THE POTENTIALITIES OF FOCUS GROUPS IN E-BUSINESS RESEARCH: THEORY VALIDATION

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Abstract: Focus groups enable the rapid and timely collation, integration and assembly of the views of a variety of different types of stakeholders into plausible theory. This paper examines the usefulness of the focus group as an e-business research method, using an exemplar of focus group deployment for the purpose of theory validation as its illustration. Our results suggest that a focus group can be effective as a strategy in e-business research, providing a useful alternative or complementary method to more traditional empirical methods. We provide a set of guidelines for effective focus groups in e-business research, which may prove useful to researchers contemplating employing the focus group method in a research design.

1. INTRODUCTION

With e-business being a comparatively recent phenomenon, there is still a scarcity of robust research literature to draw on for theory development, necessitating a significant amount of empirical research in order to ground new theory. E-business researchers face important challenges identifying appropriate methods for their needs (Clarke, 2000a). Frequently, issues relating to the multi-disciplinary, interorganisational nature of e-business must be explored (Clarke, 2001). Comprehensive coverage and in-depth analysis of the extensive issues involved often require debating between stakeholders to enable issues in contention to surface. Understanding is sought of “the behaviour of individuals, organisations and mechanisms such as e-communities, marketspaces and e-enhanced societies” (Clarke, 2001). Approaches which facilitate the development of integrated, holistic

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solutions, and facilitate solutions of relevance for both practitioners and e-business researchers are also key requirements in e-business research.

This wish list of empirical research methods for the e-business domain suggests that there is scope for examining the benefits of alternative approaches to the more traditional approaches – often exemplified by case studies and surveys. We believe that the focus group method has significant potential to address the challenges listed above, providing a complementary tool for empirical researchers in this rapidly-growing field of academic endeavour. Focus groups are a relatively recent addition to the repertoire of empirical information systems (IS) research methods, although they have a much longer history in the field of marketing research (see, for example, Hasan and Tibbits, 1999; Law and Lee-Partridge, 2001; Lichtenstein, 2001) so that there has, to date, been little empirical research into their use as a research method for either IS or e-business research. Recently, focus groups were nominated by Clarke (2001) as being amongst the viable methods for e-business research – although it is interesting that he did not single them out in his final recommendations. We believe, however, that focus groups offer some very real advantages for e-business research, in that they enable the rapid and timely collation, integration and assembly of the views of a variety of different types of stakeholders from multiple disciplines and different institutions into relevant, plausible theory, in a relatively short period of time.

The objective of this paper is to investigate the usefulness of the focus group research method for e-business research. We employ the example of a focus group in e-business theory validation, to illustrate the potential effectiveness of focus groups in e-business research.

The paper commences by providing an overview of the focus group research method. The following section articulates some important challenges for e-business research, highlighting the role focus groups can play in addressing these challenges. Next, we describe an example of the use of a focus group for theory validation in an e-business research project, illustrating the advantages of the focus group for our research project. We then present a set of guidelines for effective focus groups in theory validation in e-business research, and conclude by outlining the implications of our research results for e-business researchers and for businesses.

2. THE FOCUS GROUP RESEARCH METHOD

A focus group is a qualitative research method, positioned somewhere between participant observation and in-depth interviews (Morgan, 1997), and often referred to as a group interview. Focus group sessions consist of

semi-structured panel discussions between a small group of people representing a specific target audience – for example, key stakeholders – which provide relaxed *fora* for discourse and for the exchange, exploration and testing of ideas, feedback, brainstorming and discovery; while generating valuable qualitative research information representing critical client interests (Edmunds, 2000; Greenbaum, 1998; Morgan, 1997; Morgan and Krueger, 1998; Morrison, 1998; Templeton, 1996). Discussions are led by a moderator, who is able to tap genuine feelings and issues about the research topic, while remaining aloof from the issues under discussion. A focus group can be used as the principal data source, a supplementary data source following a primary method such as a survey, and in multi-method studies where independent data sources are used (Morgan, 1997).

Most commonly employed as a marketing research technique, focus groups typically yield ideas insights and directions for new products, packaging, advertising, and consumer habits, and for screening new concepts. Organisations also use focus groups to investigate their customers' beliefs, attitudes and perceptions about current business policies, programmes and services. Recent developments include the use of synchronous or asynchronous online focus groups (Edmunds, 2000; Murray; 1997; Rezabek, 2000).

Criticisms of the focus group approach have included: their limited generalisability due to the small number of people participating, together with the possibility that these participants may not be a representative sample; their inadequacy for forming conclusive opinions and yes/no decision-making; the significant effect of the moderator, who must maintain control of the forum so that forceful personalities do not sway the group, and in order that the timid and polite get a chance to speak up; the tendency for participants to “play into the hands of the researcher” by agreeing with ideas that they may not believe in reality; and the insufficiency of this research method when employed as the sole source of data (Gibbs, 1997; Nucifora, 1997). Despite these criticisms, however (and which research method does not have weaknesses?), we believe that the genuine benefits which focus groups can offer to e-business research significantly outweigh their weaknesses.

3. ADVANTAGES OF FOCUS GROUPS IN E-BUSINESS RESEARCH

There are some important challenges facing e-business researchers when approaching the selection of empirical methods. We elaborate on these

challenges below, and discuss the potential advantages of focus groups for meeting them.

3.1 Multi-disciplinary and interorganisational nature of e-business

The need for multi-disciplinary research approaches to e-business problems is now considered pressing (Kumar and Crook, 1999; Vogel, 2001). Reference disciplines for e-business issues include sociology, anthropology, politics, economics, management, law, computer science, engineering, architecture, health sciences and history (Vogel, 2001), each offering a quite different perspective on any given e-business issue. In addition, stakeholders often include business-oriented and systems-oriented groups, which typically offer discordant views (Gordijn *et al.*, 2001). When traditional empirical methods such as case studies, action research, or surveys are employed, the researcher must frequently interpret and reconcile uncertain and/or conflicting sets of data harvested from a variety of stakeholders and disciplines via interviews and/or questionnaires. Later attempts to resolve contradictions in isolation from the human sources of data can mean that the researcher establishes results which compromise the various viewpoints subjectively, rather than integrating them to produce a broader, holistic solution. For example, the researcher – lacking the opportunity to recycle the developing theory amongst stakeholders to incorporate all viewpoints – may prefer one type of stakeholder's viewpoint over others, or formulate a subjective compromise between several differing stakeholder viewpoints.

Interorganisational issues are regarded as critical to e-business success (Geisler, 2001). Holland and Lockett (1997) and Kampas (2000) argued that interorganisational relations may contribute to an understanding of how e-commerce organisations evolve and succeed, while Johnston and Gregor (2000) advocated the examination of electronic networks of organisations at an industry level. Using traditional empirical methods such as case studies and surveys, there may not be sufficient opportunity to capture and explore the many interorganisational issues involved in e-business research projects, because the opportunity for debate between personnel in the different organisations is lacking in such methods and because comparisons across organisational boundaries are difficult both to establish and to validate (the danger of finding oneself comparing apples and oranges is ever-present in interorganisational empirical research). And yet it is imperative to undertake such interorganisational studies to gain deeper understanding of e-business phenomena of various sorts.

A focus group can be a valuable research method whenever the opinion of a target population is difficult to obtain due to either a multidimensional topic, or to polarised or fluid opinions (Clarke, 2000b): this is a common scenario in the multi-disciplinary and interorganisational e-business domain. Through a focus group, representative stakeholders for the reference disciplines and different types of organisations may be brought together in a controlled environment, in order to: offer potentially discordant opinions and perspectives; discuss previously identified issues; identify and resolve conflicts; uncover new issues; and establish conciliatory yet feasible, integrated, holistic solutions.

3.2 Extensive issues in e-business research topics

There are a large number and variety of issues involved in many e-business topic areas. These have proven difficult to explore and identify comprehensively within the constraints of data collection via either questionnaires or single person interviews – during which issues resulting from potential conflict between different stakeholder viewpoints are unlikely to be uncovered, debated or explored; and during which brainstorming is not facilitated.

Within a focus group session, those issues for which there is ready agreement among participants can be passed over quickly, with most of the time and attention being directed to issues in contention, or to the uncovering of new issues (note that the brainstorming activities characteristic of focus groups are conducive to the discovery and illumination of new information and issues). The potential for researching often-overlooked issues relating to a given e-business research topic thus exists within focus groups and can be used to great advantage in an e-business research project.

3.3 Holistic approaches to e-business research

Technical issues were the focus of IS research until recent years, in accord with the now-outdated technical-economic rationality which assumed an organisational goal of economic efficiency and effectiveness via technology deployment (Kumar *et al.*, 1998; Kling, 1980). The focus has recently shifted in both IS and e-business research toward more holistic approaches which integrate the human, social, organisational and technical issues (Baskerville *et al.*, 2000; Bennetts *et al.*, 2000; Cavaye, 1998; Lichtenstein, 1997; 2001; Lichtenstein and Swatman, 2001; McMichael, 1999; Russo *et al.*, 2001; Vogel, 2001). It can be difficult for case studies

(whether positivist, or utilising more interpretivist approaches such as ethnographic surveys or grounded theory approaches) and surveys alone to yield an integrated holistic solution to an e-business research problem, because the method of collection is a single viewpoint, without opportunity for debate between stakeholders. There are complementary techniques such as Delphi surveys (see, for example Delbecq *et al.*, 1975), or a combination of quantitative with qualitative methods (see Gable, 1994, for a discussion of this issue) which can make a real contribution to linking individual viewpoints to arrive at a solution. While we in no way criticise any of these approaches, focus groups offer an alternative approach with some unique holistic benefits.

Indeed, focus groups – being a moderated interview of multiple perspectives – facilitate debate, which can lead to conflict resolution, theme exploration, pattern identification, and collaborative, holistic solution development. The potential for over-focusing on a single dimension (for example, technology) is minimised in a focus group by the accessibility of differing perspectives from participants with backgrounds in different disciplines and organisations, all of whom can argue their perspectives until they are incorporated in the solution. Human, social, organisational and technical issues relevant to the research problem are all likely to be raised during a session, and a solution can be devised which accommodates and integrates the various dimensions, forming an entity greater than the sum of the individual perspectives.

3.4 Relevance of e-business research

E-business is a highly dynamic area, so that the need to conduct research speedily may be pressing, in order that the research outcomes still have relevance for practitioners and researchers alike (Clarke, 2000a; Gray, 2001; Kock *et al.*, 2001). In a recent ISWORLD debate questioning the relevance of IS research, Amaravadi proposed: “a Kuhnian vision of rationalization of [information systems – of which e-business is a domain] research ...that can clarify the channels, make progress visible, make summaries available, streamline the research process and improve relevance” (Weber and Cockcroft, 2001). Relevance versus rigour in IS research has previously been deliberated (Benbasat and Zmud, 1999; Davenport and Markus, 1999), but there is an argument which suggests it is even more an issue for e-business, with its rapid growth, wide-ranging issues and interorganisational focus. Indeed, some experts believe that expediting research and assuring its relevance, while potentially sacrificing a degree of rigour, may well be critical for e-business research (Clarke, 2001).

A focus group can improve e-business research relevance by including representatives from different stakeholder types and reference disciplines, in the group. Furthermore, sessions may be organised quickly, take a short time to conduct – typically, several hours – and can thus yield research outcomes relatively speedily.

4. THE FOCUS GROUP IN E-BUSINESS RESEARCH

We feel focus groups have considerable potential to assist in the validation of e-business research. In any area that is relatively new, business-oriented and multi-disciplinary, theory validation is a constant issue. We used the focus group approach to validate the findings of a major e-business security research project (reported in Lichtenstein, 2001; Lichtenstein and Swatman, 2001). In the project, we investigated the management of Internet security issues for organisations conducting e-business, by an organisational e-business security policy. In particular, we were interested in determining an holistic solution, incorporating the human, societal, technical, organisational and other influential factors. In 1996 at the time the project commenced, there were few guidelines in this topic area. Literature sources from a variety of disciplines were employed to construct an initial framework for organisational e-business security policy (the final version of the highest level model of the framework is depicted in Figure 1). The framework comprised various models and issues at different levels of detail, representing three sets of guidelines—a set of *factors* to be considered when developing the policy, a method for the *development* of the policy, and a model for the *content* of the policy. Details of this framework are found in Lichtenstein (2001), and are not included here due to space limitations.

Figure 1. Framework for e-business security policy (Lichtenstein, 2001)

We explored the research topic further via multiple case studies of six large organisations (five Australian and one US), selected for their significant Internet usage at the time of study. We conducted semi-structured interviews with network administrators and IT security managers, who appeared to have the greatest in-depth knowledge of what was actually happening in their organisations in the complex Internet security area. We analysed the data collected in each case, using the initial version of the framework as a guide for pattern-matching purposes, then performed a cross-case analysis across the six cases, to determine commonalities, trends, and differences, and to draw conclusions from these for the research project.

4.1 Selection of focus group method for theory validation

We then faced the problem of choosing another research method to validate the framework, in order to obtain triangulation for our research results. We examined our research progress at that point and, particularly,

identified areas of insufficiency in data collected and solutions devised so far. While conducting the case studies, it had become apparent that there were limitations to the data we were able to collect via single interviews, documents, etc:

- The type of personnel we had selected for interviewing were network administrators and IT security managers, whom we had presumed to be most knowledgeable about the security of their e-business systems. Yet many issues arose about which they clearly lacked the expertise to provide in-depth comments – including social, human resources, legal, engineering, administration and organisational culture issues.
- In several instances, two people from the same organisation were interviewed in the one interview session – for example the network administrator and the IT security manager. In each such interview, conflict and tension were apparent between the two parties, raising some interesting issues that we were not able to explore or resolve, due the constraints of the interview technique. We also suspected that in those interviews there were issues left unraised, due to the reluctance of interviewees concerned to highlight certain problems with co-workers present.
- We suspected that at times interviewees had contributed politically correct responses, while on other occasions they did not appear to be sufficiently stimulated to suggest potential solutions to problems revealed in the interviews (for example, almost all the parties interviewed deemed the control of excessive personal use of the Internet by employees, impossible).
- On occasion, we suspected interviewees were being too agreeable in their responses, inside an interview environment, which was not conducive to challenging the framework components offered for discussion.
- Solutions suggested by interviewees to existing problems were typically one-dimensional in nature (eg an Internet risk management technology) rather than holistic.

When analysing the multiple case data via a cross-case analysis, the inadequacies of our collected data became even more evident. Our framework had identified a plethora of relevant issues, many of which were unclear from the case interviews and other organisational data sources such as policy documents. Could auditors, for example, have provided useful information about the conduct of security audits and about security standards, which would have added to the models? Could human resource experts have added more understanding about employee rights and recommended we include those issues in our models? Would employees think our framework was missing some important problems they faced in

Internet usage? Would a consultant find the methodology suitable for customer approval? The multi-disciplinary nature of e-business was proving to be a thorn in the research agenda. Importantly, we also wondered whether all these different perspectives would clash, and if so, how would contentious issues be resolved to the satisfaction of all? We wondered whether a group of people representing the different perspectives might be able to argue through the issues in the research problem and framework, under the supervision of an impartial moderator fluent in the topic.

It seemed that a focus group could be ideally suited for this purpose. We began investigating the focus group research method for its potential advantages. We anticipated that any solutions arising out of a meeting of diverse experts from different disciplines would be likely to be holistic. We also recognised the potential benefit in selecting participants from different organisations – to stimulate debate over interorganisational issues involved in the research topic. After some deliberation, we chose the focus group method for the validation stage of the research project.

4.2 Establishment and conduct of focus group session

We established and conducted a focus group comprised of a moderator – an academic with a solid background in the research domain – and five experts with different job roles representing different perspectives and disciplines (we have taken some liberty here with the term ‘discipline’, for the purposes of highlighting the different reference points from which participants were approaching the research problem). Each participant was employed at a different organisation. The roles and reference disciplines of the five participants were: network administrator (within a specifically computer science -oriented domain), telecommunications consultant (engineering, sales and management), auditor (accounting), computer user (human resources), and programmer/analyst (information systems). Note that the views of medium level IT managers had already been heavily polled via interviews with IT security managers in the case studies, so we did not include any of this stakeholder type in the focus group.

A document containing background information on the project as well as the framework itself, was despatched to all participants ahead of the session date. The meeting took place as a three hour session, in June, 1998, in a special observation laboratory designed for such activities, located at Monash University in Melbourne, Australia. The room possessed video cameras and audio recording facilities. The session was video-recorded for subsequent study. One of the researchers was able to view the session from the room next door through a one-way window, as well as listen to the proceedings through speakers. She was also able to communicate with the

moderator via a microphone which transmitted to an earpiece worn by the moderator. She employed this communication facility from time to time to request the moderator to follow up issues of particular importance, as well as to ask the moderator to seek clarification where deemed necessary.

The moderator began the session by requesting introductions, and explaining the focus group objectives, which were:

- to determine whether an e-business security policy was considered an important policy for Internet-connected companies;
- to determine whether the proposed framework and its component models could be useful to companies;
- to improve the framework;
- to elicit recommendations regarding the presentation of the framework as a commercial methodology; and
- to determine the overall usefulness of the research project.

Next, he asked each participant to explain his/her company's interest in the research project, and queried participant positions regarding the research topic. He then led the group through a review of the document containing the topics, issues, framework and component models, encouraging a free flow of ideas and brainstorming, and steering the discussion when necessary to determine support or lack thereof for the framework and its models, or to elicit suggestions for changes.

In the interests of limiting the size of this paper, only selected aspects of the session are presented, illustrative of the advantages presented by focus groups for e-business theory validation.

4.3 Status of e-business security policies in organisations

Participants agreed the research topic was important to their companies, few of which possessed e-business security policies, or found them effective when they did have them (recall the session was held in mid-1998). All participants mentioned the difficulty in monitoring and enforcing existing or future policy. They supported one another in a discussion of the depth and importance of this problem. What was painted by the group was a fairly bleak overall picture of diffusion and effectiveness of e-business security policies in the workplace, a picture which had not emerged from the case studies. On reflection, it appeared that the interviewees in the case studies may have whitewashed their company's problems in this area. This part of the session discussion, about the status of e-business security policies, highlights the advantages of a focus group for identifying the level of relevance and importance of a research topic to stakeholder groups.

4.4 Factors in e-business security policy

The focus group discussed at length the special position of the *human issues* factor in the factors model (Figure 2). The network administrator (representing the computer science discipline) was initially convinced that human issues did not need to be treated differently to the various other factors in the model. He did not see why all other issues had to be considered in light of the human issues involved. One participant was adamant that human issues should remain in its current, special position in the model, pointing out that if human issues were treated as just another factor to be considered in policy setting, then not as many human issues would be identified as if the various other factors were seen *through* the filter of human issues. Another participant stressed that his company would not accept the model unless human issues were highlighted as shown in the current model. The remaining three participants were gradually won over in discussion by the arguments raised by the two who clearly saw human issues as critical to all other issues. This discussion highlights the advantage of a focus group for dealing with contentious issues caused by the *multi-disciplinary* and *interorganisational* nature of e-business. It also illustrated the capacity of this method to act as an agent of change in the research domain, and added richness to the detail of the framework.

4.5 Internet risks, organisational factors, and human issues in e-business security policy

Participants suggested *a number of changes* to the proposed models for Internet risks, organisational factors and human issues. For example, one participant identified a new organisational factor, *organisational culture* – a factor which we believe came to light because participants, when acting as a group, appeared to be more in tune with people and soft issues in general, than had been the individual interviewees during the earlier case study (single person) interviews. The moderator may also have played a key role in raising the group's awareness of the people issues involved in the research topic. This part of the session highlighted the advantages of a focus group for exploring extensive issues relating to a complex e-business research topic. It also highlighted the advantages of the focus group for tapping and debating the different perspectives of the representatives of different reference disciplines, from different organisations.

Figure 2. Factors in e-business security policy

4.6 Freedom of Internet use in e-business security policy

Participants engaged in a heated debate about whether there should be restrictions on the freedom to use the Internet for personal reasons in the workplace. Each participant had a different view, depending on their personal perspective, organization represented, and reference discipline. The resulting solution – *limited personal use as necessary* – was an holistic one, highlighting the usefulness of the focus group method for producing holistic solutions.

Altogether, many models and issues were discussed in the session. We have discussed only a small portion of these above, sufficient to illustrate the benefits of the focus group method for e-business research.

4.7 Methodology for e-business security policy

The moderator concluded the meeting by asking participants whether they thought the framework was a good starting point for an organisation to develop an e-business security policy, and whether the framework would have a useful outcome in practice. One participant responded that the framework would be useful as a commercial methodology when polished and expanded as suggested during the session. A second participant commented that the required content was present in the framework and that it met the research objectives, but that its presentation could be improved by

a document design expert to make the framework more useable as a methodology for an organisation. A third participant, the auditor, advised that he wished to use the framework, with permission, as a guide for an impending Internet audit. A fourth participant commented, "It (the framework) was great," but added that it needed to be revised by a legal team and a publicising team, prior to finalisation. The fifth participant believed the framework was very comprehensive, and mentioned that if a particular company wanted to use it, they would surely find the means to handle various practicalities that had been mentioned during the session. This conclusion to the focus group highlights the usefulness of the method for suggesting research relevance for practitioners, and for providing an holistic solution that meets the needs of different types of stakeholders.

Clearly, the focus group fulfilled our theory validation needs, as well as providing the specific benefits suggested earlier in Section 3.

5. MAKING FOCUS GROUPS WORK FOR E-BUSINESS RESEARCH

As a result of this study, we have developed the following guidelines for effective use of focus groups in theory validation in e-business research.

5.1 Composition of focus group: multi-disciplinary and multi-organisational

The composition of the focus group should be multi-disciplinary and multi-organisational. While it is clearly infeasible to include within a single focus group session representatives from all types of e-business disciplines and organisations, a considered and balanced selection process will minimise this limitation. In such a selection process, the researcher should attempt to identify a wide spectrum of e-business disciplines and organisational types relevant to the topic area. The researcher should be *au fait* with key issues in e-business. Clearly, the availability of expertise will also be an important factor in the selection process. The researcher must search for a homogenous mix of disciplines and organisations by postulating, evaluating and comparing different combinations, aiming for the most comfortable and productive interactions between participants. The intent is to forge an insightful focus group, whose participants share common goals, but possess the diverse skills and perspectives of the different disciplines and organisational types.

5.2 Direct discussion to conflicting multi-disciplinary, interorganisational issues

The focus group should direct its attention to the conflicting multi-disciplinary, interorganisational issues of e-business. The moderator should draw participants' attention to points of possible discord, which tend to lie in the areas where different disciplines and organisations involved in e-business would have differing perspectives to put forward, debate and resolve. The moderator should encourage the participants to discuss and resolve the issues, without his/her interference if possible. This is more likely to yield a genuine, rather than a contrived, solution.

5.3 Documentation of existing theory must be available and structured

The models which comprise the theory to be validated should be available to participants as documents, both before and during the session. Models should be structured and presented in such a way that participants can easily move back and forth between them as necessary during the session, with minimal disturbance to the flow and momentum of the session. Terminology which may be confusing to participants from different reference disciplines should be clearly defined.

5.4 Encourage discussion of different perspectives

The moderator must carefully lead the participants through the theory, explaining any models and giving ample opportunity for the provision of varied perspectives from participants representing different disciplines and organisations in e-business – particularly on issues that the researcher has highlighted beforehand as likely to be contentious. It is useful if the researcher is able communicate with the moderator during the session, to ask the moderator to seek clarification or more information where needed (although this should be a relatively transparent and seamless process in order not to disturb session momentum; this communication can be performed remotely, using an earpiece and microphone).

5.5 Moderator should promote brainstorming, to elicit new issues

The moderator should make judicious use of brainstorming at key points, to identify more of the many issues often involved in an e-business topic area.

5.6 Moderator should attempt to maintain session momentum until discussion has resulted in integrated, holistic solutions

The moderator needs to be very aware of the need to integrate the differing perspectives of the different types of participants gathered to represent different reference disciplines in e-business. The moderator is aiming for compromise, consensus, and an integrated, holistic solution.

5.7 Moderator must be highly knowledgeable in e-business and the specific research domain

The moderator needs to be well-versed in e-business, as well as the specific theory being validated. S/he also needs to be aware of those issues regarded as likely to cause contention due to differing perspectives from the different disciplines involved in e-business – in order to direct attention to those topics.

5.8 Moderator must search for research relevance

The moderator must continually be aware of the need for the research to have relevance to previously-defined target audiences, such as practitioners and researchers. For example, if the theory is being developed in order to be utilised by businesses, then the moderator should seek such confirmation, at key points during the session.

6. CONCLUSIONS

We have presented in this paper some important challenges facing e-business researchers today, and have argued the potentialities of focus groups for addressing these challenges. Our case study of focus group use in a significant e-business research project provides support for our view of the usefulness of focus groups in e-business research, in particular for theory

validation, which is often a problematic stage for researchers seeking an appropriate method. We have presented a set of guidelines for the effective use of focus groups in e-business theory validation. These may prove useful to e-business researchers who are considering using the focus group method for that purpose or indeed, for other stages of a research project. However we consider further research needs to be carried out, perhaps using our guidelines as a starting point, to develop a set of guidelines for effective focus groups in other research stages such as theory building.

One theme which emerged particularly strongly during our study was that there are indeed many perspectives to be considered in any significant e-business topic area, and that there will sometimes be conflict between these perspectives which can be difficult to identify when the stakeholders do not meet face to face. Even then, a skilled moderator is needed to draw the different perspectives from the participants, and to assist them in brainstorming and integrating the issues into an holistic solution. Given the widely varying backgrounds and disciplines of the stakeholders, there are likely to be contentious issues, and the moderator needs to be skilled at handling conflict in a productive way. Vogel and Klassen (2000), building on a significant body of work by Vogel in the area of group support technologies, suggest ways in which asynchronous learning linkages can be used in an e-business environment. Such an approach might well provide an additional method of utilising the focus group concept in a truly global and networked manner – combining some of the advantages currently provided by Delphi surveys (such as global reach and the ability to ignore time zones), with those already provided by focus groups (note also the work of Murray (1997) and Rezabek (2000) in online focus groups for qualitative research).

A second important theme which emerged from our study is the effectiveness of focus groups for devising holistic solutions. Participants when meeting face to face seem less bent on focusing on any single dimension, and are particularly attuned to the all important human issues often neglected in e-business research.

A third theme which emerged is the usefulness of the focus group for identifying priorities and relevance in the research area. In our example, the group highlighted the importance of the need for organisational e-business security policies, and the importance of human issues in organisational e-business security management.

A fourth theme identified is the tendency of a focus group, operating in a social setting, to search for and identify missing social elements of the framework – in our example, organisational culture. These days, it is recognised that the social aspects of e-business solutions are critical to their

eventual success, and hence a research method which illuminates those aspects could be most useful.

Clearly, in an era where business demand for new and effective solutions for e-business needs is high and the issue of theory relevance is paramount, speedy research methods such as the focus group should be seriously considered by e-business researchers. We remind the reader here of the comment by Clarke (2001) regarding a critical need to sacrifice a degree of rigour in e-business research, in order to obtain desired relevance. Our research has shown that when a focus group is employed, the potential for relevance is high, as the variety of disciplines and organisations represented provide the opportunity to cover many facets of the topic and produce integrated, holistic solutions, in a timely fashion. If the session is carefully planned and conducted, using guidelines such as those we have provided here, there is every chance of rigor being preserved, also. We can thus provide business with solutions that are effective in practice – e-business solutions, in fact.

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