USING CARD SORTS TO ELICIT CROSS-CULTURAL PERCEPTIONS OF WEB PAGE QUALITY: A STUDY OF STUDENTS OF ENGLISH

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B.A., RSA Dip. TEFLA

Submitted in partial fulfilment of the requirements for the degree of

MASTER OF SCIENCE
In
OFFICE SYSTEMS AND DATA COMMUNICATIONS

UNIVERSITY COLLEGE NORTHAMPTON

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2001

A key issue in the design of web pages is that of quality and the perceptions of quality of its users. Not only must a web page satisfy the needs of all its stakeholders, but it must be seen to do so or risk being passed over in favour of more promising resources. This is increasingly important with the ever-expanding constituency of international users, and yet little work seems to have been done so far on cross-cultural perceptions of quality in web pages.

Usual research methods applied to cross-cultural user research include questionnaires and observation. These however require extensive design and testing otherwise there is a risk of cultural bias and distorted data. Card sorts have already been used successfully with user perceptions of quality in a single cultural context, and offer a possible solution for simple acquisition of cross-cultural data, whilst avoiding many of the risks of cultural bias inherent in other techniques.

In this study, students of English repeatedly sort cards carrying screen shots of English Language Resource web pages and generate their own criteria for the sort, and the categories into which they sort them. The respondent groups include male Egyptian students, and male and female students from diverse cultural backgrounds. The attributes thus elicited are matched against the students' own evaluation of the quality of the web page on a continuous line Likert-type scale, in order to identify cultural factors in perceptions of quality.

It is found that the groups generate different attributes in their sorts which shows different concerns with web page quality. There are also distinct differences in categorisation both between cultures and across genders. These are not easily and clearly correlated with well-known international variables and suggest that card sorts may yield new and important data about cross-cultural web page perceptions.

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ACKNOWLEDGEMENTS

My thanks are due to:

Dr. G. Rugg for continued guidance and encouragement throughout the research.

Ms. G. El Saiid, and Ms. B Hurd for their advice and assistance.

Mr. R. Jones and Mr. D. Burnapp, at University College Northampton, Ms. J. Maher (Director) and Mr. J. Carmichael at The British Council, Alexandria, and Ms. B. Neher, Mr. D. Albery and Mr. M. Steele at International House, London, for help with finding respondents and making facilities available to me.

I am also grateful for the assistance and enthusiasm of my research subjects, language students from all over the world and, especially, Egypt.

CHAPTER 1 – INTRODUCTION

1.1 GENERAL INTRODUCTION

A central concern of web page design is the issue of quality and perceptions of quality: not only should a page be 'fit for purpose' [Juran 1979] in satisfying the needs of all stakeholders, but it should be seen to be so by users, or risk being passed over in favour of more promising resources. With the global penetration of the Internet, especially into regions where computer use has hitherto been scarce [Aykin 1999b, El-Nawawy 2000], publishers have the ability to communicate their message to members of widely differing cultures, whose diverse needs and perceptions of quality place special demands upon the web page designer.

While a considerable amount of effort has been spent, and remains to be done, in preparing software user interfaces for international use [e.g Hoft 1996,] comparatively little work has been done on cross-cultural factors in web page design. Much existing work focuses on usability studies [e.g. El Saiid and Hone 2001] and avoiding undesirable effects such as causing unintentional offence to users [Aykin 1999a]. Data for these studies have been collected mainly through the use of interviews, questionnaires and observation [Evers1998]. By its very nature, however, cross-cultural research is subject to problems of language and cultural bias, especially in the design of research instruments and considerable time and effort are required to ensure that they are adequate to the task [Hoft 1996, Brislin 1986, Day and Evers 1999]. As a result, such cross-cultural research programmes may not be able to provide information rapidly

enough for implementation in the project at hand. Herein lies the challenge of internationalisation and localisation of web pages, namely, the need for rapid and efficient collection of cross-cultural data on the target user cultures and their perceptions in order to aid web page design.

One technique, which offers interesting possibilities in the task of eliciting cross-cultural perceptions, is card sorts [Rugg and McGeorge 1997]. This has already been used successfully in elicitation of web page quality attributes [Upchurch *et al.* 2001], and is a method which is simply explained to respondents, and makes comparatively low demands on their linguistic ability – responses need not be grammatically or even lexically correct, just intelligible. This could render it particularly suitable for use where data collection sessions need to be conducted in the respondents' second language (L2).

Card sorts often generate rich data about the respondents' categorisation of the domain under investigation, and design, execution and analysis of results can be completed in a relatively short time. The primary purpose of this study, therefore, is to examine the value of card sorts as a technique for elicitation of cross-cultural perceptions of quality in web pages.

1.2 INTERNATIONALISATION

The rapid growth of the Internet and the ability of a wide range of individuals across the globe to access web resources has led to a need to internationalise and localise web content for users from a variety of cultures [Aykin 1999b, Mudur 2001]. While existing literature emphasises making international users feel at home with web page content and

on avoiding unintentional offence or misunderstanding [Aykin 1999a], such strategies rely on avoiding the undesirable, and there is undoubted advantage to be gained from promotion of features actively considered desirable by the target user population [Hoecklin 1995].

Although possible solutions include the creation of locale-specific pages and dynamic content determined by the user's personal profile or location [Plocher *et al.* 1999], such resources may be beyond the technical or financial means of some publishers, require greater connection speeds than local infrastructure can support, and be impractical to implement for every conceivable cultural niche. The alternative therefore is to identify form and content which is as acceptable and, indeed, desirable, as possible to the maximum number of users. Stiff [1995] argues however, that it is impossible to design for everybody and it may be optimistic to rely on notions of cultural universals.

Whichever solution is adopted to address the needs of international users, a clear understanding of the way those users perceive aspects of the design and content is essential in order to accommodate them.

1.3 QUALITY IN WEB PAGES

Juran, [1979] described quality as 'fitness for purpose or use'. The ISO 8402 definition of quality is as follows:

> "The totality of features and characteristics of a product or service that bear upon its ability to satisfy stated or implied needs."
>
> [ISO, at www.cse.dcu.ie 1984]

The ability of a web site to satisfy the needs of both the author and the user may be thus taken to be dependent on its quality. The author of the site will be concerned with the quality insofar as it can achieve the aim of communicating ideas, selling products, deriving income from advertising etc as efficiently and effectively as possible. Upchurch et al. [2001] suggest that the quality concerns of the designer can be encapsulated in the question 'How good is my web site?'.

Amongst the primary concerns of web page designers is the presentation of a site which users will wish to continue into, rather than browsing elsewhere. The impatience of Internet users is well documented [e.g. Zona Research 1999] resulting in the 'eight second rule', which refers to the time after which a user, waiting for a page to download, is likely to give up and try another site. This would also suggest that if the user is not convinced in a comparatively short time that a site, just opened, offers what is being sought, then that user will go elsewhere. The user's concerns, therefore, from

the moment that the page opens could be epitomised in the question 'How good does the web site seem to be?'.

Considerable literature exists within the Human-Computer Interface community relating to improving the efficiency of communications, mainly through a focus on usability and other design principles [e.g. Berk and Devlin 1991]. Jakob Nielsen has offered substantial and continuing guidance [www.useit.com] on improving usability in interface design [Nielsen and Molich 1990, Nielsen 1993,]. Nevertheless, issues concerning the quality of web pages also merit attention as these relate to the ability of the page to satisfy the requirements of the user (and hence, the author).

Literature is also readily available on metrics and design for quality of software [e.g. Fenton *et al.*, 1995, Smith and Dunckley 1996] and even with reference to cross-cultural issues [Siakas *et al.* 1999]. However, attention has only recently turned to metrics for quality of web pages [Upchurch *et al*. 2001]. This work was conducted within a single cultural context. Yet it appears that much work still needs to be done on perceptions of web page quality in a cross-cultural context: the perceived quality of a page will have a bearing on the willingness of international users to make use of the resources on offer in a web site and hence on the design for internationalisation of web pages.

1.4 CROSS-CULTURAL ISSUES

It is widely recognised that cross-cultural attitudes [Sensales and Greenfield 1995] and perceptions should be taken into account in the development of software and user interfaces [e.g. Kellogg and Thomas 1993, Nakakoji 1994, Evers and Day 1997]. Much

of the work in this area has focused on Asian and Western perceptions and little work appears to have been done investigating perceptions of cultures that have recently joined the global community of the Internet [El Saiid and Hone, 2001].

There is a tension between the approaches of designing a single interface optimised for everyone, and of creating different interfaces for different cultural groups [Stiff 1995]. The extent to which one or the other of these approaches is preferable is dependent on those design factors which find common acceptability across cultures and those which are culture specific. The use of 'professional intuition' as a methodological principle for design of interfaces for cross-cultural use is not reliable [Teasley *et al.* 1994] and reference must be made to the perceptions of the target users. It may even be insufficient to rely upon the experience of an individual well-versed in the perceptions of more than one culture, as that individual is arguably representative of 'a culture on a boundary' [Nakakoji 1994]. Marcus *et al.* [1999] on the other hand, argue that as interfaces are increasingly targeted at narrower user communities, the use of subject-matter experts and user-representatives at the design stage becomes a more important pre-requisite to design success.

There are many definitions of culture to be found. Hoft [1996] offers one for use within the context of developing a cultural model for interface design:

> "learned behavior consisting of thoughts feelings and actions"
>
> [*ibid*. 1996]

A cultural model uses international variables to organise cultural data so that similarities and differences of user perception and behaviour can be compared between two or more cultures. These cultures need not be widely separated for differences to emerge. The temptation, therefore, to infer that what is true, for example, for Egyptians will also be true for Moroccans and Jordanians on the basis that all are 'Arabs', must be treated with caution: indeed profound cultural differences based on region or social stratum may emerge within a single nationality [Hofstede 1991].

Cultural models give valuable insight into dimensions of human cultural activity that can assist in the interpretation of cultural data. The choice of cultural model to be adopted will depend on the data available and the task to which it will be put. A variety of international variables have been proposed by authors.

Edward T. Hall [1959] was concerned with communication eliciting the correct response as a measure of its effectiveness. He described three important dimensions of man's experience of life. Communication, learning and awareness are imbued with the so-called 'Major Triad' of *Formal*, *Informal* and *Technical* dimensions which roughly correspond to explicit rules of life, imitation ('getting the hang of it'), and education respectively. He also noted that perceptions of time were an essential differentiating factor between cultures. In later work [cited in Hoft 1996] he formulated the notion of *monochronic* and *polychronic* cultures, the former denoting a culture where activities were addressed one at a time and intolerant of interruptions (typical of Western culture) and the latter where multiple, often unrelated, activities were normally conducted simultaneously and permissive of interruptions.

The other key variable Hall identified [1973] was that of high context and low context cultures. High context cultures usually require little information to be transmitted in any given message as most of the meaning is carried in the context, although if that context is impoverished little meaning can be derived from the message. High context communication is often found between individuals who have known each other for a long time. Low context cultures, by contrast, such as certain aspects of western culture, require a great deal of detail in efficient communication: absence of detail can compromise the message.

Geert Hofstede [1991] described four dimensions of human interaction, based upon research involving over 116,000 respondents [Hoft 1996]: these were *Power Distance*, reflecting attitudes to power and authority, *Collectivism versus Individualism*, reflecting attitudes to group membership, *Femininity versus Masculinity*, reflecting the values placed upon work goals by men and women, and *Uncertainty Avoidance*, which reflected the degree to which individuals felt threatened by the unknown. One criticism levelled at Hofstede's work [Hoft 1996] is that the questions in his original instruments failed to eliminate cultural bias, generating responses which conflicted with his original four dimension model. He subsequently devised a fifth, *Long-term versus Short-term* orientation reflecting concerns about the future(long-term orientation) and the present and past (short-term).

Fons Trompenaars [1993] developed international variables similar to those proposed by Hofstede. In particular, the addition of the dimension of *Achievement versus*

Ascription, relating to the derivation of personal status, be it from background or achievement, is of interest in the context of this enquiry, as perceptions of quality may be influenced by ascriptive associations, such as brand name (e.g. Mercedes, Gucci) and they could influence results.

Trompenaars is also responsible for a three layer metamodel, the 'Onion', which consists of a Core, the implicit and unspoken assumptions that underlie the way we cope with our environment, a Middle Layer, which encompasses the norms and values which determine whether things are good or bad, right or wrong or desirable and undesirable. The Outer layer of the Onion model contains all the aspects of life which are most readily accessible, such as language, dress, buildings, rituals etc.

It is the Middle layer, therefore, that represents the level of most interest to researchers of cross-cultural perceptions of web pages, as this holds the values that determine whether an international user accepts or rejects a design, is offended by it or is attracted to it. This is the level that most research seeks to expose [Hoft 1996].

Hoft [1996] asserts that before international variables can be selected for use in a cultural model, it is necessary to establish appropriate methods for the elicitation of the cross-cultural data.

1.5 CROSS-CULTURAL ELICITATION

The methods available to cross-cultural researchers in cultural data collection include academic research, observation, focus groups, questionnaires and interviews [Hoft

1996]. Hoft [*op. cit.*] suggests that of these methods, questionnaires and observation are preferred for identifying international variables. It might be argued however that in the context of user interface research, on-line self-report might also be of value. Hoft considers questionnaires to be the most practical, as observation requires considerable time in the target cultural community. However, detailed questionnaires aimed at collecting cultural data require very careful design, and should be rigorously tested to avoid cultural bias [Hoft *op.cit.* Day and Evers 1999]. Furthermore, they are subject to variable response rates, both of items within the questionnaire and failure to return the questionnaire itself.

Whichever method of data collection is chosen, cross-cultural data gathering presents problems not found in collection of data within one's own culture, the primary obstacle being that of language. The medium of communication will likely be foreign to the researcher or to the respondent, or worse, a mutually intelligible language foreign to both, or else there will be a need for extensive translation (simultaneous or sequential) of research instruments and responses. In any case there is the risk of misunderstandings and subsequent misinterpretation of results. If respondents are chosen who have a high level of ability in the (for them) foreign language of communication, there is the risk that their cultural view does not reflect that of non-speakers of the language [Brislin 1986]. Furthermore, detailed written materials, or complex discussion may place heavy cognitive demands on the respondent or be irritating and impair the quality of data [Day and Evers 1999].

For these reasons, a user-friendly method of eliciting data, which places minimal linguistic demands upon both the respondent and the researcher in terms of both instruction and execution, yet yields rich data on respondents' categorisation of the domain being examined, would be attractive in cross-cultural research. Sorting techniques [Maiden and Rugg 1996] offer such a method, and instruments (information, instructions etc.) are easily adapted to the task [Appendix IV].

In addition, the use of Likert-type scales [Appendix V], where respondents marked their perceptions as a position on a line in response to a single question, was chosen in order to reduce variables that could be created by misinterpretation of linguistically complex questions and of subsequent responses given.

1.6 USING CARDS SORTS FOR ELICITATION

The primary method chosen for elicitation of perceptions of quality in web pages is card sorts, as discussed in the ACRE framework for the selection of methods for requirements acquisition [Maiden and Rugg 1996]. Sorting techniques have been applied to knowledge acquisition in the development of product design expert systems [Chen and Occeña 1999], and more recently have been used successfully in eliciting perceptions of aspects of design in web pages [Griffin 2000, Upchurch *et al*. 2001]. Sorts are a method of elicitation of respondents' categorisation of the features that they perceive in a set of entities, be they pictures, word or items, and the method is derived from Kelly's Personal Construct Theory (PCT) [Kelly 1955].

Personal Construct Theory proposes a theory of man as inquirer and scientist [Bannister and Fransella 1980]: he makes sense of the world by categorising and proposing theories, which may subsequently require revision. PCT is founded on a fundamental postulate and eleven corollaries [Kelly 1955]. The fundamental postulate states that:

> "A person's processes are psychologically channelised by the ways in which they anticipate events."
>
> [Kelly 1955]

This postulate states that our nature is defined by the way in which we interpret the world. Of the eleven corollaries, the last two, the Commonality corollary and the Sociality corollary appear to have the most relevance to a cultural enquiry.

The Commonality corollary: *To the extent that one person employs a construction of experience which is similar to that employed by another, their processes are psychologically similar to those of the other person*. [*ibid.* 1955]This corollary refers to the similarities between individuals in the way they interpret things and events [Bannister and Fransella 1980]. The relevance to the card sort method is that it aims to elicit such similarities of interpretation. It also has implications for interpretation of cultural behaviour in that similarities of construction may be shared by members of a cultural group and arguably inculcated by membership of that group extended over time.

The Sociality corollary: *To the extent that one person construes the construction processes of another, they may play a role in a social process involving the other*

person. [*ibid.* 1955]This corollary describes the way in which individuals seek to understand each other by attempting to create a meaningful picture of the other individuals construct system. [Bannister and Fransella 1980]. It can be argued that a lifetime of association with other individuals will confirm the validity or otherwise of different ways of construing those other individuals' construct systems. Insofar as one's own construct systems may be adapted in the light of experience, convergence between systems held by individuals belonging to the same cultural group would aid social processes.

In Hall's [1959] afore-mentioned major triad, namely *informal*, *formal* and *technical* aspects of life, informal learning is acquired by imitation, experimentation and noticing when one has 'got it wrong'. Our constructions of the world undergo modification as a result, in other words are 'permeable' [Adams-Webber 1979] until perhaps we become 'too old to change now', and our construct systems become 'impermeable'. Formal learning of cultural norms however, is acquired by correction and the unquestioned assertion that 'That is the way it is done.' An example of this might be 'Boys don't play with dolls'. There is no 'why', they 'just don't'. This implies an impermeability of constructs from the outset in that the young individual is encouraged to develop a construct system resistant to change. Technical learning is acquired by the analysis and demonstration. This is exemplified by some, but not all, learning in schools and universities. The best way to accomplish something has been analysed and is transmitted to students. The learning individual is encouraged to build and change a construct system whilst rendering it impermeable based on the belief that 'this is the best way'. When Kelly's corollaries are viewed in the light of Hall's notions of learning

in the acquisition of cultural knowledge, it can be seen that the corollaries can operate on all three of Hall's levels in the formation of a shared cultural construct system.

Although various sorting techniques are described by Rugg and McGeorge [1997], repeated single criterion card sorts have been selected for this experiment as they are recommended for their flexibility and ease of implementation, and have been demonstrated to be of value in eliciting user perceptions of web pages [Griffin 2000, Upchurch *et al*. 2001]. In this method, the respondent sorts cards carrying words or pictures into categories according to a criterion and categories which may be given by the researcher or generated by the respondent. Indeed, it is also possible for the respondent to sort according to supplied criteria, followed by sorts according to the respondent's own generated criteria. When each sort is completed, the respondent announces the criterion (if self-generated) and the categories that have been chosen, and the results are noted.

Although the use of supplied criteria and categories would make analysis of commonality simpler, it would not yield the constructs peculiar to specific cultural outlooks and so all constructs in this experiment are respondent generated, giving the respondent complete freedom to generate any construct considered important by that individual. This approach permits conclusions to be drawn from the number and nature of constructs generated. For the reasons stated above, the technique of card sorts suggests itself as useful in highlighting cultural differences in user perceptions.

Analysis of card sorts is carried out by examining the number of criteria and the types of criteria generated [Rugg and McGeorge 1997]. Commonality of criteria, the similarity between respondents in the criteria generated, is also examined. When respondents generate criteria, their choice of wording may vary for what is essentially the same construct. It is therefore useful to group these verbatim constructs into superordinate constructs, and an independent judge can be used for this task [Upchurch 1999, Griffin 2000]. This will help to highlight similarities in perception between respondents or between explicit groups of respondents, and any non-explicit groupings can be revealed by examination of the distribution of that commonality.

The categories can then be examined, by looking at numbers of categories, the commonality and the distribution of categories both within criteria and between respondents [Rugg and McGeorge 1997]. Even categories such as ‘don’t know’ and ‘not sure’ can be informative. Lastly, it is recommended that the researcher identify significant absences: there may be criteria or categories that would normally be expected in a sort, but are absent.

As the main value of card sorts lies in the generation of nominal values, a parallel evaluation by respondents of the web pages by means of Likert-type scales in response to the question, ‘How good does the web site seem to be?’ will furnish a quantitative evaluation of perceived quality against which the constructs generated by card sorts can be matched.

Another technique described in the ACRE framework, laddering [Reynolds and Gutman 1988, Rugg and McGeorge 1995], also based upon PCT, was also used with two Egyptian respondents in order to explore the hierarchy of constructs in use.

1.7 THE DOMAIN OF ENGLISH LANGUAGE RESOURCE WEB PAGES

The domain of English Language Teaching (ELT) provides a natural interface between cultures. Students will be exposed to cultural influences of the native English speaking community while to a greater or lesser degree retaining their own cultural outlook; to a greater extent when the students study within their own country, and less so, when they travel to the target language community in order to study.

English Language Teaching web sites are generally aimed at two groups of user. They can provide teaching materials and other resources for use by both native English-speaking and foreign Teachers of English as a Foreign Language (TEFL), and for students of English, they can offer learning resources, self-evaluation materials and opportunities to chat to or contact other students. Provision on such web sites can be for one or both groups of user.

The choice of domain offers several advantages in this type of experiment. First, international respondents can be selected for their known ability in English and can be considered as 'experts' in the domain of learning English. At Upper Intermediate level, students will characteristically have been studying English for at least 360 hours (Advanced level, around 500 hours) and in most cases much more. Secondly, respondents can be selected based on similarity of background (wealth and education)

and be observed, either in their own country or abroad. As a result, respondents will almost certainly be familiar with the Internet, as an increasing number of private schools, universities and English Language schools use the Internet and computers in teaching. Finally, English Language schools offer a source of respondents of a similar background, and provide a means of reliable assessment of language ability. The school itself can provide a convenient environment for recruiting respondents and conducting data collection sessions with them with minimum interruption to their personal schedules.

In this experiment, the perceptions of male and female students of English from a variety of European, Asian and South American countries, all studying English in the United Kingdom, have been elicited and compared to those of a group of male Egyptian students interviewed in Egypt.

1.8 EGYPTIAN STUDENTS AS A RESPONDENT GROUP

As stated above, there is increasing interest in the attitudes of recent entrants to the global community of computer and Internet users.

An exploration of the attitudes of Kuwaiti students to computers was carried out by Mohammed Omar [1992], when the use of computers was comparatively new in the Middle East. Attitudes were found to be mainly positive even in a mainframe, batch-processing environment which lacked the ease of use of personal computers then available in the western world.

Since 1996, Egypt has made the Internet widely available, mainly because of liberalisation of restrictions on service providers and content [El-Nawawy 2000]. The proportion of Internet users to the population (0.37%) shows about the same level of Internet usage as for the Arab States as a whole (0.36% of the population), although there are concerns that growth of usage is not as rapid [*ibid.* 2000]. El-Nawawy [*op. cit.*] rejects language and culture (a potential barrier to adoption amongst users, as English is the predominant language of the Internet) as the cause of the lack of growth of Internet usage in Egypt on the basis that these factors were the same across the entire Arab world: he cites lack of awareness and formal education in web usage as the primary deterrent.

Current research, from a preliminary study as presented by El Said and Hone [2001] examines the experience of Egyptian users with respect to usability of the web and attempts to identify design measures that will improve that experience. It focuses on the international variables of Uncertainty Avoidance, High versus Low context, Oral Dominance and Polychronism for its cultural model and highlights difficulties with the formulation of search phrases, and problems in interpersonal communications using text alone.

Egypt therefore provides a rich opportunity to examine cultural perceptions of web page quality in the context of mature and increasing usage of the Internet but a nevertheless very distinct cultural environment. This distinctness is further enhanced by the fact that the Egyptian respondents in this study, in comparison with their peers (i.e. moderately

wealthy students of English) in many other countries have very limited experience of travel abroad.

Hall [1959] characterised Middle Eastern culture as polychronic referring to a cultural preference for carrying out several tasks simultaneously. In business this might manifest itself in a tolerance for interruptions during a business meeting to sign papers, discuss tasks with a subordinate and even take a telephone call: such interruptions would not be tolerated in a monochronic society. In the context of web usage this might manifest itself as a tendency to browse with several windows open at a time, each connected to different sites [El Saiid and Hone 2001].

Later work by Hall and, subsequently, David Victor [in Hoft 1996] identified Arabic culture as a high context culture. In such a culture, context supplies a considerable portion of meaning and information is implicitly stated. If however, the context is lost, further information must be supplied to restore the meaning. El Saiid and Hone [2001] suggest that, as computer interfaces require explicit instructions, there could be a possible cultural conflict in this variable. However, this view would depend on how the user viewed the computer. If viewed as a machine no greater conflict should arise than, for example, in the driving of a car. A further conclusion from this international variable may be that if a satisfactory context for a web page cannot be ascribed to it by the user, any implicit content may lack meaning for that user.

Of Hofstede's [1991] dimensions of human interaction, that in which Arab cultures manifested an extreme position was Power Distance, relating to how individuals

respond to and perceive power. In Arab countries, this emerges as an authoritarian and autocratic relationship. This dimension might have a bearing on constructs relating to perceptions of the authority of a web page. Other dimensions of relevance included Masculinity/Femininity (moderately masculine for Arab countries), Individualism/Collectivism (low individualism for Arab countries) and Uncertainty Avoidance, which is the tendency to view unknown situations as threatening, where Arab countries rated fairly high. The last of these could be relevant to cultural perceptions of web pages, insofar as unfamiliar layout and poor navigability etc. might generate feelings of uncertainty in the user.

Trompenaars's [1993] findings showed that Egypt was a highly ascriptive culture, where one's background, connections and educational record (the place of study, subject and level), rather than actual achievements and actions accrue respect and status. In the context of attitudes to web pages this might influence judgements if any of the pages were recognised, had a reputation or were associated with prestigious institutions. Thus, after each experiment, respondents were asked about their acquaintance with any of the sites in order to assess this factor, if present.

R. S. Zaharna [1995] contrasts the cultural preferences for messages of American and Arabic cultures. Amongst dimensions offered, the contrast of Oral versus Literate dominance is of interest in the context of this study: Arab culture is oral dominant and relies more on the emotional resonance and symbolism rather than the factual accuracy and the analytical and evidential content of a message. Arabs prefer to interact with their interlocutor, in order to make sense of utterances. In summary, whilst Americans

favour simplicity, accuracy, understatement and actions in communication, Arabs prefer repetition, imagery, exaggeration and symbols and what is considered 'effective' and 'ineffective' communication is determined by these differences. As a result, written materials, including web pages, may be evaluated by Egyptians based on conformity to these preferences.

1.8 SUMMARY OF AIMS OF THE INVESTIGATION

The subjective evaluation of web pages and their quality by means of card sorts in previous studies has generated rich data on web pages and the foundations of card sorts in Personal Construct Theory suggests it might also yield interesting information on cross-cultural perceptions which may be missed by other elicitation techniques. In the light of this, this thesis aims to:

a) Evaluate card sorts as a method for highlighting the factors involved in cross-cultural perceptions of web pages.
b) Characterise any gender differences in perceptions of quality between International groups of students.
c) Assess any similarities and differences in perceptions of quality between a group of International male students and a group of Egyptian male students.
d) Note any correlating factors, which may indicate cultural preferences of the respondent groups with regard to quality.

CHAPTER 2 – RESEARCH DESIGN

2.1 METHOD

Two methods were used to elicit data about the web sites from the respondents, card sorts and Likert-type scales. These were conducted in the same session.

Respondents were asked to sort cards carrying screen shots of a selection of home pages of sites which offered a variety of English Language learning resources. The opening page of each site was chosen for evaluation as this would be the first point of contact for any user. In each sort, respondents chose a construct in order to evaluate the cards and then placed them in groups according to that construct: no constructs were provided by the researcher. This process was then repeated until the respondents were unable to generate any more constructs with which to sort the cards. Any evaluative comments made by the respondents regarding the web sites or the constructs used in sorting were noted. In the event that the respondents wished to continue sorting but were unable to generate any more constructs, dyadic or triadic elicitation, as recommended by [Rugg and McGeorge 1997], was used to prompt further sorts.

After the sorts the respondents were asked to evaluate each of the web sites represented on the cards in response to the question, ‘How good does the web site seem to be?’ and to mark their assessment on a Likert-type scale. Likert scales were considered appropriate for assessment in a multicultural context as they do not oblige the respondent to take a specific position, a potential problem identified by Day and Evers

[2000]. The wording ‘How good does the web site seem to be?’ was preferred to any construction using the word ‘Quality’ for two reasons. First, it permitted a simpler sentence construction than would otherwise be possible: this would avoid the risk of misinterpretation by respondents whose first language was not English. Secondly, the word ‘Quality’ is a sophisticated construct, which may be vested with a variety of connotations and meanings in different cultures. For example, one culture may value ‘quality’ in terms of expense, another in terms of durability, and a third in ascriptive terms (such as recognisability or brand name).

After each session data about the respondents was gathered via a brief questionnaire in which they were asked about their Internet, international media and travel experience and if they had previously encountered or heard of any of the web sites used in the sorts. Data collection sessions with students and teachers took place in a room set aside in the school where they normally studied or taught English and were conducted in English.

2.2 RESPONDENTS

There were three groups of respondents: the first group, six male Egyptian students of English, were studying at the British Council in Alexandria, Egypt. The second and third groups comprised five male International students of English and seven female International students of English, all studying at British English Language schools. All respondents were rated by their schools as having an Upper-intermediate to Advanced or above level of English.

Male and female International students were used in order to highlight any domain-specific gender differences in patterns of response suggested by previous research [Gerrard, 1995]. The Egyptian student group was all male in order to avoid such gender differences as a complicating variable in examining any salient cultural patterns.

The Egyptian students were aged between 15 and 31. The male International students were aged between 23 and 29, and the female International students, between 22 and 35. The male International students represented five different countries, as did the female students, none being from Egypt. All respondents came from comparatively wealthy backgrounds as evidenced by their ability to afford study at English Language Schools and in the case of International students, to travel in order to do so. The Egyptian students however had very limited experience of travel abroad, most of that being restricted to Arab states and brief holidays outside of the region [Appendix II]. All respondents were well-educated, having either University or technical education or being in the process of working towards such a level. All had experience of the Internet and none had accessed the web sites used in the experiment before.

2.3 MATERIALS

Since all respondents were all students of English, they all had a common interest the material chosen. It was decided to use cards for the sorting process rather than an interactive interface as they permitted rapid and efficient sorting. It was not practical to pre-select sites with which the respondents were not acquainted, although it was subsequently found that none of the sites had been accessed by any of the respondents

before. A list of the sites used was furnished to respondents after each session and most expressed an interest in following them up.

Twelve pages were selected to represent a cross-section of different web sites offering English Language learning resources to both teachers and students on-line, and each was the opening page of a web-site. Pages were randomly numbered from one to twelve for recording purposes.

The creation of cards for sorting from web pages on-line presents problems with presentation as noted by [Upchurch 1999] and [Griffin 2000] and some modification was necessary. In the case of card numbers 1 and 8, the background colour appeared too intense and was modified in the web page source code to produce a lighter print. In card numbers 7 and 9, coloured text had insufficient luminosity and was adjusted in Adobe Photoshop 6. The pages were displayed in Internet Explorer 5 in full-screen display mode at a display resolution of 800 x 600 pixels. Extraneous features such as menus and other browser toolbars were removed as recommended by [Rugg and McGeorge 1997] but scroll-bars were retained to indicate to respondents the extent of each page. .Although there is considerable variation in colours between different monitors and monitor types, in order to recreate as closely as possible the overall experience and, in particular, to reproduce the luminosity of colours, the pages were printed out in full colour at the highest available quality on A4 glossy photo paper with a photo quality inkjet printer. These were then laminated for strength and durability. The same cards were used in all sessions. Copies of the cards and a list of the web sites used may be found in the Appendix III.

2.4 PROCEDURE

The eighteen sessions used in this study were conducted over a period of forty-five days from 1st August 2001 to 15th September 2001. Five of the female International students were all interviewed on the same day at the same school in consecutive sessions, the sixth being interviewed in a different school two days later consecutively to the first of the International male respondents. The Egyptian male respondents were all interviewed between 13th August 2001 and 15th August 2001 in Alexandria, Egypt, in sessions before and after English classes. Data collection sessions with the remaining International male students took place on the 13th and 14th September 2001, the first four in consecutive sessions. The same procedure was used for all respondents in all sessions. However, laddering sessions [Rugg, and McGeorge, 1995] based on the constructs generated in the data collection sessions were conducted with two Egyptian respondents after the main sessions. At the end of each session all respondents were asked not to communicate what had transpired in the data collection sessions to any other student.

At the beginning of each data collection session the respondent was given background information regarding the general nature of the research (internet resources for English Language learning) and written instructions were given explaining the method [Appendix IV]. These were presented in appropriately simplified English [Brislin 1986, Day and Evers 1999] and then a ‘ Sort’ [Rugg and McGeorge, 1997] was conducted with each respondent using cards from a different domain (‘Houses’, [Appendix X]) until all questions were answered and it was clear that the respondent understood the

task. It was made clear to the respondent that he or she could use ‘don’t know’, ‘not sure’, or ‘other’ as categories and that he or she could have as many or as few categories as he or she wished. All spoken instructions followed scripts in appropriately simplified English [Appendix IV] as warranted by the circumstances and concept-checking questioning was used to confirm comprehension. When it was clear that the respondent was ready to proceed, he or she was given all of the cards and asked to study them before beginning the sort. The respondent was asked to indicate when he or she was ready to start sorting and the time was noted. For each sort the respondent stated the construct used and named the categories into which the cards had been sorted, announcing the numbers in each group.

Results were recorded verbatim as given by the respondents and the precise wording was reported back to the respondent for confirmation. Card numbers for each category were likewise repeated and checked with the respondent. Where incorrect English made the respondent’s choice of words unintelligible, elucidation and re-wording was requested. At all times the researcher avoided supplying words in relation to any construct, restricting himself to indicating comprehension, making requests for re-wording or inviting periphrasis where the respondent had difficulty in expressing the construct simply in English. Any comments made during sorting were also recorded by the researcher. Full details of all data collection sessions may be found in Appendix I.

It was noted that, counter to instructions, subjects tended to announce the construct on which the sort was based prior to sorting and then to name the categories as they sorted them. When asked to reiterate the name of the construct they adhered closely to their

original pronouncement. Some respondents attempted to combine criteria in the initial sort. When subjects ran out of criteria and expressed a wish to continue, the dyadic elicitation technique (the respondent is asked to identify the main difference between two randomly selected cards) was used in two cases to stimulate identification of further criteria. In a two other cases triadic elicitation (identification of the differences/similarities between three cards) was required to stimulate further sorting, dyadic elicitation having been necessary in the 'toy' sort.

When all criteria were exhausted, the respondents were asked to complete a form [Appendix V] containing Likert scales for each card with the range 'Not good at all' to 'Very good' in response to the question 'How good does the web-site seem to be?'. From these scales a percentile figure was generated for each page. In addition respondents were asked to complete a short questionnaire giving brief information about themselves including their internet, travel and international media experience [Appendix V].

At no time during the data collection session was the word 'quality' used by the researcher, either verbally, or in written materials given to the respondents.

The laddering sessions, conducted with two Egyptian respondents, were carried out after all other processes were completed. Constructs generated by the respondents during the card sorts were selected on the basis that they did not represent easily observable features of the cards (such as bright colours), and the respondents were asked to explain features of cards that contributed to the generation of the construct:

questions were asked that typically began, ‘How can you tell that the card is…?’. This process was repeated until either a visible attribute of the card was generated or it was clear that a line of questioning would be unproductive (e.g. would be irritating to the respondent or produce circularity).

2.5 PRACTICAL EXPERIENCE

[Rugg, and McGeorge, 1997] recommend that the number of results be counted after each sort to ensure that none has been missed. With a large number of cards, Griffin [2000] found that results were easily missed even with careful notation: it was found that with twelve cards all results could be easily counted in. During piloting, a notation was tried using a grid with vertical columns for the cards and rows for the constructs and categories. Cells were then filled in giving a representation of results which would show up any absences instantly. This would be especially valuable for large numbers of cards. However it was found to be confusing when respondents generated five or more categories as responses could be easily misplaced in the wrong column or row under experimental conditions. It was therefore rejected from the experimental design, although used later for summary of results [Appendix I].

Some of the data collection sessions were recorded on audio tape, however several respondents expressed unease about recording and, in Egypt, where air-conditioning was necessary, the background noise rendered recordings useless. Some recordings that were made contained very long periods of silence and without visual cues were of little assistance. Video recording of the sessions would, without doubt, have provided the

most valuable data for review but would require absolute respondent acceptance in order to avoid disruption of the experiment.

CHAPTER 3 – RESEARCH RESULTS

3.1 RESULTS

Results recorded for each respondent can be found in Appendix I. Individual constructs and their categories are recorded in the order in which they were generated and the card numbers to which they were applied are marked. Dyadic or triadic elicitation, where required, has been shown at the point in the session where it occurred. The quality ratings for each card generated by each respondent are also shown.

Comments, where applicable, are noted for the criteria and categories, and notes made by the researcher about the respondent's attitude to the sort and the way the task was addressed are also recorded.

Respondents were able to understand the concept of card sorts quickly and used them to generate a range of sorts based on their own constructs. Quality assessment on Likert-type scales was generally easily grasped. However, Chinese respondents, needed more clarification before proceeding with the Likert scale task.

3.2 NUMBERS OF CONSTRUCTS AND CATEGORIES USED

A total of eighty-six constructs was identified across the three groups of students. Table 1 shows verbatim constructs generated by the Egyptian male group.

Table 1 Verbatim constructs generated by the Egyptian male respondents

Respondent	Construct	No of Categories
1	Way you see the page	2
1	Commercial (advertisements)	2
1	Attractivity	2
2	Attractive	12
2	Practical	12
2	Attitude of the site	6
2	Background colour	6
2	Linkages to other English sites	2
3	Appealing of the page	4
3	Possibility of studying in foreign Universities	3
3	The most clear benefits of the web-site	5
3	The core of the site	5
3	The stressing/functional point of the site	4
4	Which web-site is easiest to use	4
4	Which web-site makes you want to use it	4
4	Which gives you more information from outside appearance	4
4	Which web-site would you recommend for a friend	4
5	Age of learning	2
5	Additional services	2
5	The look of the web-site	2
5	Finding information	4
5	If the site is attractive or not	3
6	Style	5
6	Columns and lists	2
Number of Constructs: 24		

Table 2 shows those generated by the International male group and Table 3, those of the International female group. The tables also show how many categories were used for each construct. Some constructs appear to be the same (for example ‘Colours’, as generated by different respondents): these have been identified separately.

Table 2 Verbatim constructs generated by the International male respondents

Respondent	Construct	No of Categories
7	Vivid	2
7	How clear it is	2
7	More professional	2
7	At a glance intuition tells me not good	2
7	Heavy colour	2
7	Using Flash software	2
8	Style	4
8	Number of items in single menus	4
8	Navigation of the site	6
8	Aim	3
8	Additional marketing purposes	2
8	Purpose	2
8	Advantage	2
9	First impression, catch your attention	3
9	Colours	3
9	Scroll bar	3
10	Serious places to study	5
10	Places where I can learn English	4
10	Pleases my eyes	3
10	Way they offer me information	4
10	Places to study English and get cultural information	3
11	Background	2
11	Visual pollution	2
11	The way things/information is organised	2
11	The graphics	3
11	Search boxes	2
11	Lists of links to other parts of web-site	2
11	Advertising banners	2
Number of Constructs: 28		

Other constructs share similarities (for example ‘Attractivity’, ‘Attractive to me’ and ‘Attractive’) and have also been listed separately. Constructs include observable ones such as ‘Images’ and ‘Scroll bar’, and unobservable ones such as ‘Age of students’ and ‘Target market’. Subjective constructs include ‘Colours that attract me’ and ‘Which ones I would choose’ and are based on the personal taste of the respondent whereas

objective constructs like ‘Linkages to other web sites’ and ‘Advertising banners’ are visible to anyone looking at the card.

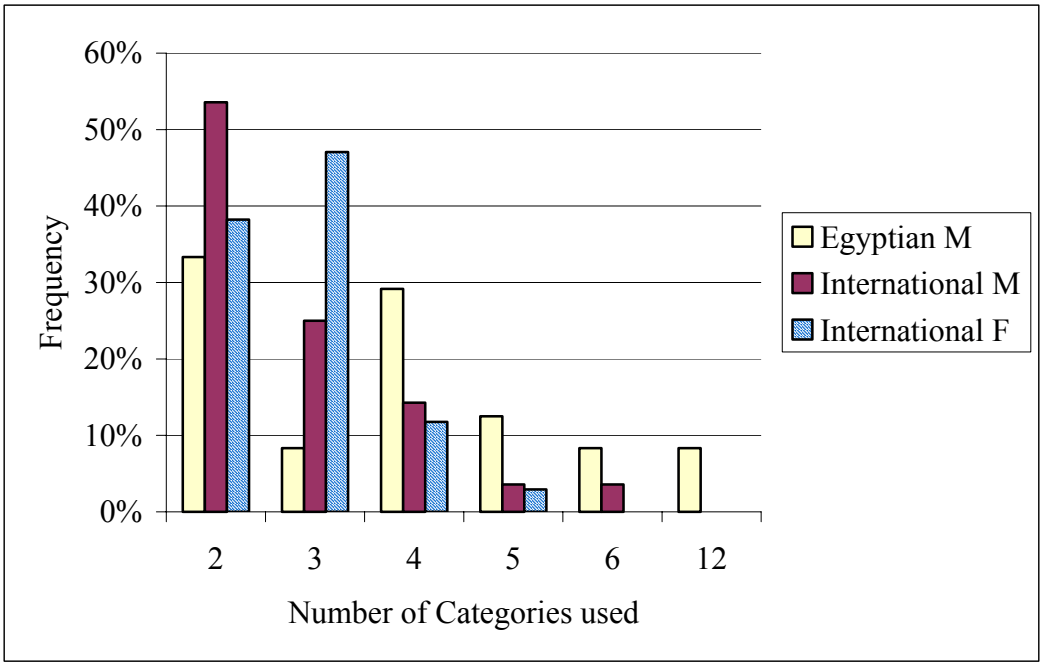
Table 3 Verbatim constructs generated by the International female respondents

Respondent	Construct	No of Categories
12	Which is more academic	3
12	Which website I want to work as editor	2
12	Which pages look dull	2
12	Which pages are more alternative	2
12	Which one, when I first open then I want to continue	2
12	Which one is more convenient for English Learner	2
12	Which colour is more beautiful	2
12	Which pages are designed better (using flash, photoshop etc)	2
12	Which pages are more interesting for me to log on	2
12	Attractive to me	3
12	Which pages are more suitable for young learners	2
13	Which ones I would choose	4
13	First impression	3
13	Colours	3
14	Information on first sight	3
14	Colours that attract me	3
14	The layout	3
14	Images	3
14	At the first look	3
15	Who the web-site is for	3
15	What they offer	2
15	How clear it is	2
15	Colours	3
16	Sites I will check first	5
16	Writing and ideas	4
17	If I would try them or not	3
17	Friendliness	2
17	Effectiveness	3
17	How serious they are	2
17	How direct the information is	3
18	Appearance	3
18	Level of understanding	3
18	Target market	4
18	Age of students	4
Number of Constructs: 34		

The total number of constructs identified by each respondent varied overall from two to eleven. The range in number of constructs varied between the three groups: the Egyptian male group identified an average of 4.00 constructs per respondent with a range of between two and five constructs. The International male group identified an average of 5.60 constructs per respondent with a range of between three and seven constructs. The International female group identified an average of 4.86 constructs per respondent with a range of between two and eleven constructs.

The number of categories into which constructs were divided ranged from two to twelve. The ranges varied between the groups and the frequency of numbers of categories expressed as a percentage of all sorts by each group are shown in Figure 1.

Figure 1 Frequency of categories used for each construct expressed as a percentage by groups.



3.3 COMMONALITY OF CONSTRUCTS

Three verbatim constructs were generated by more than one individual and are shown in Table 4.

Table 4 Verbatim constructs generated by more than one respondent

Construct	EM	IM	IF	Total
Style	1	1	0	2
How clear it is	0	1	1	2
Colours	0	1	2	3
Key: EM = Egyptian Male **IM** = International Male **IF** = International Female				

On account of the similarity between constructs generated verbatim by the respondents [Tables 1, 2 and 3], it is necessary to group the constructs into superordinate constructs in order to show commonality between the verbatim constructs. This procedure was carried out by an independent judge, according to the instructions given in Appendix VI. The judge, a fully qualified and experienced English Language teacher, was selected on the basis of familiarity with both International and Egyptian students, and familiarity with the web. The superordinate constructs were then classified as types, either constructs of Form (relating to the appearance or style of the page) or of Content (relating to the information contained within the page) [Griffin 2000]. Where the construct could have belonged to either type it was noted as such. A table showing in detail the constructs grouped into superordinates and types can be found in the Appendix VII. The total number of verbatim constructs generated is reduced to twenty-five superordinates. Table 5 shows a summary of those groupings.

Table 5 Superordinate constructs according to type

Superordinate construct	Form/Content	No of Constructs
Academic	C	1
Advertising	C	2
Age	C	3
Alternative	F	1
Attractive	F	10
Benefits	C	2
Clarity	F/C	4
Colour	F	7
Easy to use	F	4
Emphasis of site	C	3
First impression	F/C	6
I want to work there	F/C	1
Images	F	4
Information	F/C	3
Links	C	3
Lists	F	3
Makes me want to use it	C	4
More than English	C	3
Navigation	F	4
Recommend to friend	F/C	1
Serious	C	2
Study in university	C	1
Style	F	8
Visual pollution	F	2
Who the website is for	C	4

Key: F= Form C = Content

Total Constructs:	86
Total Superordinates:	25
Total Form Superordinates:	9
Total Content Superordinates:	11
Total Combined (Form/Content) Superordinates:	5

Table 6 shows how the superordinate constructs are distributed amongst the three groups. For example, it shows that only one superordinate construct, 'Visual pollution' was generated by International males only, and only two superordinates were generated by Egyptian males only. Likewise, five superordinate constructs, representing thirteen verbatim constructs were generated by Egyptian males and International males only.

Table 6 Distribution of Superordinate constructs between groups.

Superordinate construct	Example of Verbatim Constructs Included	Form or Content	EM	IM	IF	Total
Academic	Which is more academic	C	0	0	1	1
Advertising	Commercial (advertisements)	C	1	1	0	2
Age	Age of learning	C	1	0	2	3
Alternative	Which pages are more alternative	F	0	0	1	1
Attractive	Background	F	4	3	3	10
Benefits	Advantage	C	1	1	0	2
Clarity	Places where I can learn English	F/C	0	2	2	4
Colour	Colours	F	1	2	4	7
Easy to use	Which web-site is easiest to use	F	2	0	2	4
Emphasis of site	The stressing/functional point of the site	C	1	0	2	3
First impression	First impression	F/C	0	2	4	6
I want to work there	Which website I want to work as editor	F/C	0	0	1	1
Images	Using Flash software	F	0	2	2	4
Information	Finding information	F/C	2	0	1	3
Links	Linkages to other English sites	C	1	2	0	3
Lists	Number of items in single menus	F	1	2	0	3
Makes me want to use it	Which pages are more interesting for me to log on	C	1	0	3	4
More than English	Places to study English and get cultural information	C	1	2	0	3
Navigation	How direct the information is	F	0	3	1	4
Recommend to friend	Which web-site would you recommend for a friend	F/C	1	0	0	1
Serious	Serious places to study	C	0	1	1	2
Study in university	Possibility of studying in foreign Universities	C	1	0	0	1
Style	Style	F	4	2	2	8
Visual pollution	Way they offer me information	F	0	2	0	2
Who the website is for	Aim	C	1	1	2	4
Total Superordinate Constructs: 25			24	28	34	86

Key: F= Form C = Content

A summary of commonality of superordinates between all combinations of group can be found in Table 7.

Table 7 Total superordinate constructs generated by all permutations of interview group

Respondent Groups	No of Constructs
Egyptian Males only	2
Egyptian Males	16
Egyptian Males and Intl Males only	5
Egyptian Males and Intl Males	9
Egyptian Males and Intl Males and Females	4
Egyptian Males and Intl Females only	5
Egyptian Males and Intl Females	9
Intl Males and Females only	5
Intl Males and Females	9
Intl Males only	1
Intl Males	15
Intl Females only	3
Intl Females	17

A comparatively low commonality of superordinate constructs (four) is observed between all respondent groups, and exclusive commonality (i.e. not including commonality shared across all three groups) of superordinates between pairs of groups is also low (five). However, when all instances of commonality between pairs of groups (including those shared with a third) are considered, it can be seen that the commonality between Egyptian males and International males [Table 8], Egyptian males and International females [Table 9], and International males and International females [Table 10] all have a value of nine. The distinguishing feature between these commonality values for superordinates is that the total numbers of verbatim constructs represented by the superordinates is highest for the International male/International

female pair (thirty-nine) and lowest for the Egyptian male/International male pair (thirty-one).

Table 8 Superordinate constructs – Egyptian male and International male

Superordinate Construct	F/C	Egy Male	Intl Male	Total
Advertising	C	1	1	2
Benefits	C	1	1	2
Links	C	1	2	3
Lists	F	1	2	3
More than English	C	1	2	3
Attractive	F	4	3	7
Colour	F	1	2	3
Style	F	4	2	6
Who the website is for	C	1	1	2
Total Superordinate Constructs 9		15	16	31

Table 9 Superordinate constructs – Egyptian male and International female

Superordinate Construct	F/C	Egy Male	Intl Female	Total
Age	C	1	2	3
Easy to use	F	2	2	4
Emphasis of site	C	1	2	3
Information	F/C	2	1	3
Makes me want to use it	C	1	3	4
Attractive	F	4	3	7
Colour	F	1	2	3
Style	F	4	2	6
Who the website is for	C	1	1	2
Total Superordinate Constructs 9		17	18	35

Table 10 Superordinate constructs – International male and International female

Superordinate Construct	F/C	Intl Male	Intl Female	Total
Clarity	F/C	2	2	4
First impression	F/C	2	4	6
Images	F	2	2	4
Navigation	F	3	1	4
Serious	C	1	1	2
Attractive	F	3	3	6
Colour	F	2	4	6
Style	F	2	2	4
Who the website is for	C	1	2	3
Total Superordinate Constructs 9		18	21	39

3.4 TYPES OF SORT

As indicated above [Figure 1], the number of categories into which the respondents sorted cards ranged overall from two to twelve.

The International male respondents had the highest frequency of dichotomous sorts of all the groups with the largest proportion of sorts by that group being dichotomous. The International female group showed the highest frequency of triadic sorts of all the groups with triadic sorts representing the largest proportion in that group, although closely followed by the proportion of dichotomous sorts. By contrast, the frequency of different types of sort for the Egyptian males was spread more evenly over the range. Egyptian males generated more dichotomous sorts than other types but produced more quadratic sorts than other groups and showed a tendency to sort into more categories than the other groups. There was a pronounced lack of triadic sorts generated by this group.

When examining the types of sort with four or more categories it could be seen that these divided into two types. In scalar sorts, the categories are used explicitly and exclusively to express degrees of conformity to the construct. The most extreme example in this experiment would be the use of twelve categories to express degrees of conformity to the constructs ‘Attractive’ and ‘Practical’, which in the results were labelled by the researcher with numbers one to twelve for convenience, ‘Practical 1’ being the most practical and ‘Practical 12’, the least. In discrete sorts, the categories represent separate attributes (such as ‘Yellow’, ‘Green’, etc for ‘Colours’) and cannot be used for comparison. In some sorts the respondents have used a combination of discrete and scalar categories and under the principle of exclusivity these have been classified as discrete sorts. Table 11 shows the constructs listed by respondent group and sort type.

Overall, dichotomous sorts accounted for forty-two percent of the sorts, triadic sorts for twenty-nine percent, discrete sorts for sixteen percent and scalar for thirteen percent. For sorts with four or more categories, the Egyptian male group showed a tendency to produce scalar sorts (thirty-three percent of all sorts) equal to the number of dichotomous sorts that they produced. The International male group showed a pronounced tendency towards discrete sorts. The International female group produced three discrete and two scalar sorts.

Table 11 Constructs listed by group and sort type.

Construct	No of Categories	Type of sort
Egyptian Males		
Attractive	12	Scalar
Practical	12	Scalar
Attitude of the site	6	Discrete
Background colour	6	Discrete
Appealing of the page	4	Scalar
The core of the site	5	Discrete
The stressing/functional point of the site	4	Discrete
The most clear benefits of the web-site	5	Discrete
Which web-site is easiest to use	4	Scalar
Which web-site makes you want to use it	4	Scalar
Which gives you more information from outside appearance	4	Scalar
Which web-site would you recommend for a friend	4	Scalar
Finding information	4	Scalar
Style	5	Discrete
International Males		
Style	4	Discrete
Navigation of the site	6	Scalar
Number of items in single menus	4	Discrete
Places where I can learn English	4	Discrete
Serious places to study	5	Discrete
Way they offer me information	4	Discrete
International Females		
Which ones I would choose	4	Discrete
Sites I will check first	5	Scalar
Writing and ideas	4	Scalar
Target market	4	Discrete
Age of students	4	Discrete

Summary:

	Discrete Sorts	Scalar Sorts
Egyptian Males	6	8
International Males	5	1
International Females	3	2

3.5 COMMONALITY OF CATEGORIES AND DISTRIBUTION OF ITEMS

Although there was a high level of commonality in constructs generated as evidenced by the superordinate construct groupings, the commonality of categories within those superordinates was variable. The superordinates 'Attractive', 'Colour', 'First impression' which all incorporated six or more criteria showed a high degree of commonality in categories.

For 'Colour', for example, out of categories produced by seven respondents there were four separate references to the strength or intensity of colours, while there were three references to the attractiveness of the colours: all these references were made by International students. There were three separate references to the mix of colours on the page. 'Attractive' had the highest level of commonality of category between respondents. The majority of these were generated by the Egyptian male or International female respondents and most incorporated variations on the word 'attract' although there were references to clarity and two separate respondents used the category 'Boring'. For the superordinate construct 'First impression', three respondents used variations of the word 'interest' and two referred to the desire to investigate further: all were international students.

'Style', which incorporated eight criteria had rather less commonality, incorporating a wide variety of categories including references by two respondents to 'conservative/traditional' and two references each to 'funny/comic' and 'fun'.

‘Clarity’ showed a high degree of commonality in categories generated, with the word ‘clear’ used by three of the four respondents, all international students. Three of the four respondents who generated ‘Who the website is for’ identified ‘students’ in their categorisation.

Cards 2, 7 and 12 were identified by many respondents as ‘Attractive’ and there was also a high degree of commonality in the evaluation of cards 3, 5, 9 and 11 by respondents as ‘not very attractive/not attractive/never attractive etc.’.

Cards 5 and 10 were considered by all respondents generating the superordinate construct ‘Easy to use’ as ‘Easiest/more convenient/practical etc’ while cards 3 and 7 were uniformly rated as ‘Less convenient/(Least) practical/requires skills etc’.

Cards 4, 5, and 9 were rated under the superordinate construct ‘Information’ with categories such as ‘A lot of information/You can find everything/Gives the most information etc.’ by all respondents, while cards 1 and 7 generated categories such as ‘Not enough information/I can’t find anything etc’.

Although there was no commonality of categories generated by all respondents for any single card, nor commonality of categories within any respondent group, areas of commonality of category are observable for certain cards and across groups of respondents.

3.6 USE OF ELICITATION TECHNIQUES TO AID GENERATION OF CONSTRUCTS

The majority of respondents did not request help with sorting cards when they ran out of ideas. Some respondents had requested help during the 'toy sort' and dyadic or triadic elicitation was used to stimulate further sorts but none of these respondents required further help during the main experiment. It is therefore likely that these respondents used the process of elicitation by themselves to generate further ideas as the technique does not require repeated intervention by the researcher.

There was commonality in the point at which two male respondents, one Egyptian and the other International, required help (after one sort). Both respondents generated only two more sorts, the criteria for which were generated in the dyadic elicitation. There was no commonality in the constructs generated this way. The remaining two respondents, Egyptian male and International female, who required triadic elicitation help after the third and fourth sorts respectively, both generated five constructs having derived the subsequent criteria from the elicitation.

3.7 QUALITY RATINGS

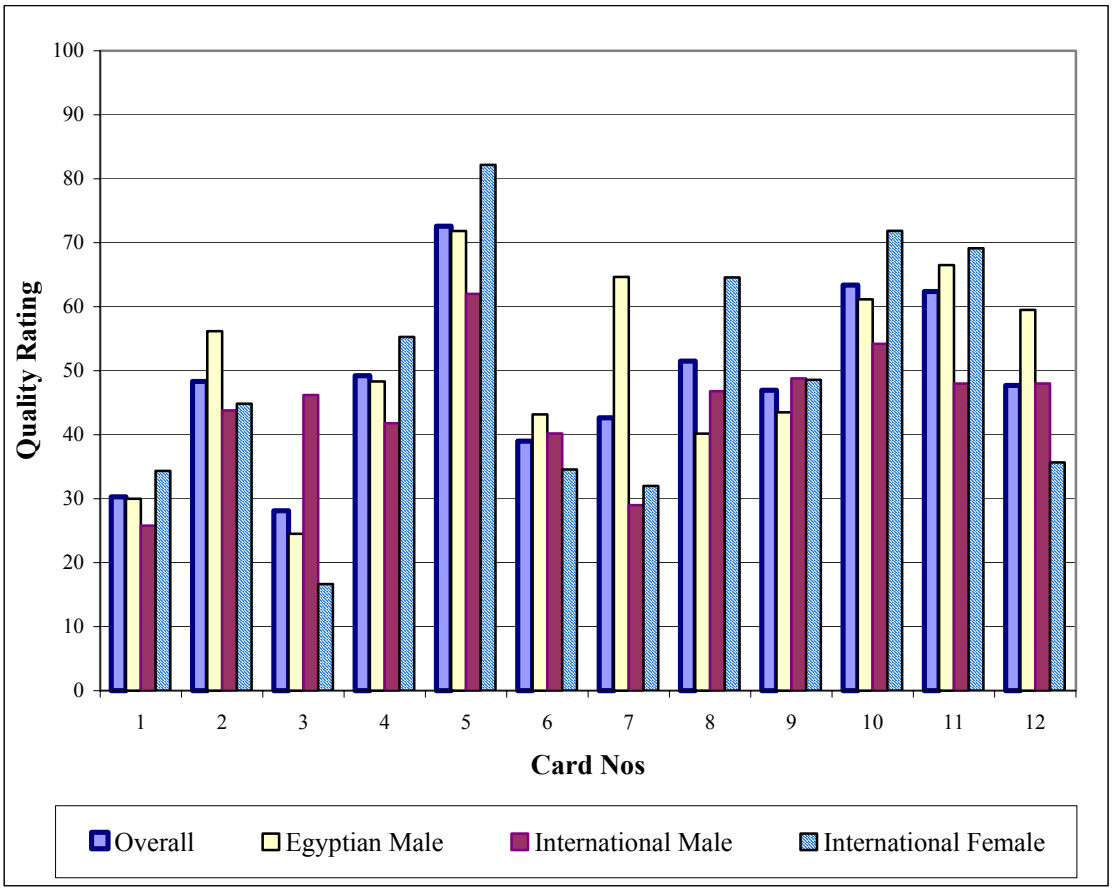
After finishing the card sorts, the respondents were asked to complete a questionnaire [Appendix V] consisting of Likert-type scales, one hundred millimetres in length, for each card with the values 'Not good at all' and 'Very good' marked at the left and right extremities respectively. They were asked to mark their rating of the cards in response to the question 'How good does the web site seem to be?'. The marks were then measured and a percentile figure generated from this measurement, one hundred being

the highest quality and zero being the lowest. A summary of all quality ratings can be found in Appendix VIII.

3.8 DISTRIBUTION OF QUALITY RATINGS WITHIN RESPONDENT GROUPS.

Figure 2 shows the average quality rating for all cards by group. The highest overall quality rating was given to card 5. It was rated highest by all groups. The lowest overall rating was given to card 3, although it was not the lowest rated by the International male group which rated card 1 lowest.

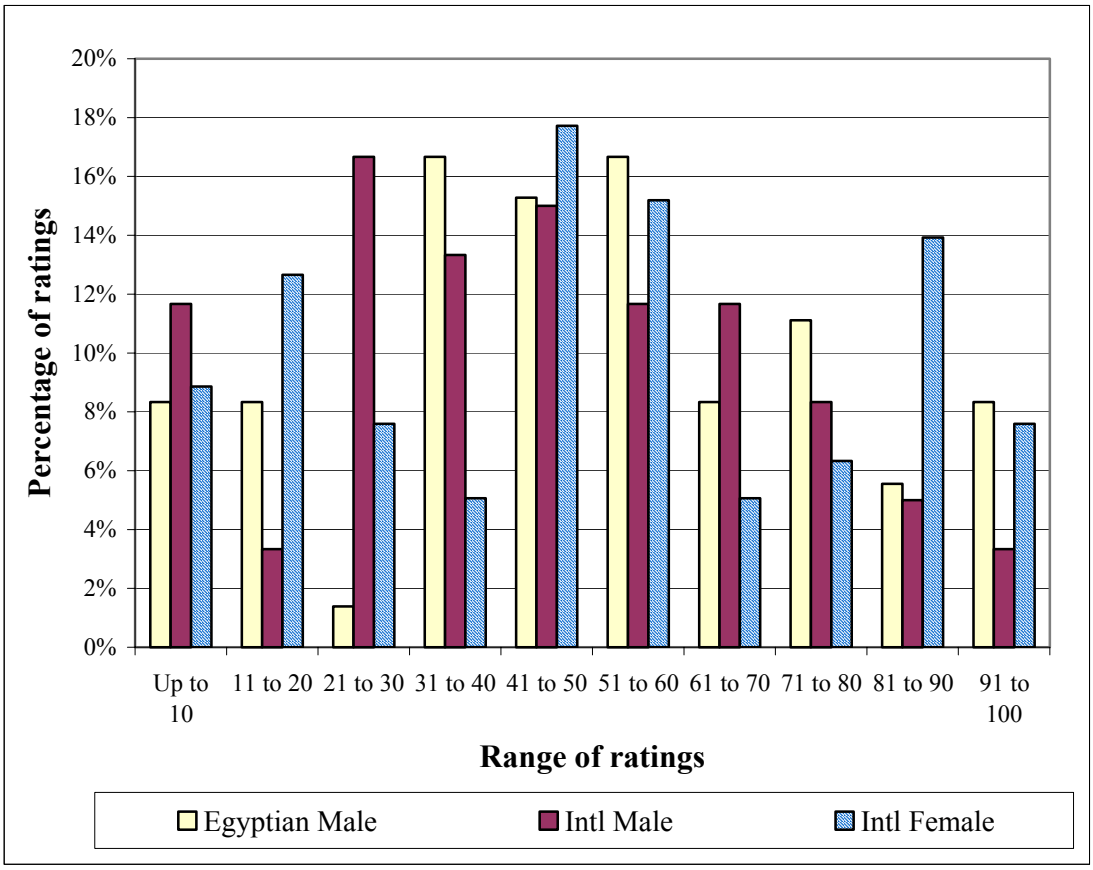
Figure 2 Average quality ratings by group for cards.



It can be seen that the Egyptian males rated card numbers 2 and 7 higher than other groups while International females rated card numbers 1, 4, 5, 8, 10 and 11 higher than other groups. While the International female group tended to assign higher ratings than the overall trend, the International male group tended to assign lower ratings. The Egyptian male group with few exceptions followed the overall trend quite closely. With the exception of card numbers 3, 7 and 8, respondent groups generally gave similar quality ratings to the cards.

The distribution of ratings by group for all the cards, shown as a percentage of instances of ratings by increments of 10 points, can be seen in Figure 3.

Figure 3 Distribution of quality ratings by group



This shows that for the International female group, although the largest percentage of ratings was in the middle of the range (between 41 and 60) there was a pronounce increase in percentage of ratings in the range 11 to 20 percent and 81 to 90 percent. Egyptian males showed a similar tendency to International males in the distribution of their ratings, with a similar absence of ratings in the range 11 to 30 percent, specifically 11 to 20 percent for international males and 21 to 30 percent for Egyptian males.

It is clear that the distribution of quality ratings is different between groups, although the distribution of ratings in the Egyptian male group shares similarities with that of the International male group.

3.9 COMMONALITY OF CATEGORIES FOR SIMILAR QUALITY RATINGS

There is no commonality of categories between all three cards rated highest by the Egyptian male group (cards 5, 11, and 7). Cards 11 and 7 have only two categories in common, where there is high commonality between cards 5 and 11. Table 12 shows the commonality generated by the Egyptian male group for cards 5 and 11. There was no emphasis on constructs of either form or content.

The International male respondents generated a higher degree of commonality between the categories for the three highest rated cards (cards 5, 10 and 9). There was an emphasis on constructs of form for these categories. Table 13 shows the commonality generated for these cards by the International male respondents.

Table 12 Commonality of categories between the two cards rated highest in quality by the Egyptian male respondents.

Superordinate construct	Type	Category Card 5 (QR: 71.8)	Category Card 11 (QR: 66.5)
Advertising	C	Without commercials	Without commercials
Age	C	Helpful for university learning	Helpful for university learning
Attractive	F	Normal, not very attractive	Normal, not very attractive
		Attractive 9	Attractive 10
		Never attractive	Never attractive
Information	F/C	You can find everything	You can find most things
		Can help you find information	Can help you find information
Links	C	Linkages to other English sites	Linkages to other English sites
Lists	F	Columns and lists	Columns and lists
Makes me want to use it	C	Awful	Awful
Style	F	Direct about English	Direct about English
		Most helpful	Most helpful
		Traditional	Traditional

Key: QR = Quality Rating, F =Form, C = Content

Table 13 Commonality of categories between the three cards rated highest in quality by the International male respondents

Superordinate construct	Type	Category Card 5 (QR: 62)	Category Card 10 (QR: 54.2)	Category Card 9 (QR: 48.8)
Attractive	F	Boring	Boring	Boring
Benefits	C	Learn online	Learn online	Learn online
Colour	F	Light colour	Light colour	Light colour
Lists	F	No lists	No lists	No lists
Navigation		Scroll just a bit or nothing	Scroll just a bit or nothing	Need to scroll not too much
Visual pollution	F	Visually polluted	Visually polluted	Visually polluted

Key: QR = Quality Rating, F =Form, C = Content

The International female respondents generated the highest level of commonality of categories between the three cards rated as being of the highest quality (cards 5, 10, and

11). There was also an emphasis on constructs of form for these categories. Table 14 shows the commonality of categories generated for these cards

Table 14 Commonality of categories between the three cards rated highest in quality by the International female respondents.

Superordinate construct	Type	Category Card 5 (QR: 82.2)	Category Card 10 (QR: 71.9)	Category Card 11 (QR: 69.1)
Alternative	F	Just common pages	Just common pages	Just common pages
Clarity	F/C	Clear	Clear	Clear
		Easiest to understand	Easiest to understand	Easiest to understand
Colour	F	Middle (light colours)	Middle (light colours)	Middle (light colours)
		Colourful	Colourful	Colourful
Easy to use	F	More convenient	More convenient	More convenient
		Effective	Effective	Effective
Images	F	Designed better	Designed better	Designed better
Makes me want to use it	C	I would try	I would try	I would try
Navigation	F	The most direct	The most direct	The most direct
Serious	C	Serious	Serious	Serious
Style	F	Friendly	Friendly	Friendly

Key: QR = Quality Rating, F =Form, C = Content

Card 3 received the overall lowest rating for quality. There was commonality between respondents' categorisations only in references to clarity, ease of use and navigation with users from all respondent groups having difficulties with the page. However, card 3 was rated higher than other cards by the International male group. Card 1 was uniformly rated by all groups as being of poor quality, receiving similar ratings from all. It generated a wide range of categories, with a high degree of contradiction between respondents and low commonality of categories. Some commonality was observed in categories such as 'Not serious/Fun/Funny/Just for fun-a game', and categories relating

to ‘Information’, such as ‘Not enough information/I can’t find anything/Can’t know what’s inside’ or ‘Ease of use’ (for example, ‘Non-effective/ Practical 9/ Less convenient etc.’).

There seems to have been a much higher level of agreement between respondents in the categories relating to good quality pages than those relating to poor quality pages when relating categories from the sorts to respondents’ ratings on the Likert scales.

3.10 LADDERING

Laddering sessions were carried out with two Egyptian male respondents after the main experiment was completed.. The results of the sessions can be seen in Appendix IX. With respondent number four, four constructs were broken down and produced between three and five levels of analysis. Respondent five was queried on five constructs and also produced between three and five levels.

CHAPTER 4 – ANALYSIS AND DISCUSSION

4.1 EXPERIMENTAL DESIGN

The design and implementation of the study did not generate any significant problems as the respondents were able to carry out the sorting process successfully and generate the required data. Instructions were standardised for all respondents and most verbal instructions adhered to scripts [Appendix IV]. As observations were to be made on cultural aspects of user perceptions, it was important not to supply any criteria for the sort. While a process such as laddering [Rugg, and McGeorge, 1995] might have generated culturally applicable criteria for use with one group of respondents, it would have been difficult to do the same for a cross-cultural group. This meant that the respondents were faced with a more daunting task than would have been the case had criteria been supplied by the researcher and may account for the low number of constructs elicited from some respondents.

4.2 CARD SORTS

A problem which may arise with card sorts is that 'taken for granted' knowledge and implicit knowledge may not be elicited during the sorts [Maiden and Rugg 1996]. Taken for granted knowledge is knowledge which it is felt unnecessary to communicate, on the assumption that it will be known by all parties to the communication. While the assumption may be false, this may manifest itself in the omission of some 'obvious' constructs by respondents, possibly on the basis that they are deemed trivial to the enquiry. However, it is also arguable that some cultural knowledge is based upon 'taken

for granted' and implicit knowledge and it must be accepted that some possibly important cultural factors may be missed during sorts as a result.

4.3 DIFFICULTIES WITH THE TASK

After initial explanation and demonstration of the task using 'toy' sorts [Rugg and McGeorge 1997] from an entirely different domain, when most misunderstandings were resolved, all respondents stated that they understood what was required in the process. In some cases dyadic elicitation was used to assist in the 'toy' sort. Nevertheless, two respondents, one from the International male group and the other from the Egyptian male group, repeatedly attempted to combine criteria in sorts and required reminding not to do so. In the case of the latter respondent, this tendency was not fully resolved before he had finished sorting.

In a few cases the categorisations for criteria seemed to lie outside what would normally be considered to be the range of convenience for that construct. For example, a female respondent used the criterion 'Which ones I would choose' and used the categories 'cluttered' and 'easily understandable'. While it is easy to speculate that 'cluttered' would be a reason not to choose a site and 'easily understandable' a reason to choose it, this kind of categorisation gives the researcher little concrete information to that effect as these categories would rest more easily with the superordinate 'clarity'. However when combined, as they were, with the categories 'the best' and 'just for fun – a game' even that conclusion cannot be drawn.

In general, most respondents in all groups, contrary to instructions, tended to verbalise the construct and category heading before they had finished sorting. After being reminded of the procedure, most continued to do so quietly, choosing to make a formal pronouncement of construct and categories. Where this happened the final pronouncement usually reiterated the initial declaration. This tendency was most pronounced in individuals with a lower ability in English. In many cases, the respondents reformulated their constructs and categories several times using a variety of periphrases before settling upon the wording recorded. No attempt was made to correct incorrect English in verbatim constructs; however, in some cases the respondent's choice of words for constructs was not intelligible and elucidation or explanation was requested by the researcher.

One of the respondents from the International Male group, and a female respondent from a pilot group, both workers in Information Technology Systems, seemed to find difficulties in generating constructs and the former requiring help through dyadic elicitation after the first sort. The female (Egyptian) respondent claimed that the technique was 'frustrating'. Further discussion with both suggested that card sorts did not enable them to communicate all their observations, and that there was some uncertainty about the nature of the constructs required by the researcher. In particular the International male respondent was concerned that one of his criteria might seem 'stupid', but he nevertheless felt it was important.

The fact that all criteria should be generated by the respondents themselves and that none were supplied by the elicitor, no indication being given of the nature of criteria

required other than they should be important to the respondents, caused hesitancy in some respondents. One respondent remarked 'I don't know what you want me to talk about', but proceeded with sorting once she had been reassured that any criteria were valued in the study. Nevertheless the respondents had all been made aware of the general nature of the study and why it was being conducted (see introductory letter to respondents [Appendix IV]). This could mean that there was a risk that otherwise important but simple constructs might have been rejected by the respondents as too trivial for the study in hand. Indeed, for example, one respondent suggested that scroll-bars might seem 'stupid' as a criterion, but felt it was important. Other respondents declined to use all the features of web pages they had identified (such as colour and amount of information on the page) during dyadic and triadic elicitation, possibly for the same reasons.

In fact, very few respondents seemed to be aware of the possibility of scrolling down the page. As this trend became apparent during successive data collection sessions, the respondents were asked after data collection whether that feature had figured in their considerations. It became clear that some had not noticed the possibility, whilst others had not considered the possibility relevant. Some asked casually at this point what else was on some of the pages. The researcher however, had taken care not to view the hidden parts of these pages in order to avoid unintentional influence on data, and was unable to answer.

The Likert scales were understood by most respondents. The Chinese respondents however all had problems with marking their ratings. The Hong Kong Chinese female

stated that she could not give a rating on the scales for some of the cards, writing 'not sure' or 'not interested' for those cards. The mainland Chinese at first both asked for clarification of which end to mark and why, and when it was pointed out that the respondent could mark anywhere on the line, the Chinese male asked how he could ascertain the middle point. The concerns were clarified in the last two cases by the researcher marking random points on scales on another answer sheet to show that all positions were acceptable. Once this was understood, the respondents were able to continue without hesitation.

4.4 NUMBERS AND TYPES OF CONSTRUCTS AND CATEGORIES USED

In order to assess how much respondents from the different groups can categorise in this domain, it is necessary to identify the numbers of constructs generated by each group. Eighty-six verbatim constructs (criteria) were generated in total and the number of constructs generated by respondents varied from two to eleven [Table 15]

Table 15 Numbers of constructs (criteria) generated by all respondent groups

Respondent Group	Total Constructs	Constructs per Respondent	Mean Constructs per Respondent
Egyptian Males	24	2 – 5	4.00
International Males	28	3 – 7	5.60
International Females	34	2 – 11	4.86
Overall	86	2 – 11	4.78

There was very little duplication between respondents of verbatim constructs. Only 'Colours' (three respondents), 'Style' (two respondents), and 'How clear it is' (two respondents), were duplicated [Table 4]. However, the extent to which verbatim constructs were condensed into superordinates [Appendix VII], for example those

grouped under the superordinate ‘Attractive’, suggests that had all respondents had full command of idiomatic English, there may have been more duplication.

The Egyptian male group generated the lowest mean number of constructs per respondent(4.00, median: 4.50 and mode: 5.00). International male respondents generated the highest mean number of constructs (5.60, median: 6.00, and mode: 7.00). Although a female respondent generated the highest number of constructs (eleven) the mean for the International female group was 4.86 (median: 4 and mode: 5). All respondents could be considered experts (as learners) in the domain of learning English. However, the Egyptian male group assessed themselves comparatively low in Internet experience (mean 44.5 on a scale of 100) compared to the International students (73.4 for males and 61.1 for females). Rugg and McGeorge [1997] suggest that much higher numbers of constructs (up to twenty or more) could be expected from domain experts. In spite of this, even those respondents who rated themselves as expert (over 90 on a scale of 100) in the Internet (Polish male web designer, 100/100 and Swiss German female student, 99/100) only generated a maximum of seven and three constructs respectively.

An interesting point to note is that both Mainland Chinese respondents generated the highest number of constructs (male, 7 constructs and female, 11) in their respective groups.

Respondents generated constructs of Form and of Content in their evaluation of the web pages. Table 16 shows the types identified by the respondent groups .

Table 16 Types of construct identified by the respondent groups as percentages.

	Form	Content	Form/Content
Egyptian Male	50%	38%	13%
International Male	57%	29%	14%
International Female	44%	32%	24%

All groups generated more constructs of Form than of Content, with the International males producing the highest proportion of Form constructs and International females producing the lowest. Egyptian males were midway between the other two groups in this respect, with the highest emphasis on Content in their sorts. It may be that this preponderance of constructs of Form reflects, in part, the comparative lack of experience with accessing English language resources claimed by all groups of students (Egyptian males average 15.50 out of 100, International males average 28.00 out of 100, International females average 50.00 out of 100 [Appendix II]),

When the number of categories used by respondents for each construct is analysed it indicates the complexity of categorisation of the respondents. Figure 1 shows the distribution of the ranges of categorisation for the three respondent groups. Table 17 shows the mean value for the ranges of categorisation for the three groups. At this level there is a pronounced tendency by Egyptian respondents for more complex categorisation within constructs, followed by the International female group and lastly the International males.

Table 17 Mean numbers of categories per construct by groups of respondents.

	Range of categorisation	Mean per respondent
Egyptian Male	2 – 12	3.98
International Male	2 – 6	2.85
International Female	2 – 5	3.09

In fact, the overall level of categorisation for all three respondent groups is remarkably similar. If the product of the mean number of criteria and the mean number of categories is taken for each group, Egyptian males and International males both generated a total of 15.93 categories per respondent, and International females 14.99 categories per respondent.

The mainland Chinese respondents showed a marked preference for low levels of categorisation. The Chinese male generated only dichotomous sorts, and the Chinese female generated two triadic sorts and the rest (nine) were dichotomous, hence for the Chinese male, overall categorisation was only twelve, while for the Chinese female (with eleven constructs) overall categorisation was twenty-four. As noted before these respondents had initial problems with the scalar nature of the Likert scales. The Hong Kong student (female), who also had problems with the Likert scales, produced however only two sorts and both of these were scalar. Plocher *et al*. [1999] suggest that in a culturally complex region such as China, substantial differences might be expected. They cite research [Chiu 1972] on the differences in categorisation and organisation of information between American and Chinese children, the former classifying on the basis of inferential-categorical style, while the later use thematic relationships for

classification. Both mainland Chinese respondents tended to categorise criteria using the dichotomies of conformity/non-conformity to the construct (e.g. Criterion: How clear it is, Categories: Clear/Not clear).

The type of categorisation used in sorts with four or more categories is informative [Table 18]. Where International males showed a distinct preference for discrete sorts (categories representing separate attributes e.g. red, blue etc.) the Egyptian males showed a tendency towards scalar sorts, with the International females showing little preference for either.

Table 18 Preferences for types of sort by group, shown as a percentage.

	Dichotomous	Triadic	Scalar	Discrete
Egyptian Males	33%	8%	33%	25%
International Males	54%	25%	4%	18%
International Females	38%	47%	6%	9%
Overall	42%	29%	13%	16%

4.5 COMMONALITY OF CONSTRUCTS

As stated above, there is very little commonality of verbatim constructs either within or between groups of respondents. The construct 'Colours' was identified by two female respondents and one International male [Table 4]. Likewise, 'How clear it is' was identified by one International male and one International female, and 'Style' was generated by one Egyptian male and one International male.

However, when superordinate constructs are examined [Table 6], there was a higher degree of commonality. Two International males only were concerned with 'Visual pollution'. Other superordinate constructs which found particular favour within respondent groups were 'First impression' (four occurrences), 'Colour' (four), 'Attractive' (three), and 'Makes me want to use it' (three) for the International female group, 'Attractive'(three occurrences) and 'Navigation' (three) for the International males, and 'Attractive' (four occurrences) and 'Style' (four) for the Egyptian males.

It can be seen that the superordinate construct 'Attractive' (ten occurrences overall) was the most favoured across the groups, followed by 'Style' (eight) and 'Colour' (seven). It is notable that most of the superordinate constructs for which commonality has been observed, both within and across groups, are constructs of Form. Only one superordinate construct of Content ('Who the web site is for'), is identified by respondents from all three groups. Although the majority of constructs generated by all respondent groups were constructs of Form, the lack of commonality in constructs of content may reflect very different concerns between individuals regarding the content of sites and may suggest a wide diversity of reasons for accessing English language resources on the web, and indeed for studying English in the first place.

Constructs held in common between the International male and female groups only (and not by the Egyptian male group) may suggest areas of cultural difference. The Egyptian males were not concerned with 'First impression' (six occurrences) nor with 'Clarity' (four), 'Images' (four) or 'Navigation' (four). The commonality in their identifications of 'Attractive' and 'Style' in the web pages may suggest that their judgements of sites

were primarily based upon superficial attributes of Form, although the absence of 'First Impression' would indicate that these judgements were not so rapidly formed. Examination of categorisation does not show what might have been meant by 'Attractive' in this group; the use of laddering [Appendix IX], however suggests that respondent four felt that attractiveness was determined by how 'strange' or 'new' the site was and by how many services were on offer and that 'personal' web sites were not attractive. The attraction to 'strange' or 'new' appearance would run counter to Hofstede's [1991] identification of Arabs as showing high Uncertainty Avoidance.

Superordinate constructs generated in common by Egyptian males and International females only, included references to the 'Age' [of the user], 'Easy to use', the 'Emphasis of the site', [Finding] 'Information', and 'Makes me want to use it'. These constructs generally focus much more on the experience of the user than do those generated by Egyptian males and International males only (focus on the content of the site), and International males and International females only (focus on the general impression of the site). These results would also seem to be independent of the levels of Internet experience of the different user groups.

The levels of commonality between different combinations of respondent group show a remarkable level of similarity [Table 7]. This similarity is independent of the experience levels of the respondents in Internet usage in general and in accessing English Language resources on the web in particular. In order to observe any differences between groups it is necessary to look at the nature of the commonality expressed in those combinations, in respect of constructs of Content and Form, and other underlying themes.

4.6 COMMONALITY OF CATEGORIES AND DISTRIBUTION OF ITEMS

The superordinate 'Attractive' showed the highest level of commonality in categories generated and showed that this was a factor considered to be important to both Egyptian males and International females. However, in the superordinate construct 'First impression', International students (male and female) identified a stimulation of curiosity or interest in a page where Egyptian students made no reference to it.

It appears that certain cards generated a high degree of commonality in categories generated across all respondent groups suggesting a level of cultural universality of perception. Card 7 was notable for generating commonality in categories such as 'Attractive', but was considered to be difficult to use, and not providing very much information. Card 5 however was considered to be easy to use and providing a great deal of information while not being considered attractive. Card 9 was similar in that it was generally considered to offer a lot of information while not being very attractive. Card 3 on the other hand was generally described as unattractive and difficult to use.

These general perceptions are of greatest interest when compared to the overall quality rankings assigned to them.

4.7 COMMONALITY OF QUALITY ASSESSMENTS AND DISTRIBUTION OF ITEMS

The fact that there was a remarkable similarity between ratings of quality for many of the cards by respondent groups, suggests that there was little cultural divergence in perceptions. If the commonality of attributes for the highest rated cards within groups is examined [Tables 12, 13 and 14], however, it can be seen that the principal are of concern for the Egyptian group was the utility of the pages. The International females were generally concerned with criteria relating to ease of use and accessibility of information, while the International males showed no identifiable thematic area of concern.

Card 9 was considered have good information but poor attractiveness and this card received the most similar ratings from all groups out of all of the cards. Quality ratings showed that Card 5 met with the highest overall level of perceived quality and most respondents across all groups were in agreement on this. From the commonality of attributes identified, it would appear that ease of use and provision of information were contributory factors in this perception across all respondent groups. In common with most of the other cards, this card was rated lower by the International male group than by other groups.

There were, however, a few cards where one group's rating was significantly different from those of the other groups. Card 7, for example, was exceptional because it was highly rated by the Egyptian group but not by the International groups. There was also little commonality in categories between Card 7 and the other two highest rated cards

by that group. However, the difference between ratings from this group and those from the other groups suggests that the Egyptians rated this card highly because it was attractive and did not consider the other aspects (ease of use and information content) to be of so much weight. Nevertheless, its quality rating is curious in the light that this card seemed to evoke general feelings of mystification and lack of understanding amongst many respondents and was considered to be unclear and difficult to use. One Egyptian respondent however used the category 'weird' and gave it a quality rating of 1/100. This alone suggests that Uncertainty Avoidance was influencing quality perceptions.

A similar but less marked disparity could be found in the ratings for Card 3. Card 3 showed the lowest overall level of perceived quality. Again, its unattractiveness and lack of ease of use seem to be the major factors in this. However, the fact that this was rated higher by the International male respondents than by other groups is especially of note since they generally assigned lower ratings. However, the distribution of ratings between International male respondents shows that two individuals gave high ratings where the other three gave low or very low ratings.

Certain cards provoked extreme reactions in quality ranking in certain individuals. Card 3 received one ranking of 9/100, three rankings of 1/100 and one of zero, and Card 7 received four rankings below 10/100 while also receiving two of over 90/100.

This expression of extreme reactions contributed to a difference between groups. It appears that the assignment of quality ratings was not distributed evenly over the range

of zero to 100 [Figure 3]. All groups placed most of their ratings around the middle of the range (between 41/100 and 50/100), with as observed, a tendency for lower ratings amongst International males and to a lesser extent amongst Egyptian males. There was a concentration of values for both groups at the bottom of the range (zero to 10/100), with an absence of values between 11/100 and 30/100, possibly reflecting a tendency to weight quality ratings to show disapproval. It is possible that this represents a tendency to 'mark down' sites perceived as 'poor' while giving less such weighting to sites perceived as 'very good'. The Egyptians however showed another peak in ratings between 71/100 and 80/100 and again between 91/100 and 100/100.

However, for the International females there were concentrations of ratings around 11/100 to 20/100 and 81/100 and 90/100 in addition to the central peak suggesting a trimodal distribution. This bears out the observation made during the data collection sessions that female respondents were more likely to express strong opinions (with facial expressions, non-verbal exclamations etc) about certain cards, which were possibly then marked up or down according to whether they were perceived as 'good' or 'poor'. This suggests that there was a tendency amongst female respondents to use the Likert scale to give weight to strong opinions. In this respect, Egyptian males showed more similarities with International female students than with their male colleagues.

4.8 MATCHING ELICITED ATTRIBUTES TO INTERNATIONAL VARIABLES

The use of a much larger Egyptian respondent group might have yielded repeated themes in the constructs generated which could then be matched to some of the

international variables suggested by Hall, Hofstede and others. From the data generated by the Egyptian group some correlations might be suggested. The themes 'traditional[look]/conservative[style]' and the contrasting 'Weird/new look' suggest a concern with the distinction between the familiar and unfamiliar. Likewise, concern with navigational features (including 'search boxes' mentioned during laddering by both respondents) reiterates concerns highlighted by El Saiid and Hone [2001] about the difficulties with search strings and may suggest Uncertainty Avoidance [Hofstede 1991]. Although Egyptian society is considered by Trompenaars [1993] to be an Ascriptive society, the references to usefulness in University study which appeared in both Card sorts and the laddering session would suggest more of an emphasis in the minds of respondents on the Achievement end of that scale. This is reinforced by the efforts of these respondents towards self improvement in the study of English (albeit at a prestigious school).

While little apparent correlation can be easily made between international variables and the data elicited by this experiment, certain cultural tendencies are suggested. The use of international variables in building cultural models may be useful in offering potential areas for investigation in cross-cultural research. Nevertheless the data elicited by card sorts would suggest that the presumption that all cross-cultural observations will conform to one international variable or another could lead to failure to identify such patterns of behaviour and modes of perception that defy this type of classification in various cultural groups. Indeed, this class of cultural factor may be precisely the one to which web page designers should make reference when designing for a target user population.

CHAPTER 5 – CONCLUSIONS AND FUTURE WORK

5.1 CONCLUSIONS

The number of constructs generated by the respondents in the card sorts and the commonality of categorisations produced show that card sorts are a valuable technique for elicitation of cross-cultural user perceptions. The experiment also shows that there were gender differences both in categorisation of attributes, and assignment of quality ratings for the cards, and that it is possible for the attributes associated with quality to be identified when card sorts are used in conjunction with Likert-type scale evaluations of quality.

The nature of the experiment meant that all respondents were required to generate their own criteria. Problems caused by the richness and variety of language generated in the card sorts arose, which made analysis more difficult especially in the identification of commonality. Although the number of constructs generated by respondents was generally lower than that predicted for respondents expert in the domain under investigation [Rugg and McGeorge 1997], it could be argued that 'taken for granted' knowledge and constructs considered 'obvious' or 'trivial' by some respondents were not generated. If this is indeed the case, then it indicates that for the purposes of elicitation of perceptions in a web design project, a set of base criteria covering 'obvious' constructs such as 'Colour', 'Density of information', 'Ease of use' etc. with an invitation to the respondents to continue with their own constructs afterwards. This pattern would need to be incorporated into the 'toy' sort as well, in order to familiarise

the respondents with the procedure. However, because of cultural differences in categorisation, for example Egyptian scalar categorisations compared with Chinese dichotomous categories, respondents would have to provide their own categories. The used of a preferred (target) value analysis [Upchurch *et al.* 2001] on the categories generated (especially those in large discrete sorts) would help to clarify the desirability of attributes within respondent groups as, for example, it is not clear whether 'Lists and Columns' is considered desirable or not by the respondent.

5.2 FUTURE WORK

This study was conducted with male-only Egyptian students in order to filter out any gender effects in the target group. This would have the effect of highlighting the masculinity-femininity dimensions of cultural behaviour. Further work is needed to incorporate data from female Egyptian students. Furthermore, other Middle Eastern nationalities were absent from the international group and more work is required to compare perceptions across the Middle East so that similarities and differences can be observed.

Initial data from the mainland Chinese is of great interest, but requires a larger sample, possibly taking regional differences into account in order to be conclusive. Both the Chinese respondents, male and female produced large numbers of constructs (six and eleven respectively) in a rapid sorting process where the majority of sorts were dichotomous. This, combined with the apparent difficulty which both had with marking degrees of opinion on a Likert scale (also suggested by the Hong Kong Chinese)

suggests that the Chinese tend to a characteristic style of categorisation which deserves further attention.

As many of the web sites are conceived, if not built, by English Language teachers (many of them experienced in their field), a study of teachers' perceptions of the quality of such sites would be of great value. It could be used to assess teachers' perceptions of the usefulness of the sites, both for their own use and for the use of their students. Such a study would show to what degree there is a disparity between teachers' perceptions of what their students need and those of the students themselves.

The disparity in verbatim constructs could, as has been suggested above, been the result of lack of proficiency in the language used for the data collection sessions. Because of the constraints of time and location, it was necessary to use an independent judge to identify superordinate constructs. Ideally, if the circumstances permitted (e.g. if all respondents were from the same learning institution), in order to identify superordinacy with more certainty, small discussion groups involving members of all three respondent groups could be brought together to discuss the criteria generated and compare their perceptions. This would enable the respondents themselves to identify areas of commonality and results could be correlated to the findings of the card sorts for validation.

Although card sorts are a useful stand-alone method for eliciting valuable cross-cultural data about user perceptions, which other techniques may not yield, the technique also

represents a useful starting point in the acquisition of data about target groups of international users in any larger programme of web site or user interface development.

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APPENDICES

APPENDIX I – SAMPLES OF RESPONDENT DATA

Respondent 2 (Egyptian Male)

Sort	Criterion	Card No.	1	2	3	4	5	6	7	8	9	10	11	12
1	**Attractive**													
		Most attractive												X
				X										
									X					
			X											
											X			
												X		
										X				
						X								
							X							
													X	
								X						
		Least attractive			X									
2	**Practical**													
		Most practical					X							
												X		
						X								
											X			
													X	
										X				
														X
								X						
			X											
				X										
									X					
		Least practical			X									
3	**Attitude of the site**													
		Tend to teach English				X	X	X				X		
		Tend to improve listening skills									X			
		English exercise site											X	
		Advertising site for university			X									
		Weird							X					
		Don't know their attitude	X	X						X				X
		Triadic elicitation required here >>												

Respondent 2 (Egyptian Male) continued:

4	**Background colour**											
	White background			X		X	X				X		
	Greenish background				X								
	Mixed colours background		X					X		X		X	
	Yellow background								X				
	Red Background												X
	Purple background	X											
5	**Linkages to other English sites**												
	Linkages to other English sites	X	X			X				X	X	X	X
	Lack linkages to other sites			X	X		X	X	X				
	Quality rating	13	17	1	53	96	38	1	56	53	97	94	44

Overall comments on respondent during sort:

Asked for help during practice: dyadic elicitation. Used as much space as possible on the table:perused all cards for a long time before sorting. Examined content closely. Forgot about 12 in the second sort until drawn to his attention . Silent during sort. Very analytical approach: high intensity/concentration. Even quality questionnaire was very carefully considered.

Respondent 5 (Egyptian Male)

Sort	Criterion	Card No.	1	2	3	4	5	6	7	8	9	10	11	12
1	**The look of the web-site**													
		Traditional				X	X	X		X	X	X	X	
		New look	X	X	X				X					X
2	**Finding information**													
		You can find everything				X	X	X			X			
		You can find most things								X		X	X	
		Few things			X									
		I can't find anything	X	X					X					X
3	**If the site is attractive or not**													
		The most attractive	X	X					X			X		X
		Maybe attractive			X			X		X				
		Never attractive				X	X				X		X	
4	**Additional services**													
		Another service to learning English	X	X						X		X	X	X
		No other service			X	X	X	X	X		X			
5	**Age of learning**													
		Helpful for university learning		X			X			X			X	X
		For before university learning	X		X	X		X	X		X	X		
		Quality ranking	6	85	48	36	74	35	99	0	8	19	51	80

Overall comments on respondent during sort:

Swift and efficient sorting - confident expression of ideas - performed a laddering exercise after sorting

Specific respondent comments:

"I have friends as web designers - we are always thinking of new users"
New look -"something new"

Respondent 7 (International Male – Mainland Chinese)

Sort.	Criterion	Card No.	1	2	3	4	5	6	7	8	9	10	11	12
1	**Vivid**													
		Vivid	X	X					X			X		X
		Flat			X	X	X	X		X	X		X	
2	**How clear it is**													
		Clear	X		X		X					X		X
		Not clear		X		X		X	X	X	X		X	
3	**More professional**													
		More professional			X	X	X			X	X		X	X
		Not professional	X	X				X	X			X		
4	**At a glance intuition tells me not good**													
		Good impression	X	X	X				X			X		X
		Not interesting				X	X	X		X	X		X	
5	**Heavy colour**													
		Heavy colour		X		X			X					X
		Light colour	X		X		X	X		X	X	X	X	
6	**Using Flash software**													
		Flash picture	X				X		X			X		X
		No Flash		X	X	X		X		X	X		X	
		Quality Rating	46	24	82	46	56	48	25	35	65	71	24	29

Overall comments on respondent during sort:

Sorted swiftly and confidently, although some hesitation between sorts

Specific respondent comments:

Clear - "at a glance I can get the meaning"
Not clear - "Something bothers me"

Respondent 8 (International Male – Polish)

Sort	Criterion	Card No.	1	2	3	4	5	6	7	8	9	10	11	12
1	**Style**													
	Eyecatching graphic			X					X					X
	Plain				X	X	X				X			
	Funny		X					X		X				
	Serious											X	X	
2	**Purpose**													
	Home base for browsing			X					X			X	X	X
	No external things		X		X	X	X	X		X	X			
3	**Advantage**													
	Learn online		X			X	X	X	X	X	X	X	X	
	Doesn't provide facility to learn English online			X	X									X
4	**Additional marketing purposes**													
	A touch of marketing		X								X	X		X
	Don't have any marketing			X	X	X	X	X	X	X			X	
5	**Aim**													
	Teachers as well as students		X				X	X						
	Only for students			X	X	X			X	X	X	X	X	
	Very difficult to specify who it is for													X
6	**Navigation of the site**													
	Not very clear - (difficult)				X						X			
	Very simple - basic (very easy)							X						
	Looks like a portal (a bit difficult)					X	X			X				
	I cannot find navigation (most difficult)								X					
	List of links (easier)		X									X	X	X
	Very easy to find what you are looking for (easiest)			X										

Respondent 8 (International Male – Polish) continued:

7 **Number of items in single menus**												
two or three items						X	X					
more items but very clear		X									X	X
many items, difficult to read	X		X						X	X		
lists too long				X	X			X				
Quality rating	38	100	1	43	59	31	5	42	33	75	84	93

Specific respondent comments:

Eyecatching graphic - "cool" Plain - "mostly"
Home base for browsing - "you can go to other places" No external things - "single topic only"
A touch of marketing - "include banners/advertising"
Teachers as well as students - "can find resources" Only for students - "to learn, to check offers of opportunities"
Not very clear - (difficult) - "difficult to read, background terrible" Looks like a portal (a bit difficult) - "links, categorised"
List of links (easier) - "horizontal or vertical" Very easy to find what you are looking for (easiest) - "young style"

Respondent 12 (International Female – Mainland Chinese)

Sort	Criterion	Card No.	1	2	3	4	5	6	7	8	9	10	11	12
1	**Attractive to me**													
	Most Attractive								X					
	Common		X	X								X		
	Not attractive				X	X	X	X		X	X		X	X
2	**Which is more academic**													
	Most academic					X	X			X	X	X		X
	Less academic		X	X					X					
	Not academic				X			X					X	
3	**Which pages are more interesting for me to log on**													
	More interesting		X	X					X			X		
	Less interesting				X	X	X	X		X	X		X	X
4	**Which pages are more suitable for young learners**													
	More suitable		X	X								X		
	For adults				X	X	X	X	X	X	X		X	X
5	**Which pages are designed better (using flash, photoshop etc)**													
	Designed better			X			X				X	X	X	
	Not designed so well		X		X	X		X	X	X				X
6	**Which colour is more beautiful**													
	More beautiful			X			X		X				X	X
	Not so beautiful		X		X	X		X		X	X	X		
7	**Which one is more convenient for English Learner**													
	More convenient			X			X					X	X	x
	Less convenient		X		X	X		X	X	X	X			
8	**Which one, when I first open then I want to continue**													
	Want to continue		X	X			X		X	X	X	X		
	I don't want to continue				X	X		X					X	X
9	**Which pages are more alternative**													
	Alternative pages			X					X					
	Just common pages		X		X	X	X	X		X	X	X	X	X

Respondent 12 (International Female – Mainland Chinese) continued:

10 **Which pages look dull**												
Dull			X			X					X	
Common	X	X		X	X		X	X	X	X		X
11 **Which website I want to work as editor**												
I want to work there	X	X			X					X		
I don't want to work there			X	X		X	X	X	X		X	X
Quality Rating	75	90	1	6	86	17	52	51	68	88	48	52

Overall comments on respondent during sort:

The respondent sorted rapidly and confidently and successive sorts followed each other without pause

Respondent 17 (International Female – Brazilian)

Sort	Criterion	Card No.	1	2	3	4	5	6	7	8	9	10	11	12
1	**How direct the information is**													
	The most direct			x			x			x		x	x	
	Intermediate				x	x					x			
	The least direct		x					x	x					x
2	**If I would try them or not**													
	I would try						x				x	x	x	
	In second place			x		x				x				
	I don't feel attracted		x		x			x	x					x
3	**Friendliness**													
	Friendly			x		x	x			x	x	x	x	
	Unfriendly		x		x			x	x					x
4	**Effectiveness**													
	Effective			x			x	x		x	x	x	x	
	Intermediate					x								
	Non-effective		x		x				x					x
5	**How serious they are**													
	Serious			x		x	x			x	x	x	x	x
	Not serious		x		x			x	x					
	Quality ranking		12	38	18	48	61	16	17	50	87	55	61	54

Specific respondent comments:

The most direct - "You can go directly to specific topics"
The least direct - "I don't know what they are about"

APPENDIX II – RESPONDENT DATA

Respondent	Sex	Nationality	Date of Interview	Age	Occupation	Level of Education
1	M	Egyptian	08/13/01	22	Student	Bachelors
2	M	Egyptian	08/13/01	25	Chemist	Bachelors
3	M	Egyptian	08/14/01	22	Graduate	Bachelors
4	M	Egyptian	08/14/01	15	IGCSE Student	School
5	M	Egyptian	08/14/01	22	Student	Bachelors
6	M	Egyptian	08/15/01	31	Stock Exchange dealer	Bachelors
7	M	Chinese	08/03/01	23	Student	Bachelors
8	M	Polish	09/13/01	25	Web-site designer	Bachelors
9	M	Swiss F	09/13/01	27	IT Systems Engineer	Technical
10	M	Peruvian	09/13/01	29	Lawyer	Bachelors
11	M	Brazilian	09/14/01	29	Teacher Training Assistant.	Bachelors
12	F	Chinese	08/03/01	25	Student	Bachelors
13	F	Swiss G	08/01/01	22	Student	Bachelors
14	F	Swiss G	08/01/01	28	Teacher	Bachelors
15	F	Swiss F	08/01/01	23	Student	Bachelors
16	F	Hong Kong	08/01/01	26	Student	Bachelors
17	F	Brazilian	08/01/01	35	Journalist	Bachelors
18	F	Italian	08/01/01	25	Student	Bachelors

Respondent	Resp. Group	Internet Experience (/100)	ELT web access (/100)	Prior acquaintance with sites	Intl media exposure (/100)	International travel experience
1	EM	35	0	Nil	42	No
2	EM	37	26	Nil	49	4 yrs Qatar, 1 wk Turkey
3	EM	34	5	Nil	23	Italy when young: holiday
4	EM	57	33	Nil	51	Europe (2wks)
5	EM	68	21	Nil	66	No
6	EM	36	8	Nil	79	No
7	IM	71	5	Nil	18	1mth UK
8	IM	100	64	Nil	99	3 years
9	IM	67	14	Nil	10	2-3 Years
10	IM	62	44	Nil	35	1 Year ?
11	IM	67	13	Nil	70	6 Years
12	IF	50	83	Nil	1	2mth UK
13	IF	99	27	2	53	7mths
14	IF	57	49	11 (heard of)	66	7mths
15	IF	51	67	Nil	-	2yrs
16	IF	22	51	Nil	4	4mths
17	IF	88	62	Nil	76	10mths
18	IF	61	11	Nil	29	1.5yrs

APPENDIX III – WEB PAGES USED IN THE EXPERIMENT

(A copy of this list was supplied after the data collection session to the respondents.)

The web sites used in this experiment as accessed on 25th July 2001, and displayed on the cards were as follows (by card number):

1. http://www.eslcafe.com Dave's ESL Cafe
2. http://www.englishbaby.com/ English, baby!
3. http://schmooze.hunter.cuny.edu:8888/ Schmooze University
4. http://www.ruthvilmi.net/hut/LangHelp/ Ruth's Language Help Pages
5. http://deil.lang.uiuc.edu DEIL/IEI LinguaCenter
6. http://www.eslpartyland.com/ Karin's ESL PartyLand
7. http://drive.to/autoenglish Auto-English
8. http://eleaston.com/index.html E. L. Easton
9. http://www.esl-lab.com/ Randall's ESL Cyber Listening Lab
10. http://vlc.polyu.edu.hk/ Hong Kong Virtual Language entre
11. http://www.smic.be/smic5022/ English Exercises Online
12. http://members.tripod.com/~towerofenglish/index.htm The Tower of English

1.

Advertise Job Vacancy | Banner Advertising | Announcements | Bookstore | Chat | Forums | Help Center | Hint of the Day | Ideas | Jobs | Photos | Sponsored Links

---

EF Supports Dave's ESL Cafe

Dave Sperling Presents the One and Only ...

Dave's ESL Cafe

"The Internet's Meeting Place for ESL/EFL Students and Teachers from Around the World!"

"College isn't the place to go for ideas."
Hellen Keller
◆ ◆ ◆

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ESL Cafe News

2.


English, baby!™
It's REAL.
HELLO... WELCOME TO EBABY! WHAT IS EBABY? LOGIN REGISTER
NEW TODAY
REAL: Joe gets a price check
LESSONS
music, movies, slang...
FEATURES
sports, holidays, culture...
Our Planet, TODAY
news - events - weather
ESPOTS
china, brazil, argentina...
ETOPICS
jokes, x-files, fashion...
HOROSCOPES
Select a Sign
HOT LINKS
EXPERIENCE ENGLISH
Study in America!
Click Here
Teachers! Schools!
We can help you. Click Here!
SEARCH Ebaby! for:
Search
SLANG WORD OF THE WEEK delivered by email - FREE!
Get the WEEKLY NEWSLETTER delivered by email - FREE!
"Ebaby! is so cool!" Read what people are saying about Ebaby!
Fill out the Ebaby! Survey today and win a cool T-shirt!
LINK TO EBABY!
EBABY! PALS
MESSAGE BOARDS
GUESTBOOK
CHAT
eCARDz
ETEAM
MEMBER GALLERY
LIVEPEOPLE

Welcome to schMOOze University!

There have been **564240** visitors to the page so far!

ESL/EFL Related Pages

Using a Modular Approach to schMOOze with ESL/EFL Students

The Educational MOO Environment: A User Profile

Collaborative MOO Project

International English Language Institute

Virtual English Language Center

schMOOze U. is a small, friendly college known for its hospitality and the diversity of the student population. It was established in July, 1994 as a place where people studying English as a second or foreign language could practice English while sharing ideas and experiences with other learners and practicers of English. Students have opportunities for one-on-one and group conversations as well as access to language games, an on-line dictionary, virtual stockbroker and many language games. Although schMOOze U. was founded with the ESL/EFL students in mind, it welcomes all people interested in cross-cultural communication.

Things To Do

- See schMOOze with enCore! (Java-enabled browsers only)
- Visit schMOOze! (Java-enabled browsers only)
- Request a Character
- schMOOze Newspaper

Language Help

Welcome to Ruth's Help Pages! These documents are written to help students and researchers globally, and particularly those at Helsinki University of Technology, to improve their English.

- Aural Help (Listening Help)
- Business Help
- CALL Help
- Creative Help
- Culture Help
- Encyclopedias, etc.
- Dictionary Help
- DL EFL/ESF & TESOL Distance Learning Courses Help
- EFL/ESL & TESOL Publications Help
- Email, News & Discussion Lists
- Email Writing Help
- English for Science and Technology
- Glossaries
- Grammar Help
- HUT VLC Help
- Idioms and Phrasal Verbs
- Interactive Exercises
- International Help
- Language Fun and Games Help
- Language Search
- Literature Help

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Studying for TOEFL? IEI Online has something coming of interest to you!

Grammar Safari Explore English Grammar and Vocabulary on the Web	**Interactive Listening** Practice your listening comprehension with authentic materials from the Web	**Ex*Change** Read articles written by ESL learners and submit your own work
Holidays Learn about American Holidays and Cultural Events	**Teacher Resources** Links to LinguaCenter resources for teachers	**Classes** Web pages designed by and for IEI, ESL and DEIL classes
Read Links to some of the interesting things you can read on the Web	**Listen** Links to some of the interesting things you can listen to on the Web	**ESL on the Web** Links to other ESL Resources on the Web
Test Preparation Web-based resources to help you prepare for TOEFL, TOEIC, GRE and GMAT	**DEIL** Learn more about the **Division of English as an International Language** at the University of Illinois	**IEI** Learn more about the **Intensive English Institute** at the University of Illinois

6.


Karin's
ESL PartyLand
For ESL Students and Teachers
The Cool Way to Learn English
Updates and Announcements
Students
Teachers
Our student pages have over 75 interactive quizzes, 15 discussion forums, interactive lessons on a variety of topics, a chat room, and lots of great links.
On the teacher side, we provide you with loads of lesson plans and reproducible materials to use in class. We also have discussion forums, ideas for communicative practice activities, a chat room, a job board, links, and more.
Tell A Friend About PartyLand
Your friend will receive the following message:
I found this site called ESL PartyLand--it's a fun place to practice your English. You can take quizzes, meet other ESL students and teachers, and do lots of other interesting things there. I think you'll like it.
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7.


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Busco una editorial para mis cursos de inglés. Editoriales hagan clic aquí.
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AUTO-ENGLISH
NO TIME? NEED ENGLISH? USE A CAR?
Welcome to Auto-English, Rob Wilson's ESL website. Here you will find : -
JUNGLE
The Aquarium
Mistakes Desert
Search the Web
Go
VIRTUAL VEGAS
Choose your game now!
Black Jack
Ok
The Internet Identity Company
www.
Domain Check
.com
GO

Two mice sat in their hole watching Cat lurk outside. "I know how to make Cat go away," said the first mouse. "How?" the second mouse asked in surprise.

"Watch! Bow, wow!!!" barked the first mouse. Peering through their hole in the wall, they saw Cat running away in fear.

"Ah, see the benefit of knowing another language!"

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ENGLISH *online*

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A Fun Day	American Slang	Dear Mom and Dad
College Life	Camping Under the Stars	Driving Road Test
Getting Around Tokyo	Dinner Time	First Mountain Bank
Heavenly Pies Restaurant	Emergency Call	Friday Night Mishaps
How was your day?	English Language Center	Hotel Check-In
Hello. May I help you?	Good Old Blues	Home Repairs
Hotel Reservations	Making Invitations	Housing Complaints
Immigration and Customs	Nice to Meet You *	It's a Home Run!
Is your dad home?	No Place Like Home	Movie Review
Likes and Dislikes	Party Time!	Personal Problems
Lost in the Crowd	Picnic Preparations	Professional Babysitting
Randall's Introduction	Radio Advertising	Radio Commercial
Rental Shop (Version B)	Saturday's Chores	Rental Shop (Version A)
Shopping for the Day	So, what's the matter?	Street Market
Sightseeing in Town *	Taped Library Tour	Taxi Ride (Difficult)
Spending Money	Taxi Ride (Medium) *	The Ideal Woman
Talking About Families	Theft in the Park	Travel Arrangements *

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- Gap fills with MCQ
- Synonyms

Putonghua for beginners
- Guest book
- Software
- Q & A Help
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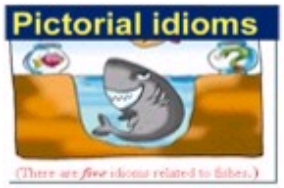

Research and Reference

Web Concordancer

keyword: equal to Go

Net Dictionary

English: equal to Go

Teachers' toolbox

MagicMarking *online* | Personal Web Site
QuizMaker | ClozeMaker
Xword Generator | TTS Dialog Author

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11.


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Get lists of all available materials by clicking on Exercises or Handouts
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Text-writing
Miscellaneous
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EXERCISES to do online
Vocabulary
Grammar and dictation
Reading comprehension
Miscellaneous
Links
For the 'light' version of the Handouts section, click here, for the 'light' version of the Exercises section, click here.
The selection of exercises and handouts is still growing. So, come back regularly if you don't find what

12.


Hosted by tripod
VISIT EXCITING DESTINATIONS FOR LESS!
E-mail this page to a friend
Tell me when this page is updated
The Tower of English
Lobby
Welcome to the NEW Tower of English!
The ESL Guide to the Internet!
Search The Tower of English or The Web
Find!
Site Map
Tower search
Web search
powered by FreeFind
All Sites A-Z
Tower of English Theme Park
Advertising
Animals
Art
Business English
We tore down the old Tower, and put up this shiny new one! We hope you like it! The Tower is here to help ESL students and teachers quickly find the best places on the Internet to practice real English! You'll find about 300

APPENDIX IV – INSTRUCTIONS AND SCRIPTS (SIMPLIFIED ENGLISH) USED WITH RESPONDENTS.

Introductory letter

CARD SORT EXERCISE ON INTERNET USAGE

Please read this letter before completing the sorting exercise and the attached form.

As you probably know, there are many opportunities to access English Language learning resources on the Internet, and this is one of the areas that is currently being researched by University College Northampton. As part of this research we are investigating the factors that encourage and discourage people to use web-sites for resources. We would like to find out more about these factors.

We would be grateful if you could spare approximately ***30 – 40*** minutes of your time to complete the Sorting Exercise. Afterwards, please complete the questions on the attached form. We would like to point out that there is no right or wrong answer to sorting the cards or to the questionnaire, what we are interested in is your personal views.

Thank you for your time and co-operation

Instructions for Respondents on carrying out Card Sorts

The researcher will give you some cards to sort. Each card will have a picture on it. We would like you to choose a topic or "criterion" for sorting: use one criterion at a time and place the cards in groups or categories and name them.

Each time you sort the cards, please tell us what the criterion was and what the categories were so that we can record this. Repeat the sorting until you cannot think of any more criteria. If you think you want to continue but have no more ideas, ask the researcher for help.

For example: if the task was sorting different pictures of **food -**
The **first criterion** might be "*taste*" and the groups might be "salty", "sweet", "bitter" etc.
The **second criterion** might be "*cost*", with the groups being "cheap", "medium", "expensive" and "very expensive".
The **third criterion** might be "*food which I eat*" and the groups "never" "sometimes", "often" etc.

You can choose any criteria you want and any groups you like (including "don't know", "not sure" and "not applicable"). The main thing is to use only one criterion in each sort – please don't put two or more in together, for example, "cost and availability ". If you're not sure about something, just ask.

Please Note: the cards are numbered only to help us record the results. The numbering is random, so please don't use that as a criterion for sorting!

Practice: the researcher will first give you a selection of cards to use so you can practice the procedure and answer any doubts you have. If you have any comments or questions, then please say, and we will do our best to help you.
After that, when you are sure of the procedure, the researcher will start the experiment with the main set of cards.

Thank you for your help.

Researcher's Script for demonstration of Card Sorts technique

For the practice card sort we will use these six pictures of houses: I will give you some examples of topics or criteria for houses and then I will sort them into groups or categories. After that you can do the same.

Let's say that the first topic or criterion is *"What is the house made of?"*,
We can say for these cards, two or maybe three groups, " Wood", "Brick" and "Stone", what do you think?

The next topic could be, for example, *"Houses I would like to live in."*
We probably have different opinions about this: I am interested in *your* opinion, so how would *you* sort them?

Now, can you suggest another topic for sorting?

Do you need help? (Dyadic elicitation).

Do you feel comfortable with this now or would you like to practice a bit more?

Then we'll continue with the main experiment.

Researcher's Script for introduction of main sort

I am now going to show you twelve cards. Each has a screen-shot of the opening or start page of a web-site – that means that it shows exactly what you will see on the computer screen when you open the web-site and look at it for the first time. All the web-sites are about learning English and they are all different sites.
You should think of a topic (or criterion) as you did in the practice and sort the cards into groups. When you are satisfied with your sort tell me *first* the names of the groups (or categories) and *then* the name of the topic or criterion, and then tell me the numbers of the cards in each group.

After that you can repeat the sorting process until you feel you have covered all of the topics you can think of. Do you have any questions at this point?

Please take a little time to look at each of the cards and then when you are ready to start sorting, let me know and you can begin.

Other situations:

- If you cannot think of a simple way to say something you can use a sentence to say it and I will use that as the name of the topic or group.
- Please remember to use only one topic at a time – you can do another sort for the other topic later.
- Do you want to continue, or have you done all that you can?

APPENDIX V – QUALITY EVALUATION FORM AND QUESTIONNAIRE

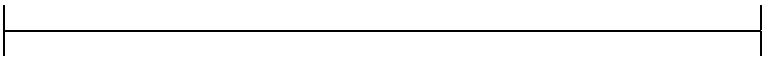
Quality evaluation form

Date:	Session:	Respondent No:

"How good does the web-site seem to be?"

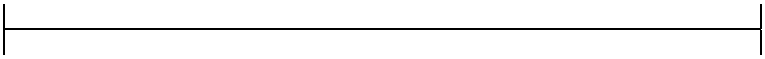
Judging only by the appearance and content of each card, please give your opinion: for each card in the set, please mark your position on the scales below.

Card 1.



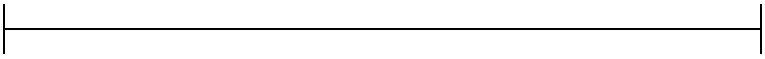
Not good at all **Very good**

Card 2.



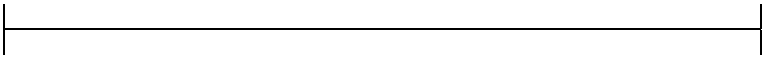
Not good at all **Very good**

Card 3.



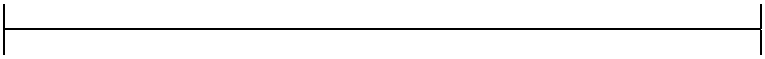
Not good at all **Very good**

Card 4.



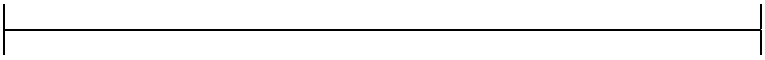
Not good at all **Very good**

Card 5.



Not good at all **Very good**

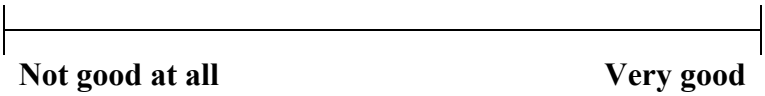
Card 6.



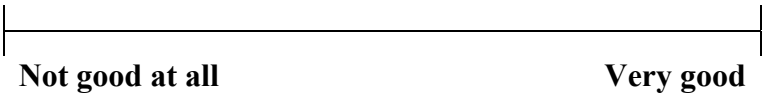
Not good at all **Very good**

See over →

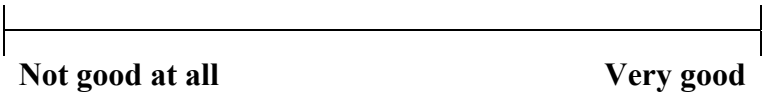
Card 7.



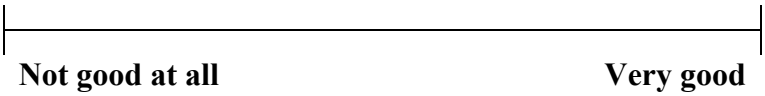
Card 8.



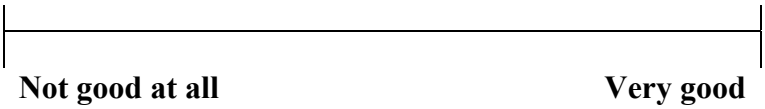
Card 9.



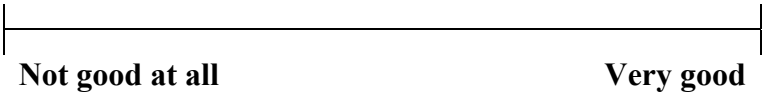
Card 10.



Card 11.



Card 12.



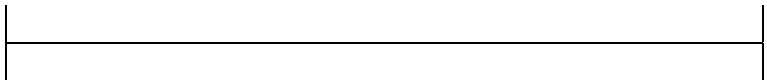
Questionnaire

Date:	Session:	Respondent No:

Age: _____
Occupation: _____
Please indicate the highest level of education achieved (school, Bachelor's, Master's, PhD etc): _____

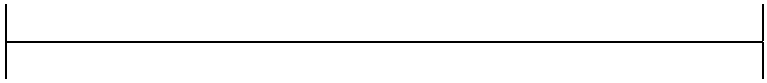
Your use of the Internet – please mark on the scales the position which best represents you:

How experienced do you think you are at using the Internet?



Not experienced **Very experienced**

How often do you use the Internet to access Language Learning Resources?



Never **Very often**

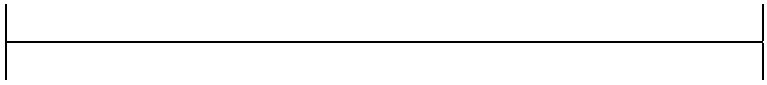
If you have accessed Internet Language sites before, were you familiar with any of the sites used in the experiment? If so, please mark the numbers below.

1 2 3 4 5 6 7 8 9 10 11 12

Had you heard of any of them before? If so, which ones (please mark numbers below)?

1 2 3 4 5 6 7 8 9 10 11 12

Do you watch international television channels (e.g Satellite TV)? If so how regularly (please mark on the scale)?



Never **Very regularly**

Have you travelled abroad? If so, please write the approximate total time spent in other countries.

_____

Thank you. Your answers will be kept confidential.

APPENDIX VI – INSTRUCTIONS GIVEN TO INDEPENDENT JUDGE FOR IDENTIFICATION OF SUPERORDINATE CONSTRUCTS.

You will be given access to a list of criteria or constructs generated by EFL students from a variety of countries based on their perceptions of English Language web-sites. The criteria are *verbatim*, as given by the students. They thus reflect not only the individual's choice of words but also the limitations on that choice imposed by their ability in English.

Your task is to interpret the criteria into *super-ordinate constructs*. You should try to identify *gist agreement* between verbatim constructs so that you can state, with reasonable certainty, where one respondent could be said to have meant the same as another but simply used different wording.

You should then note which constructs belong to these super-ordinate constructs. You should also allow for the fact that some individuals might have used very similar or identical wording to other respondents for constructs but in fact meant something quite different. For this purpose you should take into account the named categories into which the respondents divided their constructs as well as any recorded comments they made at the time. This information will be made available to you.

For example: in a card sort involving on-line shopping web sites, two respondents might have the following criteria:

- "How easy it is to check the shopping trolley"
- "Ease of use of shopping basket"

After checking that the categories from the two criteria are similar, you could place both under the super-ordinate construct "Ease of use of Shopping basket".

You should use your knowledge of web sites and English Language students to help you reach your decisions. In order to interpret what the student meant it may be necessary to look at the web-pages themselves.

You should observe certain rules in your groupings:

1. Super-ordinate constructs may contain one or more members.
2. A super-ordinate construct should be given the name of one of its verbatim members – this can then be adjusted for correctness or conciseness.
3. No two constructs generated by one respondent should belong to the same super-ordinate construct, no matter how apparently similar they might be.
4. If in doubt treat similar constructs as belonging to different super-ordinates especially if their categories indicate very different interpretations.
5. Similarly, if two verbatim constructs are very different but have very similar or identical categories, they should be considered for inclusion in the same super-ordinate.

APPENDIX VII – TABLE OF SUPERORDINATE CRITERIA

Superordinate construct	Form/ Content	Verbatim Constructs Included
Academic	C	Which is more academic
Advertising	C	Commercial (advertisements)
		Advertising banners
Age	C	Age of learning
		Age of students
		Which pages are more suitable for young learners
Alternative	F	Which pages are more alternative
Attractive	F	Background
		The layout
		If the site is attractive or not
		Vivid
		Attractive to me
		Appealing of the page
		Attractive
		Appearance
		Attractivity
		Pleases my eyes
Benefits	C	Advantage
		The most clear benefits of the web-site
Clarity	F/C	Places where I can learn English
		How clear it is
		Level of understanding
		How clear it is
Colour	F	Colours
		Background colour
		Colours that attract me
		Which colour is more beautiful
		Colours
		Heavy colour
		Colours
Easy to use	F	Which web-site is easiest to use
		Practical
		Effectiveness
		Which one is more convenient for English Learner
Emphasis of site	C	The stressing/functional point of the site
		What they offer
		Writing and ideas

Table of Superordinate Criteria (continued)

Superordinate construct	***Form/ Content***	***Verbatim Constructs Included***
First impression	F/C	First impression
		Sites I will check first
		At a glance intuition tells me not good
		At the first look
		Which one, when I first open then I want to continue
		First impression, catch your attention
I want to work there	F/C	Which website I want to work as editor
Images	F	Using Flash software
		Images
		Which pages are designed better (using flash, photoshop etc)
		The graphics
Information	F/C	Finding information
		Information on first sight
		Which gives you more information from outside appearance
Links	C	Linkages to other English sites
		Purpose
		Lists of links to other parts of web-site
Lists	F	Number of items in single menus
		Columns and lists
		The way things/information is organised
Makes me want to use it	C	Which pages are more interesting for me to log on
		Which web-site makes you want to use it
		If I would try them or not
		Which ones I would choose
More than English	C	Places to study English and get cultural information
		Additional services
		Additional marketing purposes
Navigation	F	How direct the information is
		Search boxes
		Scroll bar
		Navigation of the site
Recommend to friend	F/C	Which web-site would you recommend for a friend
Serious	C	Serious places to study
		How serious they are
Study in university	C	Possibility of studying in foreign Universities
Style	F	Style
		Style
		Friendliness
		More professional
		Way you see the page
		The look of the web-site
		Which pages look dull
		The core of the site

Table of Superordinate Criteria (continued)

Superordinate construct	***Form/ Content***	***Verbatim Constructs Included***
Visual pollution	F	Way they offer me information
		Visual pollution
Who the website is for	C	Aim
		Who the web-site is for
		Attitude of the site
		Target market

APPENDIX VIII – SUMMARY OF QUALITY RATINGS BY RESPONDENT

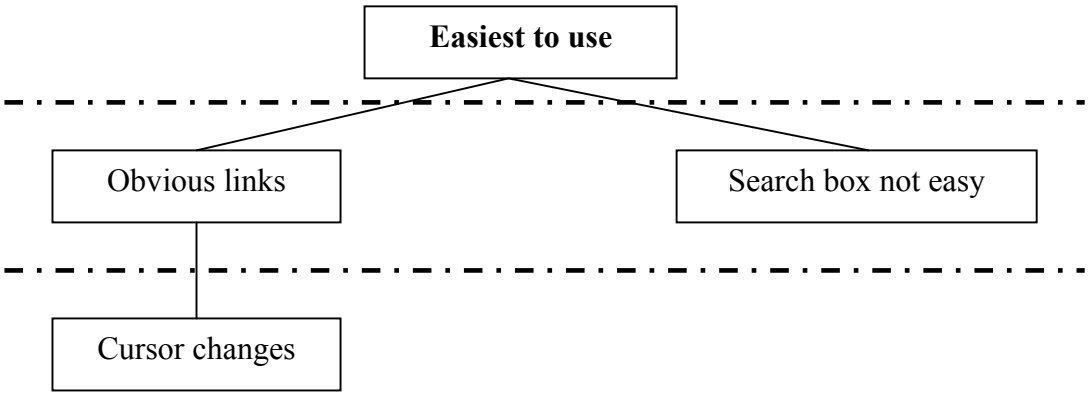
Respondent	Group	Card 1	Card 2	Card 3	Card 4	Card 5	Card 6	Card 7	Card 8	Card 9	Card 10	Card 11	Card 12
1	EM	50	81	31	51	86	41	93	49	53	56	68	69
2	EM	13	17	1	53	96	38	1	56	53	97	94	44
3	EM	47	57	19	41	78	69	77	42	69	54	88	39
4	EM	31	57	39	93	79	32	38	53	50	75	66	73
5	EM	6	85	48	36	74	35	99	0	8	19	51	80
6	EM	33	40	9	16	18	44	80	41	28	66	32	52
7	IM	46	24	82	46	56	48	25	35	65	71	24	29
8	IM	38	100	1	43	59	31	5	42	33	75	84	93
9	IM	2	27	42	30	74	59	3	70	65	36	68	3
10	IM	16	5	80	76	81	33	49	53	56	41	54	51
11	IM	27	63	26	14	40	30	63	34	25	48	10	64
12	IF	75	90	1	6	86	17	52	51	68	88	48	52
13	IF	4	13	21	46	100	33	0	74	29	35	49	0
14	IF	21	33	45	50	59	56	29	46	47	51	67	41
15	IF	51	52	15	89	87	54	20	49	88	88	71	20
17	IF	12	38	18	48	61	16	17	50	87	55	61	54
18	IF	43	72	0	88	100	44	74	91	0	99	100	47
16	IF	-	16	-	60	-	22	-	91	21	87	88	-

	Card 1	Card 2	Card 3	Card 4	Card 5	Card 6	Card 7	Card 8	Card 9	Card 10	Card 11	Card 12
Overall Avg =	30.3	48.3	28.1	49.2	72.6	39	42.6	51.5	46.9	63.4	62.4	47.7
Egypt M Avg =	30	56.2	24.5	48.3	71.8	43.2	64.7	40.2	43.5	61.2	66.5	59.5
Intl M Avg =	25.8	43.8	46.2	41.8	62	40.2	29	46.8	48.8	54.2	48	48
Intl F Avg =	34.3	44.9	16.7	55.3	82.2	34.6	32	64.6	48.6	71.9	69.1	35.7

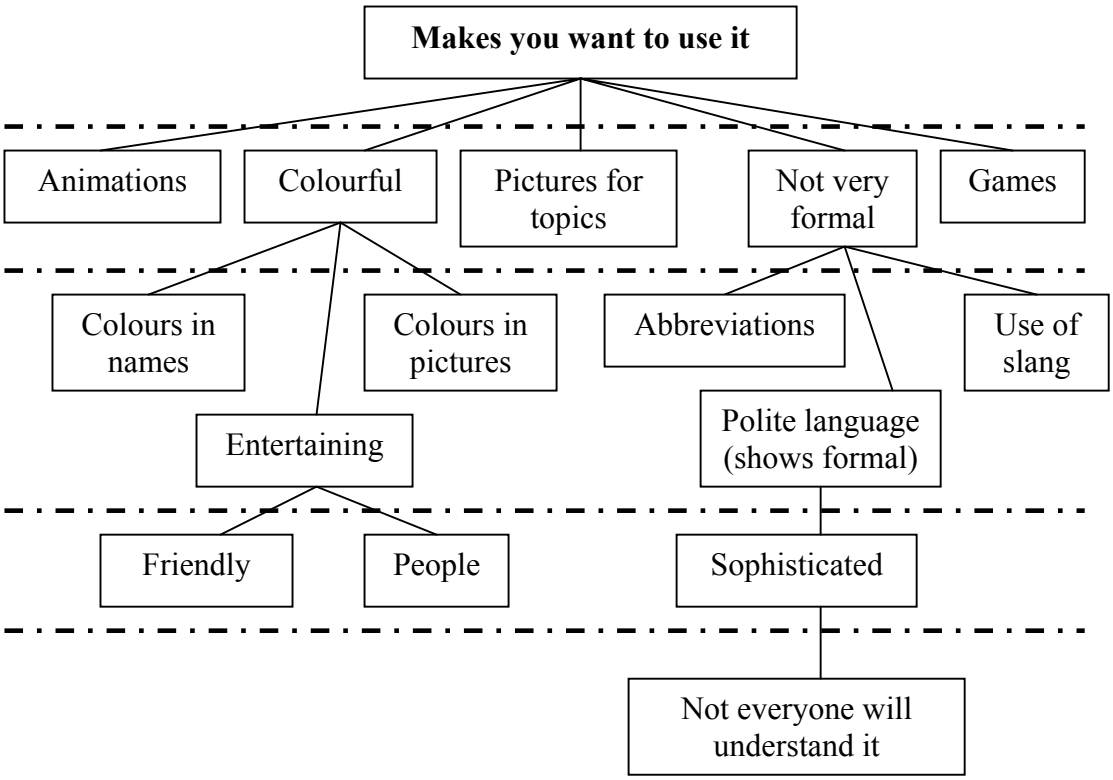
APPENDIX IX – RESULTS OF THE LADDERING SESSIONS WITH EGYPTIAN MALE RESPONDENTS

Respondent 4 – 14/08/01 Laddering session

Construct 1 – Which website is easiest to use

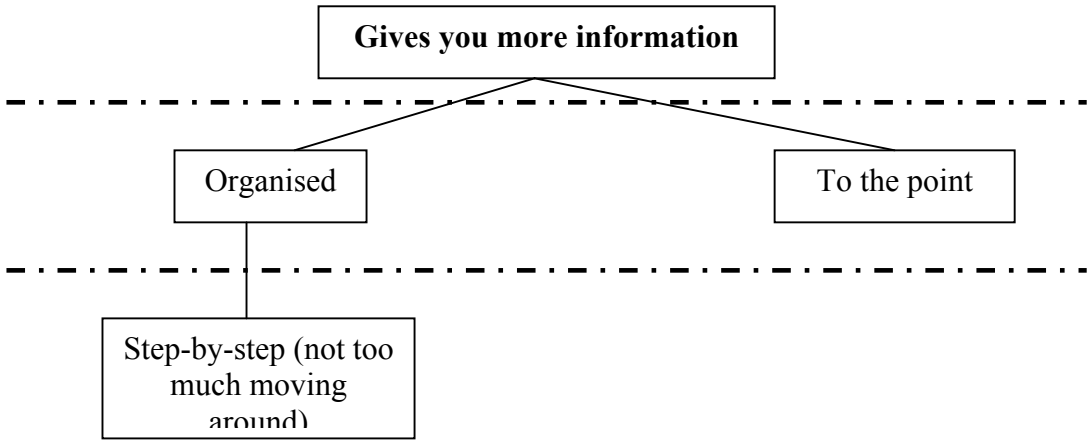


Construct 2 – Which website makes you want to use it

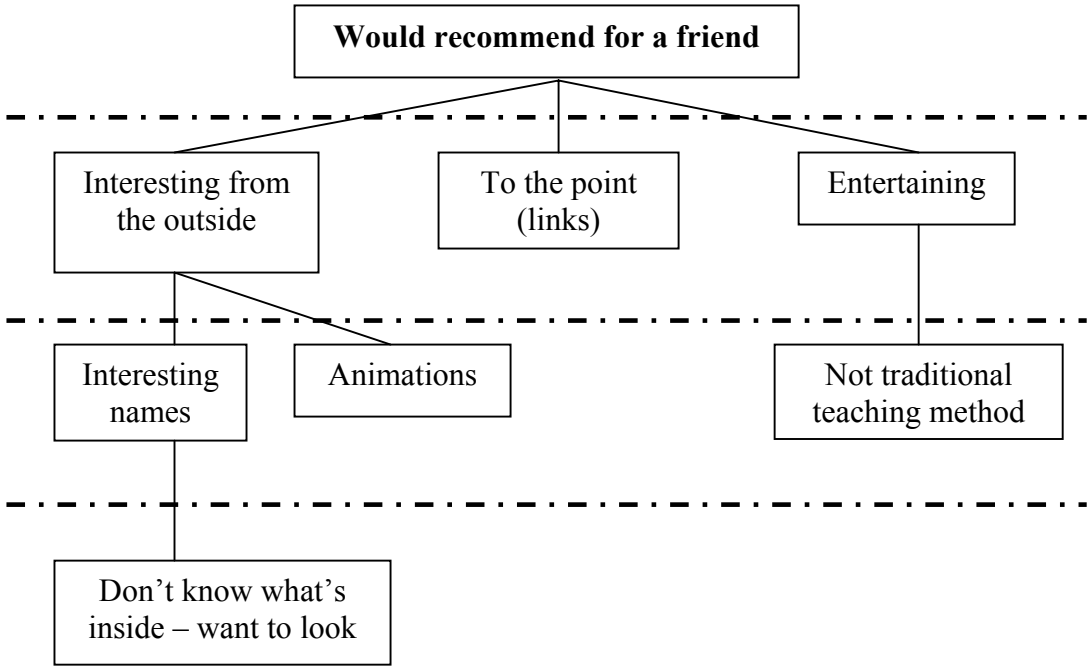


Respondent 4 – 14/08/01 Laddering session continued:

Construct 3 – Which gives you more information from the outside appearance

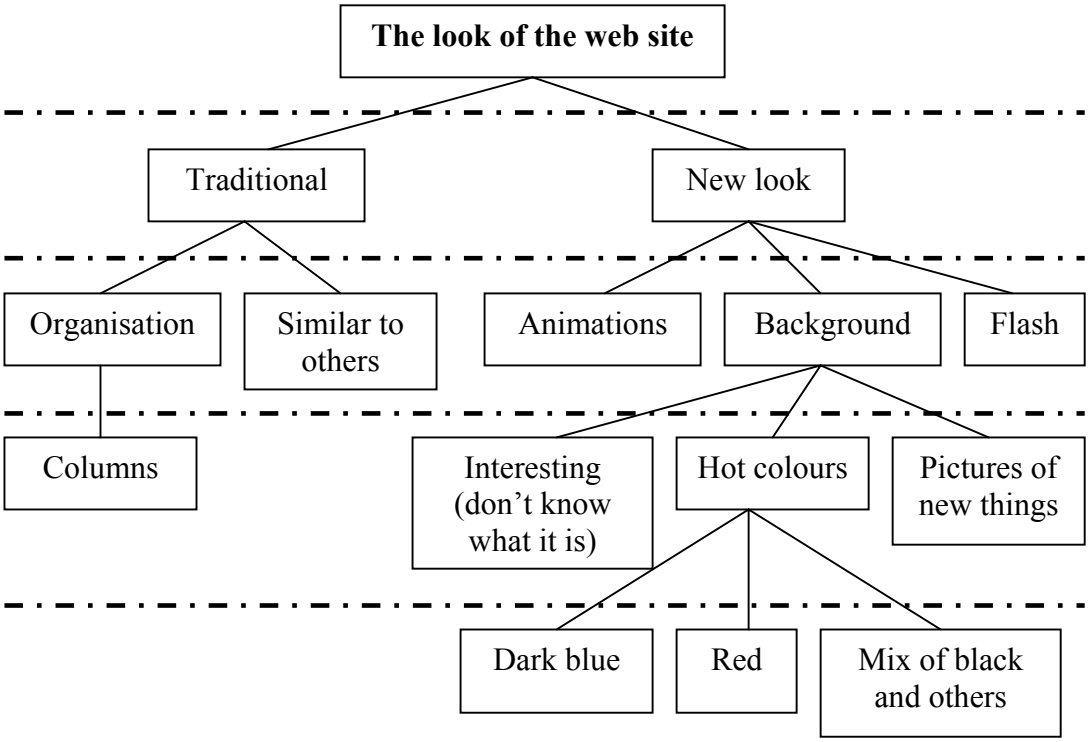


Construct 4 – Which web-site would you recommend for a friend

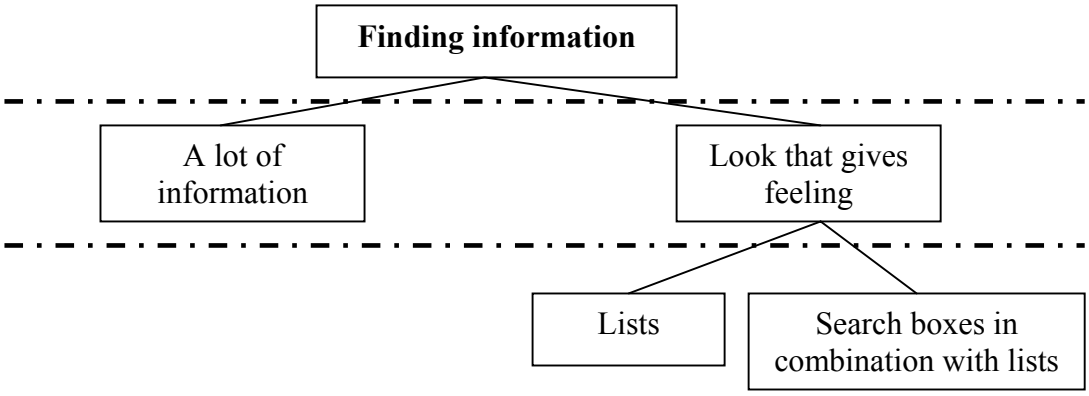


Respondent 5 – 14/08/01 Laddering session

Construct 1 – The look of the website

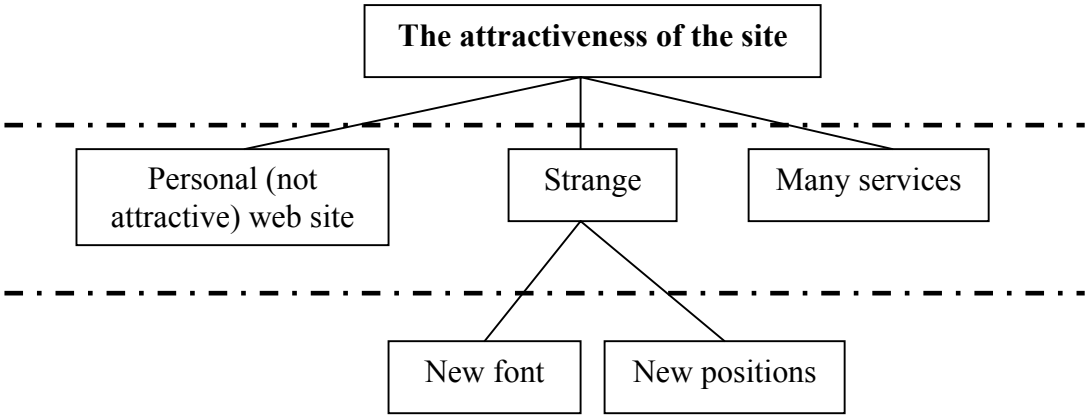


Construct 2 – Finding information

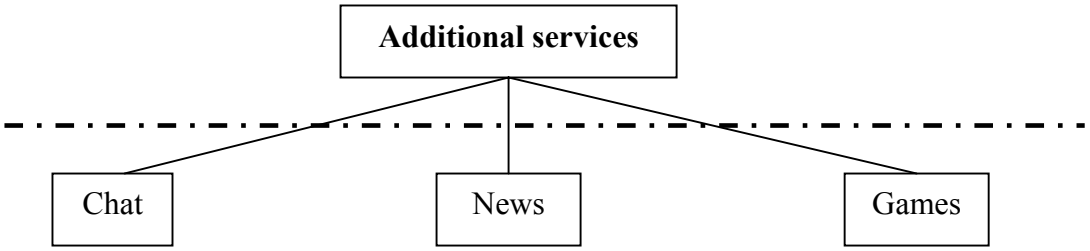


Respondent 5 – 14/08/01 Laddering session continued:

Construct 3 – The attractiveness of the site

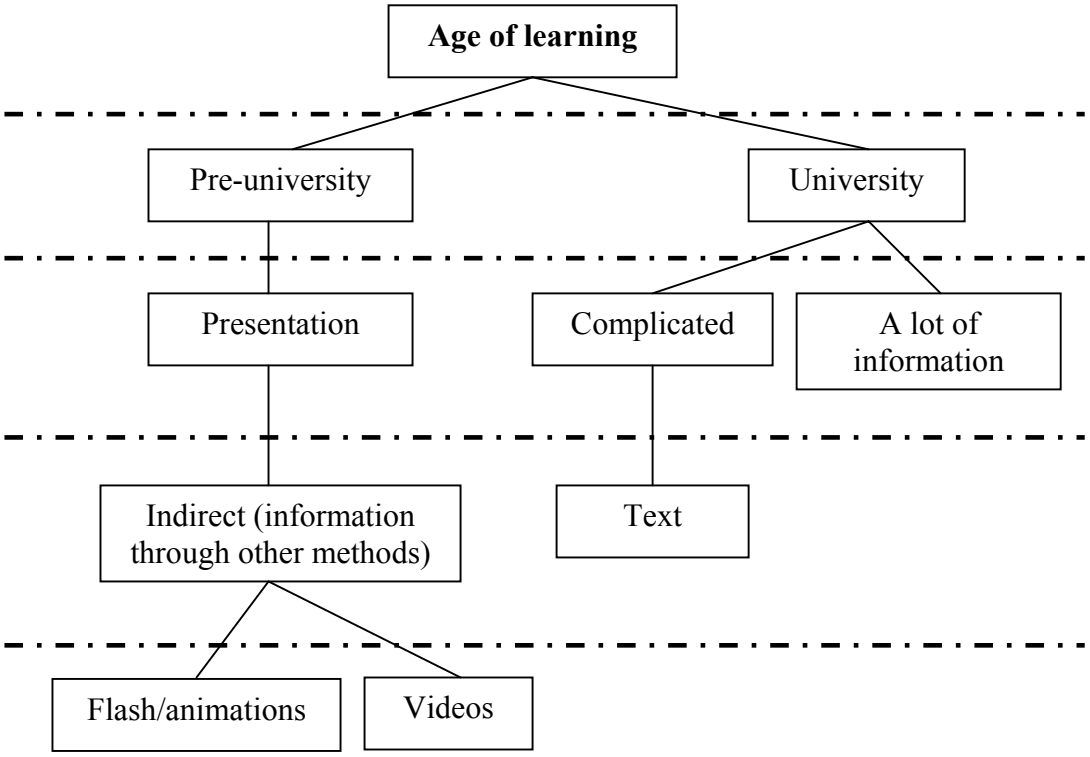


Construct 4 – Additional services



Respondent 5 – 14/08/01 Laddering session continued:

Construct 5 – Age of Learning



APPENDIX X – CARDS USED FOR 'TOY SORT'

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