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Top 30 Insights into Great Business Leadership During Times of Change

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ABSTRACT
Leadership is a highly complex topic without much unbiased experimental research to provide definitive statements. Utilizing a method of reflection and discussion over a two year period on the top 30 insights into business leadership, especially during times of change, is a worthy endeavor that can provide lessons to be learned to anyone who is seeking information on leadership. This paper follows a rigorous process to establish a consensus on the top 30 insights into business leadership especially during times of change and then shares a synopsis of the discussions for each of the top insights.

KEYWORDS
Leadership, business, change-management, characteristics of leadership, leader practices.

Much has been written on leadership over the years, with the amount growing each year. One of the most challenging issues for a leader to face is times of change. It is easier to provide leadership when the economy and business environmental variables are known and stable. During times of change, however, leadership can prove lacking or demonstrate an unexpected strength that can help all move successfully through the change.

This article attempts to take all the different lessons of leadership over the past few decades and boil them down to the top 30 insights into great business leadership during times of change. During the span of a course called Insights on Business Leadership in Times of Change, the students and the teacher discussed and curated many potential lessons in leadership to come to consensus on the top 30. Those insights are presented here.

Introduction

What is Leadership? Leadership is not determined by title or position. Bill Clinton purportedly said that "Being president is like running a cemetery: you've got a lot of people under you and nobody's listening". Nor is leadership a matter of authority. Even top-level jobs with a lot of authority have been described as "not worth a bucket of warm spit".

Leadership is not measured by the size of a domain. A small business owner can be as much of a leader as the CEO of Apple. Furthermore, good leaders tend to be good followers as well. Leadership is more of a certain emotional maturity that is valuable no matter where within an organization the leader sits. Leadership is not always recognized, especially by those who don't have the skills and talents of a leader. Those with the skills and talents of a leader know the way and show the way (ala John Maxwell). They also know what needs to be done and how to get others to do it (ala Harry Trumann and Dwight Eisenhower).

Good intent matters. Leaders possess the ability to influence others, but for the right reasons. If we simply look at followers and impact of outcomes, Hitler would be described as a very good leader. But since the outcomes were negative and caused the death of millions, that would not be the kind of leadership we are describing. We also all know leaders with many followers who have the emotional stability of four-year olds, complete with temper tantrums and self-centered egos.

Leaders have resilience and dedication. Jim Collins defined the "yin and yang" of leadership as the perfect balance of personal humility and professional will (J. Collins "Level 5 Leadership"). They also see the value in others. Sam Walton said that "Outstanding leaders go out of their way to boost the self-esteem of their personnel. If people believe in themselves, it's amazing what they can accomplish" (Yihan). Steve Covey defines leadership as the ability to communicate to people their worth and potential so clearly that they come to see it in themselves (Covey).

While it's been said about leadership (and many other things) "I'll know it when I see it", that vague non-definition does not bode well for leadership research. And the history of leadership research shows it.

History of Leadership Research

Literature and resources for *leadership* has grown significantly over the years. While far from scientific, a good straw poll is the number of books on Google and Amazon over the years, as shown in Figure 1.

Source	2005	2010	2015	2020	2024
Google	30,800,000	67,700,000	104,600,000	2,930,000	6,260,000,000
Amazon	16,380	45,025	59,348	73,670	102,315

Figure 1. Number of books and resources on leadership reported by Google and Amazon
**Some numbers have been extrapolated, shown in gray. Amazon no longer returns more than 60,000 books, and the count in 2015 was missed.*

Leadership is a confusing topic for many reasons. The first point of confusion is the difference between leadership and management. Zaleznik was one of the first to posit (in an article originally written in 1977) that leadership was not the same as management (Zaleznik). Over 20 years ago, Henry Mintzberg charted the changing thinking on leadership in a special Harvard Business Review article on leadership (Mintzberg). Prior to that, most research and literature generally considered them to be the same thing. Conger and Fulmer researched that question, and found that the split was necessary due to the global business environment, increased competitive pressures, and the difficulties of indifferent employees (Conger and Fulmer). Researchers on leadership and management everywhere had to go back into their literature and categorize it as one or the other, because the terms had been used interchangeably (Rhoads "Leadership Summarized Major Points of Research").

What is the difference? Scope is a part of the answer. Buckingham noted that great managers discover what is unique about each person they manage, and capitalize on it while great leaders discover what is universal and capitalize on it. (Buckingham). The other part of the answer is what managers and leaders typically do. In Table 1, the tactical versus the strategic focus can be seen.

Typically a manager would:	Typically a leader would:
Provide structure	Use Imagination
Ask how and when?	Develop
Keep an eye on the bottom line	Talk strategy
Do things right	Instigate
Am a builder	Ask questions
Give answers	Do the right thing
Maintain	Provide support
Administrate.	Keep an eye on the horizon
Use common sense	Am an architect
Talk tactics	Ask why?

Table 1. Difference between Manager and Leader

Leadership as a research topic has not had the benefit of the sort of data analysis that natural sciences have enjoyed. Dionne, et al. took the long-term view when they wrote on a 25 year perspective on levels of analysis of leadership in research. An analysis of the articles in the *Leadership Quarterly* journal showed that multi-level data analysis techniques are used in less than one-fifth of all articles, though the majority (87%) were considered empirical. While this reveals more articles using data analysis than other leadership journals (making *Leadership Quarterly* a top premier leadership journal), the low number of multi-level data analysis techniques used is still well below the level of analysis of other fields (Dionne et al.). That doesn't mean that experimental analysis are unknown in the field of leadership. Aviolo et al. did a systematic review and meta-

analysis on 200 leadership intervention studies where the researcher overtly manipulated leadership as the independent variable through training, assignment, scenario or other means. They found that leadership interventions produced a 66% probability of achieving a positive outcome versus a 50–50 random effect for treatment participants (Avolio et al.).

Benefits of Leadership

Leadership can be economically rewarding, though some would argue it is the impact of the leader rather than the leadership itself that leads to economic gain (Phillips and Phillips). Collins identified leadership as one of the most important factors leading companies to economic success whether they have been around a long time (Collins and Porras), turning things around from mediocre to superstar (J. C. Collins), or dealing with chaotic environments (Collins and Hansen).

Abner, et al. described three different methods for assessing the return on investment (ROI) on leadership development. The methods included expert estimates, instructions on how to assign monetary values, and a ROI method that included accounting for the duration of the performance improvement, the effect size of the intervention, and the standard deviation of dollar-valued job performance among untrained employees (Abner, Valdez and Perry; Avolio, Avey and Quisenberry). Archer recommends using a balanced scorecard method (Archer; Robert. S. Kaplan and David. P. Norton; Robert S. Kaplan and David P. Norton). Phillips and Schmidt developed a specific Leadership Scorecard to measure it (Phillips and Schmidt; Offices).

There have been many studies that linked leadership programs to actual profits. McGovern describes a study conducted in Manchester involving 100 executives from Fortune 1000 companies. They attained an average (ROI) for executive leadership training that was 5.7 times the initial investment (McGovern et al.). The Corporate Leadership Council's study, Hallmarks of Leadership Success, revealed that organizations with top-tier leadership teams achieve 10 percent higher total shareholder return than their industry peers. In 2004, MetrixGlobal evaluated a leadership development program designed by the Center for Performance Excellence and given to Booz Allen employees. The results indicated over half (53 percent) made significant improvements. Monetary benefits were validated and rigorously documented. They found over $3 million in increased profits. Four impact areas each produced at least a half million dollars of annualized benefit to the business—improved teamwork ($981,980), quality of consulting ($863,625), retention ($626,456), and team member satisfaction ($541,250). Given that the total, fully loaded cost of the leadership training was $414,310, the ROI was 689 percent (Council).

The National Cancer Institute calculated the ROI of their leadership program and found that Leadership-trained are 35 percent more likely to be high performers and receive almost 40 percent more value in monetary awards. They estimated the ROI of leadership training to be between $3.9 and $5.5 million annually over the next five years. They also found that leadership-trained are more than twice as likely to be retained and almost half as likely to turnover. The employees managed by leadership-trained are more than twice as likely to be promoted and approximately 35 percent less likely to turnover (Estrada and Connolly).

While not an unbiased source, CEO of International Leadership Association, Steve Coats, describes a study that found a direct correlation between leadership training and financial performance, and a case where a sales division financially outperformed (17% growth versus 8% growth) the other divisions for seven of 10 years, and was in the top three all 10 years (Coats).

Coates reminds us, however, that financial improvement is not the only way to calculate ROI on leadership. The study also reported improvement in more innovation, greater initiative, the initiation and ownership of calculated risk, collaboration, self-confidence, and clarified shared values. Furthermore, opportunity costs and emotional return should not be ignored.

Ashley-Timms reported on a case regarding a leadership coaching program for the Housing and Constituencies Directorate run by Notion Business Coaching in the UK. By the completion of the third coaching session, managers reported 72 per cent increased personal productivity (65 per cent), better decision-making (77 per cent) and problem handling (81 per cent) within the first three months. Ninety-two per cent of managers stated in a follow-up that they had made progress on the majority of the actions agreed with their coach (Ashley-Timms).

Culture and leadership

One important concept to note is that leadership is culturally based. Leadership concepts and practices are deeply rooted and influenced by religions, history, and culture. Hofstede investigated how cultural conditioning impacts various aspects of employee motivations, leadership styles, and organizational behavior. He defined culture as the collective mental programming of people in a particular environment. He emphasized that culture is not a characteristic of individuals, but rather a set of shared values, beliefs, norms, and behavioral patterns ingrained in a group of people who have undergone similar education and life experiences. Culture significantly influences how individuals are motivated within an organization. Different cultures prioritize various motivators such as achievement, recognition, job security, or group harmony differently. His research highlighted that what motivates employees in one cultural context may not have the same impact in another due to differing cultural values and expectations. Hofstede argued that leaders cannot freely choose their leadership styles without considering the cultural conditioning of their followers or subordinates. Leadership styles that are effective in one culture might not be as effective or suitable in another. For instance, participative leadership might be valued in certain cultures that emphasize collectivism and group decision-making, while in other cultures with a higher power distance, autocratic leadership might be more accepted (Hofstede "Motivation, Leadership, and Organization: Do American Theories Apply Abroad?").

In his bestselling book Culture's Consequences (Hofstede *Culture's Consequences, International Differences in Work-Related Values*), Hofstede explored the impact of national culture on work-related values. Based on extensive research, including surveys conducted among IBM employees in different nations, Hofstede identified and defined several overarching cultural dimensions, providing a framework for understanding and comparing cultural variations that influence values, attitudes, and behaviors at workplace. These dimensions include Power Distance, Individualism-Collectivism, Uncertainty Avoidance and Masculinity-Femininity. Power Distance measures the extent to which less powerful members of a society accept and expect unequal distribution of power. In cultures with high power distance, hierarchical structures are prevalent, and authority is respected and unquestioned. In contrast, low power distance cultures tend to value equality and minimize hierarchical differences. Individualism-Collectivism dimension reflects the degree of interdependence among individuals within a society. Individualistic cultures prioritize personal goals, autonomy, and individual achievements. Collectivist cultures emphasize group harmony, cooperation, and loyalty to the community or group. Masculinity-Femininity dimension examines the distribution of roles and values within a society concerning ambition, assertiveness, competitiveness, and material success (masculinity) versus nurturing, collaboration, caring for others, and quality of life (femininity). Uncertainty Avoidance assesses a society's tolerance for uncertainty and ambiguity. Cultures with high uncertainty avoidance tend to be more resistant to change, prefer clear rules and structures, and have a higher level of anxiety about the unknown. Conversely, cultures with low uncertainty avoidance are more adaptable, open to change, and comfortable with ambiguity.

The cultural differences between the East and the West are probably the deepest in the world (Hsu). In exploring the differences, Hofstede and Bond studied the influence of Confucian values on economic growth in East Asian countries. Confucianism, emphasizing hierarchical relationships, virtue, and societal stability through benevolent behavior and perseverance, significantly shapes societal values and business practices in China, Japan, South Korea, Taiwan, and Singapore. Realizing the inherent problems of using Western management theories to study Eastern business practices, Michael Bond collaborated with a group of Chinese social scientists to develop a 40-item Chinese Value Survey (CVS) to understand Chinese values distinct from Western values. The CVS revealed 3 dimensions similar to Hofstede's cultural dimensions, including Power Distance, Individualism-Collectivism, and Masculinity-Femininity, showing that these dimensions are universal social behaviors in both Eastern and Western cultures. Remarkably, the CVS didn’t capture a dimension related to Uncertainty Avoidance. However, it unveiled a new dimension known as "Confucian Dynamism," illustrating a contrast between dynamic, future-oriented mentalities and static, tradition-oriented mentalities associated with Confucius' teachings. The study found a strong association between scores on Confucian Dynamism and economic growth across the surveyed countries between 1965 and 1985 (Hofstede and Bond).

Purpose of the Top Thirty List

Given the reams of material on leadership, and the years that one could spend studying it, and the complexity of the variables that influence it, trying to distill all of that learning into a short list of top insights is both a difficult task and a worthy goal. Even more importantly is to focus on turbulent times or times of change when leadership appears to become more important than other factors when looking for a positive outcome after the change. It was just this goal that we took on over a two year period. Thirty top insights was determined to be enough to cover the spectrum of insights without becoming an overwhelming task, and fit easily into a course semester (covering 2 each session).

Method

The initial task was to review as much research as we could. While not done as a systematic review, an attempt was made to identify a comprehensive list of major research on leadership including both academic and "guru" style leadership findings. The groups started with the "Leadership Summarized" article (Rhoads "Leadership Summarized Major Points of Research") and the 95 referenced articles and books therein. Then more recent research was found and added over the subsequent ten years. In the end, 267 articles and book chapters were reviewed on the topic of leadership and changing times over the course of two years. The larger list was distilled into a top 38 of the most important articles and chapters. As this work took place during a summer course over 2 years, there were two different groups who participated in the review, brainstorming sessions, and discussions. After a thorough review of each by participants, they would present their summaries of the articles during a 4-6 week period of meeting every day on Zoom for an average of five hours. After assigning subsets of the top 38 book chapters and articles to teams for reviewing, the groups got together to brainstorm insights. Initial brainstorm lists were discussed and paired down through voting until a sub-list of 30 was proposed by the first group. The draft list of 30 top insights was further discussed, revised, revised again until a consensus on the specific wording of the 30 topics was agreed upon by the second group. Each member of the group had to make comments before the final vote for the final wording of the insight.

Results

While the initial source or major concept for each insight is referenced, the distillation of the insight is the product of the process described in the methods section. Utilizing the consensus from the final group, here is a complete list of the top 30 insights into great business leadership during times of change, starting with the consensus on the best definition of leadership.

1. Leadership is "***communicating to another person their worth and potential so clearly they are inspired to see it in themselves***". (Covey)

2. The one most important characteristic of a Leader is **Balance**. (Rhoads "Leadership Summarized Major Points of Research")

3. There is a lot of empirical evidence that good leadership increases profits and decreases risk. (Rhoads *Lessons in Leadership*)

4. Leaders take responsibility when things go wrong and give credit to others when things go well. (Mautz)

5. Leadership does not come from position, title, or authority, but rather from the interaction between a team and the person who motivates that team. (Rhoads *Lessons in Leadership;* J. Collins "Level 5 Leadership")

6. Despite their position of power, leaders do not use authority to influence their followers. Leaders maintain healthy relationships with the people who follow them. (Rush)

7. Leaders talk to the people on their teams in a way that **always** maintains their dignity and shows them respect. When shown respect, a team member is less likely to respond defensively when provided corrective feedback, and think more positively about the concern. (Mautz)

8. Management and leadership are not the same thing. Management is more operational while leadership is more visionary. (Mintzberg)

9. Leaders are emotionally mature. Emotional maturity and leadership can be learned. (Goleman)

10. Good leaders manage their own emotions. When adapting, they deal with the emotional components of the change. (Rush)

11. Leaders are ardently committed to a goal that is to the benefit of all. Leaders put aside their personal interests in order to achieve a common goal. (J. Collins "Level 5 Leadership: The Triumph of Humility and Fierce Resolve. (Cover Story)")

12. Leaders understand that people are motivated when they are aware of the rewards, believe they have the capability to complete the task, and trust that when they complete the task they will gain the reward. (Motivation = Valance X Expectancy [Instrumentality]) (Vroom and Sternberg)

13. Leaders understand that what gets rewarded gets done. (Rhoads *Lessons in Leadership*)

14. Leaders understand that if you put a good performer in a bad system, the performer will stop performing well. (Rummler and Brache)

15. Great leaders discover what is universal and capitalizes on it. (Buckingham)

16. Increased globalization and the use of social media has enabled the rise of people into positions of power and influence who do not have the leadership skills necessary for their role. For that reason, it is important for existing leaders to design new transformational processes that mitigate the impact of unqualified leaders. (StrĘK)

17. When reviewing the outcomes of leadership styles, it becomes apparent that some types of leadership (especially narcissistic and charismatic) focus mostly on the personal ego or financial gain of the leaders themselves. (Harrison and Clough).

18. In the long term, research shows that Level-5, transformational, and authentic leadership tend to provide the best resulting outcomes for the team, group, or company. (Rush; J. Collins "Level 5 Leadership"; Rhoads *Lessons in Leadership*)

19. Inspirational Leadership works best in times of adversity, which should be looked upon as an opportunity rather than an excuse to spiral downward. (Rush)

20. Psychological ownership is a double-edged sword. In good times it has positive outcomes, but when a change is imposed on those tasks, it can have negative effects. The negative effects can be mitigated with transformational leadership skills. (Cocieru et al.)

21. Some researchers on leadership focused on the interaction between the business environment (i.e. the situation) and the leadership characteristics. (Hersey and Blanchard; Hoy and Miskel; Hencley)

22. Non-academic research (i.e. "gurus") on leadership focused more on the ability of a leader to motivate and lead a team of people toward a goal in the business world. (Covey; Buckingham; J. Collins "Level 5 Leadership")

23. In the past, academic research on leadership utilized self-assessment measures that were designed to meet the needs of a hierarchical male-centered military. This mono-cultural, mono-gendered, hierarchical system is often not applicable to business or educational environments. (Rhoads "Leadership Summarized Major Points of Research")

24. Self assessments that measure leadership often telegraph correct answers instead of assessing objective skills and experience of the individual. [To "telegraph" an answer means to give hints or clues within the wording of the item that indicate which answer is "correct"] (Rhoads "Leadership Summarized Major Points of Research"; Murphy)

25. Leaders constantly collect and analyze information about opportunities and threats in the external environment. When they identify a trend, they respond with a balance of optimism tempered by recognizing the "brutal facts". (Rush; J. C. Collins)

26. Good leaders utilize both external benchmarks and balanced scorecards (i.e. internal benchmarks) in order to recognize when there is a need for a change, and to persuade their teams of the importance of changing when needed. (Rush)

27. Change can be long and tough. Good leaders treat change as an ongoing process. (Rush)

28. Leaders utilize several strategies to help prepare their companies for dealing with change, especially during uncertain times. They frequently introduce innovations. They implement recognition and reward systems, collective learning, and intrapreneurship programs. They seek feedback in order to take into account the constantly changing preferences of consumers. They utilize the collective experience of other leaders, team members, and feedback from external sources as a basis for change initiatives. They do not rely solely upon authority to dictate change initiatives. (Rush)

29. Good leaders react to threats and changes quickly. The speed of the adaption depends upon the types of products and services the company provides. The speed of adaption must be faster when products or services are leading-edge or unique. (Rush)

30. Good leaders take care of themselves first. They utilize many ways to stay healthy and reduce stress including eating a well-balanced diet, maintaining emotionally-healthy relationships, and frequently engaging in stress-reducing activities (such as tai chi, meditation, yoga, Pilates, non-competitive hiking, biking, swimming, or walking). These low-impact repetitive pursuits increase the "relaxation response" that changes a person's brain chemistry, enabling them to remain calm and in control emotionally even in the midst of a crisis. Practicing these behaviors long-term increases resilience and the leader's ability to overcome adverse conditions.(Rhoads *Lessons in Leadership*)

Discussion

As noted earlier, no one could skip the discussion and just acquiesce; each group member had to comment and share their thoughts. Before the final vote, the discussion on each one of these insights were generally passionate, with certain members of the group presenting a strong case for either a different insight or a change in wording for the existing insight. For example, the first of the insights, the top definition, had many contenders for the final definition. The reasons that persuaded the consensus for the Covey definition was simplicity and the focus on enabling and encouraging others in a measurable and meaningful way.

Similarly, there were many views on the one single most important thing about leadership (*balance),* but in the end, the word *balance* seemed to encompass all the others and it was the only *single* word that could do so. Others – such as *resolve* and *dedication* were proposed but in the end the group could only agree on *balance.*

One of the more difficult issues was that while there was empirical evidence that leadership correlated highly with profits and/or return on investment, that research was generally observational rather than experimental. There have not been any random control studies that could provide evidence of causation. Nonetheless, given the studies that we do have (most notably the paired-company research of Jim Collins) it's fair to judge leadership as an influential variable in return on investment.

The issue of "credit" was also discussed in detail as the fourth insight notes that leaders take responsibility when things go wrong and give away credit when things go well. It was pointed out that this works well as

long as the group knows and acknowledges the influence of the leader on the good outcome. Sometimes, often in situations where the leader is a woman or minority, the unacknowledged activity can become part of a pattern, improving the profile of people who didn't influence the outcome while impacting the profile of the actual leader negatively. So this insight cannot always be deployed optimally. But generally when a leader acknowledges the contributions of others on a job well done, because the leader is known, it reflects well on both the leader and the team. And when a leader takes responsibility for poor performance, it is usually well-known that they, themselves, did not cause the poor performance. But it takes the pressure off the team members so that they can focus on solutions rather than assessing blame to other team members.

It is also important to recognize that leadership can be done from "behind". That is, leaders can focus on leadership behavior while following others who are designated with the position, title, or authority. So leadership itself does not come from the position, but rather from the behaviors of the leader and the outcome of the activity.

The *way* leaders talk to their teams is important. Leadership always show respect and work to maintain the dignity of all team members at all times. Coaching and corrections to improve outcomes must be done carefully and respectfully.

The group felt that it was important to acknowledge that management and leadership were not the same thing, as discussed in the introduction of this paper. It is difficult to be visionary if one is bogged down in the tactical operations of today, and leaders by definition need to be more visionary than operational.

The next two insights focus on the emotional control of the leader, and the necessary understanding of the leader on the emotions of their teams especially during times of change. It is also noted that this emotional control is not necessarily an inherent personality trait, but is a behavior that can be learned over time.

The eleventh insight relies heavily on Jim Collin's work and the insistence that leaders put the needs of the organization ahead of their own. This may be one of the most difficult, and most telling, characteristic of leadership.

The twelfth insight relies upon the definition of motivation according to Vroom and Sternberg which states that people are only motivated when they know of the award and believe they can obtain it. The next insight also talks about rewards, noting that there must be rewards in order to get anything done.

The fourteenth insight recognizes the importance of the system; the specific processes and procedures that make up the environment of the work. The fifteenth insight relies upon Buckingham's concept that there is one great thing that must be utilized to progress.

The sixteenth insight was discussed in much more detail than some of the others. It is a bit more complex, requiring a discussion of social media and its impact on our perceptions of who is and is not a leader. Since social media might be considered "shallow" understanding, it was noted that there has to be systems in place to ensure that non-leaders (i.e. people without the proper leadership characteristics) do not rise to decision-making levels that might prove detrimental or, if they do, there are processes in place to remove them so that they cannot do long-term damage while in that position.

The next three insights focus on the different leadership styles, culminating in the statement that during times of adversity, research shows that Inspirational Leadership appears to be the style that works the best.

The twentieth insight reminds us that a company may initially benefit from "psychological ownership" of the employees (i.e. they feel ownership over the processes and procedures under their control), but that this benefit may turn into a negative during necessary times of change. Similarly, the next insight talks about the interaction of the business environment and the leadership characteristics or style.

The group felt that the difference between the gurus of leadership and the academic study of leadership needed to be delineated. Additionally, the past academic study of leadership has overly focused on military leadership which was, in the past, male-centered and hierarchical. Since businesses don't necessary run hierarchically, and they may not be led by a male, sometimes that academic leadership research is not applicable in business and education.

The twenty-fourth insight reminds us that often leadership measurement is self-assessed, which has a multitude of issues, especially regarding the telegraphing of the "right" answer.

The last five insights go back to identifying exactly what leaders do; including collecting and analyzing information, utilizing benchmarks and balanced scorecards to identify when and how to change. It is also noted that leadership is a long-term, not a short-term phenomenon. By frequently introducing innovation into a business environment, leaders can prime the environment so that when required change in introduced during uncertain times, the team is better prepared to deal with it.

Finally, the last insight talks about the importance of leaders taking care of themselves first so that they can be available to help others. Practicing stress-reducing activities is a long-term strategy for developing the resilience necessary to deal with the emotional turmoil of a crisis.

Limitations

There are many limitations of this project. It is a subjective view of a complex subject. The groups were, undoubtedly, influenced by the primary instructor's views (though based upon the level of discussion, the group often overrode the instructor's preference for both the insights and the wording of the insight while staying within the realm of consensus). The final list of thirty insights is definitely not the work of any one person, but has gone through a relatively rigorous process to make the final cut.

Another limitation has also been identified earlier; the amount of unbiased random-control research in the realm of leadership is little to none. Since our dataset is limited to observational research, the final conclusions are, in the end, simply our opinions of the dataset outcomes.

Furthermore, as the two phases of this project occurred over a two year period, the current events of the times may have influenced the choice and wording of the insights. The insights are meant to be universal and not connected specifically to any particular time period, but we cannot be assured that that is the case.

Conclusions

In conclusion, distilling a huge amount of research and readings on leadership is a daunting task, but can be accomplished with time and consensus-building activities. Identifying the thirty most important insights into leadership, especially during times of change, is a worthy endeavor and will be helpful to others seeking information on leadership.

References

Abner, Gordon, Bill Valdez, and James L. Perry. "Elevating the Case for Leadership Development Programs: Return on Investment Evaluations." *Public Administration Review* 81.2 (2021): 291-94. Print.

Archer, Stephen. "Because It's Worth It." *Training Journal* (2013): 55-59. Print.

Ashley-Timms, Laura. "Return on Investment Guaranteed: Effecting Transformation and Sustaining Change with Coaching." *Industrial & Commercial Training* 44.3 (2012): 159-63. Print.

Avolio, Bruce J., James B. Avey, and David Quisenberry. "Estimating Return on Leadership Development Investment." *Leadership Quarterly* 21.4 (2010): 633-44. Print.

Avolio, Bruce J., et al. "A Meta-Analytic Review of Leadership Impact Research: Experimental and Quasi-Experimental Studies." *Leadership Quarterly* 20.5 (2009): 764-84. Print.

Buckingham, M. *The One Thing You Need to Know: ... About Great Managing, Great Leading, and Sustained Individual Success*. Free Press, 2005. Print.

Coats, Steve. "Development Roi." *Leadership Excellence* 27.12 (2010): 20-20. Print.

Cocieru, Ovidiu C., et al. "The 'Dark Side' of Psychological Ownership During Times of Change." *Journal of Change Management* 19.4 (2019): 266-82. Print.

Collins, James C. *Good to Great : Why Some Companies Make the Leap--and Others Don't*. Vol. 1st. New York, NY: HarperBusiness, 2001. Print.

Collins, James C., and Jerry I. Porras. *Built to Last : Successful Habits of Visionary Companies*. Vol. 1st. New York: HarperBusiness, 1994. Print.

Collins, Jim. "Level 5 Leadership." *Harvard business review* 79.1 (2001): 66-76. Print.

---. "Level 5 Leadership: The Triumph of Humility and Fierce Resolve. (Cover Story)." *Harvard business review* 83.7 (2005): 136-46. Print.

Collins, Jim, and Morten Hansen. *Great by Choice: Uncertainty, Chaos, and Luck--Why Some Thrive Despite Them All*. New York: HarperBusiness, 2011. Print.
Conger, Jay A., and Robert M. Fulmer. "Developing Your Leadership Pipeline." *Harvard business review* 81.12 (2003): 76-84. Print.
Covey, Stephen R. *Principle Centered Leadership*. New York: Simon & Schuster, 1992. Print.
Dionne, Shelley D., et al. "A 25-Year Perspective on Levels of Analysis in Leadership Research." *Leadership Quarterly* 25.1 (2014): 6-35. Print.
Estrada, Teresa, and Shannon Connolly. "Roi of Leadership Training at National Cancer Institute." *Workforce Solutions Review* 6.6 (2015): 10-13. Print.
Goleman, Daniel. *Working with Emotional Intelligence*. New York: Bantam Books, 1998. Print.
Harrison, J. K., and M. W. Clough. "Characteristics of "State of the Art" Leaders: Productive Narcissism Versus Emotional Intelligence and Level 5 Capabilities." *Social Science Journal* 43.2 (2006): 287-92. Print.
Hencley, S. P. "Situational Behavioral Approach to the Study of Educational Leadership." *Leadership: The Science and Art Today*. Itaska, IL: F.E. Peacock Publishers, 1973. 139--64. Print.
Hersey, Paul, and Kenneth H. Blanchard. "So You Want to Know Your Leadership Style?" *Training & Development Journal* 35.6 (1981): 34. Print.
Hofstede, Geert. *Culture's Consequences, International Differences in Work-Related Values*. Sage Publications, 1980. Print.
---. "Motivation, Leadership, and Organization: Do American Theories Apply Abroad?" *Organizational Dynamics* 9.1 (1980): 42-63. Print.
Hofstede, Geert, and Michael Harris Bond. "The Confucius Connection: From Cultural Roots to Economic Growth." *Organizational Dynamics* 16.4 (1988): 5-21. Print.
Hoy, W. K., and C. G. Miskel. *Educational Administration: Theory, Research, and Practice*. Vol. Third. New York, NY: Random House, 1987. Print.
Hsu, Francis L. K. *Americans and Chinese : Passage to Differences*. University Press of Hawaii, 1981. Print.
Kaplan, Robert S., and David P. Norton. *The Balanced Scorecard : Translating Strategy into Action*. Boston, Mass: Harvard Business School Press, 1996. Print.
Kaplan, Robert. S., and David. P. Norton. "The Balanced Scorecard—Measures That Drive Performance." *Harvard Business Review* January-February 1992 1992. Print.
Mautz, Scott. "17 Phrases Great Leaders Never Say to Employees." *Inc.* 2020. Print.
McGovern, Joy, et al. "Maximizing the Impact of Executive Coaching: Behavioral Change, Organizational Outcomes, and Return on Investment." *The Manchester Review* 6.1 (2001). Print.
Mintzberg, Henry. "Enough Leadership." Harvard Business School Publication Corp, 2004. 22-22. Vol. 82. Print.
Murphy, Mark. "Leadership Iq Study: Why New Hires Fail." *Public Management (00333611)* 88.2 (2006): 33-34. Print.
Offices, Compensation & Benefits for Law. "How to Ensure That Leadership Training Programs Bear Fruit. (Cover Story)." *Compensation & Benefits for Law Offices* 6.8 (2006): 1-12. Print.
Phillips, Jack J., and Patti P. Phillips. "Courageous Leadership: Delivering Results in Turbulent Times." *Strategic HR Review* 19.2 (2020): 59-66. Print.
Phillips, Jack J., and Lynn Schmidt. *The Leadership Scorecard*. Improving Human Performance Series. Burlington, MA: Routledge, 2004. Print.
Rhoads, CJ. "Leadership Summarized Major Points of Research." *Journal of Leadership and Management* 1.2 (2014). Print.
---.*Lessons in Leadership*. Presentation at Kutztown University, 2010.
Rummler, Geary A., and Alan P. Brache. *Improving Performance : How to Manage the White Space on the Organization Chart*. The Jossey-Bass Management Series. Vol. 2nd. San Francisco, CA: Jossey-Bass, 1995. Print.
Rush, Stephen. *The Leadership in Action Series: On Leading in Times of Change*. The Leadership in Action Series. Greensboro, N.C.: Center for Creative Leadership, 2012. Print.
StrĘK, Natalia. "The Idea of Situational Leadership in Political Parties." *Annales UMCS, Sectio K (Politologia)* 25.2 (2018): 41-52. Print.
Vroom, Victor, and Robert J. Sternberg. "Theoretical Letters: The Person Versus the Situation in Leadership." *The Leadership Quarterly* 13.1 (2002): 301–23. Print.
Yihan, Lin. "Sam Walton Leadership Case Study." Leadership With You 2013. Web. July 7, 2013 2013.
Zaleznik, Abraham. "Managers and Leaders: Are They Different?" *Harvard Business Review* 82.1 (2004): 74-81. Print.

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The Influence Of Transformational IT Leadership On The IT Leadership Of Followers

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Abstract
Investments in information technology (IT) are underutilized, thus a key topic of IT Leadership is the enablement of IT utilization and increasing innovation through IT use. Most research about IT leadership focuses on the top-down leadership from the C-suite. As organizational hierarchy flattens, and teamwork becomes the new way of working, the IT leadership of team leaders and members becomes key to IT-use and IT-based innovation. In this study, we conceptualize IT leadership, building on the concepts of IT self-leadership and personal innovativeness in IT. We investigate the relationship between team leaders' transformational IT leadership and team members' IT leadership. Further, we investigate whether team leaders' and members' IT leadership increase team members' job satisfaction. We conduct an empirical study across seven European countries and seven industries with 130 employees from various teams. Our findings reveal that transformational IT leadership of team leaders is positively related to IT leadership of team members. We found a relationship between IT leadership and job satisfaction only for individuals between 19 and 33 years old.

Keywords
Transformational IT leadership, transformational information technology leadership, IT leadership, IT self-leadership, job satisfaction, age

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Introduction

This study investigates the role of team managers' transformational information technology (IT) leadership on team members' IT leadership. Transformational IT leadership (Eseryel, 2020) can be defined as inspiring followers to go above and beyond in their Information Technology (IT) use to increase their own (i.e., the followers') work efficiency and effectiveness. We further investigate whether the team members' IT leadership, that results from a team's transformational IT leadership behavior influences team members' job satisfaction.

Since most organizational processes are enabled by information technology (Jasperson, Carter & Zmud, 2005), IT plays an important role in the business world (Afshari, Bakar, & Luan, 2009; Devine et. al, 1999). Yet, investments in information technology (IT) are underutilized (Li & Hsieh, 2007; Jasperson, Carter, & Zmud, 2005). The underutilization of information technologies by users has received considerable attention (Wang, Li, & Hsieh, 2013; Hsieh & Wang, 2007; Jasperson, Carter & Zmud, 2005). Depending on the industry, 'proper' IT use may even be "vital to create and sustain competitive advantage" (Li & Hsieh, 2007, p. 15). Research shows that information technologies are far from saturation (Bjorn-Andersen & Raymond,

2014). According to Bjorn-Andersen & Raymond (2014) and Afshari, Bakar & Luan (2009), the implementation and use of IT is related to organizational change, which requires strong IT leadership. The term 'IT Leadership' in extant research typically refers to the IT leadership of the C-suite, or the leadership of IT directors or managers. For example, Jasperson, Carter & Zmud (2005) suggests that the potential of IT lies in the management's hands by developing strategies, which encourage the use of IT in new and innovative ways (Jasperson, Carter & Zmud, 2005) that go beyond the minimum requirements of IT use (Li & Hsieh, 2007) to improve task performance (Kim, Malhotra, & Narasimhan, 2005).

While most of executive's IT leadership focus on adopting new and innovative IT, most IT-use benefits arise from increasing the utilization of IT after its adoption (Jasperson, Carter & Zmud, 2005). This could take the form of individuals using IT to set and achieve performance goals or innovating with IT individually or in their teamwork. Since organizations increasingly become less hierarchical, and teamwork becomes the new norm of collaboration, IT leadership of individuals for their own work, and for their collaboration with their team members is key to increasing IT utilization. Yet, little research has been done in the post-adoptive phase, even though this is the longest phase and where most benefits accrue for the firm (Jasperson, Carter & Zmud, 2005). Although researchers agree that managerial support is essential for innovative IT use (Jasperson, Carter & Zmud, 2005; Bassellier, Benbasat & Reich, 2003), research has yet not explicitly addressed the influence of team leaders in stimulating IT leadership within their teams. To fill this gap, we ask the following general research question:

What is the influence of transformational IT leadership of team leaders on the IT leadership and job satisfaction of team members?

Theoretical Framework

This section introduces the conceptual development on IT self-leadership, IT leadership and transformational IT leadership. In the remainder of this article, the term 'follower' and 'employee' are used interchangeably to refer to a member of a team, who is not perceived by the team members as the team leader.

IT Self-Leadership Construct Development

Our efforts to develop IT Leadership started by developing IT self-leadership scale. IT self-leadership was defined as "the ability to intentionally influence one's thinking, feeling and actions towards the use of IT to reach one's (work) goals" (Eseryel, 2020, p. 124). In this paper, we improve our definition by incorporating the voluntariness of IT use, which is captured by the first component of IT self -leadership. As a result ***IT self-leadership***'s improved definition is ***the ability to intentionally influence one's thinking, and feeling toward IT use, and using IT voluntarily to reach one's goals.*** Eseryel et al. (2014) found that IT self-leadership influences innovative behavior by enhancing communication, feedback, brainstorming, networking, sharing knowledge, visualization, and adaptive behavior (p. 95).

While IT self-leadership term finds its source from the self-leadership concept in organizational theory, it extends the meaning of the term in multiple ways: (1) The term does not relate to the managerial control, in fact IT self-leadership can be exhibited bottom up, (2) The term is relevant to IT use, regardless of what context or field one works in, (3) While self-leadership is focused on getting oneself to do a task, IT leadership refers to using IT (even voluntarily) to do a task, and (4) IT-use exhibited in IT self-leadership refers to use of IT that is not required by one's job or task description.

Manz coined the term self-leadership as constituting "the core of the management process" because it complements managers' role by initiating an additional control mechanism, which "exists within each person" (Manz, 1991, p. 88). Self-leadership was the antecedent of self-management, which was defined as an approach for managers to "address self-regulation or higher level control standards" (Manz & Sims, 1980, p. 366) for followers to work more independently by using self-observation, self-goal-setting, cueing strategies, self-reinforcement, self-punishment and rehearsal (Manz, 1986). Self-management guides people to perform tasks because there is a necessity to do them and/or there is an extrinsic reward linked to their performance (Manz, 1986). Later, Manz augmented the self-leadership term, by including self-regulation related to intrinsically motivating tasks. By late 80's he defined self-leadership as "leading oneself toward performance of naturally motivating tasks as well as managing oneself to do work that must be done but is not naturally motivating" (Manz 1986). Currently, self-leadership term goes beyond self-management, by focusing on

behavioral reinforcement, intrinsic motivation, and constructive thinking to enhance individuals' self-regulation and self-direction (Neck and Houghton 2006).

While the importance of self-leadership is established in organizational leadership literature (Houghton and Neck 2002), how individuals exhibit leadership with information technologies is not (Eseryel, Bakker, Eseryel, 2014). Therefore, we adapt Manz's (1986) reasoning to the IT context to develop IT self-leadership. According to this, IT self-leadership has three categories of components:

Components of IT Self-Leadership

(1) Voluntary IT Use for Goals & Performance

The first component of IT Self-Leadership is the adaptation of the category called "behavior focused strategies (Georgianna, 2007; Neck & Houghton, 2006) or "behavior awareness & volition" (Houghton, et al., 2012). In the self-leadership context, this category referred to individuals setting and keeping track of goals and their performance with respect to these goals.

In the IT self-leadership context, this category was adapted to capture two things: (a) individual using IT to set goals and measure their own performance with respect to these goals, (b) voluntariness aspect, i.e., individual doing all these with IT, even though they are not required by their job description. The behaviors that fall into this category refer to IT-enabled self-goal setting, and IT-enabled self-observation behaviors. One hopes that these behaviors will be followed by self-rewards, and self-correcting, although these two types of behaviors are not captured, and rather the voluntary IT-use that may cause these behaviors is captured.

(2) IT-Use Motivators

The next component of Self-Leadership is referred to as "motivational strategies" (Georgianna, 2007) or as "Task motivation*"* (Houghton, Dawley & DiLiello, 2012), which lists triggers that enhance motivation such as feelings of competence, self-control, the sense of purpose (Konradt, Andreßen & Ellwart, 2009), and self-reward.

For IT self-leadership concept, we adapt this category to refer to the strategies that individuals use to motivate themselves to use IT for their tasks. One element of this component is visualizing oneself doing a task successfully with IT before attempting the task. The other component is rewarding oneself when one masters an IT tool. Both visualizing success with IT and rewarding oneself are motivators for IT-use.

(3) Constructive Thought Strategies (Metacognitive Efforts) to Motivate IT Use

The last component of self-leadership is 'constructive thought strategies' (Georgianna, 2007; Neck & Houghton, 2006), also called "Constructive Cognition" (Houghton, et al., 2012). This component relates to observing one's own mental processes to assess the accuracy of one's own (negative) beliefs about a difficult task or using self-talks to keep working on challenging tasks (Georgianna, 2007).

We refer to this last component of IT as "constructive thought strategies to motivate IT use". This component includes a person questioning their potentially negative thoughts of IT, when they have difficulties using IT for a task. It further includes a person using self-talk strategies when they run into challenges using IT for a task. This component can also be called Metacognitive Efforts to Motivate IT Use because metacognition refers to a person observing how they think about ideas and how they cognitively construct meaning.

Development of the IT Leadership Construct

In the preceding section, we described the elements of IT self-leadership and how this concept was operationalized based on adaptation of organizational self-leadership theory. Self-leadership refers to a person affecting one's own behavior. In IT self-leadership, the person who leads and the person who follows are the same person. When we use the word 'lead', without the word 'self', we indicate that there is a person who leads, and there are one or more other people who follow the person who leads. Therefore, IT Leadership construct needs to be different than IT self-leadership.

We define ***IT leadership*** as ***leading self and others in effective, efficient, and innovative IT-use to work and collaborate to achieve goals.*** In this definition, 'others may refer to members of one's team, department, unit, company/organization, an alliance of organizations, country, or a number of countries. Therefore, 'goals' may be the goals of one's team, department, unit, company/organization, an alliance of organizations, a country, or a number of countries. Our definition of IT leadership does not restrict who a leader is. A leader does not need

to be a manager, director, a CIO, CEO, or the president of a company/organization/country. IT leaders can just as easily be at the bottom, or middle of a unit as they can be at the top. They may or may not have a title that equals a position of power or status. Therefore, IT leadership allows for bottom-up leadership, top-down leadership, and leadership of peers.

We operationalize IT leadership by combining the elements of (1) IT self-leadership, (2) personal innovativeness with IT and (3) innovating with IT for collaboration (Figure 22). The personal innovativeness with IT (PIIT) was measured by three items developed by Agarwal and Prasad (1998) and also used by Wang, Li, & Hsieh (2011). We developed another five questions, inspired by PIIT, to measure innovating with IT for team collaboration.

IT Leadership= IT self-leadership + personal innovativeness with IT+ innovate with IT for collaboration.

Figure 2. Components of IT Leadership

Transformational IT Leadership

Northouse's (2019) book provides a systematic overview of leadership theories. The commonality across many leadership theories is that they are transactional in nature: The leader's goal is to motivate and/or support the followers to accomplish the goals that the leaders laid out for them. The leader in return, rewards the followers for achieving these goals. The rewards are generally tangible in the form positive reviews, raises, and bonuses. Thus, there is an expectation of a transaction where the followers achieve the leader's goals, and in return they get financial and motivational rewards. Transformational leaders differ from transactional theories in that leaders inspire followers to go above and beyond what is expected of them (Podsakoff et al., 1990).The field of Information Systems is highly dynamic and is constantly transformed and revolutionized (Elrod et al., 2022). Therefore, working with information technologies requires individuals to overcome many challenges and go through many changes, which may be professionally and personally trying. As a result, transformational leadership is a better fit than transactional leadership theories for leaders who deal with information technologies.

Eseryel (2020) adapted the transformational leadership theory to theorize about leaders within any field, who understand the need to use IT in differentiating their business. ***Transformational IT leadership*** (Eseryel, 2020) can be ***defined as inspiring followers to go above and beyond in their Information Technology (IT) use to increase the followers' work efficiency and effectiveness.*** In that sense, transformational IT leadership is quite different that transformational leadership. To operationalize transformational IT leadership, Eseryel (2020) adapted Carless et al.'s (2000) brief transformational leadership instrument. We will follow a similar approach but use the full transformational leadership instrument (Podsakoff, MacKenzie, & Bommer,1996) to cover all relevant aspects of transformational IT leadership. When Podsakoff, et al.'s (1996) approach is used, transformational IT leadership has six important components that we discuss below.

Components of Transformational IT Leadership

(1) Articulating an innovative IT vision

This component refers to transformational IT leader (TITL) having a vision of using IT innovatively and intensively to achieve strategic goals of their team, unit, department, or organization. The transformational IT leader would look for new ways to use IT, looks for how IT use can be increased to increase the effectiveness and efficiency of processes and inspires others in their team, unit, department, or organization to adopt the same vision. Articulating a vision is a key characteristic of transformational leadership and crucial to encourage followers to work harder by establishing cognitive models that they can envision (Sun, Xu & Shang, 2014).

(2) Role modeling IT use

The second component of transformational IT leadership is *Role modeling IT use.* This refers to the leader not only talking about a certain IT vision, but showing the others that they really believe in IT by making use of IT innovatively themselves. By providing an appropriate model, a transformational IT leader is expected to behave as an exemplary user themselves. Role modeling IT use helps increase followers' performance, their degree of IT leadership (Avolio & Gibbons, 1988) and employees' job satisfaction (Podsakoff, MacKenzie & Bommer, 1996). Yukl (2012) pointed out that leaders must be able to communicate with their followers

about technical matters, and information technology is a very important technical matter relevant to all users of IT.

(3) Fostering collaboration through IT

The third component of transformational IT leadership is *fostering collaboration through IT.* This component refers to both leaders' abilities to define common goals, enhance collaboration and alignment of followers' interests (Li & Hsieh, 2007) and to enable and ease collaboration between different parties with appropriate information technologies. IT can support clarification and facilitation of goal setting (Kark, Shamir & Chen, 2003) and increase employee empowerment by assigning expertise to followers (Zhang & Bartol, 2010).

(4) Expectations of high IT-use performance

Expectations of high IT use performance is the fourth component of transformational IT leadership. Transformational leaders have high performance expectations from their followers (Podsakoff, MacKenzie & Bommer, 1996). Transformational IT leaders may be leading various different organizations or teams, where followers job descriptions are non-technical such as being a marketing analyst. A transformational IT leader would expect the followers to use the best relevant information technology to ensure that organization as a whole can be a leader in the industry. For example, marketing analysts could use the appropriate marketing analytics tools and/or artificial intelligence technology to benefit from the novel capabilities that information technology affords the field. The transformational IT leaders further would expect followers to develop strong IT skills so that they can use cutting edge technology in the most effective way that helps ensure the best job performance.

(5) Individualized Support

The fifth component of transformational IT leadership is *Individualized Support.* This component refers to the TITL acting with respect and thoughtfulness to each follower's feelings. We kept this component the same as that in the general transformational leadership theory. This is because many individuals, especially those whose training and main jobs are non-technical may have developed anxieties regarding their ability to successfully use information technologies. Others may not be aware of the most appropriate IT that would help improve their performance. The fifth component refers to transformational IT leads taking into consideration the feelings and personal needs of individuals in encouraging them in general. Bass (1994) mentions the importance of individual consideration in developing transformational leadership. This factor is concerned with the leaders' ability to filter out individual wants and needs (Choi, 2006), show appreciation and involve their input in decision-making (Choi, 2006). Individualized support helps develop followers fulfill their potential (Lee, 2005). Choi (2006) identified that this component has a significant impact on job satisfaction of followers. Sun, Xu & Shang (2014) stated that, when leaders show interest and appreciation for their followers, team performance is affected positively.

(6) Stimulation to innovate with IT

Last component of transformational IT leadership is *stimulation to innovate with IT.* Intellectual stimulation is an important component of transformational leadership (Bass, 1994). Intellectual stimulation refers to thinking about alternative views, learning, questioning, and looking for new processes and approaches to solve problems. By encouraging self-awareness and creativity, followers are stimulated to rethink visions and thinking patterns to arrive at new ways to "analyze and solve different kinds of problems" (Sun, Xu & Shang, 2014, p. 130). Transformational IT leaders stimulate creative thinking about IT use to solve business problems. The transformational IT leader helps followers view IT in a different way. They motivate followers to consider how various IT could be used to solve business problems. A leader that encourages 'out of the box' thinking is likely to increase the chance of effective IT use as employees are self-motivated to experiment with the technology and are not anxious to try out unconventional approaches.

In this section, we discussed the components of transformational IT leadership. In the next sections, we discuss the expected relationships between the concepts discussed above to answer our research question: *What is the influence of transformational IT leadership of team leaders on the IT leadership and job satisfaction of team members?*

Transformational IT Leadership and Job Satisfaction

The literature on the six components that relate to transformational IT leadership points to a relationship between transformational IT leadership and job satisfaction of the followers.

For example, the second key behavior used by TITL is role modeling IT use. Role modeling (IT use) helps increase followers' performance (using IT) (Avolio & Gibbons, 1988), which makes followers feel good about their work. Further, when the TITL leads by doing and leads by example, this increases followers' job satisfaction (Podsakoff, MacKenzie & Bommer, 1996).

The third key TITL behavior is fostering collaboration through IT. Increased collaboration enables teams and organizations to increase their feeling of membership to the team or organization. Further, IT can support goal-clarification and facilitation (Kark, Shamir & Chen, 2003) and increase employee empowerment (Zhang & Bartol, 2010). Empowered employees feel more valued by the organization. They develop higher connection to their organization. Further their relationships with their colleagues improve. For these reasons, empowerment increases employee satisfaction (Go, Monachello, & Baum, 1996).

Individualized Support refers to the degree of attention that the TITL pays to the followers on a more personal basis. This factor is concerned with the leaders' ability to filter out individual wants and needs (Choi, 2006), show appreciation and involve their input in decision-making (Choi, 2006). Further it relates to the leaders' attention towards employees' feelings and emotions to ultimately develop them beyond their potential (Lee, 2005). By showing respect and considering their followers' feelings (Podsakoff, MacKenzie & Bommer, 1996), leaders can increase intrinsic motivation which in turn could make the use of IT to be enjoyable in its own right (Davis, Bagozzi & Warshaw, 1992). We expect that when one enjoys what they are doing at work, that would increase their job satisfaction.

Wang, Li & Hsieh (2011), suggest that employees should be encouraged to have satisfying experiences with IT, which might be accomplished by intellectual stimulations of leaders for innovating with IT. Having satisfying experiences with IT would contribute to the job satisfaction of an employee, who often uses IT for their job.

Therefore, we propose the following hypothesis:

H1: Transformational IT leadership of team leaders contribute to the job satisfaction of team members.

Transformational IT Leadership of Team Leaders and IT Leadership of Team Members

While followers are invited to take responsibility and work independently (Houghton & Yoho, 2005), leaders are nevertheless essential to reinforce self-leading behavior (Manz & Sims, 1987). Those leaders are then taking a coaching role in the development of the follower (Stewart, Courtright & Manz, 2011) rather than a directing role, which can be undertaken by a transformational IT leader. IT self-leadership can be stimulated in a number of ways, amongst others by a transformational IT leader (Eseryel, 2020).

A high degree of behavior-focused strategies increases self-leadership abilities and should be supported by a leader who provides coaching and support (Andreßen, Konradt & Neck, 2012). Next to inspiration and visioning, transformational (IT) leadership can influence (IT) self-leadership practices (Andreßen, Konradt & Neck, 2012; Sun, Xu & Shang, 2014).

The first behavior exhibit by TITL is providing an IT vision. With IT vision, TITL provide their followers with the opportunity to innovate and explore ways that "go beyond routine use", which can unleash the "potential of the system" (Li & Hsieh, 2007, p. 3). Moreover, providing followers with an IT vision could improve the followers' motivation to engage more with IT and thus increase team members' IT leadership.

There's a strong link between transformational (IT) leadership and empowerment (Choi, 2006; Jung, Chow & Wu, 2003; Kark, Shamir & Chen, 2003). For example, by fostering collaboration through IT, TITL's increased use of IT may enable goal clarification and increase employee empowerment (Zhang & Bartol, 2010). Follower empowerment, in turn, provides the basis for self-leadership (Bass, 1999; Avolio & Gibbons, 1988). Therefore, we expect that transformational IT leaders' empowerment of followers with regard to IT use should increase the followers' IT self-leadership.

Konradt, Andreßen & Ellwart (2009) uncovered that self-leadership can be learned and that employees who receive training in self-leadership, show increased mental performance, higher job satisfaction (Stewart, Courtright & Manz, 2011) and express fewer negative emotions. It can be assumed that a transformational

leader should therefore be able to facilitate through IT the employees to learn more IT leadership. Based on these arguments, we propose the following hypothesis:

H2: Transformational IT leadership by team leaders increase IT leadership of team members

Sun, Xu & Shang (2014) and Choi (2006), attributed transformational leadership to a positive link to self-leadership and job satisfaction. Therefore, we propose:

H3: IT leadership mediates transformational IT leadership and job satisfaction.

The hypothesized relationships are summarized in the conceptual model below (Figure 2).

Figure 2. Conceptual Model

Research Method

This study was conducted using an online survey (Appendix A). This section describes survey participants, data collection, survey instrument adaptation, pre-testing & refinement, and measurement.

Survey Participants

This study was conducted among larger European firms (those with higher than 50 employees) whose employees utilize IT on a daily basis. In order to test the concepts of transformational IT leadership and IT leadership, the research was conducted across industries, as can be seen in Table 1. The sample comprised of 130 employees (N=130) from different teams and firms in which one employee per team was represented to ensure that each survey relates to a different (team) leader and accounts for team-level analysis.

Industries	Share	Industries	Share
Financial services	42%	Production	13%
Legal services	6%	Health care services	7%
Public services	8%	Energy services	12%
Other services	13%	**Total**	100%

Table 1. Distribution of teams per industry

The survey was sent out to 100 companies, which resulted in a response rate of 44% with regard to number of firms. In general, every company participated with an average of 3.38 teams in this study. The sample consisted of 58% male and 42% female participants with a mean age of 35 years. 70 participants (54%) came from the Netherlands, 40 participants (31%) from Germany and 20 participants (15%) from organizations in Poland, India, USA, Canada, and Bulgaria.

Data Collection

Prior to sending out the survey link to 100 companies, all companies were contacted with a short description of the survey. This notification included information that the findings would be confidential, and the data would only be presented in an aggregated form and not be attributed to individual persons or teams. This email also informed companies about the starting date of the data collection. Two weeks after the email, the online survey link was distributed via e-mail. Participants were able to select one of the three languages (English, German, or Dutch). Once a participant started the survey, they had seven days to complete the survey. Those that were not completed within seven days were discarded. Companies, who have not responded to the notification, or the survey were sent a reminder after two weeks. In total, the survey was accessible for six weeks.

Survey Instrument pre-testing and refinement

Transformational IT leadership questionnaire was developed by adapting the 22 item transformational leadership survey of Podsakoff, et al. (1996) to fit the description of transformational IT leadership. The job satisfaction survey of Warner (1973) was adapted to account for the IT context. Two researchers adapted the questionnaires through many rounds of discussion with a third researcher. During the adaptation and pilot testing of the survey, we found that the individualized support questions lost their face value, and became irrelevant to what we wanted to measure, namely the leader's ability to create a shared vision around IT. Therefore, this component has been removed.

In order to ensure comprehension of the questions, the adapted survey was pre-tested with three native speakers of each respective language. Understanding was checked by elaborating on each question with a pilot sample. A final check was performed with two researchers to arrive at a more reliable survey. In order to account for any biases, two information systems professors were asked to control the questions for logic and understanding again. Nonetheless, to account for deviations across the three languages, a question concerning the chosen language was included to control for deviations in interpretation across languages. The pilot revealed that understanding of the question was clear.

Measures

Apart from the demographic information asked in the beginning of the survey, all questions had to be answered on a seven-point Likert scale ranging from 'strongly disagree' to 'strongly agree'. Initially, the measurement instruments, which will be described below, have utilized a five-point Likert scale. According to Lozano, Garcia-Cueto & Muniz (2008), an increase of the items on the Likert scale increases reliability and validity of the data. Consequently, the number of items was increased to a seven-point scale. The concepts with their respective components and questions are described below. Likewise, the Cronbach alpha coefficients for the respective measures are presented.

Transformational IT Leadership Survey Development

Inspired by the work of Podsakoff, MacKenzie & Bommer (1996), the authors' 22 question survey to measure transformational leadership was adapted to fit the transformational IT leadership definition. Thereby the questions were rephrased in a way to measure how employees perceive their leaders' ability to stimulate IT use. As explained in the literature review, the concept evolved around five dimensions: (1) Articulating an innovative IT-vision (abbreviated as *TITL_V*) (5 items, e.g. "The leader is always seeking new ways in which IT can be used for the team"; $\alpha = 0.836$), (2) Role modeling IT-use (abbreviated as *TITL_RM*) (3 items, e.g. "The leader actively uses the IT that s/he advocates"; $\alpha = 0.846$), (3) Fostering collaboration through IT (abbreviated *TITL_FC*) (4 items, e.g. "The leader encourages employees to use IT to collaborate as a team"; $\alpha = 0.843$), (4) Expecting High IT-Use Performance (abbreviated as *TITL_EX*) (3 items, e.g. "The leader expects employees to develop strong IT skills so that they can increase work performance"; $\alpha = 0.792$), (5) Stimulating to innovate with IT (abbreviated as TITL_STI) (4 items, e.g. "The leader has provided me with new ways of looking at IT, something that used to be a puzzle for me"; $\alpha = 0.814$).

IT self-leadership survey development

IT self-leadership was measured by adapting the self-leadership survey of Houghton, et al. (2012) into the IT context. Three components of IT-self leadership, consisting of 9-items are described as follows (1) Voluntary IT-use for goals and performance (abbrev. *ITSL_VOL*) (3 items, e.g. "I establish specific performance goals for myself with the help of IT"; $\alpha = 0.806$), (2) IT use motivators (abbrev. *ITSL_MOT*) (3 items, e.g. "I visualize myself successfully performing a task using IT before I actually do the task"; $\alpha = 0.762$), (3) Constructive Thought Strategies (or Metacognitive Efforts) to Motivate IT Use (abbrev. *ITSL_TH*) (3 items, e.g. "Sometimes I talk to myself (out loud or in my head) to work through difficult IT situations"; $\alpha = 0.778$).

IT Leadership Survey Development

IT leadership was operationalized by combining IT self-leadership, personal innovativeness with IT, and innovating with IT for the team.

To the IT-self leadership measurement instrument above, we added (1) three questions that measure personal innovativeness with IT (abbreviated in this study as PIIT) (Agarwal and Prasad, 1998; Wang et al., 2011) (3 items, e.g. "If I hear about a new information technology, I would look for ways to experiment with it"; $\alpha =$

0.879). We developed another five questions, inspired by personal innovativeness with IT, to measure innovating with IT for team collaboration (abbreviated as IITC) (5 items, e.g. "When I see possibilities in the use of IT to make my job more efficient, I share this with my teammates "; α = 0.782)

Job satisfaction. In order to measure job satisfaction, the general job satisfaction survey from Warner (1973) was used. The basis for this survey has been established by Brayfield & Rothe (1951). The purpose with regard to the research was to measure the "general satisfaction with the work role in an organization" (Warner, 1973). The instrument has been used because it has proven to be a valid and reliable index of overall job satisfaction (Warner, 1973).

Before participants were asked to answer general job satisfaction questions, it was explicitly mentioned that they should relate the questions to their work in the team that they have referred to with regard to the transformational leader. The survey contained 14-items (abbrev. *JS1-JS14*) of which 8-items were negatively phrased to ensure that participants read the questions attentively (e.g. "I am disappointed that I ever took this job"). The overall reliability of the survey instrument was (α = 0.915).

Results

Procedure and Assumption Testing

Before starting the analysis, the survey output was checked for missing data. Surveys with missing data were discarded. This allowed 130 responses to be processed further. The KMO tests (tables 2 and 3) show that both transformational IT leadership and IT leadership meet linearity criteria of the principal component analysis. Further, Bartlett's Test of Sphericity was performed, the null-hypothesis ($p<0.05$) was rejected, and this allows for variable reduction using component analysis.

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.926
Bartlett's Test of Sphericity	Approx. Chi-Square	1787.204
	df	153
	Sig.	.000

Table 2. KMO Measure for Transformational IT Leadership

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.795
Bartlett's Test of Sphericity	Approx. Chi-Square	874.544
	df	78
	Sig.	.000

Table 3. KMO Measure for IT Leadership

Principal component analysis

The variance explained by the scree plot (Figure 3) and the Eigenvalue (Table 4) suggested extracting three to four components describing transformational IT leadership (Figure 7 and 8).

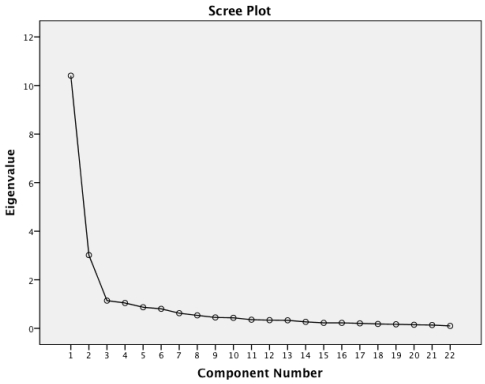

Figure 3. Scree plot for Transformational IT Leadership

Component	Initial Eigenvalues		
	Total	% of Variance	Cumulative %
1	10.405	47.297	47.297
2	3.016	13.710	61.007
3	1.141	5.188	66.196
4	1.044	4.745	70.940
5	.870	3.953	74.894

Table 4. Eigenvalues for Transformational IT Leadership

However, even within these components, strong cross-loadings existed which demanded significant transformations. As outlined before, the component *TL_IS,* relating to *Individualized support* showed low correlations. As most variables loaded on multiple components with higher values than 0.3, we decided to remove the component *TL_IS.* However, the removal of *TL_IS* reduced the number of recommended components from three to two components. Ultimately, we decided to use Transformational IT leadership as one component including *TITL_V, TITL_RM, TITL_FC, TITL_EX* and *TITL_STI* which was named *TransITLeadership.* The reason being the separation into two components, as suggested by the screeplot, did not reveal a separation that showed a logical allocation of variables. The component *TransITLeadership* explained 55.96% of the total variance.

With regard to IT leadership, the component analysis, using *Direct Oblimin* rotation, suggested that we maintain four components. These four components explain 72.78% of the total variance. Initially, some cross-loadings existed, however three to five questions loaded clearly on one of the components with loadings above 0.60. Removing one question from *ITSL_MOT*, namely *ITSL_MOT1*, strengthened the loadings and reduced cross-loading in the rotated component matrix. After some rotations, content of the questions which loaded on the same components was analyzed and upon that, further questions were removed, namely *ITSL_TH3, IITC3* and *IITC5.* As a result, we identified four components of IT leadership (Table 5).

As can be seen, *PIIT, IITC* and *ITSL_VOL* load on one component only. The fourth component consists of questions relating to *ITSL_MOT* and *ITSL_TH*. Given their context relating to task motivation and constructive IT cognition, it was rephrased to *IT-Use Enablers* (abbrev. *SL_IUE*), which describes the eagerness to do tasks because an individual feels that s/he possesses the appropriate skills to perform beyond expectations using IT. For further data analysis, IT leadership construct was renamed to *ITLeadership.*

Pattern Matrix[a]

	Component			
	1	2	3	4
PIIT2	**.906**	.064	-.005	.053
PIIT3	**.901**	-.055	.088	.032
PIIT1	**.602**	.098	.136	.205
ITSL_TH2	.191	**.829**	.048	-.147
ITSL_TH1	-.069	**.821**	.104	-.074
ITSL_MOT3	-.148	**.763**	-.012	.111
ITSL_MOT2	.163	**.555**	-.114	.177
IITC4	.144	.019	**.899**	-.186
IITC2	-.162	.023	**.878**	.211
IITC1	.145	.021	**.752**	.101
ITSL_VOL2	-.106	.054	.126	**.883**
ITSL_VOL3	.193	-.088	.011	**.790**
ITSL_VOL1	.197	.114	-.022	**.647**

Table 5. The Four Components of IT Leadership

Regression analysis

The regression analysis, revealed that only one of three hypothesized relationships is significant:

> ***H2: Transformational IT leadership has a positive impact on IT leadership with F(1,126) = 44,892, at p < .00.***

The other two hypotheses, which are displayed below, did not show significant results, as will be explained below. Further, the results will be presented commonly as the result of *H1* impact the results of the analysis of *H3.*

H1: Transformational IT leadership has a positive impact on job satisfaction

H3: IT leadership mediates transformational IT leadership and job satisfaction.

With regard to *H1*, the regression analysis revealed that *TransITLeadership* is not significantly related to *Jobsatisfaction*, $F(1,126) = 1.587$, $p > .05$. In their publication, Baron & Kenny (1986) discuss three conditions for mediating variables to be tested. Given that *H1* was not significant, the mediating effect of IT leadership cannot hold. The requirement for a mediating relationship to be tested, according to Baron & Kenny (1986), is that there is a significant relationship between the independent (*TransITLeadership*) and dependent variable (*Jobsatisfaction)*, which is not the case here. Moreover, the moderating effect of *ITLeadership* can and must be neglected as well, given that there is no zero-order correlation between two other variables (Baron & Kenny, 1986), namely *TransITLeadership* and *Jobsatisfaction.* The findings are provided in Figure 10.

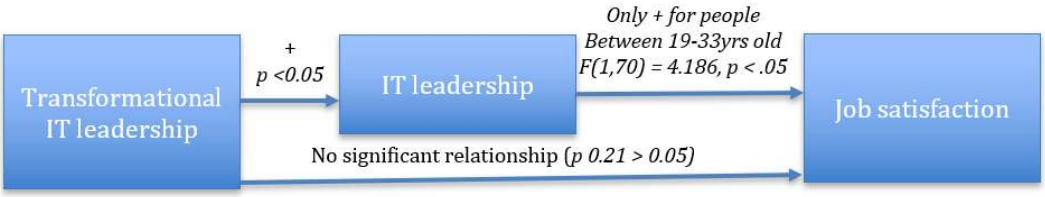

Figure 4. Findings

Control variables

A number of control variables were used to improve the validity and reliability of the results. Control variables were used for gender, age, type of industry and survey language. The control variables for gender and age were proposed by Warner (1973), whereas industry and survey language were considered to be appropriate control variables by the researcher to account for differences across industries and ensure that survey questions were translated coherently.

Although controlling for those variables did not change the results considerably, some findings deviate from the overall outcome. The sample was divided into three age-groups. In the age group of 19-33 years, transformational IT leadership and job satisfaction showed a positive relationship of $F(1,70) = 4.186$, $p < .05$. According to Baron & Kenny (1986), all conditions for a partial mediating effect of IT leadership hold within this control variable. This is an important finding given that 56% of the sample is categorized within this age group.

Limitations

One research choice that we made in the adaptation of transformational IT leadership process was to keep the "individualized support" the same as that in the general transformational leadership. Our thought process was that an attention to individuals' feelings and related thoughtfulness would be relevant regardless of the focus of the leader on IT. The statistical analysis resulted in removal of this construct.

We would recommend researchers to include this construct in their TITL measurements, but to adapt the individualized support construct with a different verbiage, to specifically address individuals' feelings, fears, and anxieties about information technologies.

A second limitation of this study is the treatment of gender as a binary value (male, female). Future studies should allow for a more nuanced survey questions to capture gender in the workforce that includes more than CIS men and CIS women. Further, the role of gender in the perception of transformational IT leadership should be investigated.

Conclusions

The aim of the study was to answer the following research question: What is the influence of transformational IT leadership of team leaders on the IT leadership and job satisfaction of team members?

We did find a clear relationship between transformational IT leadership of team leaders and the IT leadership of team members. In organizational studies showed that transformational leadership of leaders were related to self-leadership of followers (Houghton & Yoho, 2005; Jung, Chow & Wu, 2003). This relationship repeated itself in one study with respect to transformational IT leadership: Eseryel (2020) found that for instructors implementing interventions to exhibit transformational IT leadership in an online IT course increased the IT self-leadership of the students. That study had taken place in the United States. In this study, we showed that a similar relationship holds in real-life teams that use IT frequently across numerous industries: As transformational IT leadership of team leaders increases, IT leadership of the team members increase. And this study took place in large European Companies.

We could not find a general relationship between transformational IT leadership and job satisfaction of the followers. Yet, we found that this relationship between TITL and job satisfaction of the followers held for younger employees (19-33 years). This seems to be in line with the Unified Theory of Acceptance and Use of Technology (UTAUT) of Venkatesh, Morris, Davis & Davis (2003), who found that age is the single moderating variable among three others, namely gender, experience and voluntariness, that moderates all four components of their model (performance expectancy, effort expectancy, social influence, facilitating conditions).

Combining the findings of this research with the work of Venkatesh, Morris, Davis & Davis (2003), it is conceivable that younger employees see the use of IT as an opportunity and an enabler of efficient work, and thereby experience higher levels of job satisfaction. Moreover, the regression analysis for that control group indicated that IT leadership mediates the relation of transformational IT leadership and job satisfaction partially, which strengthens the claim that younger employees appreciate the empowerment through IT usage more than their older colleagues.

While we hypothesized that transformational IT leadership would have a positive impact on job satisfaction, we could not find similar results to those who found a relationship between transformational leadership and job satisfaction (Cho, Park & Michel, 2011; Choi, 2006).

Contributions to theory

This study develops three specific leadership types relevant to the information systems field, namely (1) transformational IT leadership, (2) IT self-leadership, and (3) IT leadership. Moreover, we developed a detailed survey tools for each of the leadership types. Therefore, this study contributes both to the leadership literature, and to the Information Systems field. Most IS leadership theories focus on the leadership of managers, directors, or that of the C-suite members. The conceptualization of these IT self-leadership, IT leadership, and transformational IT leadership describe a leadership influence mechanism, that is not limited to a top-down approach. They can be used to refer to leadership influence that works bottom-up, peer-to-peer, or top-down. Thus, we contribute to leadership theories that may be valid in today's flattened organizations, and in different types of collaborative environments.

In organizational research a relationship was identified between transformational leadership and self-leadership (Sun, Xu & Shang, 2014; Andreßen, Konradt & Neck, 2012). While Eseryel (2020) found the same relationship between transformational IT leadership and IT self-leadership, this was in an educational context, with students in the United States. We were able to replicate the study of Eseryel (2020), using a more detailed transformational IT leadership instrument, and with data collected from real team members from large European companies.

Similarly in organizational research, Gundersen, Hellesoy & Raeder, (2012) found that that the construct of transformational leadership holds across different cultural contexts. Similarly, we were able to find that the transformational leadership construct holds across different cultures, and even across industries.

Our study identified the importance of team member age, when investigating the impact of transformational IT leadership on individuals' job satisfaction. Thus, age should be considered when investigating the relationship of TITL to other variables.

Contributions to practice

Researchers argue that companies underutilize their IT (Li & Hsieh, 2007; Jasperson, Carter & Zmud 2005). One of the practical goals of this study was to illustrate that large IT investments are not the only way to get more out of IT, and to increase performance in the face of global competition.

IT investments can be fully utilized, and the ROI on IT investments can be improved when employees possess higher IT self-leadership, and IT leadership skills. One way to do that is to invest in the development of these two types of leadership, since self-leadership can be learned (Konradt, et al., 2009). A second approach would be to hire transformational IT leaders, and/or train existing employees, managers, and directors in TITL. This would increase transformational IT leadership, as well as employee's IT self-leadership and IT leadership.

As a result of this finding, businesses should select managers who have a high understanding of IT and possess transformational IT leadership skills, to increase the IT self-leadership and IT leadership of all employees. Given that firms only attain 30-50% of the promised benefits (Jasperson, Carter & Zmud, 2005), while paying 178% of what they anticipated to pay (Wang, Chou & Jiang, 2005), the development of transformational IT leaders who enhance IT leadership among their followers could be a cost-effective approach to increase expected ROI from IT investments through innovative IT use.

References

Afshari, M., Bakar, K., & Luan, W. (2009). Technology and school leadership. *Technology, Pedagogy and Education*, 235-248.

Agarwal, R., & Karahanna, E. (2000). Time flies when you're having fun: Cognitive absorption and beliefs about information technology usage. *MIS Quarterly, 24*(4), 665-694.

Agarwal, R., & Prasad, J. (1998). A Conceptual and Operational Definition of Personal Innovativeness in the domain of Information Technology. *Information Systems Research, 9*(2), 204-215.

Andersen, J. S., & Prussia, G. E. (1997). The self- leadership questionnaire: Preliminary assessment of construct validity. *The Journal of Leadership Studies, 4*, 119-143.

Andreßen, P., Konradt, U., & Neck, C. P. (2012). The relation between self- leadership and transformational leadership: Competing models and the moderating role of virtuality. *Journal of Leadership & Organizational Studies, 19*(1), 68-82.

Applegate, L. M., & Elam, J. J. (1992). New Information System Leaders: A Changing role in a changing world. *MIS Quarterly*, 16(4), 469-490.

Avolio, B. J., & Gibbons, T. C. (1988). Developing transformational leaders: A lifespan approach. In J. A. Conger, & R. N. Kanungo, *Charismatic leadership: The elusive factor in organizational effectiveness* (pp. 276-308). San Francisco, CA: Jossey-Bass.

Avolio, B. J., Bass, B. M., & Jung, D. I. (1999). Re- examining the components of transformational and transactional leadership using the multifactor leadership questionnaire. *Journal of Occupational and Organizational Psychology, 72*, 441-462.

Bandura, A. (1977). *Social learning theory.* Englewood Cliffs, NJ: Prentice Hall.

Baron, R. M., & Kenny, D. A. (1986). The moderator- Mediator Variable Distinction in Social Psychological Research: Conceptual, Strategic, and Statistical Considerations. *Journal of Personality and Social Psychology*, 1173-1182.

Bass, B. M. (1985). *Leadership and performance beyond expectation.* New York: Free Press.

Bass, B. M. (1999). Two decades of research and development in transformational leadership. *European Journal of Work and Organizational Psychology, 8*, 9-32.

Bass, B. M., & Avolio, B. J. (1994). *Transformational leadership: Improving organizational effectiveness.* Thousand Oaks, CA: Sage.

Bassellier, G., Benbasat, I., & Reich, B. H. (2003). The influence of Business Managers' IT competence on Championing IT. *Information Systems Research,* 14(4), 317-336.

Bell, B. S., & Kozlowski, S. W. (2002). A typology of virtual teams: Implications for effective leadership. *Group & Organization Management, 27*(1), 14-49.

Biswas, S. (2012). Impact of Psychological Climate & Transformational Leadership on Employee Performance. *The Indian Journal of Industrial Relations, 48*(1), 105-119.

Bjorn-Andersen, N., & Raymond, B. (2014). The impact of IT over five decades - Towards the ambient organization. *Applied Ergonomics, 45*, 188-197.

Bono, J. E., & Judge, T. A. (2003). Self- concordance at work: Toward Understanding the motivational effects of transformational leaders. *The Academy of Management Journal, 46*(5), 554-571.
Brayfield, A. H., & Rothe, H. F. (1951). An index of job satisfaction. *Journal of Applied Psychology, 35*(5), 307-311.
Carless, S. A., Wearing, A. J., & Mann, L. (2000). A short form measure of transformational leadership. *Journal of Business and Psychology*, *14*(3), 389-405. https://doi.org/10.1023/A:1022991115523
Cho, J., & Dansereau, F. (2010). Are transformational leaders fair? A multi- level study of transformational leadership, justice perceptions, and organizational citizenship behaviors. *The Leadership Quarterly, 21*, 409-421.
Cho, J., Park, I., & Michel, J. W. (2011). How does leadership affect information systems success? The role of transformational leadership. *Information & Management*, *48*, 270-277.
Choi, J. (2006). A Motivational Leadership of Charismatic Leadership: Envisioning, Empathy, and Empowerment. *Journal of Leadership & Organizational Studies, 13*(1), 24-43.
Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1992). Extrinsic and intrinsic motivation to use computers in the workplace. *Journal of Applied Social Psychology, 22*(14), 1111-1132.
Devine, D. J., Clayton, L. D., Philips, J. L., Dunford, B. B., & Meiner, S. B. (1999). Teams in organizations: Prevalence, Characteristics, and Effectiveness. *Small Group Research, 30*(6), 678-711.
Elrod, C. C., Stanley, S. M., Cudney, E. A., Hilgers, M. G., & Graham, C. (2022). Management Information Systems Education: A Systematic Review. *Journal of Information Systems Education*, *33*(4), 357-370.
Eseryel, U. Y. (2020). Enabling IT self-leadership in online education. *Interdisciplinary Journal of e-Skills and Lifelong Learning*, *16*, 123-142. https://doi.org/10.28945/4684
Eseryel, U. Y., Bakker, D., & Eseryel, D. (2014). Information technology self-leadership and its influence on team level product and process innovation. Journal of Leadership and Management, 1(2), 95-109.
Fullan, M. (2001). *Leading in a culture of change.* San Francisco: Jossey-Bass.
Georgianna, S. (2007). Self- leadership: A cross- cultural perspective. *Journal of Managerial Psychology, 22*(6), 569-589.
Gundersen, G., Hellesoy, B. T., & Raeder, S. (2012). Leading International Project Teams: The Effectiveness of Transformational Leadership in Dynamic Work Environments. *Journal of Leadership & Organizational Studies, 19*(1), 46-57.
Go, F., Monachello, M., & Baum, T. (1996) *Human resource management in the hospitality industry*. NY: John Wiley & Sons.
Houghton, J. D., & Yoho, S. K. (2005). Toward a contingency model of leadership and psychological empowerment: When should self-leadership be encouraged? *Journal of Leadership & Organizational Studies,* 11(4), 8365-.
Houghton, J. D., Dawley, D., & DiLiello, T. C. (2012). The Abbreviated Self- Leadership Questionnaire (ASLQ): A more Concise Measure of Self- Leadership. *International Journal of Leadership Studies, 7*(2), 217-232.
House, R. J. (1995). Leadership in the twenty- first century: A spectacular inquiry. In A. Howard, *The changing nature of work* (pp. 411-450). San Francisco: Jossey-Bass.
Hsieh, J. P.-A., & Wang, W. (2007). Explaining employees' Extended Use of complex information systems. *European Journal of Information Systems, 16*, 216-227.
Jasperson, J. S., Carter, P. E., & Zmud, R. W. (2005). A comprehensive conceptualization of post- adoptive behaviors associated with information technology enabled work systems. *MIS Quarterly, 29*(3), 525-557.
Jung, D. I., Chow, C., & Wu, A. (2003). The role of transformational leadership in enhancing organizational innovation: Hypotheses and some preliminary findings. *The Leadership Quarterly*, 525-544.
Kark, R., Shamir, B., & Chen, G. (2003). The two faces of transformational leadership: Empowerment and dependency. *Journal of Applied Psychology, 88*(2), 246-255.
Kim, S. S., Malhotra, N. K., & Narasimhan, S. (2005). Two Competing Perspectives on Automatic Use: A Theoretical and Empirical Comparison. *Information Systems Research, 16*(4), 418-432.
Konradt, U., Andreßen, P., & Ellwart, T. (2009). Self- leadership in organizational teams: A multilevel analysis of moderators and mediators. *European Journal of Work and Organizational Psychology, 18*(3), 322-346.
Lee, J. (2005). Effects of leadership and leader- member exchange on commitment. *Journal of Leadership & Organizational Development, 26*(8), 655-672.
Li, X. & Hsieh, P. (2007, July) Impact of transformational Leadership on System exploration in the mandatory organizational context. *Impact of transformational Leadership on System exploration in the mandatory organizational context*. Paper presented at Twenty Eighth International Conference on Information Systems, Montreal (Paper 86).
Lozano, L. M., Garcia-Cueto, E., & Muniz, J. (2008). Effect of the number of Number of Response Categories on the reliability and validity of Rating scale. *Methodology,4* (2), 73-79.
Manz, C. C. (1991). Leading employees to be self- managed and beyond: Toward the establishment of self- leadership in organizations. *Journal of Management Systems,3*, 15-24.
Manz, C. C. (1986). Self- Leadership: Toward an extended theory of self- influence processes in organizations. *Academy of Management Review,11*(3), 585-600.

Manz, C. C., & Sims, H. P. (1987). Leading Workers to Lead Themselves: The external leadership of self- managing work teams. *Administrative Science Quarterly,32*, 106-128.

Manz, C. C., & Sims, H. P. (1980). Self- management as a substitute for leadership: A social learning theory perspective. *Academy of Management Review,5*, 361-367.

Morgeson, F. P., DeRue, S., & Karam, E. P. (2010). Leadership in Teams: A Functional Approach to Understanding Leadership Structures and Processes. *Journal of Management,36*(1), 5-39.

Neck, C. P., & Houghton, J. D. (2006). Two decades of self- leadership theory and research: Past developments, present trends, and future possibilities. *Journal of Managerial Psychology,21*, 270-295.

Neck, C. P., & Manz, C. C. (1996). Thought Self- Leadership: The impact of mental strategies training on employee cognition, behavior, and affect. *Journal of Organizational Behavior,17*, 445-467.

Northouse, P. G. (2019). *Leadership. Theory and Practice* (4th ed.). Sage Publications.

Pearce, C. L., & Manz, C. C. (2005). The new silver bullet of leadership: The importance of self- and shared leadership in knowledge work. *Organizational Dynamics*, 130-140.

Pettey, C., & Goasduff, L. (2013, January 3). *Gardner.* Retrieved April 15, 2014, from Gardner Says Worldwide IT spending Forecast to reach $3.7 trillion in 2013: http://www.gartner.com/newsroom/id/2292815

Podsakoff, P. M., MacKenzie, S. B., Moorman, R. H., & Fetter, R. (1990). Transformational leader behaviors and their effects on followers' trust in leader, satisfaction, and organizational citizenship behaviors. *Leadership Quarterly*, *1*(2), 107-142.

Podsakoff, P. M., MacKenzie, S. B., & Bommer, W. H. (1996). Transformational Leader Behaviors and Substitutes for Leadership as Determinants of Employee satisfaction, Commitment, Trust, And Organizational Citizenship Behaviors. *Journal of Management,22*(2), 259-298.

Stewart, G. L., Courtright, S. H., & Manz, C. H. (2011). Self- leadership: A Multilevel Review. *Journal of Management,37*, 185-222.

Sun, W., Xu, A., & Shang, Y. (2014). Transformational leadership, team climate, and team performance within the NPD team: Evidence from China. *Asia- Pacific Journal of Management,31*, 127-147.

Uhl-Bien, M., Marion, R., & McKelvey, B. (2007). Complexity leadership theory: Shifting leadership from the industrial age to the knowledge era. *Leadership Quarterly*, 298-318.

Utman, C. H. (1997). Performance effects of motivational state: a meta- analysis. *Personality and Social Psychology Review,1*, 170-182.

Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS Quarterly,27*(3), 425-478.

Wang, E., Chou, H.-W., & Jiang, J. (2005). The impacts of charismatic leadership style on team cohesiveness and overall performance during ERP implementation. *International Journal of Project Management, 23*, 173-180.

Wang, W., Li, X., & Hsieh, J. P.-A. (2013). The contingent effect of Personal IT innovativeness and IT self- efficacy on innovative use of complex IT. *Behaviour & Information Technology, 32*(11), 1105-1124.

Warner, P. D. (1973). *A comparative study of three patterns of staffing within cooperative extension organization and their association with organizational structure, organizational effectiveness, job satisfaction and role conflict.* Ohio State University, Department of Psychology. Columbus: Ohio State University.

Yukl, G. A. (2012). *Leadership in Organizations.* New York: Prentice Hall.

Yun, S., Cox, J., & Sims Jr., H. P. (2006). The forgotten follower: A contingency model of leadership and follower self-leadership. *Journal of Managerial Psychology ,21*(4), 374-388.

Zhang, X., & Bartol, K. M. (2010). Linking empowering leadership and employee creativity: The influence of psychological empowerment, intrinsic motivation, and process engagement. *Academy of Management Journal, 53*(1), 107-128.

Appendix A. Survey Instrument

AGE= Participants age

GEN= Participants' gender

COM= Participants' company name

TSI= Participants' team size

TNA= Participants' name of the team

RESP	Respondent			
IP	IP- address			
START	Date the respondent started the survey			
END	Date the respondent completed the survey			
LANG	Language the respondent has used (control variable)			
AGE	What is your age?			
GEN	What is your gender? (control variable)	Man ❒		Woman ❒
COM	What is the name of your company?			
IND	What type of industry? (control variable)			
TSI	What is the size of your team? (number of employees)	<10 ❒	10-20 ❒	>20 ❒
TNA	What is the name of your team? (team number/team name or description) The team that you name here shall also be the team that you refer to during the survey.			

Transformational IT Leadership

TITL_V= Articulating an innovative IT- vision

TITL_RM= Role Modeling IT Use

TITL_FC=Fostering Collaboration through the use of IT

TITL_EX= Expectations of Ideal IT Use to Increase Work Performance

TL_IS= Individualized Support

TITL_STI = Stimulation for Innovating with IT

(rem.)= Removed after principal component analysis

Code	**My team leader…**
TITL_STI1	1. … has provided me with new ways of looking at IT, something that used to be a puzzle for me
TITL_V1	2. … is always seeking new ways in which IT can be used for the team/department/organization
TITL_STI2	3. … has ideas about specific IT, which forced me to rethink some of my own ideas about IT I have never questioned before
TITL_V2	4. … envisions a more IT-intensive future for our work
TITL_EX1	5. … expects employees to develop strong IT skills so that they can increase their work performance
TITL_FC1	6. … fosters collaboration between individuals/teams/departments through IT
TL_IS1 (rem.)	7. … acts without considering my feelings (Reverse coded)
TITL_FC2	8. … encourages employees to use IT to collaborate as a team
TITL_RM1	9. … actively uses the IT that he/she advocates
TITL_FC3	10. … gets individuals/groups/departments to work together for the same goal using IT
TITL_V3	11. … has a clear understanding of how IT should be used to get where the business wants to go
TL_IS2 (rem.)	12. … shows respect for my personal feelings
TITL_STI3	13. … has stimulated me to think about existing problems in new ways using IT
TL_IS3 (rem.)	14. … behaves in a manner that is thoughtful of my personal needs
TL_IS4 (rem.)	15. … treats me without considering my personal feelings (reverse coded)
TITL_V4	16. … inspires others with his/ her plans to use IT in the future
TITL_EX2	17. … insists on using IT to ensure best work performance
TITL_V5	18. … is able to get others committed to his/her dream of innovating with IT in the future
TITL_RM2	19. … is a role model with regard to IT use
TITL_FC4	20. … develops a positive team attitude towards IT
TITL_EX3	21. … will ask the employees not to settle for second best IT for the task/goal
TITL_RM3	22. … leads by being an exemplary IT user himself/ herself

IT leadership

IT Self-Leadership=ITSL_VOL+ITSL_MOT+ITSL_TH

ITSL_VOL= Voluntary IT Use for Goals & Performance

ITSL_MOT= IT-Use Motivators

ITSL_TH= Metacognitive Efforts to Motivate IT Use

ITSL_MOT+ITSL_TH = SL_IUE

PIIT= Personal Innovativeness with IT

IITC= Influencing one's team/department/unit to innovate with IT

(rem.)= Removed after principal component analysis

Variable	Question
Voluntary IT Use for Goals & Performance	
ITSL_VOL1	1. I establish specific performance goals for myself with the help of IT
ITSL_VOL2	2. I use IT to keep track of how well I am doing at work, although nobody requires me to do so
ITSL_VOL3	3. I use IT to reach my goals, although my task description does not require me to use IT
IT-Use Motivators	
ITSL_MOT1 (rem.)	4. I visualize myself successfully performing a task using IT before I actually do the task
ITSL_MOT2 (became part of SL_IUE)	5. Sometimes I picture in my mind a successful performance before I actually do a task with IT
ITSL_MOT3 (became part of SL_IUE)	6. When I have mastered an IT, I often reward myself.
Constructive Thought Strategies (Metacognitive Efforts) to Motivate IT Use	
ITSL_TH1 (became part of SL_IUE)	7. Sometimes I talk to myself (out load or in my head) to work through difficult IT situations
ITSL_TH2 (became part of SL_IUE)	8. I try to mentally evaluate the accuracy of my own beliefs about challenging IT
ITSL_TH3 (rem.)	9. I think about my own beliefs and assumptions about IT whenever I encounter difficulty when using IT
Personal Innovativeness with IT	
PIIT1	10. Among my peers, I am usually the first to try out new IT solutions
PIIT2	11. If I hear about a new information technology, I would look for ways to experiment with it
PIIT3	12. I like to experiment with new IT
Innovate with IT for Team Collaboration	
IITC1	1. When I see possibilities in the use of IT to make my job more efficient, I share this with my teammates
IITC2	2. When I discover new IT solutions to improve team communication, I introduce this to the team
IITC3 (rem.)	3. Most of the time I am the one introducing new IT solutions in our team
IITC4	4. When IT solutions improve my own efficiency, I share this with my team
IITC5 (rem.)	5. Because I share IT solutions in my team, my team is more innovative

Job satisfaction

Variable	Question
JS1	1. My job is usually interesting enough to keep me from getting bored.
JS2	2. It seems that my friends are more interested in their jobs.
JS3	3. I consider my job rather unpleasant.
JS4	4. I am often bored with my job.
JS5	5. I feel fairly well satisfied with my job.
JS6	6. Most of the time I have to force myself to go to work.
JS7	7. I definitely dislike my work.
JS8	8. I feel that I am happier in my work than most other people.
JS9	9. Most days I am enthusiastic about my work.
JS10	10. Each day of work seems like it will never end.
JS11	11. I like my job better than the average worker does.
JS12	12. My job is pretty uninteresting.
JS13	13. I find real enjoyment in my work.
JS14	14. I am disappointed that I ever took this job.

Journal of Leadership and Management

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