

## Self-Leadership: A Four Decade Review of the Literature and Trainings

**Michael G. Goldsby**

*Department of Marketing and Management, Ball State University, Muncie, IN 47306, USA*

**Elizabeth A. Goldsby**

*Department of Nursing, Ball State University, Muncie, IN 47306, USA;*

**Christopher B. Neck**

*School of Kinesiology, Louisiana State University, Baton Rouge, LA 70803, USA;*

**Christopher P. Neck**

*Department of Management and Entrepreneurship, Arizona State University, Tempe, AZ 85287, USA;*

**Rob Mathews**

*Department of Management, Ball State University, Muncie, IN 47306, USA;*

### ABSTRACT

This paper reviews the fourth decade of self-leadership research. Two previous reviews of self-leadership from 2006 and 2010 are summarized and the paper applies categories from those reviews to examine recent research in the field. This paper also covers new topics and trends in self-leadership research. In previous review articles new theoretical models for extending self-leadership models were proposed. Therefore this paper continues that tradition by proposing a new model the Meta-Performance Model that offers self-leadership as a skillset for enhancing the individual performance of leaders who seek improvement through professional certification programs. Self-leadership and professional certification programs are often treated as a stand alone topics. However this paper contends professionals would benefit from combining self-leadership training with other professional improvement programs.

### ARTICLE INFO

*Keywords:*

self-leadership; self-management; Meta-Performance Model

*Article History:*

Received: 11 Feb 2021

Accepted: 22 Feb 2021

© 2020 The authors. Published by CADDO GAP Press USA. This is an open access article under the Creative Commons AttributionNonCommercial 4.0

## 1. INTRODUCTION

Self-leadership or the process of influencing one's self has garnered its share of research in the management literature over the past four decades. And for good reason; after all for leaders to influence others they must first have their own motivation and actions to get started on their grand projects (Neck et al.2019). In this paper we review the latest research and self-leadership over the last 10 years. The first paper to review self-leadership was in 2006 (Neck and Houghton2006). The second major review of self-leadership was in 2010 (Stewart et al.2011). Thus this paper covers the past decade of self-leadership research. This review will cover research articles over the last 10 years by utilizing topics from the previous two major reviews of self-leadership. The framework will enable the reader to see what the most popular topics were in self-leadership since 2010. We will also examine who the most popular writers were during this time and also new trends in the field. We end the paper with an extension of how self-leadership can be further developed to work with other leadership improvement programs.

## 2. SELF-LEADERSHIP

Self-leadership has been defined as a self-influence process by which people achieve the self-direction and self-motivation necessary to perform (Neck et al.2019;Neck and Houghton2006). It is an essential leadership for executives managers entrepreneurs and vast array of other professionals in positions of authority. Leaders at the top of their profession often cite their own personal discipline and execution to the success they have found in their organizations. As Dan Cockerell retired Vice-President of the Magic Kingdom at Walt Disney emphasized (Cockerell2020 pp. 3-4):

“At the Magic Kingdom I led a team of 12000 ‘cast members’ the term Disney uses employees and a term that aptly reflects the collective commitment to creating a unique immersive show for all visitors . . . Be it personal or professional life is much easier to navigate when we prepare for it and we do have the ability to prepare for it. It means taking care of the basics and leading ourselves first. This is very simple but not easy . . . I’ve learned the hard way the price of not taking care of myself first. It happens very easily when you work at a place that never closes employs thousands of people and hosts millions like the Magic Kingdom.”

Or consider the words of Nick Saban head coach of six NCAA college football championship teams (Sabin2007 p. 214):

“Underlying everything is a simple premise: To a significant degree we choose how good we are. There is a difference between being good and being great that there is something different about champions and that we all get to decide every day if we have it in us. It doesn’t matter what your endeavor salesperson teacher athlete you must take advantage of the gifts you were given and make the decision to succeed.”

Cockerell and Saban’s words echo the most important theme throughout *Self-leadership: The Definitive Guide to Personal Excellence* the leading textbook and professional resource on self-leadership (Neck et al.2019 p. 90): We choose. Or as Neck Manz and Houghton more specifically explain:

“We can think of the things we choose to think about in different ways What we choose to think about and how we to think about it. This might sound a little silly but it is probably the most-important part of self-leadership.”

Self-leadership consists of specific behavioral and cognitive strategies designed to positively influence personal effectiveness. Self-leadership strategies are typically partitioned into three primary categories including behavior-focused strategies natural reward strategies and constructive thought pattern strategies (Neck et al.2019;Neck and Houghton 2006).

Behavior-focused strategies attempt to increase an individual’s self-awareness in order to facilitate behavioral management especially the management of behaviors related to necessary but unpleasant tasks (Neck and Houghton2006). Natural reward strategies are designed to foster situations in which a person is motivated or rewarded by inherently enjoyable aspects of the task or activity (Neck and Houghton2006).

Constructive thought pattern strategies are designed to facilitate the formation of constructive thought patterns (habitual ways of thinking) that can impact performance in a positive manner (Neck and Houghton2006). Constructive thought pattern strategies include identifying and replacing dysfunctional beliefs and assumptions mental imagery and positive self-talk (Neck et al.2019).

In the following sections we summarize the most significant findings of the two previous major review papers on self-leadership published in 2006 and 2010.

### **3. 2006 REVIEW OF SELF-LEADERSHIP**

Self-leadership as a credible academic area of study can trace its beginnings to 1986 with the publication of “Self-leadership Toward an Expanded Theory of Self-Influence Processes in Organizations” by Charles C. Manz published in Volume 11 of the high impact journal *Academy of Management Review*. Manz conceptualizes self-leadership as an extension of the self-management literature. Manz introduced self-management a subset of self-leadership in a 1980 issue of *Academy of Management Review* as a process for completing menial and unenjoyable tasks as well as pursuing activities that a person finds naturally rewarding. Based in Social Cognitive Theory (Bandura1986) self-management instructed a person to consciously organize and manage their thoughts behavior and environment in a way to be more successful in their pursuits. Recognizing the emphasis self-management has on completing tasks Manz expanded the concept to focus on achieving a more positive state of existence by modifying the process to be more purposeful. In other words self-management focuses on how to influence yourself to complete stated goals while self-leadership embeds that pursuit with higher meaning and purpose. Thus self-leadership might be said to be more grounded in positive psychology (Seligman and Csikszentmihalyi2014) with attention on the “conditions and processes that contribute to the flourishing or optimal functioning of people groups and institutions” (Gable and Haidt2005 p. 104) and not merely the completion of tasks activities and goals without regard for the overall well-being of the individual. As we shall see throughout this paper Manz continues to be a leading scholar of self-leadership to this day.

The optimistic tone of self-leadership has generated a substantial stream of research literature in many applied fields. It could be said that in whatever line of work where people face daily hassles and tasks which would basically include all lines of employment self-leadership has been studied and applied to improve the nature of those professionals’ work. In studying the previous two major reviews of self-leadership as well as

updating the literature for this article the appeal of self-leadership can be found in its focus on the individual taking ownership of the subjective experience of the work they perform. While a person may feel less in control of how their organization or supervisor treats them they can still improve their own satisfaction and performance in their work by taking ownership of the process by which they make the choices within their control. Thus regardless of the quality of the organization or management for which a person works their own subjective experience of their work can be enhanced with self-leadership.

Given this popular approach to leadership in the research literature Christopher P. Neck (one of Manz's former doctoral students) along with Jeffrey D. Houghton (a former doctoral student of Neck's) published "Two Decades of Self-Leadership Theory and Research: Past Developments Present Trends and Future Possibilities" with the stated purpose of "including a historical overview of how the concept was created and expanded as well as a detailed look at more recent self-leadership research trends and directions" (Neck and Houghton 2006 p. 270). This article effectively documents the lineage of the self-leadership literature via the linkage of leading scholars (Manz Neck and Houghton) on the topic. In the following sections we provide an overview of the leading topics and trends and authors Neck and Houghton discovered at the twenty-year mark of the self-leadership field.

### 3.1. Topics

The 2006 review paper reported the following concepts within a variety of contexts in self-leadership research over the first twenty years of the field:

- Spirituality in the workplace (Neck and Milliman 1994)
- Performance appraisals (Neck et al. 1995)
- Organizational change (Neck 1996)
- Total quality management (Neck and Manz 1996b)
- Self-leading teams (Neck et al. 1996)
- Entrepreneurship (Neck et al. 1997a)
- Diversity management (Neck et al. 1997b)
- Job satisfaction (Houghton and Jinkerson 2004)
- Non-profit management (Neck et al. 1998)
- Goal setting/goal performance (Neck et al. 2003)
- The United States Army (Neck Christopher P. 1999)
- Team performance (Stewart and Barrick 2000)
- Team sustainability (Houghton et al. 2003)
- Ethics (VanSandt and Neck 2003)

As can be seen from the compilation of topics above the scope of self-leadership was defined by Manz Neck and Houghton. While other authors contributed to these topics over the earlier years of self-leadership it was done predominantly within this framework.

Looking to expand the field with the article Neck and Houghton (2006) proposed a model of self-leadership based on theoretical contexts (self-regulation theory social cognitive theory intrinsic motivation and self-control theory) and self-leadership strategies (behavior focused natural reward and constructive thought) influencing outcomes of improved individual team and organizational performance; and mediated by predictable outcomes/performance mechanisms (commitment independence creativity/innovation psychological empowerment trust team potency positive affect job satisfaction self-efficacy).

### 3.2. Trends

Neck and Houghton (2006) reported the new directions self-leadership appeared to be headed. Intercultural and international research was documented and as we shall see in this paper's coverage of the last decade has indeed taken place. They also noted studies examining the generalizability and contingency aspects of self-leadership which are both common trends in fields as they seek further legitimacy as a research concept. The paper concluded with the proposal of further research on an expanded topic of self-leadership called Super Leadership in which good self-leaders help others to develop strong self-leadership skills and mindsets (Manz and Sims 1989; Houghton et al. 2003). While Super Leadership seems a natural extension of self-leadership as a way of training and developing others in organizations our overview of the last ten years does not find it researched as such. Perhaps emphasizing the self in self-leadership Super Leadership has not found its grounding as an organizational topic which offers opportunities for future researchers to do so.

#### 4. 2010 REVIEW OF SELF-LEADERSHIP

Thirty years after Manz published on self-management (Manz and Sims 1980) a precursor to self-leadership research he co-wrote a review of self-leadership with Stewart et al. (2011). While the 2006 Neck and Houghton review provided an overview of topics and trends in self-leadership the 2010 Stewart, Courtright and Manz review examined findings of the performance of self-leadership at the individual-level and team-level. In “Self-leadership: A Multilevel Review” published in the *Journal of Management* they found “At the individual level studies consistently show that increased self-leadership corresponds with better affective responses and improved work performance. Findings are not as consistent at the team level” (Stewart et al. 2011 p. 185). The review also categorized research on internal and external forces that influence self-leadership. While some of the topics were similar to the 2006 review paper the 2010 paper provided additional forces that affect self-leadership. In the following section we provide those additional categories as well as observations of trends and concerns not identified in the 2006 review.

##### 4.1. Topics

As would be expected of a review only four years after the previous one Stewart et al. (2011) categorized their paper by a different set of variables with an emphasis on whether the findings were significant at an individual or team level. Examples of the findings had many authors suggesting that self-leadership was indeed finding a wider audience of researchers as it entered its third decade. The categories examined were:

- Productivity quality;
- Creativity and self-efficacy;
- Psychological empowerment and job satisfaction;
- Organizational commitment;
- Absenteeism;
- Turnover;
- Stress/anxiety;
- Career success.

Stewart et al. (2011) also examined the internal forces of individual and team-level self-leadership emphasizing the cognitive and emotional aspects of the topic. The following categories were given for capturing the research in the field on the internal forces:

- Intrinsic (natural) rewards (individual level);
- Thought self-leadership (individual level);
- Emotional regulation (individual level);
- Personality (individual level);
- Team composition (team level): cognitive ability and personality;
- Task characteristics (team level);
- Shared mental models (team level);
- Cohesion (team level);
- Conflict (team level).

Given internal forces external forces of self-leadership was then covered specifically as a complement to more recognized approaches of traditional external leadership. The authors note that professionals who practice exemplary self-leadership will also have an influence on the external leadership one has with others. Additionally organizational factors will influence the practice of self-leadership as well. Again an extensive list of example studies was given evidencing further that self-leadership has received much attention from the research community. Categories examined in this line of research follows:

- Training (individual level);
- Leadership (individual level);
- National culture (individual level);
- External team leadership (team level);

- Reward systems (team level);
- Organizational structure/culture (team level);
- National culture (team level).

#### 4.2. Trends

In summarizing their multi-level review of self-leadership Courtright Stewart and Manz conclude that a 30-year lineage of articles confirms self-leadership beneficial at an individual level but not as significant at the team level. Given the multi-level attention the authors suggest future research examine the interplay between the internal and external forces of self-leadership. More cross-disciplinary work reflecting self-leadership and external leadership is also encouraged. The long and varied lists of topics given above from the 2006 and 2010 reviews demonstrate the wide scope of research in self-leadership over its first 30-years. These lists are included in this paper to provide the reader with an overview of research in self-leadership as well as informing the review of literature on the topic over the last 10-years. In the next section we provide a review of the fourth decade of research in self-leadership and structure it based on the topics from the 2006 and 2010 reviews.

## 5. 2021 REVIEW OF SELF-LEADERSHIP

The 2006 and 2010 reviews of self-leadership offered thorough overview of what had been researched on self-leadership in its first 30 years of study. We now turn our attention to the research covered on self-leadership since the 2010 review. If as Stewart et al. (2011) claim self-leadership has been reviewed up to its first thirty years of existence the next section provides an overview of research on the subject up to its fourth decade. We utilize a combination of the categories studied in the previous reviews to examine the self-leadership literature over the last ten years. Considering that the self-leadership concept has been widely addressed over the past forty years our systematic literature review was thorough and comprehensive. The databases for the identification of the studies included: (a) Business Source Complete (EBSCO); (b) Econlit; (c) ISI Web of Science; (d) Scopus; (e) ProQuest's ABI/Inform; (f) Elsevier Science Direct. We also reviewed various academic search outlets including Google Scholar and Research Gate. Only peer-reviewed journal articles published in English were included. We also provide a summary of recent trends we found in the research literature.

### 5.1. Previous Review Topics

Utilizing the categories for review of the self-leadership literature from the Neck and Houghton(2006) and Stewart et al.(2011) the following topics were covered in at least two publications:

#### 5.1.1. Creativity/Innovation and Self-Efficacy

Thirteen articles were published on creativity/innovation and self-efficacy with three of those publications having been cited over 50 times by other articles. The leading articles with 194 citations (Amundsen and Martinsen2014) 77 citations (Pratoom and Savatsomboon2012) and 58 citations (Ghosh2015) present self-leadership as a factor in influencing creativity and innovation. Given that creative breakthroughs require persistence to endure the discovery and development process which can include many iterations of trial and error self-leadership skills and mindset can improve innovation performance. The importance of this theme to creativity and innovation is also reflected in having the highest count of articles in this current review. As such self-leadership may become an explicit factor to be trained and taught to future creative professionals and innovators.

#### 5.1.2. External Leadership

Eleven articles were published on external leadership topics with two of those publications having been cited over 50 times by other articles. Self-leadership articles related to external leadership were devoted mainly to comparing and contrasting it with other forms of leadership. For example the leading articles with 125 citations (Andressen et al.2012) examined the relationship between self-leadership and transformational leadership and 140 citations (Furtner et al.2013) expressed self-leadership as a complement to transformational transactional and laissez-faire leadership approaches. Essentially this category of articles addresses utilizing self-leadership as a way of improving overall leadership capability combining a balance of individual and larger organizational performance. This theme is to be expected at this stage of self-leadership's research tradition. The first decades were focused on establishing the concept and as thus the theoretical foundations definitional components and training protocols are predominant in the early literature. As self-leadership has become more accepted in the research literature the natural next step is to harmonize it with other more established and practiced leadership theories. Self-leadership as such is not a replacement for these approaches according to the eleven articles in this topic area but an enhancement to a professional's already existing leadership style.



### 5.1.3. Ethics

Seven articles were published on ethics-related topics with four of those publications having been cited over 50 times by other articles. The leading articles with 144 citations (Steinbauer et al.2014) 141 citations (Dion2012) 118 citations (Pearce and Manz2011) and 110 citations (Furtner et al.2015) present self-leadership as a factor in improving ethical behavior and decision-making. The articles range from self-leadership as beneficial to the overall corporate social performance of a company to addressing the “dark triad” that is sometimes present in executives and to general better ethical decision-making. All three themes pertain to the individual focus of self-leadership and how a process that considers the interaction of thought behavior and environment can lead to better contemplation of ethical dilemmas and decisions. Given the number of citations of these articles we expect future researchers to explore the role self-leadership can play in ethics.

### 5.1.4. Psychological Empowerment and Job Satisfaction

Seven articles were published on psychological empowerment and job satisfaction with none of those publications having been cited over 50 times by other articles. Psychological empowerment and job satisfaction were popular organizational behavior subjects for study in the previous reviews but given the low number of citations of these current articles researchers may be exploring self-leadership in new domains. In other words psychological empowerment and job satisfaction may be generally accepted outcomes of self-leadership.

### 5.1.5. Stress/Anxiety

Seven articles were published on stress and anxiety with three of those publications having been cited over 50 times by other articles. The leading articles with 142 citations (Houghton et al.2012b) and 88 citations (Unsworth and Mason2012) present self-leadership as a valuable process for preventing and managing stress. While environmental factors can place stress on a professional recent literature confirms self-leadership as a pre-intervention intervention and coping process that can lessen stress and strain. In other words self-leadership can serve as preventative to stress an intervention when high stress occurs and then as an ongoing practice for mitigating stress as it occurs. As we will cover later in this paper many of the contexts of self-leadership studies are in high stress professions. Therefore we expect stress to continue to be a relevant topic for future self-leadership research.

### 5.1.6. Emotional Regulation

Six articles were published on emotional regulation with one of those publications having been cited over 50 times by other articles. Furtner et al.(2011) article was cited 63 times and studied self-leadership as a process for improving socioemotional intelligence. Awareness and regulation of one’s emotional state is better enhanced by a person who takes accountability of their thoughts and behaviors. Since self-leadership emphasizes that we can choose our thoughts and behaviors emotions can be treated as a manageable phenomenon in a person’s internal world.

### 5.1.7. Career Success

Four articles were published on career success with none of those publications having been cited over 50 times by other articles. Again a common theme as mentioned above is the ownership a person who practices self-leadership takes with their life. Within that mindset and employing self-leadership practices the articles propose that better career tracks are self-guided as well as based on outside opportunities. Also given the stress of pursuing career opportunities better stress management can improve a person’s performance in interviews new job orientation and work performance all of which contribute to better careers.

### 5.1.8. Entrepreneurship

Three articles were published on entrepreneurship with none of those publications having been cited over 50 times by other articles. Perhaps the inclusion of entrepreneurship in the literature is due to its inclusion as a high stress profession. We would expect further study of self-leadership and entrepreneurship to be dependent on the growth of small business startup and entrepreneurship research. However it should be noted that Christopher Neck and Mike Goldsby two prominent researchers in self-leadership have each published entrepreneurship textbooks and include self-leadership as an important process for entrepreneurs to master. We might expect the exposure of self-leadership in those textbooks to influence future papers in the fields.

### 5.1.9. Personality

Two articles were published on personality with none of those publications having been cited over 50 times by other articles. These articles test for whether self-leadership varies by the personalities of the people practicing it. Based in the methodologies of individual differences the authors find results that suggest people will differ in how responsive they are to self-leadership but that more research is needed to confirm the findings.

#### 5.1.10. *Spirituality in the Workplace*

Two articles were published on self-leadership and spirituality in the workplace with one of those publications having been cited over 50 times by other articles. One article had 113 citations by Houghton et al.(2016) and follow-up on research they had undertaken in a 2002 article. In the 2002 article Krishnakumar and Neck proposed examining workplace spirituality from the individual and organizational levels. In doing so they examined definitions and related organizational behavior subjects that emphasize well-being. In the 2016 article they conclude that significant research had taken place on the topic in other fields but that more examination of workplace spirituality is warranted in self-leadership studies.

#### 5.1.11. *Team Performance*

Two articles were published on self-leadership and team performance with none of those publications having been cited over 50 times by other articles. Perhaps as with some of the other topics in our review that were more popular in the first three decades of study of entrepreneurship application of self-leadership to team performance was one of the most heavily researched areas in the literature. It is possible that the link between self-leadership and team performance has been firmly established and scholars are examining new topics in the field.

#### 5.1.12. *Previous Topics with One Article*

Productivity quality organizational commitment turnover organizational change self-leading teams non-profit management goal setting/goal performance The United States Army intrinsic (natural) rewards training managerial decision making and individual leadership were topics that were featured in one self-leadership article each. Of those articles only the topics of self-leading teams individual leadership and goal setting/goal performance were cited over 50 times by other publications. The higher frequency of citations of these three articles builds on their foundation as three of the most foundational principles of self-leadership. So while the number of articles were not high when those topics are published they appear to be read and sourced by the field. In particular the article on individual leadership performance (Breevaart et al.2016) was cited by 173 publications making it one of the more influential papers in this review. One major contribution of the article is the use of diaries to study the self-leadership practices of the participants which enabled the researchers to examine more closely just how and when the self-leadership process was applied. Future researchers may find the use of diaries in studies worthwhile as well.

#### 5.1.13. *Previous Topics with No Articles*

Absenteeism psychological empowerment and job satisfaction performance appraisals total quality management diversity management team sustainability succession planning team composition: cognitive ability and personality task characteristics shared mental models cohesion conflict reward systems organizational structure/culture and national culture were topics not found in a review of the last decade of research in self-leadership. Many of these topics were quite popular in the previous two reviews and may warrant re-examination by researchers in future research. However new waves of interest occur in any field over time. In the following section we provide an overview of new topics in self-leadership that were published in articles over the last decade.

### 5.2. *New Review Topics*

Several new topics entered the research stream of self-leadership over the last decade. We utilize the previous typology to summarize these articles: topics covered by at least two articles and topics that were only published in one article. The following new topics appeared in at least two articles:

#### 5.2.1. *Education-Specific*

Thirteen articles were published specifically with the focus on applying self-leadership within an educational setting. None of these publications were cited over 50 times by other articles but the frequency of these articles suggests that self-leadership is finding its way into classrooms and learning environments. The contexts of the papers ranged from undergraduate college students nursing students the U.S. Coast Guard Academy and engineering students. Educators are utilizing self-leadership as a useful skillset and mindset for students to excel in the classroom and prepare them for their future careers.

#### 5.2.2. *Scale/Measurement*

Ten articles were published on scale/measurement topics with two of those publications having been cited over 50 times by other articles. Scale and measurement refinement is a sign of a concept that is entering a mature stage of its development. As more fields use self-leadership as an important process adaptations in scales enable researchers to better (and often more easily) test new theories and contexts. One article of note is “The Abbreviated Self-Leadership Questionnaire (ASLQ): A More Concise Measure of Self-Leadership” by Houghton et al.(2012a) which has been cited 134 times since its publication. Shortening and validating the well-tested Revised Self-Leadership Questionnaire (Houghton and Neck2002) with 801 citations is a major advancement in

the self-leadership literature. The original SLQ was a powerful assessment and now the ASLQ enables the scale to fit more concisely in surveys with other measures. Although not specifically a self-leadership subject leadership empowerment is related in that it has the same theme of leadership skills of an individual's approach to their work. "Empowering Leadership: Construct Clarification Conceptualization and Validation of a New Scale" by Amundsen and Martinsen (2014) was cited by 274 publications. Leadership empowerment can assist self-leadership development by emphasizing the authority people within an organization can have over their work. As such leadership empowerment like self-leadership is based on giving choice to individuals in how they decide to pursue their work goals.

### 5.2.3. Sales/Service Leadership

Four articles were published on sales/service leadership topics with none of those publications having been cited over 50 times by other articles. With an emphasis on making sales and serving customers we are not surprised to find this topic finding its way into the self-leadership as these professionals face many of the same challenges as entrepreneurs who are in this review. This subject as a future research topic will vary by the activity in sales entrepreneurship and service professions in society and academia.

### 5.2.4. New Topics with One Article

Role rotation work engagement mindfulness psychological capital flow experiential exercises physical vitality capacity building childhood development individualism/collectivism engineering language-related project leadership proactive personality virtual R&D teams and work/family conflict were topics that were featured in one self-leadership article each. Of those articles none were cited over 50 times by other publications. Of course given this is a review of articles over the last decade of self-leadership many of these topics may be novel and receive more attention in the future by researchers.

## 5.3. Trends and Future Directions for Self-Leadership Research

In summary the leading areas of research in self-leadership over the last decade are creativity/innovation education external leadership scale/measurement ethics psychological empowerment and job satisfaction stress/anxiety and emotional regulation. We categorized topics and made conclusions and predictions of trends and future directions based on the number count in these areas. These counts show increased attention on some topics that the 2006 and 2010 reviews did not predict. In this section we provide details of our observations and conclusions on those topics. The 2021 list evidences a research topic in its fourth decade. Scale refinement improves the scope and rigor of self-leadership studies. Articles incorporating and differentiating self-leadership with other leadership approaches advances the theoretical nature of the field. Application in educational settings encourages future practitioners and scholars to continue the practice and development of the subject. Finally self-leadership brings benefit to important quality of life/work topics such as ethics psychological empowerment and job satisfaction stress/anxiety and emotional regulation and we expect that trend to continue in future research.

With regard to contexts helping professions based on an ethic of care (Noddings 2013) in which a professional places the quality of the relationships with customers clients/patients and students as the focus of their work are popular in the current literature. Over the last decade 11 articles examined self-leadership within an educational setting 4 articles within a sales/service leadership and 13 articles within nursing. Helping occupations also often take place within stressful environments where professionals can be under-resourced face pressing deadlines and timelines handle job-related expectations that may conflict with each other and balance the demands of patients clients and students with administrations and upper management. We expect these fields to continue to publish on self-leadership and we would expect other helping professions with demanding expectations such as police and firefighters among many others to adapt self-leadership to their jobs as well.

However helping professions are not the only fields that can benefit from self-leadership. Self-leadership in its first two decades was established as an alternative and complement to other leadership styles. Yet a concern for Stewart et al.(2019) is the ongoing practice of self-leadership by individuals with support from their organizations once training is completed. In other words while studies may show positive pre-and post-results after leadership training the longitudinal application of self-leadership must be given more emphasis in the literature. In "Self-Leadership: A Paradoxical Core of Organizational Behavior" published in the Annual Review of Organizational Psychology and Organizational Behavior and cited in 393 articles Stewart et al.(2019 p. 415) state that "Another critical factor related to self-leadership is the acknowledgement that facilitation is an ongoing process. One-shot training programs for either teams or individuals will almost always fail."

In the previous 2006 and 2010 review articles of self-leadership the authors provided new models for furthering the success of the process. Heeding Stewart Courtright and Manz's call for approaches to facilitate ongoing development of self-leadership in organizations we extend self-leadership in a new direction that we contend will expand the reach of the topic in management and leadership application. This review article for the special issue on self-leadership for Administrative Sciences proposes a model for enhancing the power of the topic. In the next section we offer a new model we call "The Meta-Performance Model" which places self-leadership as a prominent process for improving performance outcomes with other popular professional training

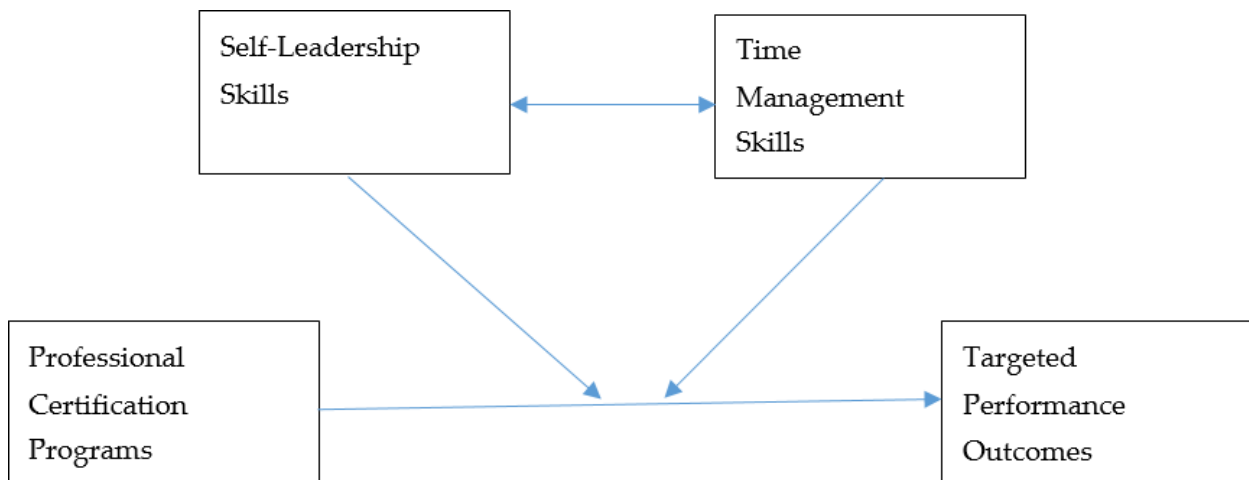


and methodologies. We believe by complementing existing performance programs with self-leadership professionals can better the outcomes of those programs while also cementing self-leadership skills over time.

## 6. THE META-PERFORMANCE MODEL

The Meta-Performance Model (MPM) endeavors to enhance professional development by introducing self-leadership as a critical component for success application of the learnings from these programs. The authors of this paper have certifications in all the professional programs listed in this paper. We have observed that a major gap in these trainings are the final instructions on maintaining and developing what is taught in the multi-day workshops. A common wrap-up phrase in the final session is “Now it’s up to you to use this.” However while some follow-up is given with trainees most of the organizations turn their attention to the next class rosters going through the training. The training organizations to their credit hold additional higher-level training but even in these groups there are participants who seem more practiced than others in the frequency of their application between workshops. We conclude that what the training organizations’ instructions are hinting at is self-leadership although it is not expressed as such. In other words leading oneself to practice and develop skills taught in the workshops. We contend that those who complete professional training programs would benefit from also being skilled in the best practices of self-leadership. Consider the impact on workplaces if the millions of professionals who attend such workshops also were trained in self-leadership. For example 20,000,000 people have assessed their talents with Gallup StrengthsFinder, 100,000 have been trained in the Basadur Creative Problem Solving Process, and 100,000 have been trained in FourSight Innovation. As certified professionals of Gallup Basadur FourSight and the other programs in Table1 we have recognized the difference training in self-leadership (and time management) have on performance outcomes. For that reason MPM places self-leadership as a moderator to other professional improvement programs and their intended outcomes (see Figure1). In other words as a professional enhances their self-leadership skills they also maintain and develop the learnings in the other professional programs.

Figure 1. The Meta-Performance Model (MPM).



Professional improvement programs by nature tend to be stand alone. They also often lack long-term influence over the individual unless they are part of a more involved self-leadership regimen and/or combined with organizational reinforcement. Individuals who focus on a holistic meta-performance approach using a variety of the leading training and enrichment programs not only enhance their self-leadership development but also their overall leadership performance across all levels including individual team organizational and societal. Furthermore those who add the discipline of revisiting and reinforcing the collective principles learned in such training programs (whether individually and/or organizationally induced) to their already-existing self-leadership practices can realize strong gains in key leadership performance metrics. This meta-performance model asserts that individuals need a variety of inputs and disciplines to better inform their self-leadership growth and thus their overall leadership performance. Professional improvement training programs can have a significant influence on an individual’s self-leadership efforts by offering more opportunities to improve individual performance.

**Table 1.** Professional certification programs.

Program	Provider	Offerings	Philosophy	Certifications	Outcomes	Ongoing Commitment
CliftonStrengths (formerly StrengthsFinder)	Gallup	2-day, 3-day, or 5-day certifications	Positive psychology around psychological talent development	<ul style="list-style-type: none"> <li>Successful strengths coaching</li> <li>Coaching for individuals, managers, and teams</li> <li>Global Strengths Coach</li> <li>Advanced Strengths Coaching</li> </ul>	<ul style="list-style-type: none"> <li>Understanding talent</li> <li>personal development</li> <li>Pointing talent towards goals</li> <li>Coaching talent in others</li> </ul>	<ul style="list-style-type: none"> <li>Deliberate practice of talents</li> <li>Talent spotting in others</li> <li>Recertification every two years</li> </ul>
Builder Profile-10	Gallup	2-day certification	Builder or entrepreneurial talent development	Coaching Builder Talents	<ul style="list-style-type: none"> <li>Understanding builder and entrepreneurial talents</li> <li>Personal development</li> <li>Hiring and placement</li> <li>Pointing talent towards business goals</li> <li>Coaching talent in others</li> </ul>	<ul style="list-style-type: none"> <li>Deliberate practice of talents</li> <li>Talent spotting in others</li> </ul>
Q12 Engagement	Gallup	2-day certification		<ul style="list-style-type: none"> <li>Leading High Performance Teams</li> <li>Engagement Champions</li> </ul>	<ul style="list-style-type: none"> <li>Understanding of the 12 elements of engagement</li> <li>Critical examination of leadership practices around engagement</li> </ul>	<ul style="list-style-type: none"> <li>Deliberate practice of engagement practices</li> <li>Self-assessment of personal engagement</li> </ul>
Basadur Innovation	Basadur Applied Innovation	Self-paced online, 4-hour, 2-day, 3-day, or 5-day certifications	Innovation styles and process	<ul style="list-style-type: none"> <li>Basadur Profile</li> <li>Simplexity Process Level 1</li> <li>Simplexity Process Level 2</li> <li>Simplexity Process Level 3</li> <li>Simplexity Process Level 4</li> <li>Professional Innovation Advisor</li> </ul>	<ul style="list-style-type: none"> <li>Understanding creative style differences</li> <li>Understanding creative process</li> <li>Executing creative process</li> <li>Aspirational language</li> </ul>	<ul style="list-style-type: none"> <li>Profile use</li> <li>Following the process</li> <li>Use of aspirational language</li> <li>Use of process tools</li> </ul>
FourSight	FourSight Innovation	Self-paced, 2-day, or 4-day certifications	Innovation preferences, tools, and process	<ul style="list-style-type: none"> <li>FourSight Mindset</li> <li>FourSight Tools</li> </ul>	<ul style="list-style-type: none"> <li>Understanding creative preferences</li> <li>Understanding the basic creative process</li> <li>Executing basic creative process</li> </ul>	<ul style="list-style-type: none"> <li>Profile use</li> <li>Process use</li> <li>Tools use</li> </ul>
Everything DiSC	Wiley	2-day certification	Communication and conflict style	Everything DiSC	<ul style="list-style-type: none"> <li>Understanding communication and conflict differences</li> <li>Understanding potential conflicts based on style</li> </ul>	<ul style="list-style-type: none"> <li>Analysis of personal conflicts</li> <li>Analysis of differences among relationships</li> </ul>
Myers Briggs Type Indicator	Myers Briggs Foundation	5-day certification	Personality dimensions	Myers Briggs (other related trainings available as well)	<ul style="list-style-type: none"> <li>Understanding personal your personality decision-making</li> <li>Understand personal behaviors</li> <li>Relate your personality to others</li> </ul>	<ul style="list-style-type: none"> <li>Analysis of personal conflicts</li> <li>Analysis of differences among relationships</li> </ul>
IDEO	IDEOU	Self-paced and 5-week courses	Design thinking	15 online courses and 6 certifications	<ul style="list-style-type: none"> <li>Applied creativity tools</li> <li>Market feedback techniques</li> <li>Design principles</li> </ul>	<ul style="list-style-type: none"> <li>Use of tools</li> <li>Use of processes</li> <li>User engagement</li> </ul>
LEGO® Serious Play®	LEGO® Strategic Play	2-day, 3-day, and 4-day certifications	Design Process and Visual Storytelling	Several applied (i.e., strategy, design thinking, problem solving, communication) and custom certifications	<ul style="list-style-type: none"> <li>Design process</li> <li>Virtual storytelling</li> <li>Experiential/tactile learning</li> </ul>	<ul style="list-style-type: none"> <li>Follow session guidelines</li> <li>Build and storytell</li> </ul>

It should be noted that the authors hold certifications in all these programs and can attest that little guidance is given to trainees in developing habits to practice and develop learnings over the long term. The professional certification programs typically hold an afternoon session on the final day of a multi-day schedule with a general message of: “Now it’s up to you to continue your development.” Although short-term coaching and website support are often provided on the topics of the courses little guidance is given for how to continue applying the learnings over time. Our observation of people who complete these professional improvement programs is that most people do not continue practicing what they learn after they go back to their jobs. However those who practice strong self-leadership ability incorporate the training better into their work and lives. Therefore we propose self-leadership training is a natural complement to other professional improvement programs in order that more leaders actually develop the skills taught in those workshops. In the following section we cover the leading professional improvement programs that confer certifications to participants who complete official training (see Table1). Then we describe self-leadership training approaches.

6.1. Professional Certifications Program

6.1.1. Gallup Suite of Talent Development and Performance Management Tools

The Gallup Corporation offers a variety of proven talent development employee engagement performance management hiring and placement tools. This integrated suite of assessments surveys research and coaching tools provide leaders with the opportunity to better understand themselves and those with whom they work.

1. Gallup’s CliftonStrengths; Donald Clifton developed CliftonStrengths (formerly StrengthsFinder) after decades of intense grounded theory research with tens of thousands of subjects on psychological talent. Gallup migrated the assessment to an online in 2003 and has refined the tool which measures and ranks 34 talents (Rath2007) over the last 18 years. Today more than 24 million people have taken the online assessment (Gallup2021). CliftonStrengths measures how individuals naturally think feel and behave and gives those trained in the philosophy insights on how to leverage and further develop their psychological

talents and manage or work around their weaknesses (lesser talents). The Gallup strengths training program and paradigm strongly aligns with the positive psychology approach of self-leadership. Gallup strengths training helps the individual discover own and point the ways in which they naturally think feel and behave towards their goals. This approach can positively contribute to key areas of self-leadership development such as creativity and innovation external leadership psychological empowerment and job satisfaction stress and anxiety and emotional regulation. When people live and work in the ways best suited to them they are more fulfilled lead better and enjoy stronger relationships (Rath and Conchie2008). Participants in Gallup strengths training are encouraged to own develop and aim their top talents toward their goals. Finally Gallup(2017) has also aggressively addressed the education facet of self-leadership research by providing education-specific tools that can be used by school systems and educators to drive self-leadership in middle school high school and college students.

2. Gallup's Builder Profile-10; Gallup's Builder Profile-10 (BP-10) measures and ranks one's builder talents. Gallup scientists validated the instrument in multiple studies of entrepreneurs and corporate builders. It can be a strong predictor of role performance as certified coaches can request an insight report that provides an individual's score in each of the 10 talent areas role type and overall against the general population and alpha (top quartile) builders/entrepreneurs. Those trained in this science develop a deep understanding of the best roles to pursue and what duties they should strongly consider delegating to others. Thus BP-10 pairs well with self-leadership efforts as it enhances external leadership scale and measurement psychological empowerment and job satisfaction stress and anxiety and emotional regulation efforts. Participants are encouraged to own and develop their top builder talents and apply them towards their role responsibilities and career goals (Clifton and Badal2018).
3. Gallup's Q12 employee engagement tools; Finally Gallup's Q12 survey measures employee engagement. The Q12 tool has been used by over 100 million people as many leading corporations and non-profit organizations in the U.S. and abroad use the tool. Leaders trained in Gallup's engagement science learn not only what motivates them to be engaged in their work but also how to better engage their employees. This complements self-leadership areas of creativity and innovation external leadership scale/measurement ethics psychological empowerment and job satisfaction stress and anxiety and emotional regulation. High Schools and universities also use BP-10 in team building and talent development (Gallup2016;Clifton and Harter2019). Participants are asked to consider their relationships and behaviors as a leader and how those behaviors impact personal and employee engagement.Gallup(2017) also offers a student engagement survey to high schools and higher education institutions which addresses the education aspect of self-leadership.

#### *6.1.2.Creativity Innovation and Problem Solving Assessments and Process Training Tools*

Two of the leading creativity innovation and problem solving programs come from Basadur Applied Innovation and FourSight Innovation. With a strong empirical foundation both organizations offer an assessment tool and various levels of creative process training. Both programs are strong influencers of the creativity and innovation external leadership psychological empowerment and job satisfaction stress and anxiety and emotional regulation facets of self-leadership. In addition both tools are widely used in higher education and by many leading companies in the U.S. and globally. Participants in these programs are encouraged to improve the steps they take to solve problems and pursue opportunities and to own and understand their unique creative styles.

1. Basadur Applied Innovation; The Basadur Profile is a four-quadrant model that graphs an individual's preferences in how they acquire information (direct experiencing versus detached abstract thinking) and what they do (ideate versus evaluate) with that information to determine one of four styles: Generator conceptualizer optimizer and implementer. Team preferences can be plotted on the same graph providing useful team analysis (Basadur and Finkbeiner1985;Basadur et al.1990;Basadur and Gelade2003;Basadur et al.2016). Basadur also offers a team Innovation Quotient (InQ) survey tool that provides insights into individual and team strengths and deficiencies related to creativity innovation and problem-solving skills and behaviors. Basadur Applied Innovation offers four levels training and certification in its 8-step creative process (Basadur et al.2013).
2. FourSight Innovation; FourSight Innovation offers the FourSight Profile which measures one's preference for each of the four universal creative process steps (clarifier ideator developer or implementer) plotted on a horizontal line in the categories of high preference neutral or low preference (Puccio and Acar2015). FourSight offers training and certification on the profile (mindset) and process (toolset). Educators use FourSight principles in their classrooms as well (e.g. Guark-Ozdemir et al.2019).

#### *6.1.3.Personality Assessments and Training Programs*

There are a variety of assessment tools on the market that offer training and certification programs. DISC and Myers Briggs Type Indicator (MBTI) are two of the most popular and widely used of those assessment tools. While there are many variants of DISC and MBTI the most common are Everything DiSC offered by the Wiley

Corporation and MBTI by the Myers Briggs Foundation and Elevate. Training and certification in these tools help individuals enhance their self-leadership journey by addressing creativity and innovation external leadership psychological empowerment and job satisfaction stress and anxiety and emotional regulation. Participants are asked to consider their own personalities and how those affect their decisions behaviors and relationships.

1. Everything DiSC Assessment and Training. The Wiley Corporation offers assessment training and certification on its version of DiSC. It is a four-quadrant model that measures active versus thoughtful and accepting versus questioning to arrive at four communication and conflict styles: Dominance influence steadiness and conscientiousness (e.g. Sugerma2009).
2. MBTI Assessment and Training; The Myers Briggs Foundation conducts training and certification on the MBTI assessment and suite of tools. MBTI is a personality assessment that measures the four aspect of personality in dichotomies: How one receives energy how one takes in information how one makes decisions and how one responds to the outside world. This results in one of 16 personality types that are expressed by a combination of four letters (e.g. Sethuraman and Suresh2014).

#### 6.1.4. Design Thinking Training

Several universities and companies offer design thinking or related training and certifications. These programs help participants learn to design anything in their work or personal lives. Top design firm IDEO and LEGO® SERIOUS PLAY® offer some of the most robust training programs in this area that include a variety of stackable courses towards certifications. Design courses like these empower participants to learn the particulars of imagining prototyping garnering feedback on and selling their own life adventures as well as their work-related projects. These programs address the creativity and innovation education external leadership scale and measurement ethics psychological empowerment and job satisfaction and stress and anxiety aspects of self-leadership.

1. IDEO; IDEO offers 15 online courses and six certificate programs in design thinking as well as onsite programs. These offerings promote an immersive experiential learning journey that is both flexible and stackable. IDEO’s overarching promise is that participants will move from simply learning design principles to practicing and executing them. IDEO principles are also readily used in the top design thinking programs in higher education. Participant are tasked with rethinking how they approach the design of new ideas how they involve other people and how they validate their creative endeavors (Kelly2016).
2. LEGO; Aspiring leaders can earn certification in LEGO® SERIOUS PLAY® facilitation methods from global master trainers in a variety of applications. This training focuses on authentic storytelling through objects (LEGO). Participants learn to remove design barriers and focus on what stories they want to tell. In addition educators use LEGO® SERIOUS PLAY® in their classrooms for a variety of purposes including leadership development creativity design storytelling and entrepreneurship among others. Participant are encouraged to use object in storytelling to enhance their authenticity and remove traditional social barriers associated with leader vulnerability (e.g. Dann 2018;James2013;McCusker2014).

While the above is not by any means an exhaustive list of self-help programs available it is a strong representation of some of the more widely used options. These programs and others can strongly enhance and influence the key tenets of effective self-leadership practices.

#### 6.2. Self-Leadership Training

In the MPM we propose self-leadership training as a process for enhancing individual performance of those taking professional improvement programs. In other words we contend that self-leadership is a moderator of professional improvement programs and individual performance. Without strong self-leadership skills a personal cannot take full advantage of what is taught in certified professional training programs. As with other individual performance areas self-leadership skills can also be enhanced with training. A plethora of studies have used a training-based research design to study the efficacy of self-leadership training. Specifically these studies have examined how self-leadership training involving various self-leadership processes influences employees. These studies (Frayne and Geringer2000;Frayne and Latham1987;Godat and Brigham1999;Latham and Frayne1989;Neck and Manz1996a) provide empirical evidence for self-leadership “as a set of control strategies that can be taught to increase self-leadership practice and subsequent employee productivity” (Stewart et al.2011).

Self-leadership training encompasses preand post-testing of participants with the Self-Leadership Questionnaire or Abbreviated Self-Leadership Questionnaire. Individuals and organizations can also complement the SLQ/ASLQ with other performance measures of interest in order to further study the impact of self-leadership training. Training includes exercises for developing self-leadership skills in participants such as a Cues Exercise (reminders attention focusers and negative cue removal) Self-Observation Checklist (frequency and duration of behaviors participant wants to increase or decrease conditions record keeping) Self-Goal Setting Exercise (long-term goals goals for developing abilities to reach long-term goals and short-term goals) Self-



Reward Checklist (positive rewards that support self-motivation) Self-Punishment Checklist (identification and removal of self-punitive tendencies and actions) Natural Rewards Exercise (building naturally enjoyable activities into tasks) Majestic Moments Exercise (naturally rewarding work) Negative Self-Talk Exercise (identifying and changing negative self-talk) Beliefs Exercise (identifying and changing destructive beliefs) Imagined Experience Exercise (positive mental practice) and Thinking Patterns Exercise (opportunity thinking versus obstacle thinking) (Neck et al.2019).

### 6.3. *Time Management Training Program*

In the MPM we propose time management correlates with self-leadership ability as well as serving as another moderator to the professional certification programs and their outcomes. In other words strong self-leadership skills enhance time management and time management enhances the application of self-leadership. Correspondingly time management will also enhance the efficacy of professional certification programs. Thus those holding certifications in a professional program will maintain and practice training better with the development of self-leadership and time management skills.

Based on a review of time management literature Claessens et al.(2007) suggest the definition “behaviors that aim at achieving an effective use of time while performing certain goal-directed activities” pg. 262. Since the focus is on goal-directed activities that are accomplished in a manner that implies successful use of time the following behaviors are included in their definition: (1) Time Assessment Behaviors-focusing on mindfulness of the past present and future with self-awareness of time usage that are to be accomplished within the boundaries of one’s abilities (Kaufman et al.1991) and self-awareness of time handling which aid to take on tasks that suitably fit into one’s abilities; (2) Planning Behaviors-with the goal of effective use of time that include goal setting development prioritizing formulating a to-do-list and arranging tasks (Macan1996); and (3) Monitoring Behaviors-with the objective of attending to how time is allotted engaging in undertakings and formulating a feedback loop that limits the impact of the disturbances by others (Fox and Dwyer1996). Many of these practices complement and reflect self-leadership well.

A good starting point for professionals new to time management is the book *Getting Things Done: The Art of Stress-Free Productivity* by Allen(2015). Allen observes that most people struggle with achieving their goals because of cluttered minds. Most people have too much going on in their minds and as a result they are not able to put their attention on what needs to be done. He likens the condition to a computer with multiple applications and windows open on the desktop. The more programs open on a computer the slower the computer. Sometimes it even locks up. He contends it happens to people too. Allen warns that any undone task that you wish were done is lying in the subconscious waiting to be addressed. As long as it remains undone it operates like an open loop which takes attention away from the task at hand. This lack of focus in turn leads to work taking longer to accomplish and with less effectiveness. The best work occurs when the mind is clear and focused on what it is doing. So how do we close those loops operating under the surface of our consciousness? Allen instructs a person to take a sheet of paper and set aside 15 min to write down everything they can think of that they would like to get done. It does not matter if it is a big life-changing goal or a tiny task. Write it down. Allen’s point is that if something came to your mind over that 15-min period that means it was an open loop in your subconscious waiting to be closed. It is an item that you are concerned enough about that your brain does not want you to forget it. Therefore your brain is not operating at its full capacity because it is spending some of its bandwidth keeping track of all these undone tasks and goals. Allen provides weekly exercises for better prioritizing organizing and completing tasks and making progress toward completion of critical work and goals. We contend that a time management program such as Allen’s brings an even higher level of self-leadership efficacy by refining the time dimension of the practice. In turn with the growth of professional certifications and licenses participants will better achieve their desired outcomes and goals by developing self-leadership and time management ability.

## 7. 7. DISCUSSION

This paper reviewed the last decade of self-leadership research. Marking the fourth decade of self-leadership (including the subset of self-management research) we utilized categories from the two previous reviews of the field. “Two Decades of Self-Leadership Theory and Research: Past Developments Present Trends and Future Possibilities” by Neck and Houghton(2006) examined the theoretical and contextual work in self-leadership. “Self-Leadership: A Multilevel Review” by Stewart et al.(2011) concentrated on the work of most of the Neck and Houghton categorization with the added dimension of individual versus team foci. In summary we observed that categories of study in self-leadership evolved over the four decades of research as would be expected as a domain matures and society changes. We discovered the most researched categories over the last decade are creativity/innovation education external leadership scale/measurement ethics psychological empowerment and job satisfaction stress/anxiety and emotional regulation. With regard to contexts studies on customers clients/patients and students were most prevalent in the self-leadership literature.



In keeping with the practice of the 2006 and 2010 review papers we offered a new model the Meta-Performance Model as a framework for future research and practice in self-leadership in concert with existing professional development certification programs. Taking our lead from “Self-Leadership: A Paradoxical Core of Organizational Behavior” by Stewart et al.(2019) we extend self-leadership to other management and leadership applications. We believe by complementing existing performance programs with self-leadership professionals can better the outcomes of those programs while also cementing self-leadership and time management skills over time. Future researchers and practitioners will determine the efficacy of MPM. Limitations of this paper are confined to our judgment of what constitutes new categories in the self-leadership literature as well as our proposal that MPM will improve the performance outcomes of professional training programs that have been completed by millions of workshop attendees. We contend that categorizing with a similar approach as the 2006 and 2010 reviews were undertaken increases the validity of the review in this paper. Additionally as participants who have completed and been certified in the listed professional programs and also as scholars and teachers of self-leadership we maintain that future attendees would benefit from systematic application of MPM. Given that the 2006 and 2010 reviews proposed models for new directions in self-leadership we believe our experience and research warrants consideration of MPM. However regardless of the accuracy of this prediction we are confident that given the findings we offer in this review of the fourth decade of self-leadership research the field will continue to have a prominent role in improving individual team and organizational performance.

### Conflicts of Interest:

The authors declare no conflict of interest.

### References:

1. Allen, David. 2015. *Getting Things Done: The Art of Stress-Free Productivity*. New York: Penguin Books.
2. Amundsen, Stein, and Oliver L. Martinsen. 2014. Empowering leadership: Construct clarification, conceptualization, and validation of a new scale. *The Leadership Quarterly* 25: 487–511.
3. Andressen, Panja, Udo Konradt, and Christopher P. Neck. 2012. The relation between self-leadership and transformational leadership: Competing models and the moderating role of virtuality. *Journal of Leadership and Organizational Studies*. 19: 68–82.
4. Bandura, Albert. 1986. *Social Foundations of Thought and Action: A Social Cognitive Theory*. Englewood Cliffs: Prentice Hall.
5. Basadur, Min, and Carl T. Finkbeiner. 1985. Measuring preference for ideation in creative problem solving. *The Journal of Applied Behavioral Science* 2: 37–49.
6. Basadur, Min, and Garry Gelade. 2003. Using creative problem solving profile (CPSP) for diagnosing and solving real-world problems. *Emergence* 5: 22–47.
7. Basadur, Min, Mitsuru Wakabayashi, and George B. Graen. 1990. Individual problem solving styles and attitudes towards divergent thinking before and after training. *Creativity Research Journal* 3: 22–32.
8. Basadur, Min, Garry Gelade, and Timothy Basadur. 2013. Creative problem-solving process styles, cognitive work demands, and organizational adaptability. *The Journal of Applied Behavioral Science* 50: 80–115.
9. Basadur, Min, Garry A. Gelade, Timothy M. Basadur, and Richard Perez. 2016. Improved reliability and research applications of the Basadur Creative Problem Solving Profile (CPSP). *Kindai Management Review* 4: 101–12.
10. Breevaart, Kimberley, Arnold B. Bakker, Evangelia Demerouti, and Daantje Derks. 2016. Who takes the lead? A multi-source diary study on leadership, work engagement, and job performance. *Journal of Organizational Behavior* 37: 309–25.
11. Claessens, Brigitte J., Wendelien Van Eerde, Christel G. Rutte, and Robert A. Roe. 2007. A Review of the Time Management Literature. *Personnel Review* 36: 255–76.
12. Clifton, Jim, and Sangeeta Badal. 2018. *Born to Build: How to Build a Startup, Winning Team, New Customers, and Your Best Life Imaginable*. New York: Gallup Press.

13. Clifton, Jim, and Jim Harter. 2019. *It's the Manager*. New York: Gallup Press.
14. Cockerell, Dan. 2020. *How's the Culture in Your Kingdom*. New York: Morgan James Publishing.
15. Dann, Stephen. 2018. Facilitating co-creation experience in the classroom with Lego Serious Play. *Australasian Marketing Journal* 26: 121–31.
16. Dion, Michel. 2012. Are ethical theories relevant for ethical leadership? *Leadership & Organization Development Journal* 33: 4–24.
17. Fox, Marilyn L., and Deborah J. Dwyer. 1996. Stressful Job Demands and Worker Health: An Investigation of the Effects of Self-monitoring. *Journal of Applied Social Psychology* 25: 1973–95.
18. Frayne, Colette A., and John M. Geringer. 2000. Self-management training for improving job performance: A field experiment involving salespeople. *Journal of Applied Psychology* 85: 361–72.
19. Frayne, Colette A., and Gary P. Latham. 1987. Application of Social-learning Theory to employee self-management of attendance. *Journal of Applied Psychology* 72: 387–92.
20. Furtner, Marco R., John F. Rauthmann, and Pierre Sachse. 2011. The self-loving self-leader: An examination of the relationship between self-leadership and the Dark Triad. *Social Behavior and Personality: An International Journal* 39: 369–80.
21. Furtner, Marco R., Urs Baldegger, and John F. Rauthmann. 2013. Leading yourself and leading others: Linking self-leadership to transformational, transactional, and laissez-faire leadership. *European Journal of Work and Organizational Psychology* 22: 436–49.
22. Furtner, Marco R., John F. Rauthmann, and Pierre Sachse. 2015. Unique self-leadership: A bifactor model approach. *Leadership* 11: 105–25.
23. Gable, Shelly, and Jonathan Haidt. 2005. What (and Why) is Positive Psychology? *Review of General Psychology* 9: 103–110.
24. Gallup. 2016. *First, Break All the Rules: What the World's Greatest Managers do Differently*. New York: Gallup Press.
25. Gallup. 2017. *CliftonStrengths for Students*. New York: Gallup Press.
26. Gallup. 2021. *Assessments*. New York: Gallup Press, Available online: [www.store.gallup.com](http://www.store.gallup.com) (accessed on 1 February 2021). Ghosh, Koustab. 2015. Developing organizational creativity and innovation. *Management Research Review* 38: 1126–48.
27. Godat, Lynnette M., and Thomas A. Brigham. 1999. The effect of a self-management training program on employees in a mid-sized organization. *Journal of Organizational Behavior Management* 19: 65–83.
28. Guark-Ozdemir, Serap, Selcuk Acar, Gerard Puccio, and Cory Wright. 2019. Why do some teachers connect better with some students?
29. Exploring the influence of teachers' creative thinking preferences. *Gifted and Talented International* 34: 102–15.
30. Houghton, Jeffery D., and Darryl L. Jinkerson. 2004. Constructive thought strategies and job satisfaction: A preliminary examination.
31. Paper presented at the 2004 Western Academy of Management Conference, AK, USA, April.
32. Houghton, Jeffery D., and Christopher P. Neck. 2002. The revised self-leadership questionnaire: Testing a hierarchical factor structure for self-leadership. *Journal of Managerial Psychology* 17: 672–91.
33. Houghton, Jeffery D., Christopher P. Neck, and Charles C. Manz. 2003. We think we can, we think we can, we think we can: The impact of thinking patterns and self-efficacy on work team sustainability. *Team Performance Management* 9: 31–41.
34. Houghton, Jeffery D., David Dawley, and Trudy C. DiLiello. 2012a. The abbreviated self-leadership questionnaire (ASLQ): A more concise measure of self-leadership. *Journal of Leadership Studies* 7: 216–32.

35. Houghton, Jeffery D., Jinpei Wu, Jeffrey L. Godwin, Christopher P. Neck, and Charles C. Manz. 2012b. Effective stress management: A proposed model of emotional intelligence, self-leadership, and student stress coping. *Journal of Management Education* 36: 220–38.
36. Houghton, Jeffery D., Christopher Neck, and Sukumarakurup Krishnakumar. 2016. The what, why, and how of spirituality in the workplace revisited: A 14-year update and extension. *Journal of Management, Spirituality & Religion* 13: 177–205.
37. James, Alison R. 2013. Lego Serious Play: A three-dimensional approach to learning development. *Journal of Learning Development in Higher Education* 6: 1–18.
38. Kaufman, Carol J., Paul M. Lane, and Jay D. Lindquist. 1991. Time Congruity in the Organization: A Proposed Quality of Life Framework. *Journal of Business and Psychology* 6: 79–106.
39. Kelly, Tom. 2016. *The Art of Innovation*. New York: Doubleday.
40. Latham, Gary P., and Colette A. Frayne. 1989. Self-management training for increasing job attendance: A follow-up and a replication. *Academy of Management* 74: 411–16.
41. Macan, Therese H. 1996. Time-management Training: Effects on Time Behaviors, Attitudes, and Job Performance. *The Journal of Psychology* 130: 229–36.
42. Manz, Charles C., and Henry P. Sims Jr. 1980. Self-management as a substitute for leadership: A social learning perspective. *Academic of Management Review* 5: 361–67.
43. Manz, Charles C., and Henry P. Sims Jr. 1989. *Superleadership: Leading Others to Lead Themselves*. Englewood Cliffs: Prentice-Hall.
44. McCusker, Sean. 2014. Lego® Serious Play®: Thinking about teaching and learning. *International Journal of Knowledge, Innovation and Entrepreneurship* 2: 27–37.
45. Neck, Christopher P. 1996. Thought self-leadership: A self-regulatory approach to overcoming resistance to organizational change. *International Journal of Organizational Analysis* 4: 202–16.
46. Neck, Christopher P., and Jeffery D. Houghton. 2006. Two decades of Self-leadership Theory and research. *Journal of Managerial Psychology* 21: 270–95.
47. Neck, Christopher P., and Charles C. Manz. 1996a. Thought self-leadership: The impact of mental strategies training on employee cognition, behavior, and affect. *Journal of Organizational Behavior* 17: 445–67.
48. Neck, Christopher P., and Charles C. Manz. 1996b. Total leadership quality: Integrating employee self-leadership and total quality management. In *Advances in the Management of Organizational Quality*. Edited by S. Goush and D. Fedor. Greenwich: JAI Press, vol. 1, pp. 39–77.
49. Neck Christopher P., Charles C. Manz. 1999. In search of the self-led soldier: Army leadership in the twenty-first century. In *Out-of-the-Box Leadership: Transforming the Twenty-First Century Army and other Top Organizations*. Edited by J. G. Hunt, G. E. Dodge and L. Wong. Stamford: JAI Press, pp. 153–76.
50. Neck, Christopher P., and John F. Milliman. 1994. Thought self-leadership: Finding spiritual fulfillment in organizational life. *Journal of Managerial Psychology* 9: 9–16.
51. Neck, Christopher P., Greg Stewart, and Charles C. Manz. 1995. Thought self-leadership as a framework for enhancing the performance of performance appraisers. *Journal of Applied Behavioral Science* 31: 278–302.
52. Neck, Christopher P., Greg Stewart, and Charles C. Manz. 1996. Self-leaders within self-leading teams: Toward an optimal equilibrium. In *Advances in Interdisciplinary Studies of Work Teams*. Edited by M. Beyerlein. Greenwich: JAI Press, vol. 3, pp. 43–65.
53. Neck, Christopher P., Heidi M. Neck, and Charles C. Manz. 1997a. Thought self-leadership: Mind management for entrepreneurs. *Journal of Developmental Entrepreneurship* 2: 25–36.

54. Neck, Christopher P., Wanda Smith, and Jeff Godwin. 1997b. Thought self-leadership: A self-regulatory approach to diversity management. *Journal of Managerial Psychology* 12: 190–203.
55. Neck, Christopher P., Robert Ashcraft, and Craig VanSandt. 1998. Employee self-leadership: Enhancing the effectiveness of nonprofits. *International Journal of Organization Theory and Behavior* 1: 521–52.
56. Neck, Christopher P., Hossein Nouri, Jeffery D. Houghton, and Jeff L. Godwin. 2003. How self-leadership affects the goal setting process. *Human Resource Management Review* 13: 691–708.
57. Neck, Christopher P., Charles C. Manz, and Jeffery Houghton. 2019. *Self-Leadership: The Definitive Guide to Personal Excellence*, 2nd ed. Los Angeles and London: SAGE.
58. Noddings, Nel. 2013. *Caring: A Relational Approach to Ethics and Moral Education*. Berkeley: University of California Press.
59. Pearce, Craig, and Charles Manz. 2011. Leadership centrality and Corporate Social Ir-Responsibility (CSIR): The potential ameliorating effects of self and shared leadership on CSIR. *Journal of Business Ethics* 102: 563–79.
60. Pratoon, Karun, and Gomon Savatsomboon. 2012. Explaining factors affecting individual innovation: The case of producer group members in Thailand. *Asia Pacific Journal of Management* 29: 1063–87.
61. Puccio, Gerard, and Selcuk Acar. 2015. Creativity will stop you from getting promoted, right? Wrong! A comparison of creative thinking preferences across organizational levels. *Business Creativity and the Creative Economy* 1: 4–12.
62. Rath, Tom. 2007. *StrengthsFinder 2.0*. New York: Gallup Press.
63. Rath, Tom, and Barry Conchie. 2008. *Strengths Based Leadership: Great Leaders, Teams, and Why People Follow*. New York: Gallup Press. Sabin, Nick. 2007. *How Good Do You Want to Be*. New York: Ballentine Books.
64. Seligman, Martin, and Mihaly Csikszentmihalyi. 2014. Positive Psychology: An Introduction. In *Flow and the Foundations of Positive Psychology*. Dordrecht: Springer.
65. Sethuraman, Kavitha, and Jayshree Suresh. 2014. Effective leadership styles. *International Business Research* 7: 165–72.
66. Steinbauer, Robert, Robert Renn, Robert Taylor, and Phil Njoroge. 2014. Ethical leadership and followers' moral judgment: The role of followers' perceived accountability and self-leadership. *Journal of Business Ethics* 120: 381–92.
67. Stewart, Greg L., and Murraray R. Barrick. 2000. Team structure and performance: Assessing the mediating role of intrateam process and the moderating role of task type. *Academy of management Journal* 43: 135–49.
68. Stewart, Greg L., Stephen H. Courtright, and Charles C. Manz. 2011. Self-leadership: A multilevel review. *Journal of Management* 37: 185–222.
69. Stewart, Greg, Stephen Courtright, and Charles Manz. 2019. Self-leadership: A Paradoxical Core of Organizational Behavior. *Annual Review of Organizational Psychology and Organizational Behavior* 6: 47–67.
70. Sugerman, Jeffrey. 2009. Using the DiSC® model to improve communication effectiveness. *Industrial and Commercial Training* 41: 151–54.
71. Unsworth, Kerrie, and Claire Mason. 2012. Help yourself: The mechanisms through which a self-leadership intervention influences strain. *Journal of Occupational Health Psychology* 17: 235–45.
72. VanSandt, Craig V., and Christopher P. Neck. 2003. Bridging ethics and self leadership: Overcoming ethical discrepancies between employee and organizational standards. *Journal of Business Ethics* 43: 363–87.