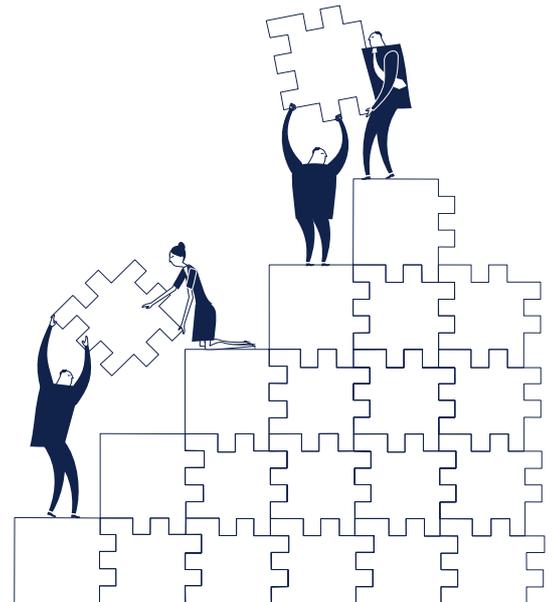**January 2016**

Using Live Cases to Learn Scenario Planning – How the Purpose Matters for Impact and Meaningfulness

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USING LIVE CASES TO LEARN SCENARIO PLANNING –

HOW THE PURPOSE MATTERS FOR IMPACT AND MEANINGFULNESS

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ABSTRACT

The Oxford Scenarios Programme (OSP) is an executive education programme at the Saïd Business School of the University of Oxford that uses 'reflective practice' (Schön 1983) to help individuals alone and in groups learn by doing and reflecting. Since 2007 this experiential learning (Markulis 1985) has been helped by deploying "live client case studies" to ground the learning in a real, still-unfolding, setting. Our designing executive education as an inquiring system (Churchman 1971) includes wider stakeholder engagement as a foundation for learning. The main purpose of the OSP is to help participants to improve the effectiveness of their scenario planning by understanding the epistemology, theories and methodology that underpin choices of methods (techniques, practices, tools) used in any scenario planning engagement. Grounding this in a real engagement with live 'clients' helps learners but little is known about how it helps or is meaningful to clients and their organizations. It is this experience with clients we analyze in this paper.

The OSP has been a week-long programme since 2007 occurring twice each year. The clashes between theory and practice that this programme design surfaced has helped faculty to produce research that clarifies methodological and epistemological misunderstandings (e.g., Ramirez and Wilkinson 2014, 2016). The stable format offers laboratory-like conditions to allow

comparison of how live case client executives benefit from a limited exposure (set up brief, three hours Monday evening, one on Wednesday, and 90 minutes on Friday) to scenario planning applied on an issue that matters to their organisation. We used abduction (Suddaby 2006) and interpretative research (Gephardt 2004) to study 22 live case clients drawn from 15 OSPs since 2007. We designed, tested, and used a questionnaire to explore dependent variables on (i) how actual values derived from claims in scenario planning literature were met and (ii) how purpose expectations compared with outcome. As engaged scholarship (Trist, Murray, and Trist 1990; Van de Ven 2007) that links theory and practice, our findings suggest the 'impact' of executive education and development can extend to the executives of a large number of organisations beyond the executives attending the programme and thereby extend the meaningfulness of business schools. Findings inform the literatures on (a) management education and (b) scenario planning.

Keywords: Scenario planning, Engaged Scholarship, Executive Education, Learning, Live Cases, Impact

1. INTRODUCTION

The Oxford Scenarios Programme (OSP) is an executive education programme at the Saïd Business School of the University of Oxford. Conceptually inspired by Churchman's (1971) "Design of inquiring systems" and its application to education design and research (Stevens 1975), the OSP course is a peer-reviewed programme. As a learning community the faculty and graduate students acting as TA's have refreshed the programme since its inception in 2004 by soliciting feedback from stakeholders that include participants, Oxford faculty paired with external experts who act as peer reviewers, teaching assistants, and live case clients.

A distinctive characteristic of the Oxford Scenarios Programme pedagogy is what Donald Schön (1983) called 'reflective practice' where individuals alone and in groups 'learn scenario planning by doing scenario planning' with the help of live client case studies. With live case client studies management executives (Rashford and De Figueiredo 2010) and professionals of real world organisations offer real world challenges for participants to learn. It is not only a programme 'delivered' to executives, it is a programme design as inquiry (Churchman 1971) so that Faculty and teaching assistants also learn, and is a specific form of engaged scholarship (Trist, Murray, and Trist 1990; Van de Ven 2007). In this paper we analyze how the case study clients as stakeholders –not the participants- gain from lending their live case studies to the programme. This relationship has the effect of extending the 'impact' of an executive development programme to also include, apart from the executives attending it, the executives of a large number of organisations that can benefit from the learning in the programme. Evidence of such impact helps to support meaningfulness of business schools not only for teaching and learning but alsofor improving decision making in organizations.

We did not design the programme as a research opportunity, but because the programme has always been designed as an inquiring system, we found that this offered an approximate laboratory-like setting for us to conduct this interesting research ex-poste. Unlike scholars who look at learning of individual MBA or executive students (e.g. Burt and Chermack 2008; Bradfield, Cairns, and Wright 2015), we instead look at the use of scenarios by organizations. The clashes between theory and practice that the OSP has afforded has provided grounds for faculty to produce leading-edge research in the field to clarify methodological and epistemological misunderstandings (e.g. Ramirez and Wilkinson 2014, 2016).

By design, live cases are enlisted primarily to help OSP participants to learn. In the 11 years that the programme has run, a distinct approach to scenario planning has been developed, which is described in Ramirez and Wilkinson (2016). In regular and formal feedback from participants we ask "How valuable was the contribution made by the client project work to your learning?" And the response from participants has been generally high, on average exceeding 4 on a 5 point scale. In this paper however, we assess not the learning of the participants but the value that this stakeholder engagement has had for the live case company professionals and executives. From a client perspective, relationship with Oxford is brief and bartered entailing lending the case conundrum, developing the brief, and engagement on the Monday, Wednesday, and Friday. We have had clients fly in from as far as India and Canada. Our overall research question is **"How were the purposeful and be-spoke scenarios developed through action learning used and how were they valued?"** To break this main question down, we explored:

1. *How did the actual value derived from scenario planning compare to claims in the scenario planning literature?* To answer this question, we tested the following proposition: Professionals and executives in the real world live case client organizations benefited from lending their live case to the OSP commensurate with values cited in scenario planning literature.

2. *How did the actual value derived from the scenario planning compare with pre-learning live case study-specific objectives in each case?* To answer this question, we tested the following proposition: The original purpose and expectations of professionals and

executives in each real world live case client organizations was met - as reflected upon by clients.

The methodological approach we chose is abduction (Suddaby 2006) because the research questions and data require an iterative approach involving quantitate and qualitative methods and our research strategy fits the interpretative research tradition (Gephardt 2004) because the researchers' self-reflection resonates with critical realism. Also, our research philosophy or paradigm for this study of the use of scenario planning reflects Bell's (2003) suggestion that critical realism is better suited as an epistemological basis for future studies than positivism or post-positivism.

As we have stated above, the main purpose of the Oxford Scenarios Programme is to help participants to improve the effectiveness of their scenario planning – both by appreciating methodologies and their choices and by appreciating the theory that underpin such choices and process. For each session of the programme, one or more executives from a real-world organization, in each session including at least one each from the public or non-profit sector and at least one from the private sector, share a conundrum from their organisation with participants of OSP. While it is in sharing their organization's conundrum with participants of OSP that clients have contributed substantially to the learning by participants, they too might gain some benefit – which is the subject of the research presented here. Anecdotal evidence indicated that clients have gone back to their organizations with useful insights into how to tackle their decision problem.

Hence, our data base is made up of the live case studies (Markulis 1985), our questionnaire data, and follow-up interviews from the OSP. We studied 22 of a total possible set of 31 live case clients in iterations of the OSP between 2007 and 2014 – details as to why are found below. We designed, tested, and used a questionnaire to explore the dependent variables i) value derived in comparison to claims in scenario planning literature and ii) outcomes versus expected purpose. To study the first question we tested actual values derived by clients against claims in scenario planning literature. To do so we produced a questionnaire based on 13 values that the literature suggests scenario planning offers & conducted a Chi-square test. To research the second question we extracted the original purpose from each client brief and, using qualitative coding technique, compared these to the questionnaire responses and the follow up interviews.

Along our conceptual framework, we analyzed the data to assess four relationships: (i) The relationship between academic knowledge and the experiential knowledge of live client executives, (ii) the relationship between the business school and live client organizations, (iii) the barter aspect in the relationship between the programme and the stakeholder executives in the live case engagement, and (iv) how these relations affect impact.

< Insert Figure 1 >

Our analysis suggest that the findings from this research on an executive development programme inform the scholarly literatures on (a) the benefits of scenario planning for organizations and on (b) how business schools can benefit from barters involving stakeholder engagement.

2. LITERATURE REVIEW

2.1 Live case pedagogy

In management education, Pfeffer and Fong (2002) found that there is little evaluation of the professional relevance of management scholarship and of the impact of business schools on both students and on the managerial profession. They advocated carrying out systematic assessments of business school products. Markulis (1985) has proposed using live cases in the classroom; but while there is evidence on the impact of live cases on the learning for students (e.g. Bradfield, Cairns, and Wright 2015), there is little work on the impact of the outputs from live cases on the learning or on the benefit that this practice has for the executives in the live case clients.

Scenario planning has roots in the Royal Dutch Shell Group in the early 1970's. In the scenario planning literature, influential practitioners have suggested that scenario work is an art rather than science (Schwartz 1996; van der Heijden 2005), which would affect how its efficacy is to be assessed. Some scholars and practitioners have proposed that the efficacy might be determined in terms of cultural theory (Inayatullah 2009); others in terms of social ecology in practice (Ramírez, Selsky, and van der Heijden 2010; Ramirez & Selsky, 2014). Despite long standing scholarly efforts, Wilkinson (2009) and Wright et al. (2012) argue that the practice-led field of scenario planning remains under-theorized.

To contribute to the development of how to assess the efficacy of scenario planning, we assess scenario planning as practiced in a given setting –the Oxford Scenarios Programme– and investigate the assessment of the efficacy of scenario planning as live cases for those that lend their live cases to pedagogy.

2.2 Learning for participants versus what executives in live case clients learn from live cases

The assessment of live case pedagogy has mostly been associated with improved learning outcomes for students (c.f. Kennedy, Lawton, & Walker, E. 2001; Culpin and Scott 2012). Live-cases for experiential learning have been used with the intention to bring the real world to the classroom, particularly in executive management education (Provost 2009). That entails having executives bring to the classroom a strategic issue they are currently struggling with, and jointly seek to address it with a team of students in real-time (Rashford and De Figueiredo 2010).

In the wider strategy field, it has been argued that case methodology in MBA classroom has been beneficial more for developing communication and interpersonal skills, and less so for the development of strategic analysis. In scenario planning field, the evaluation of scenario planning has mostly been done in professional settings (c.f. Georghiou L. and M. Keenan 2006). Others have evaluated scenario planning for learning in classroom settings such as Chermack with MBA students and Islei and Belbin with executives attending from Pharma. And though some have argued that live cases were useful for both participants and contributing companies (c.f. Charlebois and Massow 2015), there is little evidence of the latter. Like the OSP, some have tested compressed models of the live case to fit a week of learning but have again looked largely at the benefit drawn by students (c.f. Hough, Shulock, & Thanner 2014). We wish to extend such analysis to learning or use of scenario planning for the partner or client organizations.

2.3 Uses of scenario planning

Scenario planning can serve many uses. While an evaluation exercise can be useful for company leaders to justify investing in it, or for scenario planning scholars to strengthen the methodology, the literature on evaluating critical factors for scenario planning efficacy is limited (Chermack 2006; Ardón et. al. 2012).

Our literature search revealed the thirteen valued benefits that can stem from the use of scenario planning (see table 1). The literature suggests that scenario planning can be used for correcting decision-making biases (Schoemaker 1993); for supporting more effective learning (de Geus 1988; van der Heijden 2005); for assessing or changing Belbin team roles (Islei, Lockett, & Naudé 1999); for building new social capital (Lang 2012); for assessing disputed values (Ramirez and Wilkinson 2014); for appreciating complex situations (Sutcliff and Weber 2003). It can also be used to clarify issues. Thus, Sutcliffe and Weber (2003) argued that companies can better perform by investing in how leaders shape their interpretive outlooks so that leaders can manage ambiguity and mobilize appropriate action. For instance, in the ▮▮▮▮ live case (we have hidden the organizational names in the interest of confidentiality), the scenario planning helped the organization to better interpret what their customers might actually be saying and meaning.

A hypothesis we used in this research was that the limitation of work with scenario planning to a single week -given the format in the programme- is substantial to assess its effectiveness. Our research thus may bias the findings of what scenario planning can achieve within only a single week. Another hypothesis we assessed was that nevertheless, agreed aims with the clients before the programme commenced can be adequately met.

< Insert Table 1 >

3. METHODOLOGY

Our research philosophy or paradigm for this study of the use of scenario planning reflects Bell's (2003) suggestion that critical realism is better suited as an epistemological basis for future studies than positivism or post-positivism. So we adopted a critical realist approach in examining what value was derived from scenario planning (Walton 2008). Our methodology does not seek to establish whether the clients' claims can be justified as true. Rather, it seeks to determine whether "the belief in the truth of a proposition can be justified as being reasonable" (Walton 2008; p. 221). We therefore adopted the approach of *Abduction (Suddaby 2006)* within the interpretative research tradition *(Gephardt 2004).* We iteratively deployed induction and deduction to evaluate the individual cases from 2007. Table 2 presents a summary of the research design.

< Insert Table 2 >

In phase 1 we conducted a literature review and drew out uses and benefits of scenario planning. In phase 2 we performed a document analysis of 31 client briefs to investigate agreed pre-programme purposes. We tallied each purpose to the literature. We then used the 13 benefits that the literature suggested that scenario planning can offer to create a questionnaire. We used this questionnaire to reveal which specific benefits clients expected and actually felt they obtained. In phase 3 questionnaire repeated requests and reminders were issued over almost six months to obtain as many responses as possible. After obtaining an 85% response rate, we verified and

assessed the differences between expected and actual claims; and we matched the closed ended responses with open ended responses. In phase 4, we conducted five in depth interviews for those clients where there were discrepancies between the closed and open ended responses.

3.1 Design of the Oxford Scenarios Programme executive education programme

The design of the Oxford Scenario planning Programme and associated Oxford Futures Forum are intellectually related to the work of Eric Trist and his colleagues in the Tavistock Institute, particularly in terms of the "social engagement of social science"; on 'Schon's 'reflective practice' education (1983);' and on Churchman's (1972) now classic 'Designing Inquiring Systems'. The OSP also seeks to address the challenges posed by Van de Ven (2007) in his "Engaged Scholarship" where he exhorted academics to put their theories into practice, and managers to put their practice into theory. Van de Ven suggested that "Abundant evidence shows that both the civic and academic health of any culture is vitally enriched as scholars and practitioners speak and listen carefully to each other." (2007, p. 7). It is this co-listening that allows for all stakeholders to participate and learn, and for the programme to evolve.

The primary objective of the programme is to teach scenario planning. An important way it achieves this aim is through engaging real clients as case studies. A secondary objective is for the companies that lend live cases to gain usable insights. We took advantage that the OSP has offered laboratory-like conditions in as much as for the last eight years all live client case executives and all participants have had highly comparable, if not always identical, experiences. Thus, the OSP provides each live case client basically the same exposure to scenario planning: one or two groups of 7 senior participants from around the world, aided by a teaching assistant

and guided by the Faculty and the same scenario planning methodology engage the conundrum they have brought to Oxford. However each conundrum which each client brings to each programme is different. So differences have been found across cases within a single programme session as well as across different sessions of the programme.

While the programme has evolved since it was created, the live case format has remained stable – allowing us to treat the 31 live case studies as a stable, comparable, and replicable set of cases with a common format. Thus, the conditions approximate laboratory-like experiments, which is rare in scenario planning as each case, each team, each context, and each user in each engagement tends to be unique and very different indeed from those in other engagements. So the authors took the opportunity of having assembled this unique data set to study how the professionals in the live client organizations might have benefited from the scenario planning that the OSP participants used to ground their learning.

Our files hold historical information on all of the 31 companies and organizations which were used as 'live case clients" during one of the 15 Oxford Scenario Programme sessions between 2007 and 2014. The final sample consisted of 26 client companies which served as 'live' case 'clients' from these companies and organisations because five organisations repeated the experience. For recruiting all of these live case clients for this research, we sent them a letter of invitation, an information sheet outlining the research and its objectives, a questionnaire and interview protocol (latter two attached in appendix). Although we were able to approach all unique 26 cases, four did not respond to the questionnaire either because the company closed or because the executive in the client case changed jobs and/or departed from that organisation.

The analysis was thus done on questionnaire responses from 22 live case clients from the 15 OSPs between 2007 and 2014. We designed, tested, and used an online questionnaire (appended) to explore the dependent variables i) value derived in comparison to claims in the scenario planning literature and ii) expectations of value derived versus outcome in terms of purpose. Follow-up interviews were held by phone for five cases where there was wide discrepancy in responses between closed ended and open ended questions. It was made clear that participating in the interview was completely voluntary and that the respondent could withdraw at any time.

3.2 The engagement with live case clients

Building on the active contribution of all OSP participants, faculty encourage practical and reflective learning in the development of actual scenario planning relating to 'live' real-world cases. The case requires the physical presence by at least two and up to five (one if necessary) individuals who own the conundrum and who will do something with the input produced by OSP participants. Live case clients share their appreciation of the uncertainty in the context of the conundrum and details on their organization on the second half of the afternoon of the Monday. They dine with the participants that evening. They return to Oxford in person on the second part of the morning of the Friday of that week. They also make themselves available for a one hour teleconference on the Wednesday afternoon. Remarkably, this set-up has not disallowed us to get live case clients from India (twice), the USA, Switzerland, Canada, South Africa, or Germany.

Before coming, the executives produce an 8 to 12 page brief outline that provides an overview of the organization, its background, its strategic vision and its main challenges going forward – as

well as of the particular conundrum they would like the scenario planning to inform. We also ask for a description of the business model - how the organization invests what it gets, where it gets it from, and what those that finance it get in return; how it operates; how it is structured would be of help. The brief is often supplemented with annual reports and other publications about the industry and market of the organization. While the brief structure does not specifically ask about what the clients wish to learn from the case study exercise and how they will use the scenario planning; it does set out expectations.

Live case client executives have been invited to share their case study with the promise that "the objective is to invite you to consider how several alternative future environments might help you to improve the effectiveness (and robustness) of your understanding of the issue at hand and the decision you will take". 'Live' case studies are worked on by groups of 6-7 participants over the course of a week, culminating in a face to face 90 minute engagement with the client on the end of the Friday morning.

OSP participants are senior strategists from international industries and government agencies. Table 3 shows the profile of clients. The organizations are both local and international, represent both for profit and non-profit, and range from top market cap of $ 82 billion to the smallest valued in the couple of million.

< Insert Table 3 >

3.3 Design of the research questionnaire

We employed a questionnaire that was both quantitative and qualitative. It incorporated both closed and open ended questions. The closed questions helped us collect data on client expectations versus actual benefits. The open ended qualitative questions were set after the closed to help verify the responses to the closed questions and to gain further insights on the responses. Where we found a mismatch or required further clarifying information we conducted phone interviews.

The unit of analysis was the organization and the unit of observation was an individual client, or in some cases, two individuals. The questions were therefore worded to reflect that we were studying the organization from the perspective of the individual executive as client. The questionnaire is found in the appendix.

In enumerating the use and value of scenario planning, we first deductively extracted benefits and value of scenario planning from the literature and came up with 11 uses. We then reviewed the 31 briefs from live case clients to extract how they sought to benefit from the scenario planning. In doing so we identified two further benefits: "To get insights on your strategy and the assumptions behind it" and "to get a glimpse of what the future looks like".

We asked five faculty (five) and some teaching assistants of the OSP to review and test the survey, which allowed us to debug and improve the design of the questionnaire. For instance, we removed confusions between the value from the scenario process and from the final scenario

planning suggestions. We added an additional question in the open ended section on opening new lines of inquiry based on Alvesson and Saunders.

At the end of the questionnaire, as per snowballing technique, we invited the respondents to let us know who else along with them attended the programme as client, and if we could forward the questionnaire to them as per their current contact details. This ensured that we were able to comprehensively approach all clients who attended the OSP.

4. RESULTS

We explored two dependent variables: i) value derived in comparison to claims in the scenario planning literature and ii) expected value versus outcomes. We used both quantitative analysis and qualitative assessments to assess the findings. At all times, two coders independently evaluated qualitative data and compared notes to identify resolve disagreements. We struggled to interpret the data as some of the results from the quantitative data and qualitative data have been mixed.

First we analyzed the responses to the thirteen benefits of scenario planning drawn from the literature on a Likert scale. We compared the benefits expected before the programme commenced versus the actual benefits realized after use of the scenario planning. Table 4 shows the Chi-square test between the expected and actual benefits realised from the OSP. The Chi-square was significant at 5% level suggesting there is a statistically significant difference between the expected and the actual benefits drawn. Coalescing the 'no' or 'little extent' scores on what expected benefits were actually realized revealed that in terms of, for this data set actual benefits

were lower than what the scenario literature tells can be expected from scenario planning. In the same way, coalescing the 'somewhat', 'much', and 'great deal' scores regarding expected benefits revealed again that actual benefits were lower than what the literature suggests can be expected. We interpret these findings in the 'Discussion' section of the paper that follows this one.

< Insert Table 4 >

We then analyzed the responses by each one of the 13 individual benefits. Table 5 shows the expected and actual responses for each live case client, broken down by individual claims in the literature. Three of the 13 actually obtained benefits were equal to the expected ones. Ten obtained lower actual outcomes compared to the expected ones. The three highest ranked benefits in the sample of cases we researched were "To improve the quality of your strategic conversations" (van der Heijden 2005), "To get a glimpse of what possible futures might look like" (Bunn and Salo 1993); and "To gather insights on your strategy and on the assumptions behind it" (Schwartz 1996). The lowest ranked benefits in our case study sample were "To contribute towards changing team roles" (Islei, Lockett, & Naudé 1999), "To assess values that are in dispute" (Ramirez and Wilkinson 2014), and "To support more effective learning" (de Geus 1988 and van der Heijden 2005). As we see in the discussion section that follows, this appears to be due to the fact that none of the purposes in the cases fit such objectives.

< Insert Table 5 >

We then mapped the open-ended responses in terms of how well they fit each of the thirteen claims identified both from the literature and from the briefs. A summary version of this mapping

is table 6. We found examples for benefits all except for two: "To assess values that are in

dispute" (Ramirez and Wilkinson 2014) and "To contribute towards changing team roles" (Islei,

Lockett, & Naudé 1999). Note that these were also two of the lowest three ranked benefits in the

Table 4. We also coded into themes the open ended responses into different types of value

derived from the scenario planning. We thus identified the following benefits: "to test

assumptions"; "to wind-tunnel our strategy", "to improve our strategic conversations", "to

enhance our insight and learning", all of which are commensurate with benefits found in the

literature.

< Insert Table 6 >

A case by case analysis of individual expectations drawn from the original live case briefs was

made, comparing this with both the expected value revealed in the survey, and with what

questionnaire respondents indicated was the actual outcome they derived. Two coders

individually reviewed each brief to ascertain whether the original value expected from the OSP

engagement was obtained, and where they agreed, they coded this as it appears in Table 7.

< Insert Table 7 >

This table is complex but useful to interpret. It manifests in total 286 boxes, each one

corresponding to a response from the questionnaire. Of all these responses, in 18% of cases (52

boxes) actual benefits were greater than expected, in 49% (141 boxes) benefits were as expected,

and in 32% (93 boxes) the actual benefit obtained was lower than what had been expected. More

significantly, in the 10% of cases (29 dark bordered boxes) where the purpose of the benefits in

the original brief corresponded to the purpose remembered by the respondent in the questionnaire

and thus remained clear, 7 results were higher than expected , 14 were as expected, and 8 had actual lower than expected values. This suggested a somewhat normal distribution for results.

Our follow up interviews revealed why some organizations found it difficult to use the scenario planning and/or to draw value from them. The results from follow-up interviews were:

1. The respondents felt that the programme participants had too little time to understand the organization or its context. This can be especially difficult when the client represents a complicated organization in an unfamiliar setting.

2. The respondents in two charities and one public sector organization claimed the scenarios were "too far into the future to be useful" to their organizations, which they felt are concerned with meeting nearer term challenges.

3. The respondents felt that their organizations needed to be more willing to change for scenario planning to be useful than was the case. For one client, they came to the OSP because of frustration over lack of change. Thus they expressed that the willingness to change was not present to make effective use of the scenario planning.

4. The respondents felt that scenario planning can only work when the client wants to use them, not when he or she is told by senior management to use it. The individual clients who engaged with the OSP have to own the scenarios to be able to share these with colleagues. In one case, inadequate use of scenario planning stemmed from confusion on who the client was -- the person who was engaged before the programme did not attend, and another person attended not owning the conundrum attended instead.

5. Careful thought and communication with the client for managing the engagement and drafting the brief before the OSP was crucial to ensure the learning from the OSP can be

realized. In at least one case, the engagement (requested by a board member, but not the planner who attended) felt that the issue was more for the board and not so much for the organization.

5. DISCUSSION

This research investigates how scenario planning developed for learning can be used and valued by executives in organizations. The research is intended to inform teaching and learning in executive education programmes and to inform the scenario planning literature on how well benefits drawn from the literature actually help executives in organizations.

As per engaged scholarship (Trist, Murray, and Trist 1990) that links theory and practice, our findings from the use of live cases suggest:

1. The impact of teaching and learning in executive development can extend to the executives of a large number of organisations beyond the executives attending the programme;

2. Many – but not all – real world live case clients actually received value from the scenario planning produced by participants;

3. The use of live cases in the classroom can help business schools to engage stakeholders in ways that help to co-produce both rigor in learning for participants and relevance for organizations;

4. There is potential to improve the learning for clients in ways that does not undermine learning for participants;

As per the benefits of scenario planning to organizations, our findings suggest:

5. For our data set of case studies, the two most popular expected values of scenario planning were 'To improve the quality of your strategic conversations' (van der Heijden 2005) and 'To get a glimpse of what possible futures might look like'. These were followed by two other objectives - 'To gather insights on your strategy and on the assumptions behind it' (Schwartz 1996) and 'To surface assumptions and make them discussable' (Wack 1985);

6. For our data set of case studies, the least popular expected benefits of scenario planning were 'To assess values that are in dispute' (Ramirez and Wilkinson 2014) and 'To contribute towards changing team roles' (Islei, Lockett, & Naudé 1999) followed by 'To support more effective learning' (de Geus 1988);

7. We found significant differences between the expected and the actually obtained benefits for live case clients from scenario planning – however 49 % of cases met expected benefits and 18% experienced even more value than expected from scenario planning developed primarily for participants;

8. Where lack of uptake of scenario planning was experienced, this stemmed from a combination of deficiencies in the engagement before the OSP and during the course, lack of buy-in from client to own the conundrum, or lack of 'relevance' of scenario planning produced by participants.

The purpose of the OSP is not to develop perfect scenario planning outcomes for the client, but to use the live case to help participants to experience and understand a rigorous process of scenario development to aid in their learning. Consistent feedback scores from participants above 4 on

scale of 1-5, and many participants referring the programme to others, suggest the programme's pedagogy is successful.

We have compared cases where purpose and user were clear (high correlation of success) with those where user is confused, purpose is unclear, or worse does not show up (low correlation of success). To our knowledge no one has actually tested in real life situations the correlation of purpose with outcomes of use of scenarios. If the initial purpose matches the literature, then the participants work towards that and use is valued. Such an analysis speaks to the process of engagement as often called for in scenario planning. Thus our main finding is that where purpose is clear, though it may be renegotiated and that means that objectives are met. However where purpose remains unclear, there is lack of engagement with clients or users, and objectives of scenarios are often therefore not met. An important insight that this research provides is that insisting on clarifying the purpose and user that the scenario planning is intended to serve is essential to derive the benefits it implies.

Through this research we have come to acknowledge there are further ways to improve the experience for both participants and clients. In the case of four cases, ████████████ ████████████████, the benefits given low outcome scores, because they had short term and/or non-strategic questions which were incongruent with value delivered by scenario planning. In the ██ live cases, the executives who attended seemed to be unclear about their own conundrum and upon reflection they appeared to pose operational challenges rather than high level strategic questions, which appear to explain the low valued benefits experienced by these clients.

While we allow, and sometimes encourage, participants to reframe the conundrum presented by clients, this has been helpful in some cases (████), but also confusing to other clients who remain focussed on short-term operational concerns which may be incongruent with long term analysis offered by scenario planning, such as in the case of charity organizations looking to balance budgets in the near term. Although OSP participants are invited to question and review what they consider to be practical and to what academics consider to be rigorous scholarly assessment of effective practice, this opportunity has not been afforded to live case client executives during the programme. As part of the 'contract' or barter arrangement, the programme essentially ends with the final presentation, engagement with, and 'transfer' of the scenario planning to the client to take home. Lessons from this research have led us to contemplate offering a further iteration in the client system to enable more benefit to be realised.

To conclude our contribution, in terms of management education, we believe our study contributes to linking management theory on learning with impact. We set out to determine how the actual usage of scenario planning compares with pre-learning purposes. We offer the OSP as an example of an actual successful experience of what Simon (1967) considered to be a central challenge to business schools – that of integrating knowledge from practice and from science. In our case this has involved designing an executive education programme as an inquiring system with stakeholder engagement to link learning with impact helps to make client organizations and the business school more meaningful.

In terms of benefits and impact of scenario planning, our study advances the literature on the difficulties involved in assessing the benefits and impact of scenario planning. We had set out to determine how the actual usage of scenario planning compares with what literature claims are the

benefits and impact of scenario planning. We found the use of scenario planning in this educational setting are not always, but sometimes in line with the limited exposure of clients to scenario planning especially when the purpose is clearly set out around a strategic conundrum that matters and is meaningful to the organisation.

6. FUTURE RESEARCH

There is potential to extend the research we have conducted in future scholarship. The fact that the programme is a week-long programme does limit how much learning can be obtained by participants, and it also limits the formatting of each live case. The one week format allowed comparability but also has severe limitations, as the value derived from this form of scenario planning intervention is curtailed. It would be good to see studies with longer exposure data sets. We had to design our questionnaire so that it could be completed in the time that executives could afford. This made it difficult for us to solicit each of the 13 benefits for individual in-depth exploration, though we were able to overcome this to some extent in follow up interviews.

We focused on the use of scenario planning by the individual clients for their organizations and the questions in the questionnaire are mostly about organisational benefits. However as we found from open ended responses and interviews, the individuals may also have had significant personal benefits from their participation as live case clients – but these benefits were beyond the scope of our study. There is thus potential to broaden future research to include questions on individual benefits for the live case client representatives. For instance, some clients were promoted after great success from the application of scenario planning while others felt it easier to choose to resign following lack of uptake of futures thinking by their organization. Others felt

that the networking opportunity to meet executive education participants from the OSP were beneficial to collaborations.

And we acknowledge the OSP format disallows client users from participating in the generation of scenarios. Future research might investigate what effect this lack of direct involvement by clients has? And the OSP format is more about the transmission of the 'product' (done by the participants for and not with the users) than the embedding of scenario planning as an ongoing process in the organisation: What effect does that have?

We invite scholars of management learning and education and of scenarios and futures to adopt some of these many ways to further extend this research to contribute to meaningfulness of teaching and learning and to improve the meaningfulness of business schools in graduate and executive management education.

7. APPENDIX

SURVEY

Action learning and practice at the Oxford Scenario planning Programme

Step 1: Please circle to what extent you / your colleagues / your organization EXPECTED to benefit from scenario planning in the following ways:

Step 2: Please circle to what extent you / your colleagues / your organization ACTUALLY benefitted from scenario planning in the following ways:

		Not at all			Very much
1. Reframe your / your organization's understanding of issue or problem	1	2	3	4	5
2. To gather insights on your strategy and on the assumptions behind it	1	2	3	4	5
3. To get a glimpse of what possible futures might look like	1	2	3	4	5
4. To improve the quality of your strategic conversations	1	2	3	4	5
5. To better appreciate and manage ambiguity	1	2	3	4	5
6. To surface assumptions and make them discussable	1	2	3	4	5
7. To correct decision-making biases	1	2	3	4	5
8. To help surface misleading judgements	1	2	3	4	5
9. To expand or reconfigure your network of stakeholders	1	2	3	4	5
10. To assess values that are in dispute	1	2	3	4	5
11. To support more effective learning	1	2	3	4	5
12. To contribute towards changing team roles	1	2	3	4	5
13. To build new social capital; (for instance to help you create new connections or establish new common ground with others?)	1	2	3	4	5
14. Any other way your organization benefitted?	_____				

Open ended:

15. Any other way your organization benefitted?
16. To the best of your recollection, what purpose and use were the scenario planning meant to serve?
17. How were the scenario planning actually used?
18. How would you establish the "value" derived by you from the scenario planning to justify the investment?
19. How did your original aims and objectives change once you took the scenario planning home?
20. What expectations were unmet?

PHONE INTERVIEW PROTOCOL

About individual level: You as the client	
1. What convinced you to share your conundrum with OSP?	Any hesitation, ease, difficulty encountered?
2. What did you learn at the OSP?	Was there something else you wish you would have learned?
3. What would you have done differently, if at all?	What was your expectation versus outcome?
About your team: In your organization	
4. How did you share the scenario planning beyond the OSP?	Presented formally, formally reported them or just spoke about when appropriate
5. Who else was exposed to the scenario planning?	In the team, other levels, or outside
About your organization: You and all other colleagues	
6. How receptive were they to the scenario planning?	Were they openly receptive or did you have to encourage and push the scenario planning?
7. What did your organization learn from them?	Critiques? Strategic conversation?
8. How did the scenario planning feed into any decision making?	Directly or indirectly
9. How did the scenario planning factor into shaping strategy?	Can you provide specific examples?
10. Is there anything else you would like to share I haven't asked?	
11. Did it prompt further scenario work?	

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FIGURE 1

FIGURE 1: Conceptual framework of relationships analyzed
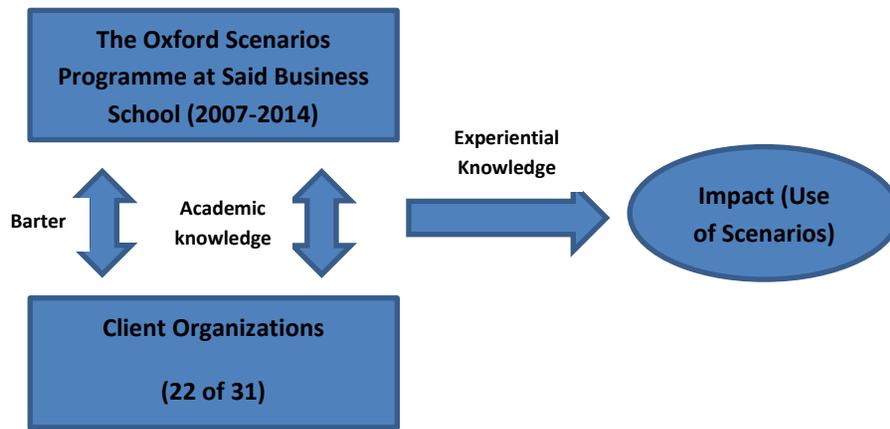

TABLE 1

TABLE 1: Uses of scenario planning from literature

BENEFIT or VALUE	SOURCE
1. To help reframe your and / or your organization's understanding of issue or problem;	Drucker 1988 and Ramirez & Wilkinson 2016
2. To gather insights on your strategy and on the assumptions behind it;	Schwartz 1996
3. To get a glimpse of what possible futures might look like;	Bunn & Salo 1993
4. To improve the quality of your strategic conversations;	Bradfield, Wright, Burt, Cairns, & Van Der Heijden 2005.
5. To better appreciate and manage ambiguity;	Sutcliff and Weber 2003
6. To surface assumptions and make them discussable;	Wack 1985
7. To correct decision-making biases;	Schoemaker 1993
8. To help surface misleading judgements;	Finkelstein, Whitehead, Campbell 2009
9. To expand or reconfigure your network of stakeholders;	Lang 2012
10. To assess values that are in dispute;	Ramirez and Wilkinson 2014
11. To support more effective learning;	de Geus 1988; van der Heijden 2005
12. To contribute towards changing team roles;	Islei, Lockett, & Naudé 1999
13. To build new social capital.	Lang 2012

TABLE 2: Summary of research design

Title	Questions	Objective	Contribution	Conceptual Level of Analysis	Data Sources	Analysis Strategy	T R I A N G U L A T I O N of D A T A & R E S U L T S
Using Live Cases to Learn Scenario Planning – How the purpose matters for impact of scenarios planning	**Main:** How were the purposeful and be-spoke scenarios developed through action learning used and how were they valued?	To investigate through exploratory and descriptive analysis how scenarios developed for learning are used by executives in organizations.		The unit of analysis is the organization and the unit of observation is the client.	*PHASE 1:* Literature review	Based on literature review and document analysis of briefs draw out benefits. Then design survey that incorporates these benefits and survey expected and actual benefits	
	1. How did the actual value derived from scenario planning compare to claims in the scenario planning literature?	To determine how the actual usage of scenarios compares with what literature claims are the benefits and impact of scenarios.	Advances the literature on the benefit and impact of scenarios.		*PHASE 2:* Document analysis of 31 client briefs to investigate aims *PHASE 3:* *Survey questionnaire* To all 26 clients of 31 cases drawn from 15 OSPs 2007-2014; Ask about aims and impact	Calculate significant differences and map closed ended responses with open ended responses	
	2. How did the actual value derived from the scenario planningcompare with pre-learning live case study-specific objectives in each case?	To determine how the actual usage of scenarios compares with pre-learning purpose or aims.	Contributes to linking management theory on learning with impact.		*PHASE 4:* 5 *in depth interviews* of clients	Investigate discrepancies and the 'why' through phone interviews	
Abduction (Suddaby 2006) and interpretative research tradition (Gephardt 2004).						**Scenario learning and impact**	

TABLE 3: Profile of clients

Profile		Profit	non-profit	UK	Non-UK	Senior level	Mid-level
Total clients Feb 2007 - April 2015	31						
Approached	26 (minus 5 duplicates; ███████ ████████████████████)	13	13	13	13	6	20
Responses	22 (minus 2 non-responses ████ ██████ and 2 who moved on ████████) (note ██████ removed due to non attendance)	10	12	11	11	6	16

TABLE 4: Combined responses for Chi-square test

13 QUESTIONS COMBINED	Expected count	Actual count	Expected %	Actual %
1 Not at all	19	39	7%	14%
2 Little	71	76	25%	27%
3 Somewhat	89	85	31%	30%
4 Much	83	70	29%	24%
5 A great deal	24	16	8%	6%
total	**286**	**286**		

H0: There is no difference between the expected & actual benefits realized from the OSP
Chi Test: 2.76911E-05 $p \leq 0.05$ Reject null
suggests there is a significant difference between the expected and actual benefits.

COALESCED	Expected count	Actual count	Expected %	Actual %
No (1 and 2 options)	90	115	31%	40%
Yes (3 to 5 options)	196	171	69%	60%

Chi Test: 0.001456208 $p \leq 0.05$ Reject null
again suggests there is a significant difference between the
expected and actual benefits.

TABLE 5: DV2 Expectations versus outcome of purpose

BENEFIT or VALUE	SOURCE	EXPECTED	ACTUAL	AVE	CHANGE
1. To help reframe your and / or your organization's understanding of issue or problem;	Drucker 1988 and Ramirez &Wilkinson 2016	82%	82%	82%	0
2. To gather insights on your strategy and on the assumptions behind it;	Schwartz 1996	91%	82%	87%	-9%
3. To get a glimpse of what possible futures might look like;	Bunn & Salo 1993	95%	82%	89%	-14%
4. To improve the quality of your strategic conversations;	Bradfield, Wright, Burt, Cairns, & Van Der Heijden, 2005	95%	86%	91%	-9%
5. To better appreciate and manage ambiguity;	Sutcliff and Weber 2003	64%	59%	62%	-5%
6. To surface assumptions and make them discussable;	Wack 1985	91%	73%	82%	-18%
7. To correct decision-making biases;	Schoemaker 1993	59%	50%	55%	-9%
8. To help surface misleading judgements;	Finkelstein, Whitehead, Campbell 2009	64%	50%	57%	-14%
9. To expand or reconfigure your network of stakeholders;	Lang 2012	59%	59%	59%	0
10. To assess values that are in dispute;	Ramirez and Wilkinson 2014	41%	32%	37%	-9%
11. To support more effective learning;	de Geus 1988; van der Heijden 2005	50%	41%	46%	-9%
12. To contribute towards changing team roles;	Islei, Lockett, & Naudé 1999	45%	27%	36%	-18%
13. To build new social capital; (for instance to help you create new connections or establish new common ground with others?)	Lang 2012	55%	55%	55%	0

6, 12:   -18%   decline in actual value experienced compared to expected
3, 8:   -14%   decline in actual value experienced compared to expected
2, 4, 7, 10, 11:   -9%   decline in actual value experienced compared to expected
5:   -5%   decline in actual value experienced compared to expected
1, 9, 13:   0%   No change

TABLE 6: Examples from open ended responses to purpose and use of scenario planning derived in comparison to claims in scenario planning literature

BENEFIT or VALUE	SOURCE	EXAMPLE QUOTE	NO OF EXAMPLES
1. To help reframe your and / or your organization's understanding of issue or problem;	Drucker 1988 and Ramirez &Wilkinson 2016	*Asking the question in a different way prompted colleagues to offer newer and more divergent insights on standard issues. We avoided the standard answer to a standard question routine.*	7
2. To gather insights on your strategy and on the assumptions behind it;	Schwartz 1996	*To generate a strategic input to our executive team for long term company strategy*	13
3. To get a glimpse of what possible futures might look like;	Bunn & Salo 1993	*The framework of addressing the future now and then getting ready for it*	8
4. To improve the quality of your strategic conversations;	Bradfield, Wright, Burt, Cairns, & Van Der Heijden, 2005	*To improve our communication on developing in-house prospective/foresight capacity*	7
5. To better appreciate and manage ambiguity;	Sutcliff and Weber 2003	*It was challenging to translate the scenario planning and their impact to other Board members and senior staff - but people were fascinated and at the same time a little confused as to what to do with them.*	4
6. To surface assumptions and make them discussable;	Wack 1985	*They were meant to provide us with different future context for how our issues and approach would fare in a changing world, given a variety fof assumptions we had never considered.*	6

7. To correct decision-making biases;	Schoemaker 1993	*To challenge the boundaries of our thinking. To challenge the level of the Board's ambitions.*	6
8. To help surface misleading judgements;	Finkelstein, Whitehead, Campbell 2009	*Thought we had cracked it, scenario planning made us think again and be more radical*	5
9. To expand or reconfigure your network of stakeholders;	Lang 2012	*Incredibly worthwhile - being exposed to such a range of extremely bright people from a mixture of different countries and different sectors produced an intensity of debate and challenge that was very powerful.*	6
10. To assess values that are in dispute;	Ramirez and Wilkinson 2014	--	--
11. To support more effective learning;	de Geus 1988; van der Heijden 2005	*Create a disciplined approach to thinking more deeply and writing up the development and impact of the program*	7
12. To contribute towards changing team roles;	Islei, Lockett, & Naudé 1999	--	
13. To build new social capital; (for instance to help you create new connections or establish new common ground with others?)	Lang 2012	*I could see the connections within a wider network that I needed to engage.*	5

TABLE 7: DV2 Case by Case Expectations versus outcome of purpose from scenario literature

Dark Borders are Original value from briefs; GREEN is Actual > Expected;   RED is Actual <
Expected;   WHITE Actual = Expected

Organization	1. To he	2. To q	3. To q	4. To i	5. To b	6. To s	7. To c	8. To h	9. To e	10. To a	11. To s	12. To c	13. To b
	2 Little	3 Somew	4 Much	5 A great	4 Much	4 Much	3 Somewl	3 Somewl	4 Much	2 Little	2 Little	2 Little	4 Much
	3 Somewl	3 Somew	3 Somew	4 Much	3 Somewl	3 Somewl	3 Somewl	4 Much	2 Little	3 Somewl	1 Not at a	4 Much	
	4 Much	4 Much	4 Much	4 Much	4 Much	4 Much	4 Much	4 Much	4 Much	4 Much	2 Little	3 Somewl	4 Much
	4 Much	4 Much	4 Much	4 Much	4 Much	4 Much	4 Much	4 Much	4 Much	4 Much	2 Little	4 Much	4 Much
	3 Somewl	3 Somewl	3 Somewl	2 Little	2 Little	2 Little	2 Little	2 Little	2 Little	2 Little	3 Somew	2 Little	2 Little
	4 Much	4 Much	4 Much	2 Little	2 Little	3 Somewl	2 Little	2 Little	2 Little	2 Little	2 Little	2 Little	2 Little
	4 Much	4 Much	5 A great	5 A great	3 Somewl	4 Much	2 Little	3 Somewl	4 Much	3 Somewl	4 Much	3 Somewl	4 Much
	4 Much	4 Much	5 A great	5 A great	3 Somewl	3 Somewl	2 Little	2 Little	3 Somewl	2 Little	4 Much	3 Somewl	3 Somewh
	4 Much	4 Much	4 Much	4 Much	3 Somewl	3 Somewl	4 Much	4 Much	3 Somewl	3 Somewl	4 Much	3 Somewl	3 Somewh
	3 Somewl	4 Much	4 Much	3 Somewl	4 Much	3 Somewl	3 Somewl	3 Somewl	3 Somewl	3 Somewl	3 Somewl	4 Much	3 Somewh
	3 Somewl	3 Somew	3 Somew	3 Somewl	4 Much	4 Much	3 Somewl	3 Somewl	3 Somewl	3 Somew	2 Little	1 Not at a	2 Little
	3 Somewl	3 Somew	4 Much	4 Much	5 A great	3 Somewl	2 Little	2 Little	3 Somewl	2 Little	1 Not at a	1 Not at a	3 Somewh
	4 Much	4 Much	4 Much	4 Much	2 Little	3 Somewl	2 Little	2 Little	2 Little	2 Little	2 Little	3 Somewl	2 Little
	2 Little	2 Little	1 Not at a	1 Not at a	2 Little	1 Not at a	1 Not at a	1 Not at a	1 Not at a	1 Not at a	1 Not at a	1 Not at a	1 Not at all
	3 Somew	4 Much	5 A great	5 A great	1 Not at a	5 A great	1 Not at a	1 Not at a	3 Somewl	1 Not at a	4 Much	2 Little	3 Somewh
	2 Little	2 Little	2 Little	3 Somewl	1 Not at a	2 Little	1 Not at a	1 Not at a	5 A great	1 Not at a	3 Somewl	1 Not at a	4 Much
	3 Somewl	4 Much	5 A great	4 Much	4 Much	3 Somewl	4 Much	4 Much	3 Somewl	3 Somewl	5 A great	4 Much	4 Much
	4 Much	5 A great	5 A great	4 Much	4 Much	5 A great	4 Much	4 Much	3 Somewl	4 Much	3 Somewl	3 Somewl	3 Somewh
	3 Somewl	4 Much	4 Much	4 Much	2 Little	4 Much	3 Somewl	2 Little	2 Little	2 Little	1 Not at a	4 Much	2 Little
	4 Much	5 A great	4 Much	4 Much	2 Little	1 Not at a	3 Somewl	3 Somewl	3 Somewl	2 Little	1 Not at a	2 Little	1 Not at all
	4 Much	4 Much	4 Much	4 Much	3 Somewl	4 Much	2 Little	3 Somewl	2 Little	2 Little	3 Somewl	3 Somewl	4 Much
	1 Not at a	2 Little	2 Little	2 Little	2 Little	2 Little	2 Little	1 Not at a	1 Not at a	2 Little	1 Not at a	1 Not at a	1 Not at all
	3 Somew	3 Somewl	4 Much	4 Much	4 Much	3 Somewl	3 Somewl	4 Much	3 Somewl	3 Somewl	3 Somewl	3 Somewl	2 Little
	4 Much	4 Much	5 A great	4 Much	4 Much	3 Somewl	3 Somewl	3 Somewl	2 Little	4 Much	4 Much	2 Little	2 Little
	5 A great	5 A great	5 A great	5 A great	5 A great	3 Somew	4 Much	4 Much	3 Somewl	2 Little	2 Little	1 Not at a	3 Somewh
	5 A great	5 A great	5 A great	4 Much	4 Much	3 Somew	3 Somewl	3 Somewl	2 Little	3 Somewl	2 Little	2 Little	3 Somewh
	2 Little	3 Somew	2 Little	3 Somewl	2 Little	3 Somewl	2 Little	2 Little	2 Little	3 Somewl	2 Little	2 Little	3 Somewh
	3 Somew	3 Somew	4 Much	3 Somewl	2 Little	3 Somewl	2 Little	3 Somewl	3 Somewl	2 Little	2 Little	2 Little	3 Somewh
	3 Somewl	3 Somew	5 A great	4 Much	2 Little	3 Somewl	2 Little	2 Little	2 Little	2 Little	2 Little	2 Little	2 Little
	3 Somewl	4 Much	4 Much	3 Somewl	2 Little	4 Much	3 Somewl	2 Little	3 Somewl	2 Little	2 Little	2 Little	2 Little
	2 Little	2 Little	3 Somew	4 Much	3 Somewl	4 Much	3 Somewl	4 Much	4 Much	5 A great	4 Much	3 Somewl	3 Somewh
	2 Little	2 Little	2 Little	2 Little	2 Little	2 Little	2 Little	2 Little	2 Little	2 Little	2 Little	2 Little	2 Little
	4 Much	4 Much	5 A great	5 A great	3 Somewl	4 Much	4 Much	4 Much	5 A great	3 Somew	3 Somewl	2 Little	5 A great
	4 Much	4 Much	3 Somewl	3 Somewl	3 Somewl	4 Much	3 Somewl	3 Somewl	4 Much	3 Somew	2 Little	2 Little	3 Somewh
	4 Much	3 Somew	4 Much	3 Somewl	2 Little	2 Little	1 Not at a	1 Not at a	1 Not at a	1 Not at a	1 Not at a	1 Not at a	1 Not at all
	4 Much	4 Much	5 A great	4 Much	2 Little	1 Not at a	1 Not at a	1 Not at a	1 Not at a	1 Not at a	1 Not at a	1 Not at a	1 Not at all
	5 A great	5 A great	5 A great	3 Somewl	3 Somewl	5 A great	3 Somewl	3 Somewl	3 Somewl	2 Little	4 Much	2 Little	2 Little
	5 A great	5 A great	4 Much	4 Much	3 Somewl	4 Much	3 Somewl	3 Somewl	2 Little	3 Somewl	4 Much	2 Little	
	4 Much	4 Much	5 A great	3 Somewl	2 Little	3 Somewl	2 Little	1 Not at a	3 Somewl	1 Not at a	2 Little	2 Little	2 Little
	5 A great	4 Much	5 A great	4 Much	3 Somewl	3 Somewl	2 Little	1 Not at a	3 Somewl	1 Not at a	3 Somewl	2 Little	3 Somewh
	2 Little	2 Little	4 Much	3 Somewl	3 Somewl	3 Somewl	3 Somewl	2 Little	1 Not at a	2 Little	1 Not at a	1 Not at a	2 Little
	3 Somewl	3 Somew	4 Much	3 Somewl	4 Much	3 Somewl	3 Somewl	2 Little	2 Little	2 Little	2 Little	1 Not at a	1 Not at all
OIF (Expected)	3 Somewl	4 Much	4 Much	4 Much	3 Somewl	3 Somewl	3 Somewl	2 Little	2 Little	2 Little	4 Much	4 Much	3 Somewh
(Actual)	3 Somew	4 Much	4 Much	4 Much	3 Somewl	3 Somewl	3 Somewl	2 Little	3 Somewl	2 Little	4 Much	4 Much	3 Somewh
No. Expected: Much+	10	13	18	15	6	10	5	7	5	2	7	3	6
No. Actual: Much+A l	11	13	16	13	6	6	2	2	3	1	4	4	3

Actual > Expected 52 ;   Actual = Expected   141;   Actual < Expected 93
Total boxes 286
Surpassed original value   7   (dark borders and green shaded)
Fell short of original value   8   (dark borders and red shaded)
At par with original value   14   (dark borders and white shade)
Most popular uses / benefits in terms of Much + A lot expected are 3, 4, and 2
Least popular uses / benefits in terms of Much + A lot expected are 10, 12, 7, and 9
This is broadly in line with coding of open ended responses shown in table 5 above