The Effects of Scenario Planning on Antecedents to Participant Engagement at Work

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Abstract

This study sought to understand the effects of scenario planning on antecedents to participant employee engagement at work. The study used the Gallup Q12 as the measure of antecedents to engagement and was a quasi-experimental pretest / posttest with treatment and control group design. A comparison of the pretest and posttest results did not show a significant difference for either the treatment or control groups. The research results are discussed as well as limitations and attempts at distilling what can be learned from the non-significant findings.

The Effects of Scenario Planning on Antecedents to Participant Engagement at Work

From a process approach, using scenario planning as a tool to foster strategic dialogue and consensus building seems like a logical and clear theoretical connection to participant engagement at work (Chermack, van der Merwe, & Lynham, 2007; Van der Heijden, 2005). Scenario planning has been suggested as a way for organizations to foster management learning, gain competitive advantage and achieve desired performance outcomes (Schwartz, 1996; Chermack & Nimon, 2008; Chermack et al., 2007; Haeffner, Leone, Coons, & Chermack, 2012; Veliquette et al., 2012) . Although research studies have addressed the effects of scenario

planning on some aspects of participant communication and decision making, there has been no direct report of a potential relationship to employee engagement. Despite a lack of evidence, many simply assume engagement to be a natural outcome of scenario planning (Chermack, 2011; Wade, 2012).

This study investigates the effects of scenario planning on participant engagement. While previous studies have approached the topic, none have addressed the concept of engagement from a holistic perspective. To clarify, two previous studies explored the effects of scenario planning on strategic conversation quality and engagement. The context of those studies indicated engagement in the strategic conversation, not engagement at work. The construct of engagement will be defined more clearly than in previous studies, focusing on employee engagement, or engagement at work and in particular, the antecedents to engagement.

Purpose of this Article and Research Question

The purpose of this article is to determine the effects of scenario planning on participant perceptions of antecedents to work engagement. Given the focus of scenario planning on involving multiple levels of the organization and encouragement of open dialogue, it is a logical hypothesis that scenario planning would improve perceptions of workplace engagement. The Gallup Q12 was selected as the instrument which measures engagement conditions that are causal contributors to engagement. The goal of the research is to determine if scenario planning changes participant perceptions of these conditions.

Research Question

The research question for this study is "What are the effects of strategic scenario planning on employee engagement at work?" The specific hypothesis is that there will be an increase in the aggregated mean scores of the Q12 survey taken before and after four facilitated strategic scenario planning interventions.

Hypothesis

We hypothesize an increase in the mean scores as measured by the Q12. The null hypothesis and our hypothesis are indicated as follows:

$H_0 : m_D = 0$
$H_1 : m_D > 0$
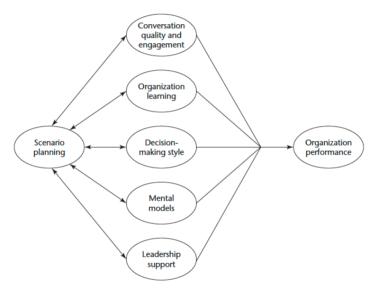
Theoretical Framework

Scenario planning became well known after it was used at Royal Dutch/Shell in the 1970's when, during times of high uncertainty, managers started successfully using scenarios to learn and develop a framework that was better than forecasts for looking at the future (Wack, 1984). The use of strategic scenario planning is believed to have given Royal Dutch/Shell a significant competitive advantage (de Geus, 1986).

Scenarios, which take into account the overarching paradigms of strategic planning using intuitive or forecasting approaches (Chermack, 2011; McLean & Egan, 2008; Van der Heijden, 2005), offer a way for organizations to embrace uncertainty (Wack, 1985a) and develop strategies to prepare for and become more responsive to the rapidly changing environments in which they operate (Chermack,

Lynham, & Ruona, 2001). Scenario planning helps participants build "a set of internally consistent and imagined futures in which decisions about the future can be played out, for the purpose of changing thinking, improving decision making, fostering human and organization learning, and improving performance" (Chermack, 2011, p. 31).

When conducted based on a performance improvement need, scenario planning can encourage creativity and organizational learning. It has the potential to yield a positive effect on performance results (Chermack, 2011), increasing chances of long term survival by helping organizations develop the ability to anticipate uncertain futures (Van der Heijden, Bradfield, Burt, Cairns, & Wright, 2002).

Many theoretical domains have appeared in scenario planning literature that link scenario planning to organizational performance, and Chermack (2011) synthesized the most common ones, including engagement, as shown in Figure 1.
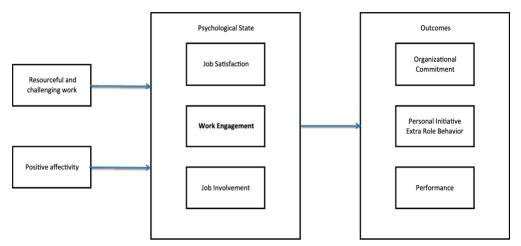

Figure 1. A Theory of Scenario Planning. This figure illustrates the theoretical domains that describe scenario planning and how it accomplishes its stated outcomes (Chermack, 2011)

Existing scenario planning theory suggests that engagement mediates the impact of scenario planning on organizational performance (Chermack, 2011). In conjunction with dialogue and conversation quality, engagement is described as a way that scenario planning participants can experiment with ideas or share knowledge, beliefs, and experiences (Chermack, 2011). This study is situated as a sub-construct within the "Conversation Quality and Engagement" theory domain. (Van der Heijden, 2005).

Engagement

Because of the many ways work engagement has been defined and operationalized, Schaufeli and Bakker (2010) suggest a conceptual, integrative model of work motivation (shown in Figure 2) in which engagement plays a key role in contributing to positive outcomes including performance. The model synthesizes

several of the proposed major elements of work engagement, and integrates several overlapping concepts. (Schaufeli & Bakker, 2010)

Figure 2. An integrative model of work motivation and engagement. This model illustrates employee motivation with work engagement as a psychological state that mediates the impact of job and personal resources on organizational outcomes (Schaufeli & Bakker, 2010)

The Schaufeli and Bakker (2010) model in Figure 2 suggests the psychological state of work engagement can lead to performance outcomes. The basis for the model is the motivational process of the job demands-resources, or JD-R model which indicates that certain job resources can be motivators that foster work engagement and improved performance outcomes (Bakker & Demerouti, 2007; Schaufeli & Bakker, 2010).

The Gallup organization defines employee engagement in terms of resourceful work, and measures job resources as antecedents to unit performance and job satisfaction. Therefore, the Schaufeli and Bakker (2010) model is well supported by the Gallup Q12 instrument for measuring resourceful work as an antecedent to engagement (Schaufeli & Bakker, 2010).

If resourceful and challenging work is the antecedent to engagement, one hypothesis is that a business unit that participates in a formal, facilitated strategic scenario planning workshop leads to resourceful and challenging work where participants can experiment with ideas or share knowledge, beliefs, and experiences that foster learning, innovation, and strategic conversation, therefore increasing the overall engagement aggregated at the unit level. Performance is often the result of combined efforts of many employees, which can result in changes in overall engagement (Demerouti & Cropanzano, 2010). A theoretical basis for evaluating engagement at the unit level during an intervention is crossover or emotional contagion, which is the transfer of positive or negative experiences between individuals in a group which can cause colleagues to influence each other with their work engagement, and possibly perform better as a team (Westman, 2001).

Employee Engagement at Work

William Kahn (1990) first coined the terms personal engagement and personal disengagement when looking at the variables that influence when and why people

bring themselves into, or remove themselves from, certain work roles or task behaviors. Kahn conceptualized that the domains of meaningfulness, safety, and availability were important to understand how engagement develops (Shuck & Wollard, 2010). One factor that influences meaningfulness is work interactions (Kahn, 1990).

The first empirical research study on engagement, published in 2002, established a business unit level link between employee engagement and meaningful business outcomes such as employee turnover, customer satisfaction-loyalty, and safety. The correlations were found to be generalizable across organizations (Harter, Schmidt, & Hayes, 2002).

Saks (2006) was the first academic researcher to confirm a meaningful difference between job and organizational engagement, and to study the antecedents (such as working conditions) and consequences (such as performance) of both job and organizational engagement. Cognitive, emotional, and behavioral drivers of engagement were also identified (Saks, 2006). Czarnowsky (2008) was the first to provide empirical evidence linking learning and engagement, and found that engaged employees are both mentally and emotionally invested in their work and their employer's success.

The next theoretical framework from Macey and Schneider (2008) suggested trait (e.g. proactive personality), state (e.g. involvement), and behavioral (e.g. proactivity) engagement were all separate constructs that could happen at different points in time. It was later suggested that behaviors were considered to be outcomes of work engagement as opposed to components of engagement (Sonnentag, Dormann, & Demerouti, 2010).

Schaufeli and Bakker (2010) offered a comprehensive description of engagement which consolidated previous findings. Engagement was described as a positive, fulfilling, affective-motivational state of work related well being that is characterized by high levels of energy and involvement in work. It includes dimensions of vigor, dedication, and absorption. Engagement is likely to occur when employee needs are met with events such as fostering learning, social support, and the need to belong. Engagement has implications for performance at the company level when companies promote their values with employees, inspire allegiance, and respond to employees in ways that show appreciation for their contributions (Leiter & Bakker, 2010).

The performance-engagement link confirms people can drive the success of an organization, and it is important to determine the right interventions to help employees become more engaged (Mastrangelo, 2009). Leiter and Maslach (2010) suggest that engagement interventions at the situational and organizational level are more impactful in the workplace than individual ones. Engagement interventions can focus on the creation of positive working conditions, new learning opportunities, and providing the right resources to support achievement of goals (Leiter & Maslach, 2010).

Several studies have shown that both job and personal resources help facilitate work engagement (Bakker, Albrecht, & Leiter, 2010). Job resources are the physical, social, or organizational aspects of the job that reduce job demands, achieve goals, or help stimulate growth (Bakker & Demerouti, 2007). Job resources can play an extrinsic motivational role through resourceful work environments that foster a willingness to dedicate efforts and abilities to work (Meijman & Mulder, 1998).

Since Harter et al. (2002), a number of studies have linked organizational

performance measures such as increased productivity and profitability, and decreased employee turnover and absenteeism, in organizations with higher levels of employee engagement (Harter, Schmidt, Killham, & Agrawal, 2009; Schaufeli, W. & Bakker, 2010; Shuck & Wollard, 2010). These studies confirm that engagement is a causal contributor to organizational performance.

Method

This study focused on whether a scenario planning intervention served to increase employee engagement conditions, as measured by pre- and post-test Q12 survey scores.

Sample

The sample was a non-random, purposeful, convenience sample of participants who were employees at four different organizations in the Rocky Mountain region of the U.S. Participants were either assigned by their supervisor or willingly agreed to participate in a series of facilitated scenario planning workshops. A control group was also used. The control group was generated by contacting 4 organizations similar to those that participated in the scenario planning intervention, however, the control group organizations were engaged in some other form of organizational planning. In other words, researchers made sure that the control group organizations were not using scenario planning or engaged in any seminars or other content that would disturb the research design.

Instrument

The Gallup Workplace Audit, an instrument finalized in 1998 and later dubbed the Q12, consists of 12 items that are averaged to calculate an overall engagement score. Items are rated on a 5-point scale (1 = strongly disagree to 5 = strongly agree). A sample item is, "The mission/purpose of my company makes me feel my job is important." Consistent with the analysis strategy used by Harter et al. (2002), responses to the pre-test as well as post-test items in this study were averaged for an overall engagement score for each test. The actual Q12 survey questions can be found in Harter et al. (2009).

The Q12 does not directly measure engagement at work in terms of an employee's involvement, satisfaction, and enthusiasm about their job. It instead measures elements of the work situation or engagement conditions. These conditions are actionable issues for management that predict attitudinal outcomes such as job satisfaction (Harter et al., 2009).

The Gallup Q12 is one of few instruments used by business practitioners and consultants where cumulative data collected by the survey has been made available for study. A Q12 instrument meta-analysis applied a Hunter-Schmidt method to analyze 199 research studies conducted between 1997 and 2006. The relationship between engagement and nine performance measures (customer loyalty/engagement, profitability, productivity, turnover, safety incidents, shrinkage, absenteeism, patient safety incidents, and quality (defects)) was tested at the business unit level of 152 different organizations from 44 industries in 26 countries representing 955,905 employees (Harter et al., 2009; Schaufeli & Bakker, 2010).

The results of the Q12 meta-analysis indicated a true score correlation of .48

between engagement and composite performance (Harter et al., 2009), measured using the combination of all nine performance outcomes. A positive average correlation was found between business unit level employee engagement and performance outcomes such as profitability, productivity, customer loyalty, while a negative average correlation existed between engagement and employee turnover, absenteeism, theft, safety incidents and quality defects (Harter et al., 2002). The calculation assumes managers work towards the nine outcomes simultaneously.

Prior reports of instrument reliability. According to the seventh published iteration of the Gallup Q12 meta-analysis in 2009, the mean of the 12 questions has a Cronbach's alpha of .91 at the business unit level, and its composite has high convergent validity with affective employee satisfaction and other measures of work engagement. A reliability score of .89 was calculated for composite performance as the equally weighted sum of the most direct outcomes of engagement, which are customer loyalty, turnover (reverse scored as retention), safety (accidents/patient safety incidents reverse scored), absenteeism (reverse scored), quality (reverse scored as defects), and shrinkage (reverse scored) (Harter et al., 2009).

Prior reports of instrument validity. The use of meta-analysis eliminates biases and provides an estimate of true validity. Criterion-related validity analysis was done for the 2009 Gallup Q12 meta-analysis to identify survey questions that correlate with meaningful outcomes such as productivity, and substantial criterion-related validity was found for each of the Q12 items (Harter et al., 2009). The meta-analytic convergent validity of the equally weighted sum of the 12 items to the equally weighted sum of additional items in longer surveys measuring known facets of job satisfaction and engagement is .91, indicating that the Q12 captures the general factor in longer employee surveys. Individual survey items correlate to their true-score values at approximately .70 (Harter et al., 2009).

Research Design

This study used a quasi-experimental, pre- and post-test design with treatment and control groups where the differences in means were analyzed using a t-test. Workgroups from four organizations that participated in a formal, facilitated strategic scenario planning intervention completed the Q12 assessment prior to starting the intervention (pre-test) and immediately following the last meeting (post-test). Means from the pre-test and post-test were compared to determine if there was as significant increase in scores, which were aggregated across the four organizations.

Data Collection and Analysis

A survey instrument was administered to gather pre-test and post-test results. The 12 questions from the Gallup Q12 engagement survey were included among the other 109 questions measuring other constructs. Both assessments were administered to the 48 participants in September and December of 2012. The pretest data were collected at the initial introductory and kick off workshops for each organization. While the actual dates varied, all pretest data were collected in September. Posttest data were collected in the final debriefing workshops in each organization. Again, the specific dates of data collection differed, but all posttest data were collected in December.

Control group organizations were contacted at the same time as the scenario

planning participant organizations and the dates of pre and post test data collection did not exactly match with the treatment organizations. However, pretest data were gathered in early October 2012, and posttest data were gathered in late January 2012.

Description of the Scenario Planning Intervention

Scenario planning is an interactive process in which key stakeholder participants brainstorm critical uncertainties and use them to craft alternative scenarios of the future. Careful team planning is important, and should focus on selecting participants based on personality, role within the organization, and team design (Hodgkinson & Healey, 2008). Personality related affective processes could derail the scenario planning process, such as powerful individuals dominating or closing down pertinent discussions. Facilitators are instructed to take best practices into consideration when forming the team, planning the intervention, and conducting the workshops.

The process used for the intervention consisted of four scenario planning workshops and were generally structured as described by Chermack (2011). There were approximately two facilitators assigned to each of the four organizations, all of whom were provided with the same instructions, tools, and training. Key stakeholders were identified at the organizations, and they worked with the facilitators to build the teams and plan the workshops. Although a general framework was followed (Chermack, 2011), the workshops were customized to focus on situations unique to each organization, such as participant experience with similar interventions, time available, participant familiarity with one another, etc. Participant pre-work was sometimes required, especially if time constraints were an issue. Workshops were dedicated to brainstorming major forces, ranking those forces by impact and uncertainty, determining the most important high impact/high uncertainty matrices, developing scenario stories for those matrices, and developing strategies to address critical uncertainties.

Descriptive statistics were reviewed to understand the demographics of the organizations and participants. Means of pre-test and post-test data were compared for all responses, and across the data grouped by organization and question, using paired sample t-tests.

Results

This section reports the descriptive statistics to establish two key assumptions for the research; namely 1) data normality (as measured by skewness & kurtosis), and 2) homogeneity of variance across the organizations involved in the research (as measured by hierarchical linear modeling). In addition, reliability and validity of score assessments are reported. Results of a principal component analysis are provided as well as the results of the *t*-tests that are the primary analysis strategy to answer the research question.

Descriptive Statistics

Descriptive statistics are provided for the organizations and individual participants of the study. All of the organizations that participated in the study were based in the Rocky Mountain region of the United States, although three of the 48

participants were based outside of the region. Half of the organizations had annual revenues under $10 million. Two-thirds of the organizations were non-profits, and over 85% reported they participate in some type of organizational planning. The breakdown of the age of the organization and the number of employees is shown in Table 1. This data indicates the majority of the organizations studied were fairly mature, with 85% in business for more than 10 years. The total number of employees is fairly evenly distributed from less than 100 to over 10,000 employees.

Table 1. *Description of the study organizations*

	Intervention Group		Comparison Group	
Demographic variables	n	%	n	%
Age of the Organization				
0 - 5 years	6	12.5	NA	NA
6 - 10 years	1	2.1	NA	NA
11-15 years	1	2.1	NA	NA
16-20 years	2	4.1	NA	NA
21+ years	38	79.2	NA	NA
Total	48	100	NA	NA
Total Number of Employees				
Less than 100	14	29.2	NA	NA
101-500	10	20.8	NA	NA
501-1,000	1	2.1	NA	NA
1001, - 10,000	16	33.3	NA	NA
10,001 +	7	14.6	NA	NA
Total	48	100	NA	NA

Table 2. *Description of the study participants*

	Intervention Group		Comparison Group	
Demographic Variables	n	%	n	%
Tenure in the organization				
0-2 years	7	14.6	5	11.4
3-5 years	6	12.5	5	11.4
6-10 years	17	35.4	16	36.4
10+ years	18	37.5	18	40.9
Total	48	100	44	100
Position Level				
Line Worker	19	39.6	21	47.7
Middle Manager	20	41.7	9	20.5
Senior Manager	8	16.7	9	20.5
Executive	1	2.1	5	11.4
Total	48	100	44	100

The breakdown of the 48 participants was approximately two-thirds female, one-third male. More than 77% of the participants did not have any experience with scenario planning. Other descriptive participant data is shown in Table 2. Nearly 73% of the participants have tenure of five or more years with their organization.

However, only about 18% have senior or executive level positions with their organization. This statistic is of interest because it is generally individuals that hold executive level positions who act as decision makers or develop strategic plans. The lack of attendance of key decision makers could impact the outcome of a strategic scenario planning intervention (Hodgkinson & Healey, 2008).

Skewness and Kurtosis

Skewness for the mean scores of the participant data aggregated across the four organizations for pre-test data was -.36 and for post-test data was -.46. The kurtosis values for the same dataset were -.34 for the pre-test and -.74 for the post-test. These results indicate the dataset is normally distributed which confirms the appropriateness of a paired-samples *t*-test.

Hierarchical Linear Modeling and Data Nestedness

HLM is increasingly used for checking data consistency across groups to ensure that any significant results are not limited to the changes in a single group. HLM allows for checking the variation in data among groups. For the analysis, the researchers computed difference scores from pre- to posttests, and analyzed the data using the interclass correlation coefficient (ICC). The ICC score indicates the amount of variance accounted for among multiple groups, taking into account the nestedness of the data. The ICC score for the single engagement factor was 0.04, or 4%. Any ICC value exceeding 11% would require closer examination (Lee, 2000). Thus, the analysis indicated that the grand means from the HLM analysis did not substantially differ from the grand means of the t-test. In other words, there was insignificant variability among the groups, satisfying the assumption of independence of observations. However, the sample size and distribution of participants per organization were not optimal for HLM analysis.

Reliability and Validity

To assess reliability for this study, Cronbach's alphas were computed for the pre-test and post-test scores. A factor analysis was then conducted to assess score validity. Principal Components Analysis (PCA), a more specific form of exploratory factor analysis (EFA), was used and data were analyzed in two iterations. The PCA results for the pre-test data indicated a one-factor structure (explaining 36.35% of the total variance), loading values all over .57, and a Cronbach's alpha of .87. For the post-test, PCA results also indicated a one-factor structure (explaining 54.74% of the total variance), with loading values all above .56 and a Cronbach's alpha of .93. A confirmatory factor analysis (CFA) would normally have been conducted, but in this case the sample size was not adequate for the assumptions underlying CFA.

Paired-Samples *t*-test

A paired sample *t*-test was used to determine if there was a change in the Q12 scores for participant perceptions of engagement conditions, considered causal contributors to engagement. Scores were averaged for all 48 participants for the pre-test done prior to the first scenario planning workshop, and the post-test done just following the end of the last workshop.

The results of the *t*-test indicated the engagement condition scores aggregated across all four organizations (pre-test mean of 3.67, post-test mean of 3.60) did

not show a significant change after participation in the strategic scenario planning intervention $t (48) = .691$, $p = .493$. When looking at results for each individual question, only three of the questions showed increased scores from pre-test to post-test, but none of the differences were significant.

When the results were grouped by organization, the average scores between pre-test and post-test increased for two organizations and decreased for the other two, but in no case was the change significant. Group 4 started with the highest average score (4.09), and also made the highest overall increase in their aggregated mean score between pre-test and post-test (.19), although the results were still not significant, $t (13) = -1.38$, $p = .19$. However, one team experienced a decrease of .37, from 3.52 down to 3.15, which was not significant, $t (13) = 1.40$, $p = .18$. Overall, results were not significant, even when probing slightly deeper than the research question required.

Control group results. Control group results were also not significant. t-test results indicated no significant difference between pretest and posttest (pre-test mean of 3.14, post-test mean of 3.53). Participants did not show a significant change after participation in the scenario planning intervention t $(48) = .72$, p = .48.

Discussion

It seemed self-evident to the research team that scenario planning would enhance and support antecedents to employee commitment. However, in this case, the data clearly show no relationship. Results were surprising and therefore data were reviewed for each of the 12 questions. Mean scores for only three of the questions increased between pre-test and post-test, but none of these increases were significant.

Many of the questions from the Q12 relate to specific causal conditions of engagement that logically would not be impacted by a strategic planning workshop. Questions such as "Do you have the materials and equipment to do your work right?" would probably not impact employees who attend a few workshops related to scenario planning. But questions where the score increased from pre-test to post-test such as "Does the mission / purpose of your company make you feel your job is important?" might apply, since scenario planning supports strategy development and contributes to the future direction of the organization. The second questions where the mean score increased was "Is there someone at work who encourages your development?" which measures how the employee is coached and how the manager is helping the employee improve through opportunities. The final question where scores increased, "Do you have a best friend at work?" refers to the manager creating opportunities for employees to develop trusting relationships at work, which can influence communication and other outcomes (Harter et al., 2009).

While not required, these additional analyses were conducted to further examine the data. Again, researchers did not find a significant difference between pretest and posttest scores in either the treatment or control groups. These findings support the conclusion that the scenario planning intervention did not affect participant perceptions of antecedents to engagement as measured by the Gallup Q12.

Overall, the significance of the findings is that they show evidence that a common assumption among scenario planners may be invalid. We began with an assumption that scenario planning would increase employee engagement. Data show no connection, which indicates a potentially faulty assumption. Many other

scenario planning practitioners may be operating under this assumption, which we have shown to be erroneous in this case. Of course, a single study is not entirely conclusive, so additional research with other measures of engagement are recommended.

Because engagement has been shown to be in part based on work relationships, scenario planners might design workshops to include more team-based activities, instead of the majority being large group activities. For example, ranking exercised could be completed first in groups and then aggregated into the whole. Later ranking exercises could require switching groups and again aggregating group rankings into a whole ranking. These kinds of strategies would promote more co-worker interaction, and less facilitator / large group interaction and may increase reports of engagement.

Limitations

There are several limitations that must be considered in the interpretation of this research. These are (1) the time constraints of the scenario planning projects, (2) facilitator style or bias (3) the voluntary nature of the participating organizations, and (4) that engagement May simply be beyond the scope of scenario planning. Each of these is discussed.

Because the scenario planning intervention was completed over a 16 week academic semester, some cases experienced constraints in the time available to complete the workshops. Chermack (2011) recommended five workshops that average between several hours to a full day, but most teams were limited to only three to four meetings, with no meeting greater than 5 hours.

Due to time and location constraints, some organizations allowed phone participation at several of the workshops, which facilitators believed reduced the active participation of the phone participants. Some suggest scenario planning cannot be effectively implemented online, and that face-to-face interaction and dialogue is necessary, but there is not research to support this (Chermack et al., 2007). Future studies should control the methods of attendance allowed.

Possible facilitator inconsistency or bias could have influenced the effectiveness of scenario planning (Van der Heijden, 2005). Even though all teams used the same framework to facilitate the scenario planning workshops (shown in Figure 3), this was the first time any of them facilitated such workshops, but all had an experienced advisor. In all cases, one of the facilitators was also an employee of the organization receiving the intervention, so biases between the facilitator and participants may have pre-existed. Good facilitators are usually outside the process, and do not have preconceived notions about what the outcomes should be (McLean & Egan, 2008).

Participants in this study were voluntary, meaning that they did not seek assistance with scenario planning and did not make a financial investment in the scenario planning services. These are two indicators that may have affected the results, given the situations the organizational decision makers were facing and the resources they were willing to deploy. In other words, the urgency and sense of importance that can be associated with scenario planning was questionable in our study participants.

Finally, the possibility that the scenario planning process can positively influence participant reports of engagement ay simply be beyond the scope of what scenario planning can accomplish. While there is evidence that participants

engage in a learning experience, (Haeffner, Leone, Coons, & Chermack, 2012;), a decision shifting experience (Chermack & Nimon, 2008; Chermack et al., 2007) and potentially a belief system shifting experience (Chermack, van der Merwe, & Lynham, 2007; Van der Heijden, 2005) it is possible that affecting the sense of engagement that participant may report is asking too much of the process. Certainly there are cases in which this might be true, and potentially, they are outliers to the standard scenario exercises. Further research is the critical key in determining the potential of scenario planning in cultivating increases in employee engagement.

Recommendations for Future Research

A key recommendation resulting from this research is to determine the specific components or antecedents of engagement at work that would most likely be impacted positively by participation in scenario planning. Several were suggested in this paper. As discussed, the Q12 instrument used in this study focuses on antecedents to engagement, or actionable engagement conditions, specifically the level of job resources the employee perceives are available (Harter et al., 2009). Several of the questions in the Q12 address engagement conditions that are unrelated to the expected outcomes of scenario planning. The focus should be on the job resources that are known to positively impact engagement that also relate to scenario planning.

Once these components are understood, the next step would be to find alternative instruments that measure those engagement factors. One instrument, the Utrecht Work Engagement Scale (UWES), supports a multifactorial conceptualization of the construct of engagement at work. UWES measures components such as vigor, dedication, and absorption. Dedication, for example, characterized by involvement in work, enthusiasm, and a sense of pride and inspiration (Schaufeli, W. B., Salanova, González-Romá, & Bakker, 2002), might be a component of engagement that would be influenced by scenario planning.

Conducting similar studies using the same pre-test and post-test quasi-experimental design with larger sample sizes and controlling for as many other factors as possible would be recommended. Custom selection of scenario planning team participants and the use of experienced, non-biased, third party facilitators who follow a consistent methodology would lower the likelihood of variation due to facilitation methods, but consistent facilitation may be an unrealistic expectation. If use of the same facilitators is not possible, having a workshop specifically to train facilitators might be beneficial (Hodgkinson & Healey, 2008). If studies of this nature have significant results, it would help determine what factors influence causation between scenario planning and engagement at work, or to what extent scenario planning mediates the relationship between the variables.

Conclusion

In this study, we have explored engagement factors that contribute to the overall engagement an employee has in their work, and whether or not the transformation of perceptions that could be brought about by scenario planning can increase the level of engagement of that employee. Although several factors may have contributed to the lack of significant findings in this study, future research should attempt to isolate and control for the relevant factors that can be influenced by scenario planning.

Since research supports that both scenario planning and high levels of employee engagement can have positive impacts on organizational performance, understanding how to best utilize both provides a valuable proposition for organizations.

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