Say, Stay or Strive: The Effects of Leadership Style and Psychological

Safety on Employee Engagement.

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Children are apt to live up to what you believe of them."

Lady Bird Johnson

Stuart Nelson

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Abstract

The purpose of the study was to investigate the impact of leadership style and psychological safety on employee engagement. It further examined if these variables differed in organisations that carried out initiatives such as Lean or Six Sigma and the impact they on the program success. A self-selecting sample (N=122) completed a series of questions including the MLQ rater, UWES and Team Learning Psychological Safety instruments along with demographic information. A mixed design was used, part-correlational and part cross-sectional.   Results found that Transformational leadership style and Psychological safety predicted Employee Engagement and that Quality Initiative organisations scored significantly higher on Transformational leadership, Psychological Safety and Engagement. These factors also predicted the success of the Quality Initiative. This research demonstrated the importance of transformation leadership and a psychologically safe environment to improve engagement, moreover, both can be learned.

Keywords: Transformational Leadership; Employee Engagement; Psychological Safety; Lean; Six Sigma

"Management is doing things right; leadership is doing the right things." Peter F Drucker

Introduction

The economic conditions of the past decade have led to a radically changed landscape in which to do business. The boom of the *Celtic Tiger* years allowed organisations and government bodies to "fix" problems around capacity, capability and HR issues with financial measures. Often additional resources were added leading to massive inefficiencies in operations. The global recession changed how employees interact with their organisations, it was once said that people were married their jobs but now merely date them. The ability of an organisation to change and change quickly is critical for success in today's economic world, pulling off the *Band-Aid* or short-term fixes and resolving inefficiencies is essential to remain competitive and ensure growth. Organisations are employing quality initiatives such as Lean, Six Sigma and TQM in an attempt to remove Non-Value adding activities and do more with less. Lean, developed in Japan during their post war recession, placed the customer and respect for the human element of the company at its core but not all adoptions have succeeded in this aspect, placing more importance on *cost reduction* elements. This failure has negative effects on employees, demotivating them and damaging company loyalty.

Organisations now recognize that achieving full employee engagement can be as valuable as driving efficiencies and *Discretionary effort,* the difference between what employees *can do* over what they *have to do*, is thought to be valued at over 20% (Gallup, 2012). Discretionary effort comes from employees who are energetic and dedicated to their work and this has been linked with how engaged they are with their job (Bakker, 2011). *Psychological Safety* was introduced by Edmondson (1999) and it is described as the belief within a team where

individuals feel safe to comment and this belief allows for greater team efficacy and learning. *Psychological Safety* creates an environment where information and knowledge is pooled and considered, moving from the *groupthink* model of conformity to what Manz & Neck (1995) called *Teamthink,* where the open and frank discussions from diverging opinions within a team are considered in the decision process.

Creating engaged teams in a learning environment takes good leadership, one with clear vision. This research will assess leadership styles as perceived by the team members on a spectrum from *transformational* to *transactional* to *laissez-faire* as described by Bass (1985). The *Transformational leader* inspires with clear vision and leads positive change while *Transactional* leaders manage by compliance with reward and punishment. A *Laissez-Faire* leader is hands of and uninvolved, leaving followers making the decisions. Furthermore, the research will gauge the impact that leadership style has on the level of engagement and the levels of psychological safety while additionally assessing if differences exist with organisations that have engaged in quality initiatives. Engaged employees in a learning environment are more open to change, this research will demonstrate the effects that the leader's behaviour has on these constructs and will identify if changes are needed at leadership as well as team level.

Quality Initiatives

All organisations need to remain competitive and this necessitates finding new ways to reduce costs while maintaining or even improving quality. Government organisations recognize this and bodies such as *Enterprise Ireland* and *Skillnets* provide grant funding to clients embracing such change. Initiatives such as Lean, Six Sigma and TQM can achieve this and the effectiveness of Japans manufacturing industries is evidence they work (Womack, Jones & Roos, 1990). The introduction of craft guilds in the 1600's was perhaps the first foray in to quality

control and standards in production. Taylor's Scientific Management Theory peaked in the first decade of the 20th century and highlighted standards and measures to increase productivity. Henry Ford's development of the moving assembly line lead to mass production of the Model T, with workers performing simple and repetitive tasks. W. Edwards Deming's pioneering use of statistical techniques to understand and improve processes led to improved use of Statistical Process Control (SPC) to locate and eliminate variation (Pyzdek, 2003). *Total quality management (TQM)* added to the ideas of Deming with *Kanban's*, *Quality Circles*, and *Just-In-Time* manufacturing among other techniques. Juran's Quality handbook of 1951 contributed further and together with Deming's work demonstrated to organisations that investing in quality was more economical than the costs of poor quality (Keller, 2011). Six Sigma was developed by Motorola in the 1980's to organise better the set of quality tools already in use. It grew further in popularity when the CEO of General Electric, Jack Welch, championed Six Sigma after observing its successful application in Motorola (Pepper & Spedding 2010). The main assumption of Six Sigma is that it is always best to reduce variation in a process. Lean is a philosophy grown out of the Toyota Production System with a focus on reducing throughput time by eliminating waste and non-value activities in a process. More recently Lean and Six Sigma are applied together with Lean focusing on increased speed, improved flow and adding value while Six Sigma delivers a consistent product or service. Fords model of simple and repetitive tasks is now replaced with job rotation and teamwork which increases morale and allows for bottom up feedback. Successful implementation requires an organisation whose team and leadership have a willingness to change. The literature discusses the following as critical for long term success; managing change, empowering teams, articulating a vision, individual development, and mentoring, with management involvement and commitment perhaps the most

essential for improvement initiatives (Antony & Banuelas, 2002; Coronado & Antony, 2002; Eckes, 2000; Henderson & Evans, 2000). Furthermore, Al-Najem, Dhakal, and Bennett (2012) found frequently that organizational change was something for frontline workers and not management, a fact recognized by training institutions as leadership and teamwork features prominently in postgraduate training in this field (University of Limerick, NUIG). A healthy culture, top-management buy in and strong leadership are critical for successful implementation (Al-Najem et al., 2012), this research is not focused on reviewing the virtues of these quality initiatives but will look for differences in *Leadership, Engagement* and *Psychology Safety* in organisations that have implemented these programs.

Leadership

Leadership is different things to different people and although much research has been carried out not one clear profile of a leader has been identified (George et al., 2007). Maccoby (2004) argued that the well-known leaders whom emerged during the dotcom era and those that survive today are far different from great leaders of the past with a need to grab headlines, self-promote and be on a level with superstars. These are the exceptions and this research will be grounded in the realities and practicalities of everyday leadership; Transformational and Transactional. The benefits this sphere of leadership is that they are not distinct traits, more of a continuation along a spectrum, and effective leaders can use both techniques to get results (Bass, 1985). Moreover, this hybrid nature of leadership is not down to charisma but is a behavioural process that can be learned (Tichy & Devanna, 1986).

"Companies need leaders not to anticipate the future but to create it" (Maccoby, 2004)

Transformational Leadership Theory

Transformational over transactional leadership was first discussed by Burns (1978 as cited in Bass & Bass, 2008). Riggio (2009, p363) defines *transformational leadership* as "an ability to provide shared values and a vision for the future for the work group" and *Transactional Leadership* as "based on some transaction, such as exchanging money for work". Bass (1985) developed the model further and describes leadership on a spectrum from *transformational* to *transactional* to *laissez-faire.* The transformational leader inspires followers to achieve personal and organizational goals, they focus on getting employees to reach performance standards and task objectives. Laissez -faire leadership is the absence of any leadership and the follower is left to their own devices.

Bass (1985) set out four components of transformational leadership: *Idealised Influence, Individualised Consideration, Intellectual Stimulation and Inspirational Motivation*. *Idealised Influence* involves inspiring followers to achieve goals beyond self-interests, being a positive role model and creating a vision that is perceived worthy of effort. These leaders are respected and admired by subordinates. *Individualised Consideration* involves paying attention to the needs and concerns of followers, developing and helping the follower to grow by promoting learning, and being concerned with the individual. *Intellectual Stimulation* is the creation of curiosity and innovation within the teams, challenge the norms and traditional ways of doing things and eliciting follower input. *Inspirational Motivation* is the arousing and inspiring of followers with a clear and articulate vision which the follower wants to achieve (Bass, 1985). Research on transformational leadership has grown, in part due to the development of Bass & Avolio's *Multifactor Leadership Questionnaire* (Riggio, 2009) which is being used in this research. In addition to measuring the four *Transformational* components, the instrument

measures three *Transactional* elements: *Contingent Reward, Management by Exception – Active* and *Passive*. *Contingent Reward* is where leaders agree with followers the tasks to be completed and clearly articulate performance expectations in exchange for rewards; *Management by exception* is a corrective form of leadership and measures the extent that a leader intervenes with the follower. *Active* is when the leader seeks out errors or issues and then acting, while *Passive* is the leader waiting for things to go wrong before becoming active. The final element of Bass's theory is Laissez-faire which is the absence of leadership. Later versions of the MLQ called this scale *Passive –Avoidant leadership* and this research follows that path and includes *Management by Exception Passive* and a *Laissez-Faire* items / sub-scale in the final scale (Avolio & Bass, 2004)

Transformational theory is supported by empirical research and offers the view that successful leadership is not just reliant on actions of the leader but interactions with the followers (Northouse, 2010). Price (2003) described a dark side to transformational leadership, where followers may be deceived by the leader to reach his goals and some well-known modern transformational leaders also display "narcissistic leadership", motivated by a need for power and admiration (Rosenthal & Pittinsky, 2006). Yet in its genuine form its goal it to "transform" people and organisations, align them with a vision and bring about change, to achieve this a leader needs followers that are engaged.

Engagement

Kahn (1990) was perhaps the earliest to discuss Engagement as the extent to which an individual invests of themselves in their work performance. Engagement as a concept has become complicated, not because of its difficulty to comprehend but it is a construct that consulting firms have championed, and one they propose can be created and leveraged (Macey &

Schneider, 2008).   What they are attempting to gain is *Discretionary Effort,* which Katoma (2011) defines as *"an unsolicited effort, which employees expend when certain work expectations are met"* and it is delivered freely when the employee is intrinsically motivated. It is an increase in productivity by creating an environment in which employees expectations are met. The benefits of engaged employees has even been noted by the cartoon *Dilbert* who observed that Employee Engagement is a new initiative where employees work harder for the same pay while management's role is unchanged. The title of this thesis borrows from one such consultancy, *Aon Hewitt,* and their 2015 research publication "*Unleash the Engagement Outcome You Need".* Built around their behaviour model *Say:* speak positively about the organisation and colleagues, *Stay:* have an intense of belonging and *Strive:* is motivated to exert extra effort (Aon Hewitt, 2015). Aon's model published reliability and validity but similar to Gallup's Q12, is not freely available to academics for research. Gallup was contacted in the course of this research with a view to correlate the Q12 with an academic measure but access was not granted.

Engagement is defined as *"a desirable condition, has an organizational purpose, and connotes involvement, commitment, passion, enthusiasm, focused effort, and energy, so it has both attitudinal and behavioural components"* (Macey & Schneider, 2008, p4). Robinson et al. (2004) observed that there is a lack of research on employee engagement in the academic literature and such research would be an extension of *Positive Psychology* to the workplace with a focus on what the characteristics of successful employees and managers are (Harter, Schmidt & Hayes, 2002). The instrument used in this research was Schaufeli and Bakker's *Utrecht Work and Well-Being Survey* (2003) and is based on the assumption that engagement is opposite of burnout as described by Maslach (1982). Schaufeli, Salanova, González-Romá & Bakker

describe engagement as "*a positive, fulfilling, work-related state of mind*" (2002), made up of 3 components; *Vigor:* high energy levels and mental resilience while working, willingness to invest effort and persistence*; Dedication:* strong personal involvement in work, sense of enthusiasm and pride; and *Absorption:* happily engrossed in work, time passes quickly and has difficulties separating work and personal life.

The UWES describes 3 factors that contribute to engagement, Meere (2005) described three levels of engagement; *Engaged*: works with passion, connected to organisation and drives innovation; *Not Engaged*: attends and participates but exerts no passion or energy; and *Disengaged*: unhappy and undermines effort of co-workers. Using the Gallup measure it was noted that in the UK only 19% of employees were engaged, 61% not engaged and 20% disengaged (Meere, 2005). Engagement may be viewed as having directly come from research in to work attitudes but it is a distinct construct in its own rights (Halberg & Schaufeli, 2006).

Psychological Safety

Edmondson (1999) introduces the term *Psychological Safety* and describes it as the belief within a team where individuals feel safe for interpersonal risk taking, that is, to comment freely without fear of judgement and this belief allows for greater team efficacy and learning. *Psychological Safety* should not be confused with trust as it is a belief about a group norm, where trust is based on an individual relationship (Edmondson et al. 2003), if trust is used it is trust in the group and each member must share the same belief. The benefit of *Psychological Safety* is that it facilitates team learning ensuring all voices are heard and considered. The absence of *Psychological Safety* was evident in Roberto's (2002) account of the 1996 Everest tragedy where experienced guides failed to turn more experienced guides back for fear of speaking out, no constructive dissent was welcomed and the gelling of the team was unsuccessful. Asch's (1956)

conformity studies showed that people go with the group dynamic leading to bad decisions so creating an environment where information and knowledge is shared and dissenting opinions welcomed is valuable in modern organisations. This environment of sharing can move from the *groupthink* model of conformity to what Manz & Neck (1995) called *Teamthink* where open and frank discussions from diverging opinions are welcomed. Transformational leaders can lay the foundations of this environment with vision but transactional attributes are needed to set out the processes to achieve it. To create the *Psychological Safe* environment leaders should; reduce individual status differences, increase leader support and increase familiarity / prior interaction (Edmondson and Lei, 2014). When creating this environment, leaders should be aware of cognitive biases at play, Roberto (2002) highlights the cognitive biases that effected decision making during the Everest tragedy such as *Sunk Costs, Recency and Over Confidence.* Having expertise in a field suggests that your information should be given more credibility (Stasser et al., 2000) but the sharing of information and each piece of information being given equal credibility is key.

Research Rationale and Hypothesis

Organisations need to change to remain competitive and to meet the changing needs of their clients. Change is also required to retain talent and attract newcomers. MacLeod & Clarke (2009) has shown that only 30% to 60% of employees are actively engaged. Saks (2006) explored antecedents of employee behaviour such as *Job Satisfaction* but did not consider external forces such as leadership. Much of the dialogue around engagement is driven by commercial consultancies with claims that engagement affects the bottom line, increases productivity, and retention (Aon Hewitt, 2005). Previous research (Flade, 2003) has shown over

80% of employees in the UK lack commitment to their employer and as far back as 1994 Peters saw that the making work meaningful could release untapped reserves of energy and commitment. The levels of employee engagement are not alone in affecting the bottom-line, leadership plays its role and *laissez-faire* leadership is the most prevalent type of destructive leadership (Aasland, Skogstad, Notelaers, Nielsen & Einarsen, 2010)

Academia is getting involved and must compete with industry about the meaning of the construct, its consequences and antecedents. Popularity in measuring and understanding emotional intelligence, *EQ-I*, (Goleman, 1998) has shown that leaders must listen and respond to employees (Cooper & Sawaf, 2001) and EQ-I, closely related to transformational leadership, is critical in change management (Barling, Slater & Kelloway, 2000). Engagement is a *"long-term emotional involvement"* (Shuck, Reio & Rocco, 2011, p.427) and this research will set out that Transformational leadership providing Vision and adding meaning to work will increase that engagement.

Leadership and Engagement

Engagement is a complex concept with competing but similar definitions from industry and academia. Lockwood (2007) detailed managerial style, leadership and company reputation as influential. As far back as 1975, Jones, James and Bruni found links between perceived leadership and job involvement a similar construct to engagement. Dale Carnegie & Associates (2012), found supervisor relationship and belief in leadership significant contributors to engagement. Supervisor encouragement, clear organisational vision, clearly defined job expectations are also key drivers of engagement (Gallup, 2012). Zhang (2014) found positive relationships with Avery's (2004) Visionary leadership style, similar to *transformational,* and employee engagement but also found that for task complexity or when employees need task

clarity the relationship is weakened and transactional leadership's relationship with engagement is strengthened. PhD research by Stanislav and Ivanov (2014) found similar results.

Transformational leaders motivate followers to put collective objectives over self-interest, set clears goals, provide encouragement and recognition (Warrick, 2011), Bass (1990) found transformational leaders to be influential as they had gained followers trust, respect and loyalty and as such are willing to work harder towards achieving objectives (Geib & Swenson, 2013). Simola, Baring and Turner (2012) found that transformational leaders could focus followers on a collective purpose and enhance their actions. Kark, Shamir, Avolio and Yammarino (2002) and Bass (1985) showed that transformational leadership improves performance beyond expectations. Transformational leaders provide vision and share knowledge and significance of tasks. Korek, Felfe and Rothe (2009) found that making work meaningful and knowing how a personal effort contributes to organisational goals strengthens the employee / employer bond and leads to more affective commitment. Shuck and Herd (2012) recognized that leadership is critical in driving engagement but there is a gap in knowledge about what types of leader behaviour affects it most. Halbesleben (2010), Mauno et al., 2010) and Crawford et al. 2010 did however identify transformational leadership as an antecedent to engagement. This research will explore the effects of leadership at subscale level to highlight the behaviours that impact engagement most.

Hypothesis 1

There will be a significant positive relationship between Transformational leadership scores and employee engagement levels.

Hypothesis 2

There will be a significant negative relationship between Passive –Avoidant leadership and employee engagement.

Hypothesis 3

There will be a significant positive relationship between Transformational leadership and Transactional leadership.

Leadership and Psychological Safety

Transformational leaders gain followers trust, respect and loyalty by building relationships with followers (Geib & Swenson, 2013), and use *Intellectual Stimulation to* create curiosity and innovation within the teams, challenge the norms and traditional ways of doing things and eliciting follower input. A transformational leader shows *Individualised Consideration* paying attention to the needs and concerns of followers. Carmeli, Tishler and Edmondson (2012) proposed such a relationship improves decision quality, psychological safety and learning from failures. Nembhard and Edmondson (2006) highlighted that leaders who promote inclusiveness increased psychological safety by offsetting the effect of status. Wang and Howell (2010) found transformational leaders develop common values and beliefs, and engage equally with all followers, again offsetting the effect of status differences. Transformational leadership influences cognitive trust, leading to team potency and psychological safety (Schaubroeck, Lam & Peng, 2011) and even improves team performance. Edmondson and Lei (2014) stated that transformational leaders influence follower's perception that the team is psychologically safe and can engage in learning behaviours while other research found that they inspire change and encourage their followers to share convergent values thus leading to higher

performance (House & Shamir, 1993; Jung & Avolio, 2000). This research will demonstrate that leadership style predicts levels of psychological safety.

Hypothesis 4

There will be a significant positive relationship between Transformational leadership scores and Psychological Safety.

Hypothesis 5

There will be a significant negative relationship between Passive –Avoidant leadership scores and Psychological Safety.

Leadership, Psychological Safety and Engagement

Huang, Chu and Jiang (2008) found that psychological safety leads to increased team performance, while Pillai and Williams found it led to greater team cohesion (2004). Psychological safety has been linked to organisational performance (Baer & Frese, 2003) and Dollard and Bakker (2010) found it to be a precursor to conducive work climates and engagement. Cartwright and Holmes (2006) found that Psychological Safety created an environment of self-expression and fulfilment for individuals, similar to a state of engagement described earlier.

Hypothesis 6

There will be a significant relationship between Transformational leadership, Psychological Safety and Engagement.

Quality Initiatives, Leadership, Psychological Safety and Engagement

Quality initiatives aim to engage all team members in driving continuous improvement through the elimination of waste or reduction in variation. Lean, as an example, has a key principle of *Respect for People* and attempts to create a culture where employees identify issues and resolve them. Executed successfully, employees are fully engaged in the day to day process for solving problems, and can see how their efforts add value. In a shrinking economy or during mergers, quality initiatives can be used to flag wastes of duplication and lead to downsizing, having negative effects on engagement and productivity (Cartwright & Holmes, 2006). In a stable or growing economy they are used to remain competitive and add more value to clients. Portugal and Yukl (1994) suggested that transformational leaders should develop a vision, link it to a, translate it to actions and plan the steps. This approach is a match for Hoshin planning used in Lean and involves engaging the employees in shaping company strategy.

Transformational leaders question old assumptions and stimulate new perspectives and approaches to doing things (Bass & Avolio, 1997). Nembhard and Edmondson (2006) showed that leadership and psychological safety predicted involvement in learning and quality improvement activities and Bass & Avolio (1997) found leaders who are intellectually stimulating encourage followers to solve problems. Lucey, Bateman and Hines (2005) found that Lean transitions fail without active employee engagement and also cite a lack of vision, leadership and poor communication as the most common reasons for failure, all attributes that are present in transformational leaders. Lucey (2004) tracked employee engagement in a successful Lean quality initiative and found that after a year engagement have improved. Baer and Frese (2003) found that psychological safety was positively related to performance and goal achievement in organizations that embarked on quality initiatives.

Successful deployment of quality initiatives requires that employees are creative, engaged and empowered to affect change, Transformational leaders align followers around a collective purpose and motivate them to achieve the required changes in line with the strategy of the organisation (Simola et al., 2012; Geib & Swenson, 2013). Carmeli, Sheafer, Binyamin, Palmon and Shimoni (2014) set out that transformational leaders facilitate this by shaping a climate of psychological safety conducive to problem and creativity. This research will show that there is a significant difference in the leadership styles, engagement and psychological safety in organisations that have and have not engaged in quality initiatives and that there is a relationship between these variables and the perceived success of the initiative.

Hypothesis 7

There will be a significant difference between Leadership style scores between organisations who have carried out quality initiatives and those who have not.

Hypothesis 8

There will be a significant difference between Psychological Safety scores for organisations who have carried out quality initiatives and those who have not.

Hypothesis 9

There will be a significant difference in Engagement scores between organisations who have carried out quality initiatives and those who have not.

Hypothesis 10

There will be a significant relationship between Leadership styles, Psychological Safety, Engagement and perceived success of the quality initiative.

Engagement Measures

It was noted earlier the prevalence of commercial activity in the engagement market and it was originally aimed to test the reliability of one of the commercial measures with the UWES. Due to copyright this was not possible and instead questions were created similar to the *Net Promoter Score ©* questions and will be correlated against the 17 item UWES. The two questions are "*How likely are you to recommend your company as a place to work to a friend?*" and "*How likely are you to recommend you company's products or services to friend or family?*" with both questions on a ten point Likert scale.

Hypothesis 11

There will be a significant positive relationship between *Recommend* scales and the UWES.

Method

Participation in this research was open to all currently employed, self-employment was excluded. A *self-selecting snowball* sampling technique was used and the survey was promoted through social media networks including LinkedIn and Facebook. Participants were requested to *Share* the survey with colleagues and connections within their network. No specific places of employment or sectors were targeted but this information will be captured in the demographic section of the questionnaires. In order to access organisations that had engaged in quality initiatives, links to the survey were posted on specialist forums and groups in LinkedIn and directly on websites in the UK and USA. A link to the survey was circulated to Dublin Chamber of Commerce and Lean Enterprise Institutes in the UK and US and shared among members. The survey featured in the news section of *Enterprise Irelands* Envirocentre site, a hub for case studies and information about Quality Initiatives. Participants were not offered anything in return for taking part and if they wanted to know the outcomes that could leave their contact details in a separate web-form.

Participants

A total of *one hundred and thirty two* participants started the survey of which *one hundred and twenty two* were valid and meeting the sample levels as described in the design. Participants were excluded if they selected anything other than employed for the first question and redirected to a closing page thanking them for their participation. Participants were made up of 76 females and 46 males, ranging in age from twenty to sixty-eight years old (M=36.59, SD= 9.05) and ranged in years at current organisation from .2 to 30 years (M=6.23, SD=6.07). Participants were mostly of Irish (N=92) and most worked in Ireland (N=101). The survey was advertised internationally and there were several participants who worked outside of Ireland

(N=19) see *Table 1* and *Table 2* in the appendix for nationality and location details. Participants

worked in various types of organisations from Small Private Sector (N=35), Medium Private

Sector (N=28) and Multinational (N=25), the remaining breakdown can be seen in *Table 3* in the

appendices. Participants were mostly frontline employees (N=49) followed by Middle-Level

management (N=29) and First line supervisors (N=16), see *Table 4*. Participants   were asked if

their organisation had run a quality initiative and answered Yes (N=36), No (N=45) or Not Sure

(N=41).

Design

This research is of mixed design, partly correlational and partly cross-sectional. It is

primarily designed to explore the relationship between predictor variables (PV), *leadership style,*

psychological safety and criterion variable (CV) *employee engagement*. Additionally, it attempts

to resolve if two questions predicts score of engagement, the PV mean of the two questions and

the CV is *engagement* scores. Furthermore it looks for differences in *leadership style,*

psychological safety and *engagement* (DVs) scores between groups that have or have not

engaged in quality initiatives (IVs). A target sample size was identified as N=52 for the ANOVA

analysis and N=76 for the multiple regression analysis with 3 variables, both of these minimum

sample sizes should show a medium effect with a Power of .80 and α=.05 (Cohen, 1992). Both

these conditions were met. The instruments in this research all utilize Likert responses and the

decision was taken to treat the scores as scale. Jamieson (2004) argued that Likert should never

be treated in this way, they can be ordered but the distances between them are not uniform.

Carifio and Perla (2008) argue that statistical tests such as ANOVA are robust enough to handle

this especially if the means or sums of many items are being tested. Additionally, Norman

(2010) cites several studies supporting Likert as scale in the use of correlations and regressions.

Materials

A range of demographic questions were asked of participants including age, gender and time with current employer, the complete questionnaire is in *Appendix 2.* Three instruments were used to assess the research variables, *Multifactor Leadership Questionnaire* (Avolio and Bass, 2004)*, Utrecht Work Engagement Scale* (Schaufeli and Bakker, 2003) and *Psychological Safety Survey* (Edmonson, 1999). Instruments are reproduced in the appendix with the exception of the MLQ due to reproduction restrictions, hard copy available on request.

Multifactor Leadership Questionnaire (MLQ)

The MLQ (5X) is a 45 item survey and assesses three styles of leadership across 3 scales, using 9 subscales. There are five transformational scales, three transactional scales, and laissez-faire (LF). The original MLQ was developed by Bass (1985) and has been developed and improved over the years. The *rater* version is used in which the follower rates their leader / manager. Self-report versions are also available to leaders and the MLQ is frequently used in 360° leader feedback. In addition to rating the leaders style, the instrument uses 9 items to assess performance outcomes, *Extra Effort* (3 items), *Effectiveness* (4 items) *and Satisfaction with leader* (2 Items). All 45 items are in the form of descriptive statements and are participants are instructed to rate how frequently the statement fits the person they are describing. Responses are on a 4-point Likert scale from *Not at all* (0) to *Frequently, is not always* (4). Each subscale is score by finding the mean of the relevant items and the scale is the mean of the relevant subscales. The Transformational subscales are: 'Idealized Influence-Attributed' (IIA), 'Idealized Influence-Behaviour' (IIB), 'Inspirational Motivation' (IM), 'Intellectual Stimulation' (IS), and 'Individual Consideration' (IC). The Transactional subscales are 'Contingent Reward' (CR), 'Management-by-Exception-Active' (MBEA), and 'Management-by-Exception-Passive'

(MBEP). The non-leadership subscale is 'Laissez-faire'. For this research the MBEP was omitted from Transactional and included with Laissez-faire for the scale *passive-avoidant leadership* as per Avolio and Bass (2004). Sample items include: "*The person I am rating…Provides me with assistance in exchange for my efforts; is absent when needed; talks optimistically about the future.*" The MLQ is well used and tested, and has well established reliability and validity (Pierce& Newstorm, 2011). Avolio, Bass and Jung (1995) assessed the reliability of the items and found the 9 factors /subscales and 3 outcomes had an α of .74 to .94 which is above the desired α=.70.

Utrecht Work Engagement Scale (UWES)

The Utrecht Work Engagement Scale was developed by Schaufeli and Bakker (2003) and originated as forming the opposite of *Burnout* (Maslach. Jackson & Leiter, 1997). The UWES assesses an overall scale of engagement and three subscales of *Vigor, Dedication,* and *Absorption*. There are 17 items in total, *Vigor* and *Absorption* are assessed by six items each and *Dedication* by five items. Participants rated the frequency of experience in response to statements on a 7-point Likert scale from Never (0) to Always / Everyday (6). Sample items include: "When I get up in the morning, I feel like going to work" (Vigor), "I am proud of the work that I do" (Dedication) and "I feel happy when I am working intensely" (Absorption). Each subscale is scored by finding the mean of relevant items, while the score for overall engagement is the mean of all items. The complete questionnaire is in *Appendix 2*. Cronbach's α = .93(N=12161) was found for the 17 items of total engagement (Schaufeli & Arnold Bakker, 2003).

Team Psychological Safety Scale

The Team Psychological Safety Scale was developed by Edmondson (1999) as a means of examining learning behaviours in teams. The original scale consisted of seven items but the version used, provided by MIDSS, is a six item questionnaire. Participants assess the accuracy of statements along a seven point Likert scale from *very inaccurate* to *very accurate* (Edmonson, 1999). Items 1, 3 and 5 were reversed scored. Sample items include "*In this team, it is easy to discuss difficult issues and problems"* and "*It is difficult to ask other members of this team for help (R)."* Previous use of the measure showed high internal consistency reliability α=.83 (Edmondson, 1999). Survey is included in *Appendix 2.*

Engagement Comparison

Two item were included to assess if the participants would recommend their company as a place to work or recommend their products or services. These were both on a ten point Likert scale and will be used to investigate hypothesis 11. Items are "*How likely are you to recommend your company as a place to work to a friend?"* and "*How likely are you to recommend you company's products or services to friend or family?"*

Procedure

A review of the literature in relation all the variables was conducted along with literature related the specific hypotheses of this research. All questions were compiled in an online survey tool with the first question assessing the suitability of the participant to take part. A link to the survey was shared on social media (Facebook and LinkedIn) and people were invited to take part and to share with colleagues. The survey was promoted on specialist forums within LinkedIn and Quality websites as well as being featured in the newsfeed of Enterprise Ireland. The survey tool collected the responses in a spreadsheet and the data was coded and scored there before

being transferred to IBM SPSS for analysis. A run of descriptive statistics were carried out

following inferential techniques to test the hypotheses.

Results

Descriptive statistics

Descriptive statistics for variables were collected and are displayed in *table 5* in the appendix. A total of 122 valid participants were analysed for all variables. Participants were made up of 76 females and 46 males, ranging in age from twenty to sixty-eight years old (M=36.59, SD= 9.05) and ranged in years at current organisation from .2 to 30 years (M=6.23. SD=6.07). Leadership scores showed the Transformation to be the highest (M=2.25, SD=.88), followed be Transactional (M=2.06, SD=.71) and then Laissez-faire (M=1.41, SD=.93). The scores for the other variables were Engagement (M=3.83, SD=1.18) and Psychological Safety (M=3.99, SD = 1.06).

Measure Reliability Testing

All measures uses were tested for reliability. MLQ - Transformational, 20 items (N= 116, α=.93), subscales, IIA, 4 items (N=120, α=.75), IIB, 4 items (N= 122, α=.43), IM, 4 items (N= 119, α=.87), IS, 4 items (N= 118, α=.86), IC, 4 items (N= 118, α=.79). Transactional, 8 items (N=116, α=.68). Subscales: CR, 4 items (N= 119, α=.78), MBEA, 4 items (N= 118, α=.58). Passive-Avoidant, 8 items (N=120, α=.85). Subscales: MBEP, 4 items (N= 117, α=.73), LF, x items (N= 121, α=.80). UWES-17 items (N= 111, α=.95). Psychological safety- 6 items (N= 119, α=.65). Most scales and subscales are above the desired α=.70 but of concern is IIB and MBEP. This will be considered in relation to any findings. Additionally Psychological Safety α=.65 is not ideal, coded was confirmed correct and it was decided to proceed with the assumption that low items (N=6) on a 7 point scale contributed to this (Tavakol & Dennick, 2011).

Hypotheses

Hypothesis 1

There will be a significant positive relationship between Transformational leadership scores and employee engagement levels.

A Pearson correlation found a strong positive significant association between Transformational leadership scores and employee engagement levels (r (121) = .51, p< .001). Subscales were checked and moderate positive significant associations were also found between engagement and IIA (r (121) = .47, p< .001), IIB (r (121) = .44, p< .001), IM (r (121) = .47, p< .001), IS (r (121) = .37, p< .001), and IC (r (121) = .43, p< .001). A simple linear regression was conducted and found that Transformational leadership scores significantly predicted employee engagement levels (F (1,119) = 40.74, p < .001, R^2 = .25) (Transformational, beta = -.505, p < .001, CI (95%) .47 - .90). Hypothesis 1 was supported.

Hypothesis 2

There will be a significant negative relationship between Passive –Avoidant leadership and employee engagement.

A Pearson correlation found a weak negative significant association between Passive–Avoidant leadership scores and employee engagement levels (r (121) = -.27, p=.003). Subscales were checked and significant moderate negative associations were found between engagement and MBEP (r (121) =-.31, p=.001). A significant weak negative association was found between Laissez-faire leadership and engagement (r (121) =-.19, p=.037). A simple linear regression was conducted and found that Passive –Avoidant leadership scores significantly predicted employee engagement levels (F(1,119) = 9.26, p=.003, R^2 = .064) (Laissez-Faire, beta = -.269, p=.003, CI (95%) -.57 - -.12). Hypothesis 2 was supported.

Hypothesis 3

There will be a significant positive relationship between Transformational leadership and Transactional leadership.

A Pearson correlation found a strong positive significant association between Transformational leadership scores and Transactional leadership scores (r (121) = .78, p< .001). Subscales were checked and significant strong positive associations were also found between Contingent Reward (CR) and IIA (r (121) = .83, p< .001), IIB (r (121) = .56, p< .001), IM (r (121) = .79, p< .001), IS (r (121) = .75, p< .001), and IC (r (121) = .82, p< .001). MBEA had a strong positive association with IIB (r (121) = .51, p< .001) and weak associations with IIA (r (121) = .20, p< .001). A simple linear regression was conducted and found that Transactional leadership scores significantly predicted Transformational leadership scores (F(1,119) = 183.69, p < .001, R^2 = .60) (Transactional, beta = .779, p<.001, CI (95%) .82 – 1.1). Hypothesis 3 was supported.

Hypothesis 4

There will be a significant positive relationship between Transformational leadership scores and Psychological Safety.

A Pearson correlation found a moderate positive significant association between Transformational leadership scores and Psychological Safety (r (121) = .46, p< .001). Subscales were checked and moderate positive significant associations were found between Psychological Safety and IIA (r (121) = .48, p< .001), IM (r (121) = .38, p< .001), IS (r (121) = .38, p< .001), and a strong positive association was found with IC (r (121) = .51, p< .001). A simple linear regression was conducted and found that Transformational leadership scores significantly

predicted Psychological Safety levels (F (1,119) = 31.47, p < .001, R^2 = .20) (Transformational, beta = .457, p < .001, CI (95%) .36 - .76). Hypothesis 4 was supported.

Hypothesis 5

There will be a significant negative relationship between Passive –Avoidant leadership scores and Psychological Safety.

A Pearson correlation found a moderate negative significant association between Passive –Avoidant leadership scores and Psychological Safety levels (r (121) = -.47, p<.001). Subscales were checked and significant moderate negative associations were found between Psychological Safety and MBEP (r (121) =-.49, p<.001) and LFL (r (121) =-.37, p<.001). A simple linear regression was conducted and found that Passive –Avoidant leadership scores significantly predicted Psychological Safety levels (F (1,119) = 33.51, p<.001, R^2 = .21) (Laissez-Faire (+MBEP)), beta = -.539, p<.001, CI (95%) -.72 to -.355). Hypothesis 5 was supported.

Hypothesis 6

There will be a significant relationship between Transformational leadership, Psychological Safety and Engagement.

A multiple regression was used to test whether Transformational leadership and Psychological Safety were predictors of engagement. The results of the regression indicated that two predictors explained 30.9% of the variance (R^2 = .31, F (2, 118) = 27.80, p < .001). It was found that Transformational leadership significantly predicted engagement (β= .37, p<.001, 95% CI = .279 to .739) as did Psychological Safety (β = .29, p =.001, 95% CI = .13 to .51). Hypothesis 6 was supported.

Hypothesis 7/8/9

Three groups were identified, those that did carry out quality initiatives (yes) N=36, those that did not (no) N=45 and those that did not know (not sure) N=40.

Hypothesis 7

There will be a significant difference in Leadership style scores between organisations who have carried out quality initiatives and those who have not.

A one-way analysis of variance showed that Transformational leadership scores differed significantly between the three groups (F (2, 118) = 10.79, p < .001). More specifically Tukey HSD post hoc analyses highlighted that the Yes group (M = 2.75, SD =.77) scored significantly higher than the No group (M = 1.88, SD = .85, p <.001) and the Not Sure group (M = 2.23, SD = .78, p = .023). Thus highlighting that the carrying out quality initiatives lead to significantly higher scores in Transformational leadership.

Another one-way analysis of variance showed that Transactional leadership scores differed significantly between the three groups (F (2, 118) = 5.33, p=.006). More specifically Tukey HSD post hoc analyses highlighted that the Yes group (M = 2.28, SD =.61) scored significantly higher than the No group (M = 1.80, SD = .67, p=.006). Thus highlighting that the carrying out quality initiatives lead to significantly higher scores in Transactional leadership.

A final one-way analysis of variance showed that Passive-Avoidance leadership scores differed significantly between the three groups (F (2, 118) = 4.08, p=.019). More specifically Tukey HSD post hoc analyses highlighted that the No group (M = 1.71, SD =1.02) scored significantly higher than the Yes group (M = 1.17, SD = .78, p=.022). Thus highlighting that the absence of quality initiatives lead to significantly higher scores in Passive-avoidant leadership. Hypothesis 7 was supported.

Hypothesis 8

There will be a significant difference between Psychological Safety scores for organisations who have carried out quality initiatives and those who have not.

A one-way analysis of variance showed that Psychological Safety scores differed significantly between the three groups (F (2, 118) = 3.12, p = 0.48). More specifically Tukey HSD post hoc analyses highlighted that the Yes group (M = 4.34, SD =1.13) scored significantly higher than the No group (M = 3.77, SD = 1.01, p =.045). Thus highlighting that the carrying out quality initiatives lead to significantly higher scores in Psychological safety. Hypothesis 8 was supported.

Hypothesis 9

There will be a significant difference in Engagement scores between organisations who have carried out quality initiatives and those who have not.

A one-way analysis of variance showed that Engagement scores differed significantly between the three groups (F (2, 118) = 4.37, p = .015). More specifically Tukey HSD post hoc analyses highlighted that the Yes group (M = 4.25, SD =1.07) scored significantly higher than the Not Sure group (M = 3.49, SD = 1.24, p =.012). Thus highlighting that carrying out quality initiatives lead to significantly higher scores in engagement. Hypothesis 8 was supported.

Hypothesis 10

There will be a significant relationship between Leadership styles, Psychological Safety, Engagement and the perceived success of the quality initiative.

A multiple regression was used to test whether Transformational leadership, Psychological Safety and engagement were predictors of quality initiative success. The results of the regression indicated that three predictors explained 32.9% of the variance (R^2 = .32, F(3, 30)

=4.89, p = .007). It was found that Psychological Safety significantly predicted quality initiative success (β= .42, p=.022, 95% CI = .16 to 1.9), as did Transformational leadership (β= .45, p=.044, 95% CI = .042 to 2.74), Hypothesis 10 was supported.

Hypothesis 11

There will be a significant positive relationship between *Recommend* scales and the UWES.

A Pearson correlation found a significant moderate positive associations between both *Recommend* scales and employee engagement levels, *Place to work* (r (121) = .44, p< .001) and *Product / Services* (r (120) = .39, p< .001). The mean of the scales was computed and a Pearson correlation found a significant moderate positive associations between the *Combined Recommend* scale and employee engagement levels (r (121) = .435, p< .001). A simple linear regression was conducted and found *Combined Recommend* scale significantly predicted employee engagement levels (F (1,119) = 27.83, p < .001, R^2 = .18) (Recommend, beta = .435, p < .001, CI (95%) .138 - .305). Hypothesis 11 was supported.

Discussion

The current study explores the relationship between leadership style, psychological safety and employee engagement and whether differences exist between organisations that have engaged in quality initiatives and those who have not. Each hypothesis will be discussed next and its relation to previous research.

Hypothesis 1 set out that there would be a positive relationship between transformational leadership and engagement. A strong positive correlation was found between the scales as well as moderate relationship between all the Transformational subscales and engagement. A regression analysis showed that Transformational leadership predicted engagement. H_1 is supported by the findings. Hypothesis 2 put forward a negative relationship between Passive –Avoidant leadership and employee engagement. A weak negative association was found and subscale MBEP was found to have a moderate negative association. A regression demonstrated that Passive –Avoidant leadership predicts engagement. H_2 was supported. These outcomes are consistent with previous research which linked leadership style with engagement (Lockwood, 2007; Zhang, 2014; Bass, 1990). It also supports consultancy publications that belief in leadership and organisational vision increase engagement (Dale Carnegie & Associates, 2012; Gallup, 2012) which are both aspects of transformational leadership. H_1 and H_2 establish that leadership style predicts engagement level.

Hypothesis 3 forecasted a positive relationship between transformational and transactional leadership styles. A strong positive relationship was found at scale and subscale levels, the relationship between CR and transformational scales is noteworthy as it suggests while transformational attributes are desired, employees still need clarity and to be rewarded for the work they do. A regression found that Transformational leadership predicts transactional

leadership and H_3 was supported. These findings support Bass (1985) that they are not distinct traits but a continuation along a spectrum. Transformational leaders behave transactionally when required based on the situation and followers needs.

Hypothesis 4 predicted a relationship between Transformational leadership and Psychological Safety. A moderate positive association was found. Moderate associations were also found at a subscale level but a strong relationship was noted between Individualized consideration and engagement. A regression was conducted and found Transformational leadership predicts Psychology Safety. H_4 was supported. Hypothesis 5 predicted a negative relationship between Passive-Avoidant leadership and found a moderate negative association, a regression confirmed that Passive-Avoidant leadership predicts Psychological safety. H_5 was supported. This supports the existing research in terms of the attributes that contribute to building a psychologically safe environment. Transformational leaders build trusting relationships with followers (Geib & Swenson, 2013) and between followers. Transformational leaders develop common beliefs (Wang and Howell, 2010) and promote inclusiveness, according to Nembhard and Edmondson (2006) inclusiveness increases psychological safety by offsetting the effect of status. The strength of the relationship with Individualised Consideration supports Carmeli et al. (2012) who found that *IC* and paying attention to followers needs improves psychological safety.

Hypothesis 6 set forth a significant relationship between Transformational leadership, Psychological Safety and Engagement. A multiple regression found that transformational leadership and Psychological Safety were predictors of engagement. H_6 was supported. This supports existing research that psychological safety leads to increased team performance (Huang et al., 2008), team cohesion (Pillai & Williams, 2004) and organisational outcomes (Baer &

Frese, 2003). Dollard and Bakker (2010) found it to be an antecedent to engagement. Supporting research for Transformational leadership was discussed at Hypothesis 1 but it should be noted that little research examined both leadership and psychological safety and their role in engagement.

Hypothesis 7, 8 and 9 examined if differences in leadership, psychological safety and engagement existed between organisations that had (Yes), had not (No) or did not know (Not Sure) carried out a quality initiative. Those that had carried out initiatives scored higher in Transformational leadership than the No's and Not Sure's, they also scored higher than the no's for Transactional leadership. The No group scored higher than the Yes group in Passive-Avoidant leadership. H_7 was supported. The Yes group scored higher on Psychological Safety than the No's, H_8 was supported. There was significant differences in engagement between the groups thus H_9 was supported. The Yes groups had the highest levels of engagement, the difference was only significance between the Yes and the Not Sure's thus leaving the result unclear. Hypothesis 10 examined if Leadership styles, Psychological Safety and Engagement predicted the perceived success of the quality initiative. A multiple regression supported this model and also identified that Transformational leadership and Psychological Safety independently predicted Perceived success of the initiative, thus H_{10} was supported. These findings confirmed the existing literature that leadership, empowering teams, articulating a vision, and individual development are essential for successful and sustainable quality initiatives (Antony & Banuelas, 2002; Coronado & Antony, 2002; Eckes, 2000; Henderson & Evans, 2000). It is original in measuring these factors in organisations that have carried out initiatives and finding that levels of Transformational leadership and Psychological safety are significantly

higher. The same significance could not be found for engagement levels and the measure of success is subjective.

Hypothesis 11 investigated if the two item *Recommend* scales and the UWES had a relationship. A moderate positive association was found with both scales and a regression analysis showed that the combined mean predicted engagement, thus H_{11} was supported. There was no supporting research for this hypothesis but this was an attempt to test if *Net Promoter* © style questions would predict engagement. The implications of this finding is that employee engagement can be captured in a snapshot that is easy to administrate. This could supplement more in-depth measures and allow employers to keep their finger on the engagement pulse.

Strengths and Limitations

Much of the engagement research is non-academic and offers organisations tools to measure engagement, be compared with norms and receive reporting on steps to make improvements. Existing leadership research looks at a broad spectrum of topics but there is not much that examines the relationship with engagement. This research stands out as it investigates levels of engagement and measures two potential antecedents of that, leadership styles, Passive-avoidant to Transformational and Psychological safety. This research also attempts to bridge the academic / non-academic divide by examining an area in much demand by organisations. The study also used quantitative measures to assess variables in organisations that have carried out quality initiatives where much of the existing literature is case study and experiential.

There are some limitations to this research however, the sample size for the main hypothesis was ample to observe a medium effect at P=.05 for the correlations, simple and multiple regressions but was only sufficient to notice a large effect for the multiple regression in H_{10}. The group's sizes for the ANOVA (H_7, H_8, H_9) were just below the required to observe a

medium effect. In the regression for H_{10} a case was excluded in the final model as it violated the

Mahalanobis critical distance by .6, all other assumptions were met (no other assumptions were

violated in any other statistical tests).   Other limitations in this research were that some of the

questions were opinion based i.e. Recommend and success of QI. These captured the opinion of

the individual but further research could investigate these more qualitatively. That being said, all

of the instruments used were opinion based. The QI questions revealed that 40 participants were

not sure whether there organisation had carried out a QI, thus resulting in three groups and

affecting the ANOVA sample size. The overall sample size was acceptable however and the

method to access the sample proved a success. The research lacked open-questions which would

have given participants the option to comment. Several participants contacted me with

comments explaining some of their answers. An interesting observation from one participant

was that their team worked very well together despite poor leadership. The team members

between them provided the vision and framework for success while the leader *"managed"*. This

demonstrated that peers play a critical factor in the workplace and could be investigated further.

Implications, application and future research

This study extends the existing knowledge in the area of engagement but moreover, the

antecedents measured are tangible constructs that with effort can be learned.   Leadership

attributes have been isolated to nine dimensions in the MLQ scale and these can be developed in

leaders and managers. The climate in which psychological safety exists is well modelled and can

be implemented within most teams. Leaders wishing to develop this need to increase support,

consider each individual, find common ground between team members, and remove status.

Teams who are not afraid to share their failings and voice concerns in a constructive setting are

teams that learn and succeed. This research has demonstrated that transformational leadership

and psychological safety predict Employee engagement and should organisations wish to increase sustainable efficiencies, making improvements here would be good place to start. Future research could investigate interventions in leadership and psychologically safe environments and measure engagement before and after. The lack of a qualitative input was noted in the limitations and this also presents a further opportunity. It is essential that research, especially in the organisational psychology field provides theory but also functional interventions. This research has also demonstrated that organisations that carried out quality initiatives scored higher on each of the variables and that the variables predict the success of the project. Given the subjective nature of the variables, a more tangible metric could be identified in terms of QI success. The other significant implication of this research is the ability to track engagement with the pair of *recommend* questions which will be of great benefit to companies. Further research here could be carried out to see if the association can be strengthened with question redesign.

Conclusion

Today's organisations need to change regularly and to do so requires employees who are engaged. This research has demonstrated that when looking to employees to adopt change, leadership should perhaps look to themselves first and assess the environment that they have created and if it is conducive to change. If engagement can bring all the benefits in terms of productivity and satisfaction that the commercial consultancies promise it may be more beneficial to attempt to address this issue first. When organizations have engaged employees there are several rewarding outcomes for the organisation and the employees. The key point identified in this research is that two predictors of engagement have been identified. Moreover, these predictors can be learned. The skills required to be a transformational leader can be taught

and managers on this journey can be supported. Creation of a psychologically safe environment can be implemented by reviewing existing meeting formats, decision process and then implementing the change.

"There is nothing more difficult to carry out nor more doubtful of success nor more dangerous to handle than to initiate a new order of things"

Niccolò Machiavelli

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Appendix 1

Tables

Table 1: Table showing participant nationality

What is your nationality?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	CA - Canada	4	3.3	3.3	3.3
	DE - Germany	2	1.6	1.6	4.9
	DK - Denmark	1	.8	.8	5.7
	EE - Estonia	1	.8	.8	6.6
	ES - Spain	2	1.6	1.6	8.2
	GB - United Kingdom	5	4.1	4.1	12.3
	HR – Croatia	1	.8	.8	13.1
	HU - Hungary	1	.8	.8	13.9
	IE - Ireland	92	75.4	75.4	89.3
	LT - Lithuania	1	.8	.8	90.2
	PH - Philippines	1	.8	.8	91.0
	PL - Poland	8	6.6	6.6	97.5
	US - United States	3	2.5	2.5	100.0
	Total	122	100.0	100.0	

Table 2: Table showing participant work location

What country do you work in?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	AU - Australia	1	.8	.8	.8
	CA - Canada	3	2.5	2.5	3.3
	DK - Denmark	2	1.6	1.6	4.9
	ES - Spain	1	.8	.8	5.7
	FR - France	1	.8	.8	6.6
	GB - United Kingdom	5	4.1	4.1	10.7
	HR - Croatia	1	.8	.8	11.5
	IE - Ireland	101	82.8	82.8	94.3
	PL - Poland	4	3.3	3.3	97.5
	US - United States	3	2.5	2.5	100.0
	Total	122	100.0	100.0	

Table 3: Table showing participant organisation type

Which best described the organisation in which you work?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Community Employment	1	.8	.8	.8
	Large Private Sector Company - 249 + Employees	14	11.5	11.5	12.3
	Medium Private Sector Company - 50 to 249 Employees	28	23.0	23.0	35.2
	Multinational Corporation	25	20.5	20.5	55.7
	NGO	1	.8	.8	56.6
	Semi-State	6	4.9	4.9	61.5
	Small Private Sector Company- 1 to 50 employees	35	28.7	28.7	90.2
	State	12	9.8	9.8	100.0
	Total	122	100.0	100.0	

Table 4: Table showing participant work position

Which best describes your position in your organisation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Board Member	2	1.6	1.7	1.7
	First line supervisor	16	13.1	13.3	15.0
	Frontline / shopfloor employee	49	40.2	40.8	55.8
	Managing Director	2	1.6	1.7	57.5
	Middle level management	29	23.8	24.2	81.7
	Senior Management	15	12.3	12.5	94.2
	Senior Supervisor	7	5.7	5.8	100.0
	Total	120	98.4	100.0	
Missing	System	2	1.6		
Total		122	100.0		

Table 5: Descriptive Statistics for Variables

Descriptive Statistics

	N	Mean	Std. Deviation
Recommend your company as a place to work	122	6.73	2.59
Recommend your company's products or services	121	7.66	2.38
Transformational	121	2.24	.86
Transactional (EX-MBEP)	121	2.05	.70
Laissez-faire (+MBEP)	121	1.41	.92
Total Engagement	121	3.80	1.18
TOTAL PSYCH SAFETY	121	3.98	1.06
Valid N (listwise)	120		

Table 6: Transformational - Engagement Correlations

Correlations

		1	2	3	4	5	6	7
1. Transformational	Pearson Correlation	1						
	Sig. (2-tailed)							
	N	121						
2. Idealized influence Attributed	Pearson Correlation	.894**	1					
	Sig. (2-tailed)	.000						
	N	121	121					
3. Idealized influence Behaviour	Pearson Correlation	.717**	.563**	1				
	Sig. (2-tailed)	.000	.000					
	N	121	121	121				
4. Inspirational motivation	Pearson Correlation	.868**	.733**	.576**	1			
	Sig. (2-tailed)	.000	.000	.000				
	N	121	121	121	121			
5. Intellectual stimulation	Pearson Correlation	.884**	.726**	.507**	.680**	1		
	Sig. (2-tailed)	.000	.000	.000	.000			
	N	121	121	121	121	121		
6. Individual consideration	Pearson Correlation	.911**	.798**	.530**	.713**	.818**	1	
	Sig. (2-tailed)	.000	.000	.000	.000	.000		
	N	121	121	121	121	121	121	
7. Total Engagement	Pearson Correlation	.505**	.468**	.443**	.474**	.372**	.425**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	
	N	121	121	121	121	121	121	121

**. Correlation is significant at the 0.01 level (2-tailed).

Appendix 2

Demographic Question

MLQ- Sample Questionnaire

Utrecht Work Engagement Scale

Psychological Safety Scale.

Demographic Questions

1. Which employment status best describes you?

2. Gender

3. Age

4. What is your nationality?

5. What country do you work in?

6. Which best described the organisation in which you work?

7. Approximately how long (years) have you worked at this organisation?

8. Which best describes your position in your organisation

9. On a scale of zero to ten, how likely is it you would recommend your company as a place to work?

10. How likely would you be to recommend your company's products or services to a friend or colleague?

11. Has your company ever run a quality initiative such as Lean, Six Sigma, TQM or other?

12. What quality initiative(s) program was it?

13. Did the company receive grant funding from any bodies e.g. Enterprise Ireland, IDA, and Skillnets etc.

14. When did the program start?

15. Is the program still running?

16. If No, how long did it run for?

17. At what levels of the organisation was the program applied?

18. In your opinion, how successful was the quality program?

19. To what extent did the initiative positively change the organisational culture?

Multifactor Leader Questionnaire Rater Form- *Sample*

NAME OF LEADER _____DATE_____

ORGANIZATION ID#_____LEADER ID#_____

This questionnaire is used to describe the leadership style of the above-mentioned individual as you perceive it. Answer all the items of this answer sheet. If an item is irrelevant, or if you are unsure or do not know the answer, leave the answer blank. Please answer this questionnaire anonymously.

Important (necessary for processing). Which best describes you?
___ I am at a higher organizational level than the person I am rating.
___ The person that I am rating is at my organizational level.
___ I am at a lower organizational level than the person I am rating.
___ Other than the above.

Descriptive statements (45) are listed on the following pages. Judge how frequently each statement fits the person you are describing. Use the following rating scale:

Not at all	Once in a while	Sometimes	Fairly often	Frequently if not always
0	1	2	3	4

The Person I Am Rating . . .

1	Provides me with assistance in exchange for my efforts	0	1	2	3	4
2	Re-examines critical assumptions to question whether they are appropriate	0	1	2	3	4
3	Fails to interfere until problems become serious	0	1	2	3	4
4	Focuses attention on irregularities, mistakes, exceptions and deviations from standards	0	1	2	3	4
5	Avoids getting involved when important issues arise	0	1	2	3	4
6	Talks about his/her most important values and beliefs	0	1	2	3	4
7	Is absent when needed	0	1	2	3	4
8	Seeks differing perspectives when solving problems	0	1	2	3	4
9	Talks optimistically about the future	0	1	2	3	4
10	Instils pride in me for being associated with him/her	0	1	2	3	4

Work & Well-being Survey (UWES) ©

The following 17 statements are about how you feel at work. Please read each statement carefully and decide if you ever feel this way about your job. If you have never had this feeling, cross the "0" (zero) in the space after the statement. If you have had this feeling, indicate how often you feel it by crossing the number (from 1 to 6) that best describes how frequently you feel that way.

	Almost Never	Rarely	Sometimes	Often	Very Often	Always
0	1	2	3	4	5	6
Never	A few times a year or less	Once a Month or less	A few times a month	Once a week	A few times a week	Every Day

1. _____ At my work, I feel bursting with energy

2. _____ I find the work that I do full of meaning and purpose

3. _____ Time flies when I'm working

4. _____ At my job, I feel strong and vigorous

5. _____ I am enthusiastic about my job

6. _____ When I am working, I forget everything else around me

7. _____ My job inspires me

8. _____ When I get up in the morning, I feel like going to work

9. _____ I feel happy when I am working intensely

10. _____ I am proud of the work that I do

11. _____ I am immersed in my work

12. _____ I can continue working for very long periods at a time

13. _____ To me, my job is challenging

14. _____ I get carried away when I'm working

15. _____ At my job, I am very resilient, mentally

16. _____ It is difficult to detach myself from my job

17. _____ At my work I always persevere, even when things do not go well

Work & Well-being Survey (UWES) © Scoring Key

The scale has 3 subscales and an overall total.

Vigor, Dedication & Absorption.

Vigor is the mean of the responses from these items: _____

 1. At my work, I feel bursting with energy___
 4. At my job, I feel strong and vigorous___
 8. When I get up in the morning, I feel like going to work___
 12. I can continue working for very long periods at a time___
 15. At my job, I am very resilient, mentally___
 17. At my work I always persevere, even when things do not go well___

Dedication is the mean of the responses from these items: _____

 2. I find the work that I do full of meaning and purpose___
 5. I am enthusiastic about my job___
 7. My job inspires me___
 10. I am proud on the work that I do___
 13. To me, my job is challenging___

Absorption is the mean of these items: _____

 3. Time flies when I'm working___
 6. When I am working, I forget everything else around me___
 9. I feel happy when I am working intensely___
 11. I am immersed in my work___
 14. I get carried away when I'm working___
 16. It is difficult to detach myself from my job___

The mean of all the responses is calculated for an overall work engagement score.

This will give 4 scores ranging 0-6 (3 subscales and overall scale total).

Psychological Safety Questionnaire

Psychological Safety represents the extent to which the team views the social climate as conducive interpersonal risk; it is a measure of people's willingness to trust others not to attempt to gain personal advantage at their expense.

Rate the following 6 statement in terms of accuracy in your workplace:

Very inaccurate	Inaccurate	Somewhat inaccurate	Neither accurate nor inaccurate	Somewhat accurate	Accurate	Very Accurate
0	1	2	3	4	5	6

1- When someone makes a mistake in this team, it is often held against him or her (R).

2- In this team, it is easy to discuss difficult issues and problems.

3- In this team, people are sometimes rejected for being different (R).

4- It is completely safe to take a risk on this team.

5- It is difficult to ask other members of this team for help (R).

6- Members of this team value and respect each other's' contributions