches, drafted drawings, onsite photographs, photographs of models, onsite video footages and computer animations in their importance and assistance in the process of understanding architecture. Again the pattern of answer appears to indicate the perceived sub-performance of these media in helping participants understand architecture.

If we overlay the response of their previous answers to the availability of the media used in current resources (Table 4), we could possibly deduce the influence of this availability factor over how they rate the importance and understanding aspects (Figure 4b): when the presence of a media is low, their understanding level is also low. Interestingly, the conspicuously high presence levels of texts and photographs also bring them close to their corresponding levels of understanding and importance. This may indicate that these media are nearing or have reached their peak performances. It also suggests the gross underutilisation and great opportunity for the engagement of the other media in the delivery of architectural information.

When asked which single or combination of media would assist them best, again, participants' responses are varied but most have indicated the preference for visual media with the frequently mentioned being '(drafted) drawings'. Often, in publication of architectural works, drawings have not been the primary medium that authors use to explain designs. At times they are unjustifiably printed small with illegible details and other times grossly oversimplified; this kind of poor delivery, unfortunately is happening not only with printed publications, but interestingly also replicated in CDROM digital content (Hadid, 2003, Aalto, 2001).

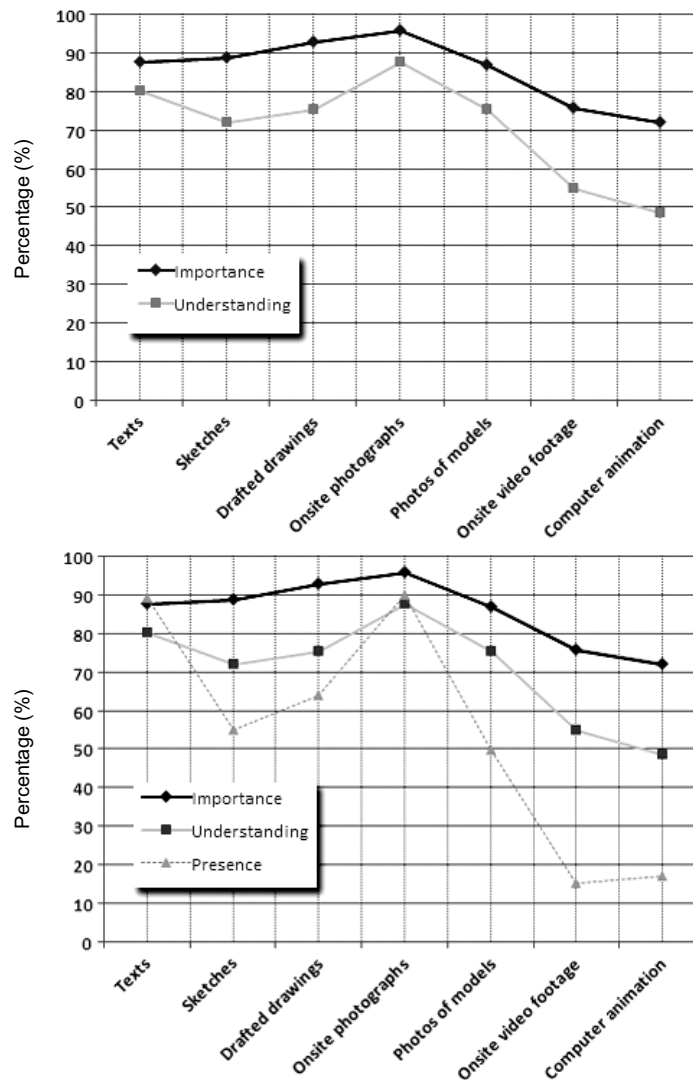


Figure 4 a/b: Importance of media, contribution to understanding architecture and media presence in publications

8. RESOURCE PREFERENCES

It is clear from the bar chart above (Figure 5) that at present, books are still the most preferred sources of architectural information. Many survey participants have stipulated that the reasons for this choice are the reliability of content and the possibility of self-immersion/interpretation. Meanwhile, one may argue too that the popularity of books could have been attributed more to the established nature of the media in terms of social acceptance than content reliability and perhaps also their traditional association to 'scholarly' prestige – a possible issue that renders comparable content and structure found in magazines today not being as highly regarded.

The internet is also highly ranked as a preferred information source despite its relatively short developmental history compared to the other more established resources. Most participants have expressed accessibility as the main factor for this preference. In all fairness, in settings where all facilities are available, the immediacy of information retrieval through the internet is still unsurpassable. If the standard of content could be improved and controlled, it appears likely that the internet may be the only medium that could overtake the popularity of books in the future. However, to exceed the traditional media in its effectiveness in delivering content, aspects of digital delivery need to be studied more closely as well.

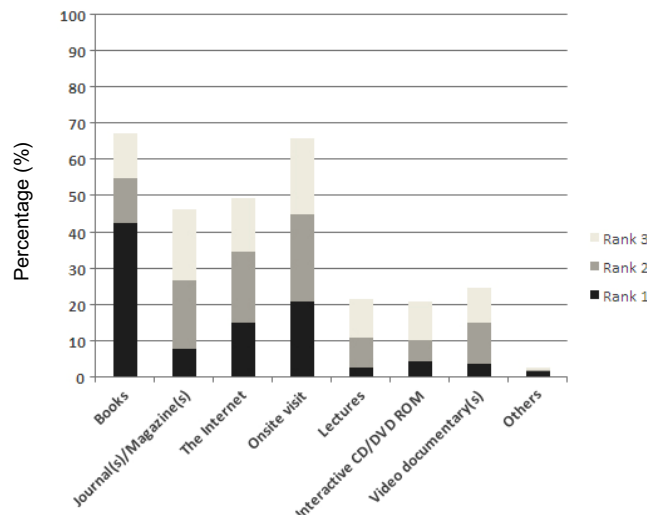


Figure 5: Preference ranking

CONCLUSIONS

Judging from the survey responses, there is a higher expectation of various aspects of architecture to be presented than most of the current media and resources have yet achieved. There seems to be a need for publications with explicit architectural content and improved delivery to facilitate better understanding of particular works. Although the current digital platform and its technologies do possess the potential to deliver architectural content, most publications are still carried out in the traditional printed media; whether this is a denial of the technological capital or merely a transitional phase of significant shifting in the dominant medium remains to be seen. The internet phenomenon of Wikipedia, for example, as a growing information source may be an indicator of the future of internet/digital dependency. More than Levinson (Levinson, 1999) and McLuhan's (McLuhan, 1967) contention that the process of being consumed by a medium carries a significant impact upon our lives than the very content the medium relays, the substance and its delivery are ultimately inevitable catalysts to and factors that would sustain the shift of particular communication media dominance. The power will rely on the effective integration between the available media and content they carry.

The quantitative evidence presented in this paper is well supported by our qualitative experience of reading and assessing the reports and essays of our own School's architecture students and the observation of their work in computer equipped studios. But in order to benefit from the digital opportunities, architectural information delivery needs to consider modes of presentation specifically relevant to the discipline. This is elaborated in (Kwee et al, 2006b). Closer links of media types in the digital platform can offer much more integrated and comprehensive information than that currently deployed in either print publications or current digital/internet sites. (Kwee et al, 2005).

ACKNOWLEDGEMENTS

We thank:

- Dr. Susan Shannon, Dr. Veronica Soebarto, Dr. Katharine Bartsch for their input and key advice in the design of the survey.
- Friends and colleagues for their assistance in disseminating the survey announcement.
- All participants of the survey for their patience and effort in answering the questions. Their genuine contributions have been integral to the applicability of the survey data.

REFERENCES

- Aalto, A., Oulens, Alvar Aalto Foundation, Alvar Aalto-museo, Jyväskylä'n yliopisto, (2001) *Alvar Aalto Houses 2.0 Paradises for Ordinary People*. Finland: Oulens.
- Kwee, V., Radford, A, Bruton, D., Roberts, I., (2006a) *Architecture | Media | Representations: Survey Results 2006*. <<http://cumincaad.scix.net/cgi-bin/works/Show?8d88>>
- Kwee, V., Radford, A, Bruton, D., (2006b) *Educative Visuals – Digital Delivery of Architectural Information for (potential) Heritage Buildings*, to be presented at The 7th VAST International Symposium on Virtual Reality, Archaeology and Cultural Heritage, Cyprus (Oct-Nov 2006), published by Eurographics.
- Kwee V., Radford A., Bruton D. (2005) *Hybrid Digital Media Architectural Visualisation Delivery -Murcutt, Lewin & Lark's The Arthur and Yvonne Boyd Education Centre on Digital Flatland*. International Journal of Architectural Computing. Vol 3 (4) pp 487-502.
- Levinson, P. (1999) *Digital McLuhan : A Guide to the Information Millennium*: New York : Routledge.
- McLuhan, M.(1964) *Understanding Media : The Extensions of Man*. London: Routledge & Kegan Paul.
- McLuhan, M., and Quentin, F. (1967) *The Medium Is the Massage*. New York,: Random House, 1967.
- Pearce, Martin. (1995), and Maggie. Toy. *Educating Architects*. Academy Editions: London.
- Rasmussen, S. E. (1964) *Experiencing Architecture*. New rev. ed. Chapman & Hall: London.
- Hadid, Z. (2003). *Planet Architecture: Zaha Hadid Works*. in-D: Los Angeles.