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Research Note

Exploring the relationship between scenario planning and perceptions of strategic conversation quality

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Abstract

This study examines the construct of strategic conversation in a scenario planning context. After defining key terms and a conceptual framework for the strategic conversation, this study presents data gathered from individual participants in a scenario planning project. Data concerning perceptions of strategic conversation skills were collected pre-and post-scenario planning project, and then compared with a standard *t*-test. Conclusions are drawn and limitations are presented and discussed in depth. Recommendations for improving this research in future studies are also identified.

A 2003 survey of 339 Canadian companies suggested that failure among older firms "may be attributable to an inability to adapt to environmental change" [1]. Certainly this is not a situation unique to Canadian organizations and evidence suggests that inability to adapt is a global issue [2,3]. Some tools have emerged that seem to help companies and leaders engage with change and lessen its threat. One such tool is scenario planning [4]. Many recent articles suggest the high utility of scenario planning in uncertain business environments [5,6,4,7] and while this article will agree, its purpose can be viewed as more specific. The ability of an organization to adapt to change is certainly important, but it is only half of the story. The ability of an organization to consistently harness change and constantly rediscover its entrepreneurial vision–we suggest–rests on the organization's ability to continuously create and hold strategic conversations.

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Arie de Geus' famous adage that "the ability to learn faster than competitors may be the only remaining competitive advantage" [8] stresses a connection between learning and overall firm performance. Learning requires an interaction of some kind [5,6], and some argue that strategic learning occurs through dialogue [3–5]. Thus, we arrive at "strategic learning through conversation" as our thesis for how competitive advantage can be gained through the use of scenario planning as a learning and development tool.

The strategic conversation is currently something of a myth in organizations. With only a few resources that describe this phenomenon, the strategic conversation has become another buzzword added to the list of organizational jargon that is already too long. Manning [9] wrote, "Strategic conversation is far more than just an occasional practice that can be adopted or abandoned at will: it is without doubt the central and most important executive tool" (p. 36). But what is it? Manning [9] provided further tips for initiating and managing a strategic conversation, but he never defined or provided a detailed description of what the strategic conversation actually is. Thus, the core purpose of this article is to define what a strategic conversation is and to provide a beginning attempt to measure its attributes.

Schwartz [10] provided the most precise definition of strategic conversation when he stated, "A strategic conversation is a carefully thought-out but loosely facilitated series of in depth conversations for key decision makers throughout an organization" (p. 221). Schwartz elaborated:

> Perhaps most significant of all, a strategic conversation is informal—or, more precisely, it combines formal and informal elements. To understand the importance of this point, consider the formal business planning process that most people think of when they hear about an organization's "strategy." This process often involves carefully scripted presentations, scheduled according to a structures cycle, in which senior managers pronounce judgments on strategic plans. But by the time proposals get to the final stage of presentation, they have almost always gone through an elaborate, but unacknowledged, *informal* process of development and testing to assure that they will pass this hurdle.[10, p. 221–222].

Schwartz, as one of the world's authorities on scenario planning, has argued for the use of scenario planning as a tool to foster strategic dialogue and conversation within an organization, which in turn, is believed to lead to a competitive advantage and long-term results [10]. In addition, scenario planning literature refers to using the strategic conversation as a tool to foster organizational learning [7–9]. Thus, it seems that the *goal* of the strategic conversation is to foster organizational learning. But this allows the ability to ascertain little about the nature and function of the strategic conversation itself. Intuitively, this argument makes sense. It seems logical that the present, ill-defined notion of strategic conversation (general and constant dialogue among the majority of organizational members about futures, options and their implications) would certainly lead to more thoughtful actions, deeper reflections, and thereby richer learning experiences about the organization and its position. However, too often, management literature is left in the abstract domain.

1. Scenario planning

The scenario planning literature increasingly features the term "strategic conversation" as one of the key outputs of the scenario planning process. Scenario planning is an approach to strategy that accounts for uncertainty in ways that traditional strategic planning falls short.

Scenarios have been defined as ". . .tools for ordering one's perceptions about alternative future environments in which one's decisions might be played out". Alternatively: ". . .a set of organized ways

for use to dream effectively about our own future" [10, p. 4]. Scenario planning has been defined as ". . .a process of positing several informed, plausible and imagined alternative future environments in which decisions about the future may be played out, for the purpose of changing current thinking, improving decision making, enhancing human and organization learning and improving performance".

There are many methods for conducting scenario planning. The Centre for Innovative Leadership [12] identified six steps, which mirror most of the methodologies available publicly today. These are:

1) identification of a strategic organizational agenda, including assumptions and concerns about strategic thinking and vision,
2) challenging of existing assumptions of organizational decision makers by questioning current mental models about the external environment,
3) systematically examining the organizations external environment to improve understanding of the structure of key forces driving change,
4) synthesis of information about possible future events into three or four alternative plots or story lines about possible futures,
5) development of narratives about the story lines to make the stories relevant and compelling to decision makers, and
6) use of stories to help decision makers "re-view" their strategic thinking.

There are multiple other specific approaches to scenario planning. The method presented here is chosen because of its ability to synthesize many of the available methods into a clear and coherent set of general steps. Mintzberg's work on strategy, particularly concerning the learning, cognitive, and configuration schools of strategy [14,15] is very much in line with the emerging view of strategy that promotes an understanding of multiple paths into the future, rather than the stale predictive thinking that ruled in the 1960's and 70's.

2. Dialogue

Bohm's [14] important work has suggested much about the ways in which people communicate. Given the positioning of communication in this article and in the larger context of scenario planning, it is useful to consider the nature of communication and Bohm's work sheds considerable light on the subject.

> I give a meaning to the word "dialogue" that is somewhat different from what is commonly used. The derivations of words often help to suggest a deeper meaning. "Dialogue" comes from the Greek word *dialogos*. *Logos* means "the word" or in our cast we would think of the "meaning of the word". And *dia* means "through"–it doesn't mean "two". A dialogue can be among any number of people, not just two. The picture or image that this derivation suggests is a *stream of meaning* flowing among and through us and between us. This will make possible a flow of meaning in the whole group, out of which may emerge some new understanding. (p. 6).

> Contrast this with the word "discussion", which has the same root as "percussion" and "concussion". It really means to break things up. It emphasizes the idea of analysis, where there may be many points of view, and where everybody is presenting a different one—analyzing and breaking up. That obviously has value, but it is limited, and it will not get us very far beyond various points of view. (p. 7).

3. The strategic conversation

The strategic conversation is a phenomenon that has been described as the simple conversations, interactions and dialogues that occur among organizational members in everyday formal and informal situations. While this strategic conversation includes the formal planning process and its meetings and retreats, it also includes the more subtle interactions that can only be classified as informal and undocumented. Van der Heijden [11] is commonly credited for coining the term in his book *Scenarios: The Art of Strategic Conversation* and he wrote:

> The crux of the institutional aspects of the processual paradigm is conversation. The learning loop model shows the interwovenness of thinking and action. If action is based on planning on the basis of a mental model, then institutional action must be based on a shared mental model. Only through a process of conversation can elements of observation and thought be structured and embedded in the accepted and shared organizational theories-in-used. (p. 41).

For certain, the strategic conversation is an abstract phenomenon—difficult to describe and pin down. However, there are some suggestions in the scenario planning literature about what is required in order to achieve this strategic conversation. Van der Heijden [11] wrote that an effective strategic conversation requires 1) a common language, 2) alignment of ideas, 3) willingness to engage in rational argumentation, and finally 4) the evolutions of ideas inside the organization.

3.1. Common language

The requirement for common language is logical and not complex. Stated simply, organization members participating in any process need a common understanding of the process to be used along with the terms and meanings associated with the process. Common language further provides some way to define and sort through the jargon that has invaded today's business world.

3.2. Alignment of ideas

Strategy literature increasingly includes reference to the notion of alignment [1,2]. While most of the strategy literature refers to alignment among organization, process, and individual goals, the strategic conversation aims to produce alignment among ideas. Wack [13] stressed the importance of revealing and analyzing mental models in scenario planning and in this context, the notion of idea alignment can be considered as an output of building a collective mental model. Sharing assumptions, values, and the basic scaffolding of a unified purpose are critical to establishing this kind of alignment.

3.3. Willingness to engage in rational argumentation

The scenario planning process is one of dialogue, challenge, and willingness to critique ideas. Thus, participants must be comfortable engaging in conversation and must be open to having their ideas

challenged by other participants. By definition, learning happens when people begin to see things anew, or in a new way. Without this critical piece, the strategic conversation becomes lip service and none of its implications are taken seriously as nothing is learned.

3.4. Evolution of ideas inside the organization

This final requirement is the result of the previous three. The goal of strategic conversation is the evolution of ideas within an organization that is, in turn, set by developing a common language, working toward aligning ideas, and being willing to critique and be critiqued among the majority of people in an organization. Often, scenarios are just a starting point for sparking new ideas, which leads to revision of the scenarios and further debate and dialogue until assumptions are challenged.

4. Other sources linking dialogue and strategic action

Chermack and Lynham cited dialogue as a key component of scenario planning in critical science contexts (or for example, situations in which scenario planning practices are used to promote community and nation building). To be sure, dialogue forms a critical component of scenario planning in general and is particularly helpful in the shaping of mental models and shared ideas.

Allee [16] stated that: "...another powerful collaborative learning and knowledge-creation process is scenario building. Scenario building can help companies rethink much more than long-term strategy. It can help a company reframe their identity, their operating assumptions, their values, and their vision for the future" (p. 179). Senge [17] identified three stages of an effective organizational learning process: 1) mapping mental models, 2) challenging mental models, and 3) improving mental models. Scenario planning has been shown to meet all three of these stages [18].

Johnson-Laird's theory of mental models and mental model development includes one core component based in language and another in logical reasoning. According to Johnson-Laird [15], learning is the key process that allows individuals to translate situations and interactions into some form of recallable experience and expertise [15,16]. Thus, this study is aimed at assessing the extent to which individual communication skills may change throughout the course of a scenario planning project as scenario planning has been advocated both as a means of developing dialogue in an organization and fostering mental model changes in key decision makers.

Ruona and Lynham's System of Interacting Components of Thought and Practice [19] is useful for illustrating the relationships among mental models and human perceiving, thinking and acting. Mental models include the biases, beliefs, experiences and values of individuals [20] and are constantly interacting with patterns of perception, thought and action (Fig. 1).

5. Theoretical framework

Scenario planning is largely based in dialogue [17,7]. Certainly some efforts have been made that position scenario planning as a technical exercise. Again, there has been no careful study of

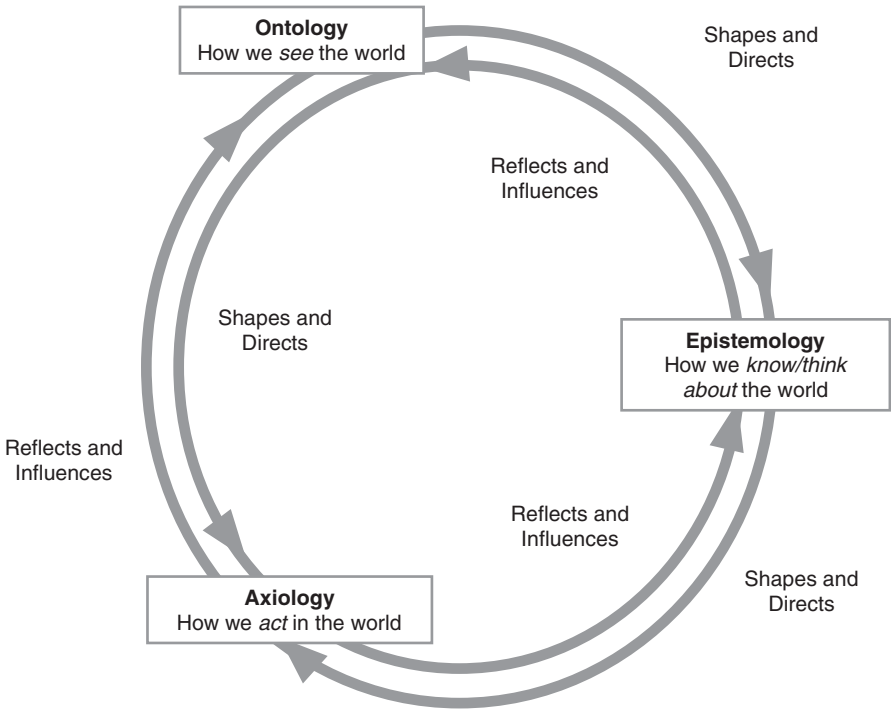

Fig. 1. Ruona and Lynham's system of interacting components of thought and practice ([20], p. 161).

precisely what makes any given scenario project succeed or fail, although it has been suggested that such technical approaches do not capture the mindset of the managers who will use the scenarios and are therefore thought to be less effective [6]. The effectiveness of scenario planning is based in the ability of facilitators to engage organizational members in genuine conversation about the possibilities of the future [10,18]. The general observation has been made that scenario planning cannot be effectively implemented via online participation as the face-to-face interaction and dialogue is thought to be the mode by which scenario planning happens. As there is no research to support this claim, further study on the topic might see an opportunity to explore the effectiveness of scenario processes via varying delivery methods. While there is much conceptual work that outlines how this happens in theory, there has been no careful study of the phenomenon.

5.1. Purpose of the article, research question and hypothesis

The purpose of this article is to analyze the link between scenario planning and perceptions of the quality of individual conversation skills. Thus, the research question for this inquiry is:

Research Question 1—What are the effects of scenario planning on perceptions of individual conversation and communication skills?

We hypothesize that there will be an increase in mean scores of perceptions of the quality of conversation and communication skills based on measurements taken before and after the scenario planning intervention.

5.2. Hypothesis

We hypothesize an increase in mean scores as measured by the CQEC. The null hypothesis and our hypothesis are notated symbolically as follows:

H_0. $\mu_D = 0$

H_1. $\mu_D \neq 0$

6. Method

The following sections detail the research method, sampling strategy, and instrument used in the conduct of this research study.

6.1. Sample

Participants in a scenario planning project at a large organization in the southern United States served as the sample for this research study. Participants were selected on the basis of a single criterion—participation in the scenario planning project. Given the lack of data-based inquiry that examines the scenario planning phenomena, this study aimed primarily to provide a data-based assessment of scenario planning practices. In total there were ten participants ($N = 10$). One participant dropped out of the planning project leaving a total of 9 participants that completed the entire project and submitted data points. Clearly the sample is a limitation and an analysis of this limitation is discussed in depth after the implications of the study are presented.

6.2. Instrument

The instrument used in this study is the Conversation Quality and Engagement Checklist (CQEC). It is based on over thirty years of practitioner-based experience with executives and planning teams in a scenario planning context and is intended to assess participant conversation and communication skills. The instrument contains 20 items which were initially divided into two groups—the first ten items were designed to measure what are called Type 1 skills and the second ten items were to measure what were called Type 2 skills. Type 1 skills items were aimed at assessing individual conversation patterns and skills. Type 2 skills items were intended to assess the ways in which individuals interact with others. These items were co-developed with participants throughout the evolution of its use, which does not establish validity in an academic sense, but can be thought of as a form of face validity.

These 20 items each have a scale from one to five. Sample items include the following: 1) I use active listening to understand another person's point of view; 2) I paraphrase what is said to ensure deeper understanding. Participants are asked to rate their own behavior from one to five in organizational conversations according to 1) never, 2) sometimes, 3) often, 4) usually, and 5) always.

Efforts to establish academic validity and reliability for this instrument have also been undertaken [25]. In short, the instrument has been found highly reliable, but analysis is unclear about differentiating

factors (it seems that there may only be one kind of skill, but further analysis will be required). The validation process is described more fully.

Validity and reliability. While establishing validity and reliability is an ongoing process, one other study has been undertaken specifically to assess the reliability and validity of this instrument. A sample of 204 managers in four manufacturing firms in the northern United States was used as a sample for reliability analysis. An exploratory factor analysis was used to assess the instrument and the overall reliability score was .93 using Chronbach's Alpha as the primary measure of reliability. Certainly, the validity and reliability of this instrument must be established over time, but we can say that an initial factor analysis has suggested that this instrument is highly reliable and valid.

6.3. Data collection and analysis

The objective of the data analysis in this study was to examine claims that scenario planning is a method of enhancing or improving the quality of conversation. Questionnaires were administered at meetings held at times that were scheduled for the scenario planning project. At least one of the authors was present at each session. Participants were given the questionnaires and asked to return them after each meeting. Meetings ran for approximately one hour. The analysis began with examining simple descriptive statistics, specifically looking at participant variance among the responses to the pre-and post-questionnaires (according to mean scores). Further analysis included paired sample *t*-tests among pre-and post-groups.

7. Results

Cronbach's Alpha was calculated as a measure of reliability (internal consistency). The results for this study produced a reliability measure of .90. According to Nunnaly [21] a Chronbach's Alpha score greater that .70 indicates a generally reliable instrument. Given that this is an initial effort at measuring conversation and communication skills in the context of scenario planning, the reliability estimates are acceptable. General descriptive statistics are provided in Table 1.

The descriptive statistics indicate an overall increase in mean scores from pre-to post-intervention assessment. Score means increased from 3.09 to 3.69, for Type I skills and from 3.10 to 3.68 for Type II skills on a scale of one through five. While we may speculate that these increases were related to improving communication and conversation skills, familiarity with the instrument and memory of pre-

Table 1
Descriptive statistics for participants on the CQEC

	N	Min	Max	*M*	SD
Level 1 pre	10	2.00	4.00	3.09	.60
Level 2 pre	10	2.20	3.90	3.10	.53
Level 1 post	9	3.00	4.80	3.69	.60
Level 2 post	9	2.60	4.80	3.68	.66
Valid *N* (listwise)	9				

Table 2
Paired-sample *t*-test for the two constructs of the CQEC

	M	*SD*	*t*	*p*
Type- 1- Post–Type- 1- Pre	.64	.68	2.70*	.01
Type- 2- Post–Type- 2- Pre	.52	.62	2.40*	.02

df=9.
*=significant at $\alpha < .05$.

testing cannot be ruled out as a possible cause, as no control group was used to isolate the effects of the scenario planning intervention. Table 2 provides the results of the *t*-test.

7.1. Discussion and implications

Individual Type 1 conversation and communication skills increased significantly over the course of the intervention scenario planning project as measured by pre-and post-assessments ($t=2.70$) and were found significant ($p<.05$). Our results do seem to support claims in the literature that individual communication skills are important in scenario planning efforts. It has been speculated that language and communication are deeply linked to mental models and while difficult to assess in quantitative measures, it seems logical that active participation and communication about a specific or challenging topic aids in learner orientation and may serve to spark changes in mental models. Senge [22] defined mental models as "deeply ingrained assumptions, generalizations, or even pictures or images that influence how we understand the world and how we take action. Very often, we are not consciously aware of our mental models or the effects they have on our behavior" ([22], p. 8).

Type 2 skills also varied significantly from pre-to post-test scores ($t=2.40$; $p<0.05$), indicating considerable change in these skills as well. The level 2 skills portion of the instrument is intended to measure interpersonal communication and engagement skills. Most models of planning are based on group action and decisions [23]. Thus, the importance of interpersonal communication capabilities becomes apparent.

It is difficult to consider the implications of this study given the small sample size (to be discussed at length in the next section). On the one hand, the results could be due to random error and are thus invalid in which case any implications become meaningless. On the other hand, given our *t*-values, our findings may represent an accurate assessment of the effect of scenario planning on individual perceptions of communication and conversation skills. If the latter were true, the implications could be that, indeed, individual perceptions of communication and conversation skills do improve as a result of participation in scenario planning and therefore we might perform other tests that assess the relationship between communication and conversation skills and some objective measures of performance (for example, financial data). We might also consider that we have found a possible explanation for why Internet-based, or online scenario planning has failed. In essence, we may have learned more about what makes scenario planning effective and what its outcomes tend to be.

It is also a possibility that the research participants have simply given us what we were looking for. The problem of social acceptability suggests that research subjects may pick up on the intent of the study and would naturally give themselves higher marks on the post-test to show improvement. Any further studies must also take this into consideration and attempt to link such increases in scores to objective measures rather than perception based ratings.

7.2. Limitations and recommendations for future research

Sample size is a clear limitation to this research. While our intention is not to provide sweeping generalizations, we do think there is enough significance to continue work in this area. It should also be noted that while it seems there was some significant change in the participant perceptions of communication and conversation skills, our study did not make use of a control group. Thus, we have not addressed the possibility that our significant results were a by-product of some other change in the environment of the sample. Additionally, we have mentioned the problem of social acceptability and thus future research will attempt to address this as a potential factor by examining objective measures or observable behaviors in addition to the perception based instrument.

While sample size is certainly a critical flaw in the study, a lack of research-based studies in the scenario planning literature could indicate that there would be some value in reporting the results that were found. In addition, there are clear implications for moving forward. First, while it is unlikely that most studies of scenario planning practices will include large samples (for example, samples of 200 or more), the solution may be to begin studying the phenomenon longitudinally. That is, small samples from similar situations over long periods of time could be combined into larger samples that would avoid the problems with error found in this study and others with small samples.

The sample size is not large enough to alleviate the possibility that the results could have simply become significant by chance [24]. A small sample size limits the conclusions that can be drawn from the data and our ability to make statements about the general nature of scenario planning and its impact on conversation skills and abilities. Our data, however, supports claims made by previous literature reviews and conceptual articles, and is simply arguing for further development of this area. Thus, we do not conclude that scenario planning increases communication and conversation skills, rather we would like to offer our findings as indicators that the phenomenon is worth studying further in more complex designs with more developed instruments.

Another problematic aspect of this study is the instrument itself. The Conversation Quality and Engagement Checklist has only recently undergone careful empirical validation. Viewing validity as an ongoing process means that as further studies progress, we will know more about the utility of this instrument. We have briefly described attempts underway to examine the reliability of the instrument using an exploratory factor analysis (EFA) [22]. Using confirmatory factor analysis (CFA) is one additional method we intend to use to refine the instrument's overall reliability and validity. Once a valid and reliable instrument is established, larger samples could be tested in the context of scenario planning and the issues encountered in this study could be resolved.

Another consideration for future research involves the use of a control group. The use of a control group would allow the results of a group undergoing a scenario planning exercise to be compared with a group that is not subject to any intervention. The intent of this strategy is to isolate the effects of the scenario planning intervention, which would help us to conclude (if significant results were found) that it was not some other random activity that generated the change in skill levels from pre-to post-test scores.

8. Conclusions

We can conclude from this study only that the phenomenon requires additional study. While the data seem to support several claims in the scenario planning literature, the limitations of this study prevent any

concrete conclusions or generalizations. We believe, however, that the lack of existing quantitative research studies that examine the effects of scenario planning is a detriment to the development of the process and its legitimization as an effective organizational intervention. We therefore offer our results as a first step in the exploration of the effects of scenario planning in a quantitative form, and suggest that the results may be of interest to anyone wishing to push beyond theoretical assessments of how scenario planning works.

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