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Inspiring Employee Creativity in HEI's through Inner-Leader Effect: The Self-Leadership Pathway to Creativity through Meaningfulness, Proactive Personality and Creative Process Engagement

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ABSTRACT

Drawing upon the Ford's theory of Creative Individual actions, this study tested a theoretical model which clarified why and how Self-leadership (SL), along with SL strategies (i.e., Behavior, Reward and Thought cognition) are more (or less) effective in promoting employee Creativity (EC) through Creative Process Engagement (CPE). The study further defined an uncover motivational conditions that might enhance the linkages between SL, CPE and EC. We speculated that both employees' sense of Meaningful work (WM; as a Cognitive aspect) and a Proactive Personality (PP; as a personal aspect) moderates the correlation, but in diverse ways, and also this association was carried out via employees' Creative Process engagement and hence creativity at workplace. We investigate our study propositions from 289 HEI's employees and collected through survey data. Results specify that self-leadership is effective in stimulating employee creativity (self-rated), when the relationship is mediated through CPE. The high sense of Meaningful work (WM) and Proactive Personality (PP) heightened the engagement in creativity-related procedures and activities, which ultimately, enhanced employee creativity (self-rated). The study outcomes not only concentrated on

mechanisms that trigger Self-leadership and Creativity relationship, but also highlighted the prominence of activities in Creative process engagement (i.e., Problem identification, Information searching and encoding, and Idea generation). Together, this research extends the consequences of several self-influencing dispositional factors on employee creativity and hence propose some new insights for further research.

Keywords: Self-leadership, Creative-Work Engagement, Self-rated Employee Creativity, Meaningful Work, Proactive Personality, Higher Education Institutes; Pakistan

INTRODUCTION

With an amplified pressure due to globalization, altering funding processes and structures, and also shifting supply and demand, many Higher Education Institutions (HEI's) around the world are endeavoring for their persistence in a vigorous competitive market. All of which marked the Higher education sector as a striking zone for research (Zhao & Wang, 2025; Namono et al, 2022;

Elrehail et al., 2018). This emergent sector underwrites meaningfully to the expansion of a nation's human capitals, and also investment in this sector has contributed a vigorous part in an economy progress (Su & Hahn, 2025). To achieve these goals and to remain competitive due to information and technology standout, organizations i.e., Higher Education Institutes (HEI's) are relying on creativity for sustainable success and competitive advantage (Zhao & Wang, 2025; Gaspar & Mabic, 2015; Anderson et al., 2014). Not astonishingly then, considering the diverse factors of creativity in HEI's have taken a high priority for researchers and practitioners in the field of organizational studies (Huangfu et al., 2025; Shavkat & Kural, 2025; Shalley et al., 2004; Elrehail et al., 2018; Gu et al., 2020).

The requisite of Creativity in HEI's has enforced institutes to transform into more organic figures, henceforward it becomes essential for HEI's personnel to become more accountable and take ample responsibility of their actions and work (Houghton & Yoho, 2005). This is mainly persuaded by their distinctive skills resulted in self-management, self-control, participation, empowerment. In this context, it is assumed about HEI's personnel's skills and abilities, or to be creative, leadership plays a vigorous part in an organizational context (Zhao & Wang, 2025; Asif et al., 2020; Ekman et al., 2018; Adewale & Ghavifekr, 2019). This hypothetical supposition about person's self-assessment is debatable yet interesting among several academic scholars (Sesen et al., 2017).

To address this concern, research has been supported and examined one of the self-assessment leadership characteristic namely Self-leadership, which is remarkably missing from research attention despite recommendations by numerous emerging creativity researchers. Yet scholar's emphasis their greater efforts on varied leadership styles and attitudes which can discourse the fundamental underpinnings of individual-creativity research (Ghosh, 2015). In an organizational research, self-leadership is usually seen as a valuable competence (Su & Hahn, 2025). However, the

established emphasis is insufficient because employee creativity is considered and taken as an initial way for broader organizational creativity and innovation (Amabile & Pratt, 2016). This signal might indicate another detrimental and possibly energy consuming facets of self-leading behaviors along with employee creativity (Chen et al., 2020), which is yet to be reconnoiter (Stashevsky et al., 2006; Phelan & Young, 2003). To reiterate employee creativity, requires Creative Process Engagement (CPE) as a behavior facilitator in between the established relationship (Reiter-Palmon & Illies, 2004). Accordingly, employees built a superior desire to share information, undertake risks (Hu et al., 2017; Edmondson and Lei, 2014) and contribute in creative activities (i.e., problem identification, information search and encoding and later idea generation) (Jiang and Gu, 2015). Consequently, developing the model linking between self-leadership and creativity literature, we illustrated on the Creative process engagement to theorize an intervening mechanism with high potential to explain the established linkage.

In creativity literature, Creativity can be used to outline mutually as an outcome (i.e., consequence) and a process (i.e., procedure) (Shalley & Zhou, 2008). In this study, we underlie the word “creativity” as an outcome sense—representing the degree to which useful and distinct ideas are created, and the word “Creative process engagement” —representing the manner in which creativity actually happens. We further draw a model via this examination by postulating and testing two possibly significant moderators in relationship between self-leadership–employee creativity: Meaningful work (WM; as a Cognitive aspect) and a Proactive Personality (PP; as a personal aspect). This significant feeling of meaningful work offers an employee a sense of valued, prominence, purposeful, and hence subsequent in positive behavior i.e., creativity (Bhatti et al., 2020) regarding to their work and job (Jiang and Johnson, 2018). Moreover, individuals deliberately valued their work meaningful, can unmistakably understand and consider their role in activities related to creative process engagement (Stephens & Carmeli, 2017). Likewise, employees with a Proactive Personality (PP) are able to bring constructive change at workplace and also they try to take jobs and position themselves in organizations where they can carry out tasks with a high meaning of work (Akgunduz et al., 2018)

Given this background, this study has a first attempt to address the gap in the literature by drawing upon Ford’s Theory of Creative individual actions (Ford, 1996) which is grounded on the wider perspective of Bandura’s Social Cognitive theory (1986). In this study we precisely focus on the relationship between Personal motivational (i.e., Self-leadership, Proactive personality); Cognitive (i.e., work meaningfulness), and Behavioral (i.e., Creative Process Engagement) mechanisms. This study is based on three basic objectives: firstly, the undertaken research contributes to the prevailing knowledge by filling numerous research gaps in the literature and also adding novel insights in Ford’s theory by investigating self-leadership strategies (behavioral, natural reward and constructive thoughts patterns) and an in-depth analysis along with creativity relationship. As per researcher knowledge, none of the empirical study has been inspected this undertaken

relationship of SL strategies with creative outcomes such as creative process engagement and creativity. Second, we extend the body of literature, by developing a hypothetical suggestion outlining the direct and in-direct link of self-leadership on employee creativity via mediating role of Creative process engagement (DiLiello, & Houghton, 2006). Thirdly, very few studies have investigated self-leadership from the context of business sector (Politis, 2015; DiLiello, & Houghton, 2006), in this way, this study will offer a pioneering effort to discover the impacts of self-leadership from creativity context in Higher Education Institutes (HEI's) (Sesen et al., 2017; Phelan & Young, 2003). Fourthly, by inspecting sequence mechanisms, we supplement studies that concentrated on particular or moderated-mediations between CPE and employee creativity with respect to the neglected self-leadership strategies (Ghosh, 2015), and answer (Chen et al., 2020) the request to observe vigorous, multifarious intervening mechanisms. Lastly, given the requisite of creativity from HEI's context, this study investigates the moderating role of meaningful work (WM; as a Cognitive aspect) and proactive personality (PP; as a personal aspect) in between self-leadership and employee creativity.

Contextual View

The HEI's "Vision 2025" emphasizes on the quality of Higher education by focusing on two main concerns; 1) provision of education, and 2) Improvement. As per this vision, the provision and growth in education mainly depends on development of faculty (Human resource), and also maximizing the research and development (R&D) prospects in higher education sector. In this regard, Higher Education Institutes (HEI's) in Pakistan shows a serious concern in the creation of human resource and capital and also towards the generation and diffusion of knowledge. This vision 2025 centers the generation of intellectual capital based on the verified fact that new-fangled knowledge based society and its economic development are entirely dependent on their human resource. Accordingly, it is considered a dire requisite for HEI's to empower this sector towards the development of knowledge and learning administration, services delivery, creativity and innovation, research and development (Economic Survey of Pakistan, 2020-2021).

Creativity in higher education institutions plays a vigorous role and contributes significantly to the innovation of all subsystems in a country. To enable the development of creativity in Higher education, it is essential for HEI's to focus on an institutional cultural shift which promotes and gives more prominence towards creativity creation and its expansion, not being constrained towards the old-fashioned methods of academic development. In this regard, Wisdom (2007) discourses the requirement for a cultural shift in higher education, and explained that it will help HEI's employees to recognize and improve their own creativity and to distinguish as an essential part of their own competence" (p. 183), and also clarifying the shift in institutional climate inspires correspondence and individual development. Research specifies in most of the organizations, employee is an imperative source of creativity, which is accountable for almost 80% of new ideas

generation and implementation (Getz & Robinson, 2003). Many academics and experts endorse the importance of individual creativity, which ultimately helps them to achieve organizational success and development (Huangfu et al., 2025; Unsworth and Parker, 2003; Smith, 2002).

To comprehend a constant drift of creativity, it is mandatory for employees to be enthusiastic and be able to revolutionize. Therefore, organizations such as HEI's are trying to capitalize their employees' ability to innovate just to become more creative. This implication illustrates the need of an employee's self-analyzing behavior, by focusing the need to examine a control an individual's emotions and certain behaviors, which helps them to identify a clear direction towards creativity generation and development. Employing individuals with creative individualities or refining the creativity are two different yet challenging ways of promoting creativity at workplace (Chang & Teng, 2017). One way of improving creativity, is to create a creativity supportive culture, where employees can gather, learn, develop and share such learning behaviors which helps them to make their job meaningful and valued, and hence they would be able to refine their own behaviors, personality and certain actions required in creative processes and outcomes. The creativity culture supports an individual to exhibit self-leading behavior by controlling their own actions, and also influencing and leading themselves through cognitive and behavioral strategies (Neck, & Manz, 2013; Neck, Manz, & Houghton, 2019). Despite agreement on the importance of self-leadership (Na-Nan, & Saribut, 2020) in activating individual creativity, few examinations of self-leadership strategies and creativity research is found in the literature specifically from HEI's context. Thus, as stated in this paper, we investigate the individual-level integrated mechanism between self-leadership and creativity. Ample of previous behavioral researches on individual creativity has concentrated on entirely organizational outcomes. Conversely, how and when innovative ideas are being created and implemented from an individual-level (i.e., individual personality, behavior, cognition and motivation), considered as the decisive part of creativity research (Shaemi, & Teimouri, 2009), which is yet to encounter.

Theoretical background and Hypothesis development

Social Cognition Theory (SCT) has been endorsed for the implication of organizational leadership studies, that combines cognitivism and behaviorism together. (Bandura, 2001). This theory states, a person's behavior is a result of social learning and also the tendency to retrieve, recognize and use past collected knowledge. Bandura (1986) claimed that investigating a person's own behaviors and actions, offers definite self-variation in personality, resulting in the change of entire work environment and upcoming behaviors. This unique change in the personality and behaviors is further elaborated and enlightened by Ford's theory of creative individual action (1996), which is grounded on Social Cognitive idea. This centered the judgements of an individual's related to recognize, and identify their own internal capabilities, which later on helps to establish and implement sequences of actions essential to achieve selected forms of performances Bandura, (1986). The

Ford's (1996) simplified that a sense of an individual's self-confirmation, distinctiveness and accomplishments tends to build emotions, behaviors and capability believes to form desired creative actions. Recognizing one's own self, developed a sense of learning, knowledge attainment, behavioral and creative thinking abilities. This wisdom makes an individual job more meaningful and valued.

The studies on Organizational leadership demonstrate that individual-level creativity entails both 1) Cognition (creative-focused) for creating useful and novel ideas and also, 2) Behavior (creative-focused) for exhibiting creative concepts and behaviors (Khalil et al., 2019; Gu et al., 2018; Chang et al., 2018; Zhou and Pan, 2015; Zhang and Bartol, 2010). Ensuing this trend, we show that Creative Process Engagements (a behavioral-mechanism) mediates the relationship between self-leadership and employee creativity via Work meaningfulness and Proactive personality. To build a desired creative behavior, an individual involves in self-control, self-management and self-influencing process, which later on control their own behavior and create influence through behavioral, natural rewards and constructive thoughts pattern strategies and hence enhances self-direction and self-motivation ability. Individual sent cues regarding their actions and behaviors considered as inventive, which formerly arranges and standardizes an employee cognition about their work-environment (Gu et al., 2018). Employees share their opinions of how they seek meaning and worth in their job role and also the perceived security for initiating risks. Considering a person's interest, self-leading employees started to send signal inputs of being appreciated and valued (Miao et al., 2014). This link become solidier if the person exhibits a personality trait of being proactive, strengthen the entire creative engagement and outcomes. Accordingly, employees with self-recognized behavior, share the perceptions of high sense of meaningful work, so they become more engaged in creative process engagement and pursue creative activities along with high proactive personality.

Self-leadership and Employee Creativity

Self-leadership (SL) is defined as a manner in which an individual's regulate their actions and behaviors, and developed an influence through a clear strategy and opinions. SL is a self-regulating practice, facilitating an individual ability serving self-motivation and self-direction (Bracht, Junker, & van Dick, 2018; Neck & Manz, 2013; Manz, 1986). The strategies of Self-leadership are generally categorized as three diverse dimensions: (1) Behavior-focused strategies, (2) Natural-reward strategies and (3) Constructive-thought patterns. These three strategies can support an individual in refining their efficiency by assisting behavior management, shaping perception, structure desire facets into activities, and creating constructive ways of thinking. They are as follows;

- **Behavior-focused strategies:** These strategies are generally associated to goal establishment, self-monitoring, self-punishment, self-rewarding, and clues strategies resulting in effective outcomes. This strategy upsurges an individual's self-awareness for handling one's own actions and behaviors (Reddy and Jooste, 2015). Behavior-fosued individuals are less likely to dominate and govern others

or external factors, as these individuals are more relying on internal aspects fostering certain actions (i.e., self-observation, and self- practice) (Furtner et al., 2018; Zeijen et al., 2018; Sesen et al., 2017; Politis, 2015).

- ***Natural reward strategies***, emphasis on individual's encouragement to improve performance by directing on fair sides of the tasks. These strategies include the enjoyable aspects of responsibilities and work (Manz, 2015; Houghton et al., 2004). Individuals with this strategy, are more motivated and strong-minded because of their nature of work and also their active work-experiences. These rewards may include inner satisfaction, sense of pleasure, enjoyment which enhance the perception of meaningful, appreciated, pleasing work condition and satisfactory work environment or activities (Ziyae and Heydari, 2016). This strategy also enhances the sense of competence, capability and self-determination (Neck and Houghton 2006).
- ***Developing constructive thinking patterns***, reflects enlightening to manage and control mental models (Neck, Manz, and Houghton, 2019; Maykrantz and Houghton, 2018; Houghton et al., 2004). Strategies related to thought patterns empowers an individual to achieve leadership skills by constructing thoughtful patterns with the help of self-evaluation, establishing believes, visualization processes for effective task and constructive self-talking (Ay, Karakaya, & Yilmaz, 2015). This strategy also helps to develop and enhance an individual's positive self-image.

The theorists on Self-leadership (SL) have anticipated that creativity is an expected consequence of an individual's self-leadership (DiLiello and Houghton 2006; Neck and Houghton 2006). However, investigation on the link between SL and individual creativity is at nascent phase precisely from HEI's context (Gosh, 2015). In this way, a further investigation is required to additionally elucidate the link between this relationship (Pratoom and Savatsomboon 2010; Neck and Houghton 2006). In the literature, creativity is proposed as significant and crucial initiator for individual innovation (Heye, 2006; Schilling, 2008). The specific personal and cultural phenomenon of creativity permits an individual to transform the possible future potentials into reality (Tan, 2007). An Individual creativity is based on two distinctive fundamentals i.e., 1) Creative Potential and 2) Creative Behavior. Creative potential is likely a person's skills and capabilities, based on the fact that the individual has to be creative and resourceful. This is linked with an individual's capacity and ability (personality-related) to construct self-leadership by mounting novel, new and useful ideas about organizational product, practices, services or procedures required for creativity (Shalley and Gilson, 2004; Mumford, 2003). On the other side, Creative behaviors result in creative outcomes, including measured consequences of creative efforts, activities, procedures involved in creative outcomes.

Jackson (2006) specified that nurturing employee creativity by assisting them to be creative is greatly significant in HEI's, where employees should inspire and develop the circumstances comprising of different approaches, strategies, methods, practices and instruction, in order to progress themselves and their potential as

entirely as this level (Alencar, Fleith & Pereira, 2017). Supporting this, individuals need to have a certain level of inner strength or related strategies that drives them to encounter challenges in creative efforts (Shalley and Gilson, 2004). When employees are encouraged to involve in self-leading behavior, this enables them to involve in defining and solving problems, by recognizing present and future challenges and opportunities and hence creating decisions accordingly, in this way their creativity is encouraged. The distinct Self-leadership strategies have shown a strong link with employee creativity (Gosh, 2015; Shaemi & Teimouri, 2009; Carmeli et al., 2006; Pearce, & Manz, 2005). The self-leading Behavior-focused strategy allows to solidifying person's inner self, and restructure inner thoughts towards the development of individual creativity.

The natural reward strategy permits to build sense of inner satisfaction and pleasures, creating favorable work condition that foster and emerge creative ideas in creativity development. While constructive thought patterns establish a positive self-image by developing beliefs, systematic thinking and mental models helping to size creativity emergence. Based on the eminence of self-leadership strategies and employee creativity, it is expected that HEI's encourages self-leadership are expected to practice advanced levels of creativity. Henceforth, self-leadership is projected to enhance employee creativity, significantly and positively. Accordingly, we propose;
Hypothesis (H1): Self-leadership is significantly associated with employee creativity (so that);

- H1a: Behavior focus strategies are positively associated with employee creativity;
- H1b: Natural reward strategies are positively associated with employee creativity;
- H1c: Constructive thought strategies are positively associated with employee creativity.

Self-Leadership and Creative Process Engagement

Self-leadership (SL) is a normative thought containing certain behavioral and cognitive guidelines of several multiple theories such as; Self-regulation theory, Social cognitive theory, Intrinsic motivation theory and Self-control theory (Neck & Houghton, 2006) under Social Cognition Theory. SL theorists claimed that employees depicting self-leading behaviors are more likely to have prospect-oriented mental concepts. They are more robust to undergo numerous challenges and also struggle to resolve the complications (Bligh, Pearce, & Kohles, 2006). Employees with high degree of SL emphasis on the constructive sides of work. They adjust their conceptual processes according to their capabilities, and are more eager to mark efforts. They usually have a strong grip on their work duties and related process and procedures. In this way, it is anticipated that individual depicting self-leadership, are likely to involve in creative actions and processes.

Creative process engagement (CPE) relates to an employees' contribution in creativity-associated processes or means. CPE includes three stages, named as; problem identification, information searching and encoding, and idea generation (Zhang and Bartol, 2010). These three stages of CPE are commonly observed as the innovative idea creation phase. The first stage of CPE starts with an identification of

problem which involves structuring the problem through goal identification, restrictions, procedures and information filtering which is required for problem solution (Reiter-Palmon & Illies, 2004). The searched information and upgraded abilities carried out in a process are also helpful for examination and judgment. At the second stage of information searching and encoding, employee devote his time and effort, to gain an extensive knowledge during the whole process information search and encoding. The collected data and information in the form of new knowledge can advance employees creative abilities. Lastly, employee attempts to pick the ultimate final decision among number of different alternatives for new idea generation (Zhang & Bartol, 2010). This novel idea or the absolute solution would be directly or indirectly beneficial for an identified problem. All of this process in CPE can greatly be done if tasks are well structured and the goals are cleared and well-defined.

The self-leading behavior of employees enable them to clear direction and their role for problem solving and decision making through their goal identification. In this way, employee feels encouraged, reinforced and accountable for building creative contribution in creativity process. Ensuing the belief of Self-determination theory, a component of SCT, supports the link between Self-leading behavior and creativity, through enhancement in self-determination and competency (Ryan & Deci, 2000). It highlights that an individual owns a convincing psychological aspiration for competency, independence and likeness, resulting in task motivation to become creative (Chirkov et al., 2003). Precisely, an individual observes the roles and duties of his/her job are more significant, understandable, and meaningful, they will start to devote an extra struggle to recognize the problem from numerous viewpoints. They find the best possible solution with the help of gathered information and creating a number of alternatives by linking varied sources of collected information (Gilson & Shalley, 2004). Adding to this, a belief of an employee regarding his or her capability to accomplish a task efficaciously, can shape preferred outcomes through their behaviors and actions, hence employee is possibly to execute an idea or a problem more persistently than before (Spreitzer, 1995; Deci & Ryan, 1985). These employees are more likely to undertake greater risks, discover new mental and cognitive ways, and remains lively with their ideas (Amabile et al., 1996). CPE has been examined in the literature with diverse leadership styles i.e., Empowering (Zhang & Bartol, 2010); Transformational (Henker et al., 2015); Participative (Chen, et al., 2020); Authentic (Zhao & Gao, 2014); Ethical Leadership (Nasser et al., (2021). Supporting the literature, CPE is highlighted as an indispensable component that influence creative behaviors and results (Shalley et al., 2004). Certainly drawing upon the nascent gap, if employees unable to recognize their capabilities and then controlling their behaviors and emotions, they will be eager to involve in creative process activities such as; (problem identification, information searching and encoding, and idea generation) to produce the desired results. Based on this, we hypothesize;

Hypothesis (H2): Self-Leadership is significantly associated with Creative Process Engagement

Creative Process Engagement and Employee Creativity

Creative Process Engagement (CPE) is highlighted in creativity literature as a dynamic component manipulating an individuals' creative behavior and consequences (Shalley et al., 2004). The mainstream of previous creativity researches largely emphasizes on the outcomes related with creativity (Binnewies & Woernlein 2011; George & Zhou, 2002; Amabile et al., 2005). However, several researchers have disapproved this concentrated link of creativity as an outcome, since the end outcome and product does not utterly account for all the processes, procedures and activities lead towards creative outcomes (Gilson & Shalley, 2004). The activities involved in CPE constitute entire creative processes which then precedes to anticipated innovative consequence (Gilson & Shalley, 2004; Mumford et al., 1991). Supporting the literature, it has been proven that involvement in the creative process is the first stage headed end results i.e., creativity (Gilson and Shalley 2004; Shalley 1991, 1995). Employee creativity focus on the behavioral and cognitive processes, applied while attempting to create novel ideas (Hughes et al., 2018). While creative process engagement controls and regulate the tractability, resulting in the exploration of mental and cognitive paths, and also the consideration given to specific facets of a task, and the degree to which a specific pathway way is monitored for required solution (Amabile, 1996). A person must involve in all the creativity-related activities which are required to involve in Creative processes (Zhang & Bartol, 2010) such identification of problem, environmental analysis and scanning, data assembly, generation and evaluation of solution, and hence implementation of solution (Shalley, 1991).

In an organizational context, attaining desired creativity outcomes could only be possible, if the processes behind those outcomes commenced in an effective manner. In this way, employees are expected to endure all the challenges undertaken while involvement in Creative processes (Tierney and Farmer, 2002) and then later on, all the constructive endings of creative engagement support and strengthen the entire procedure to come to an end (Puente-Diaz, 2016). Accordingly, we propose that creative process engagement in the stage of problem identification, information searching and encoding, and idea generation fosters employee creativity at workplace. Therefore, we hypothesize;

Hypothesis (H3): Creative process engagement is significantly associated with Employee Creativity.

Creative Process Engagement act as a mediator in between Self Leadership and Employee Creativity

Creativity plays a vital role towards finding the answers to novel enquires and then creating innovative and valuable products or services meeting individual and organizational needs (Lee et al., 2016; Chua et al., 2014). In creativity research, the role of leadership has been examined since numerous years. While supporting creativity and leadership literature, frequent studies have shown self-leadership can

actively effect on employee creativity (Phelan & Young, 2003; Gosh, 2015; DiLiello & Houghton, 2006; Kalyar, 2011; Lin, 2017). However, the mechanism of how self-leadership effects on employee creativity needs further exploration from HEI's context. It has also observed from the last three years, very limited empirical research has carry out to examine self-leadership and employee creativity relationship. The mainstream of earlier studies in Creativity research mainly emphases on the outcomes related to creativity (Binnewies & Wo"rnlein 2011; Amabile et al., 2005; George & Zhou 2002). On the other side, scholars raised a point by criticizing that the undertaken concentration on creative outcomes couldn't be fully effective in terms of achieving creative outcomes, rather activities and processes could lead to creative outcomes are as much imperative as the end results (Gilson & Shalley 2004). This clearly shows the importance of engaging in creative processes, adding a clear direction for creativity enquiries to achieve better indulgent of processes towards reaching creative results (Shalley et al., 2004; Mumford, 2000). Supporting the argument, Shalley & Gilson (2004), initiate and emphasis on personality characteristics, leadership skills, experiences, learning and knowledge, could be substantial for engaging in creative processes within a particular context. Though examination of various aspects affecting creativity have previously established an extensive emphasis in previous research, while slight consideration has been assigned to the mechanism of in what way the creative results are accomplished (Zhang & Bartol, 2010).

We draw on the Ford's (1996) Theory of Creative individual actions to postulate self-leadership and creativity tie and anticipated that Self-leadership-one's own assessment to attain direction and motivation ability may encourage the expansion of Creativity (Neck & Manz, 2013). Ford's Theory postulates that creative (Learnt-behaviors) and habitual (Personal-based) actions are theoretically self-regulated, suggesting an individual's sense of habitual actions such as (i.e., attainment, individuality and validation) builds desired Creative actions (i.e., emotions, capability and beliefs). In this way, individuals are expected to select habitual (personality based) actions unless a certain motivational force or any situations provide support for creative behaviors and actions. An individuals' self-direction and motivation helps them to clear their task and provide a clear direction in terms of achieving the desired results such as creative outcomes. Though, an important mechanism may require which mediates the connection between self-leadership and employee creativity by underlining a process of Creative Process Engagement (CPE). CPE is a- "participation in creativity-related methods or processes, including three elements, such as problem identification, information searching and encoding, and idea generation (Gilson, & Shalley, 2004).

Keeping together the theory and perspective, employees should undertake a self-influencing behavior, in which identified problem can be solved creatively. In this way, employee self-leading Behavioral strategy, endeavor to increase their self-awareness and provide a clear self-direction helping to attain a more relaxed and clear working conditions where problem is identified through environmental

scanning. While the self-leading behavior of Natural-reward strategy helps them to encourage their internal motivation to positively engage in creative task regardless of concern that the undertaken changes through innovative behaviors will encounter the established work objects, task dealings, work means, and informal rules (Reiter-Palmon, & Illies, 2004). This will help them to search information and then encode that information in order to generate the solution to identified problem in the form of idea-generation (Jaiswal, Dhar, 2015; Amabile, 1988). However, an employee self-leading behavior of Constructive-thoughts pattern, supports them to restructure and heighten the knowledge and information obtained after integrating resources, and hence based on the formation of their constructive thoughts, the idea is generated to promote creativity.

Additionally, once an employee' creative action and process involvement is not as efficiently systematized, that may effect on solution quality and effectiveness. The investigators theorized that CPE is favorable to creativity (employee-level), as those who take part in creativity-related process, inclines to devote more effort in identifying problem, hunting relevant information, exploring likelihoods and hence, are more expected to yield useful and novel solutions. Likewise, employees are encouraged to involve and lead themselves in a process followed by clear-defined goal and direction based on self-assessment of capabilities, their creativity will be stimulated. However, if they are not stimulated to lead themselves in acute conditions, this way creativity is not encouraged (Pearce and Manz 2005). Based on the build fact and discussion, it is proposed that Self-leadership (SL) is a significant factor of creativity, while CPE positively mediates the relationship between Self-leadership (SL) and employee creativity. Based on these arguments we propose;

Hypothesis (H4): Creative Process Engagement significantly mediates the positive relationship between Self-Leadership Strategies and Employee Creativity

Work Meaningfulness as a moderator in between Self-leadership and Creative Process Engagement

Work meaningfulness (WM) outlines the worth of a purposeful work or a goal indicated to a person's established standards (May, Gilson, & Harter, 2004). It typically redirects an intrinsic concern in a job and primarily contains an appropriate fit among person beliefs and values and also the work role desires (Spreitzer, 1995). It is a person view of a reliable association between their work and a wider life purpose beyond the self (Bailey, & Madden, 2016). In contemporary organizational and management research, the study emphasis on the positive meaning of work and use the term Work meaningfulness in this study. This sense will make an individual more passionate and dedicated towards their work resulting in shaping positive perceptions of impactful work which actually create meaning and value to the job (Aryee et al., 2012), and also pursue those actions which matter most of it (Mulki & Lask, 2019).

Prior research (Lee et al., 2017; Meng et al., 2020; Johnson, 2021) has examined work meaningfulness (WM) beyond leadership literature based on additional variances and further calling when expecting diverse leadership styles

along with the role of WM. In literature, this role is examined with various favorable job-related consequences, such as job satisfaction, empowerment, motivation, performance, and career development. Among of all, work meaningfulness has been widely studied in the literature with one of the job-related factor; employee engagement and displays that meaningful work is one of the strong predictor of employee engagement in the organizational processes (Chaudhary & Panda, 2018; Kaur & Mittal, 2020; Johnson, 2021). The role of WM in employee engagement noticeably highlighting that individuals who delineate work value and create a positive meaning of work are more likely to work effectively and hence directly involves in most challenging process and procedures that lead them to create a desired positive behaviors and outcome (Stephens & Carmeli, 2017).

Beside this, several researchers have suggested the call for exploring the role of WM on creativity (Cohen-Meitar, Carmeli, & Waldman, 2009; Bhatti et al., 2020; Al-Hawari at al., 2021), and also creative work involvement (Stephens & Carmeli, 2017). As creativity entails an individual's overall involvement in creative work, and also their commitment of effort and time in creative processes (Carmeli & Schaubroeck, 2007; Kark & Carmeli, 2009). Consequently, it could be claimed that SL is a key driver of forming creative process engagement fostering meaningfulness at work. Such as, an individual's along with self- influenced behavior shows a wide role in directing and motivating their behavior and also this type of motivation is precarious to bring self-initiative and creativity to attain intellectual organizational development (Bullinger, 1999). Since creativity is often required in ill-defined situations, employees with self-leading behavior have to use technical expertise and problem-solving skills to induce a task structure, provide a vision for expected work goals, plan out work, stimulate and motivate people, and ensure that the work being produced is connected with larger organizational concerns (Mumford, Scott, Gaddis, & Strange, 2002).

Self-leadership is a "value-added" aspect of leadership, which generally influence an individuals' self-concept and beliefs, helps them to mark their work more meaningful and impressive. While, work meaningfulness specifies a sense of work understanding (i.e., a clear consideration of job-role) and a sense of determination (i.e., consideration of aiding for social good) (Steger & Dik 2010). The self-leading behavior of an employee helps to involve in internal leadership process by deliberately review and direct their own intentions and thoughts towards a desired change involve in creative process engagement (Phelan, & Young, 2003). Once, an individual realizes their work significant and meaningful, they noticeably realize their role directly in workplace setting and also see the influence of their work on organizational creative processes and procedures. High meaningfulness of work offers greater paybacks in the process of creative engagement. This sense will aid an individual to increase a better understanding of realizing how their meaningful work cause a strong sense of achievement in accomplishing the activities involved in CPE such as problem identification, information search and encode and generating ideas. and drive to involve in CPE. This shown an agreement that

employees who develop the constructive evaluations of their own capability, tends to participate in creative process more comparing to those who are not (Stairs & Galpin, 2010) through increasing their perceptions of the meaningfulness of their work. We, consequently, propose that the link between Self-leadership and creative process engagement is reinforced when employee experiences greater work meaningfulness. Hence, the subsequent hypothesis is proposed;

Hypothesis (H5): Work Meaningfulness act as a positive moderator in between Self-leadership and Creative Process Engagement

Proactive personality act as a moderator in between Creative Process Engagement and Employee Creativity

Proactive personality (PP) is relatively a constant personality trait which incorporates an individual's propensity to initiate particular initiative just to expand existing conditions or to construct novel ones (Bateman and Crant, 1993). Individuals with PP started to take defensive activities for improvements in their own routine and performance and/or that of their entire institute (Grant & Ashford, 2008). It is an exclusively imperative construct that relates to career expansion, since it proposes basic intrinsic motivation to start and struggle for a better future. These individuals are more active at choosing, generating and then manipulating their own work situations (Siebert, Kraimer, & Crant, 2001). Most of the time, they used to scan diverse opportunities and plan an altered prospect (Crant, 2000).

Beside this, they take an initiative to generate new ideas for change execution, so that they can take responsibility by acting upon their ideas (Fuller and Marler, 2009). Proactive employees pursue diverse personal and organizational prospects. They select and generate those circumstances that heighten the possibility to outdo (Seibert, Crant, & Kraimer, 1999), however those individuals with less proactive personality tend to respond their organizational setting rather than constructing it, such as by maintaining the status-quo (Seibert et al., 1999). Their undertaken and identified opportunities serve them unique potentials to lead themselves for better future. They enthusiastically try to restructure their work-setting (Campbell, 2000) for executing something unique instead of restricting from challenges (Liguori et al., 2013). Since these individuals are open to new work related experiences, and more motivated to those organizations and jobs offering a high level of meaning work. These individuals can accordingly take several risk and threats, if required to find new jobs associated with distinct personality traits (Bergeron, Schroeder, & Martinez, 2014).

Empirical research confirms that PP is positively connected to numerous organizational phenomena, such as Creativity (individual-level) and Creative performance (Gong et al., 2012; Kim et al., 2009). Supporting literature on proactivity has mainly explored the significance of behaviors undertaken in Proactive personality and its effect on creative outcomes only i.e., Creative performance. In general, previous studies have not examined that how Proactive Personality relates with processes and activities leading towards creative outcomes, such as the role of Creative Process engagement that is quiet ample to learned and

examined further. Beside the creative processes and outcomes, there is a need to address Proactive personality along with primary emphasis on employee-related outcomes. In this way, we initially suggest employees high on proactive personality are expected to approach and carry out their work more accurately by demonstrating creative behaviors (Alikaj et al., 2018). This research discourses the undertaken viewpoint, by hypothesizing how and to what extant individual Proactivity Personality could guide the mechanism in which creative activities and actions are performed to engage in creative process with the basic aim of carrying problem identification, information searching and encoding, and idea generation activities.

Supporting Ford's theory of Creative actions (Ford, 1996) and some of the important yet related facets of Self-regulation theory (Baumeister & Vohs, 2007; Carver & Scheier, 1981), former studies have revealed that due to the active personality nature, proactive employees are more anticipated towards exchange and networking behaviors (Thompson, 2005). Because of this social interaction, they gather the access information, opportunities and resources, required to identify the existing problems in the organizational context (Gong et al., 2012). They are able to meet diverse people with relevant skills that encounter the appropriate information. Adding to this, studies confirmed that individual's proactive personality helps them to involve in creative actions. As these individuals are highly motivated and inspired to collect all organizational and personal experiences and then eventually learn and also be able to improve organizational situation because of their accountable nature (Fuller, 2009; Kim et al., 2009). They are excited to take high initiatives, risks and also take responsibility to recognize and identify several organizational problems. As of their hard working and challenging nature, they tend to allocate more time and effort to the assigned task which in return directly helps them to search the information and then securitize it through encoding process. Therefore, it is assumed proactive individuals can accomplish their tasks as better than the individuals with low PP. They perform extraordinary in terms of transforming outcomes from the identified problems into an effective information search. proactive employees are persistent in the face of obstacles. They use to explore alternate ways of doing several effective things such as searching information and encoding the required for solving the problem. This unique behavior of proactive personality will offer them to the carry out diverse sources, resulting in the form of idea generation. They are also naturally inspired to initiate further and engage in creative processes leading to creative outcomes (Caniëls, 2019).

An individual self-initiating attitude, along with high level of proactive behavior, helping them to endeavor new goals and opportunities in entire creative processes and hence initiate final decision accordingly (Lepine et al., 2000). It is supposed that individuals involve in creative process engagement and creativity, can work more effectively and creatively only if they make an active effort to reorganize their workplace and also experience challenging and positive moods (Liu, 2016; Abid et al., 2021), which is all possible if they have a strong disposition towards proactive behavior (i.e., proactive personality). Such that, employee high on PP can put

themselves in a conditions where they can feel highly encouraged and inspired towards their involvement in creative processes activities. They can efficiently adjust and adapt various changes in the systems and also take part in activities such as recognition of problems, information searching and scrutinizing, and hence idea generation (Fuller and Marler, 2009; Grant and Ashford, 2008) in the form of employee creativity. Hence, we proposed the following;

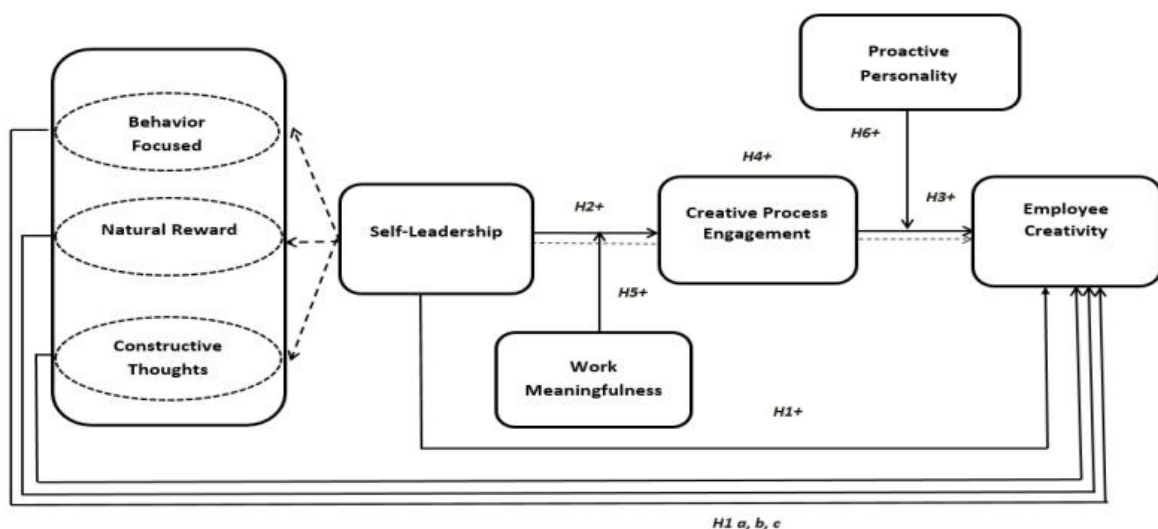
Hypothesis (H6): Employee Proactive Personality moderates the relationship between Creative Process Engagement and employee Creativity such that the relationship is stronger when proactive personality is high rather than low.

An Integrative Moderated-Mediation Model

Built on the moderating-mediating hypotheses in between Self-leadership (SL) and Employee Creativity (EL), supporting with literature gap the study further suggest two moderated mediation effects. The two distinct moderating variables; both employees’ sense of Meaningful work (WM; as a Cognitive aspect) and a Proactive Personality (PP; as a personal aspect) moderates the correlation, but in diverse way. This association was carried out via employees’ Creative Process engagement and hence creativity at workplace. It is supposed that WM is likely to accentuate the indirect effects of Self-leadership on employee creativity via the mediating effect of Creative process engagement. On the other side, PP is also expected to highlight the indirect effects of Self-leadership on employee creativity via the mediating effect of Creative process engagement. Such that, we propose the following two moderated-mediated hypotheses;

Hypothesis (H7): Meaningful work moderates the indirect effect of self-leadership on employee creativity, these indirect effects will be stronger for those high in Meaningful work (WM).

Hypothesis (H8): Employee Proactive personality moderates the indirect effect of self-leadership on employee creativity, these indirect effects will be stronger for those high in Proactive personality (PP).



Theoretical Framework of the Study

Figure 1.1: Research Framework of the study

RESEARCH METHODS

Sample and Data Collection

The analysis of this study is based on individual-level (employee) data. The overall data was gathered through a cross-sectional survey which is designed for this study bases on research questions. We measured and surveyed employees from Higher Education Institutes (HEI's) in Pakistan for attaining measures required to test the study proposed hypotheses. Higher Education Institutes in Pakistan are governed under Higher Education Commission. The HEI's in Pakistan are alienated into public and private sectors. There are overall 211 universities (in total), along with sixty-three thousand faculty working in both public and private sectors (Economic Survey of Pakistan, 2018-19). While conducting the survey, we applied probability sampling. The study is quantitative in nature and were collected using a survey-based questionnaire.

The survey was based on voluntary subject participation and distributed to HEI's employees (in hand-printed form) after approaching them through formal permission from heads of their institutes via informing the entire purpose of the study. A Likert-scale survey, containing statements from employees to ask about their level of self-leadership (SL), creative process engagement (CPE), Meaningful work (WM), Proactive personality (PP) and employee creativity (EL). The survey questionnaire was distributed to HEI's employees (includes; faculty of all level, and higher officers). Those participants who shown interest and finally undertake in the study, were fully guaranteed about their indicated interest in survey participation and also received assurances of confidentiality. The overall structure of the questionnaire was composed of two main parts; first section seeks the views/perceptions from employees regarding measured constructs, while the second part was based on demographical information. The demographical information of participants was taken by asking about gender, age, qualification and experience. As these employee demographics were directly related with employee creative outcomes (Carmeli & Schaubroeck, 2007).

A total of 360 questionnaires were disseminated to the required sample, out of which 289 were used for final testing of hypothesis, after screening out half-finished and invalid questionnaires based on consistent responses and over 5% missing of data (Cheng, Bai, & Yang, 2017; Xu, Zhang, & Chan, 2017). The overall response rate was 80.27%, considering as good response for this kind of studies. Of all the participating respondents (i.e., employees), the 55.45% were male, the mean value respondents age was 34.76 years (SD = 3.89), 76.54% reported Master's degree, the mean organizational tenure (experience) was 3.71 years (SD = 2.21).

Operationalization of Constructs and Measurement Scales

As per the objective purpose of this study, we built our hypothetical research model comprising of five below stated variables. For testing our proposed hypothesis, we measured and examined all of these constructs mutually. We measured the undertaken study variables of this study by using

a five-point Likert scale ranging from (1=not all accurate to 5= completely accurate)

Independent Variable: Self-leadership: We assessed 35-items of Self-leadership (SL) with five-point scale (M=7.2, $\alpha = 0.91$) developed by Jeffery, & Christopher, (2002). For example, “I use my mind to portray myself executing well on important tasks”.

Mediating Variable: Creative Process Engagement: 11-items of Creative Process Engagement (CPE) were assessed using five-point scale (M=6.1, $\alpha=0.86$) developed by Zhang and Bartol, (2010). For example, “I spend my extensive time trying to comprehend the nature of the problem”.

Moderating variable: Meaningful work: 10-items of Meaningful work (WM) were assessed using five-point scale (M=7.9, $\alpha=5 0.93$) established by Steger, Dik, & Duffy, (2012). For example, “I have a good sense of what makes my job meaningful”.

Moderating variable: Proactive Personality:10-items of Proactive Personality (PP) were assessed using five-point scale (M= 6.9, $\alpha=0.88$) developed by (Seibert, Crant, & Kraimer, 1999). For example, “Wherever I have been, I have been a powerful force for constructive change”.

Dependent Variable: Employee Creativity: 9-items of Employee Creativity 9EL) were assessed by using five-point scale (M=7.3, $\alpha=0.93$) developed by Ettlíe, & OKeefe, (1982); Tierney, P., & Farmer, S. M. (2004). For example, “I use to take risks in terms of bringing new ideas in doing job”.

Control Variables

Earlier examined studies have recommended that Employee demographics (i.e., gender, age, education, and organizational tenure) were mainly related with employees' creativity (Carmeli & Schaubroeck, 2007; Shalley, Gilson, & Blum, 2000; George and Zhou, 2007; Perry-Smith, 2006). Therefore, we have involved tall of these four aspects as the study control variables: such as, gender was coded as a dummy variable (1 = male, 2 = female), age and organizational tenure and employee age were self-reported and asked in the form of number of years, however education was distributed into four levels (1 =Bachelors/ Graduate, 2 = Post Graduate, 3 =Doctorate, 4=Post Doctorate).

DATA ANALYSIS

In the current study, we have used SPSS 20.0 and AMOS 23.0 for the entire analysis of statistical data. Basically, the means (M), Standard deviations (SD) and Correlations of all constructs were measured by using SPSS 20.0. This preliminarily examined the interactions among various variables. Later, we conducted a sequences of Confirmatory factor analyses (CFAs) to check the measures validity by analyzing convergent and discriminant validity in between all constructs through using AMOS 23.0.

To test the study hypotheses (i.e. direct, indirect and moderating effects), a hierarchical regression analysis was directed. For instance, all the research variables were measured and conceptualized at similar level (i.e., individual). Precisely to examined the moderating variables and their relationships, we employed Aiken and

West's (1991) methods to test hypothesis. Further, we conducted a regression model through which the moderators i.e., PP and WM were observed simultaneously. Baron and Kenny's (1986) technique was employed for testing the mediating hypothesis. Lastly, to address Moderated-mediation hypotheses, we applied a Monte Carlo Bootstrap method. In which we calculated the confidence interval (CI) for the indirect effects (such as, the effect of Self-leadership on employee creativity through the mediating effect of Creative Process engagement) at high (+1 SD) and low (-1 SD) level of the moderator.

RESULTS

Confirmatory Factor Analyses (CFAs)

To test the overall research model fit, Confirmatory Factor Analysis of discriminant Validity were assessed. These includes the test of Model's Chi-square; Root mean square error of approximation (RMSEA); Ratio of χ^2 to degrees of freedom (χ^2 / df); Comparative fit index (CFI), and Tucker-Lewis index (TLI). The outcomes of preceding studies have shown a sequence of conditions for the goodness-of-fit indices such as: the limit value of TLI and CFI, are larger than 0.90; and the value of χ^2 / df is less than 3.0 (Hu & Bentler, 1999); and also RMSEA is suggested to be up to 0.08, while the other values larger than 0.10 are taken as indication of poorly fitted model (Browne & Cudeck, 1993). It is also proven for best fitted model, if CFA's of structural model specifies the fit-indices value equal to, or bigger than, the suggested values (i.e., exhibit acceptable reliability and validity); it is then recognized as best fitted. Furthermore, the convergent validity was examined by testing the measurement models for overall calculating the Average Variance Extracted (AVE). It is also shown that constructs along with (AVE > 0.5) validate acceptable Convergent validity (CV) (Fornell & Larcker, 1981).

We also examined the discriminant validity (DV) of the five anticipated constructs by contrasting the Five-factor model against alternative models. The overall model assessment and the examined comparison results were shown in below Table 1. It is shown that the Five-factor baseline model (M1: $\chi^2 = 45.31$, $\chi^2 / df = 1.74$, TLI = 0.91, CFI = 0.89, RMSEA = 0.07) clearly close-fitting the data extensively enhanced than any of the substitute models. Hereafter, the five key variables were empirically distinctive from each other and providing a good fit. We also compared this baseline model with 4 alternative models. Such as, in this step, Model 1: Baseline model with (SL, CPE, WM, PP and EC) was overloaded on their intended factors; while Model 2: Four-factor model (SL, CPE) were loaded onto one factor (SL+CPE, WM, PP, EC). Model 3; Three-factor model (SL, CPE, WM) loaded onto one factor (SL+CPE+WM, PP, EC); Model 4: Two-factor model (SL, CPE, WM, PP) were loaded onto one factor (SL+CPE+ WM+PP, EC). 4: One-factor model along with all items (SL, CPE, WM, PP and EC) were loaded onto one factor (SL+CPE+WM+PP+EC).

Results based on fit index and the Chi-square difference test specified that the Five-factor model fit the data better than all alternate models. For further details, see Table 1;

Table 1:
Confirmatory Factor Analysis of Discriminant Validity

Model	Factors	χ^2	Df	χ^2 /df	RMSEA	$\Delta\chi^2$	CFI	TLI
Model 1	5 Factors: SL,CPE, WM,PP, EC	145.31	83	1.74	0.07	-	0.89	0.90
Model 2	4 Factors: SL+CPE, WM,PP, EC	339.01	86	3.87	0.13	181.76**	0.71	0.65
Model 3	3 Factors: SL+CPE+WM,PP, EC	401.38	88	4.49	0.15	244.25**	0.64	0.58
Model 4	2 Factors: SL+CPE+ WM+PP, EC	421.45	90	4.31	0.16	267.76**	0.62	0.55
Model 5	1 Factor: SL+CPE+WM+PP+EC	438.21	92	4.91	0.17	289.01**	0.59	0.53

Note: N = 289

SL = Self Leadership; CPE= Creative Process Engagement; WM= Work Meaningfulness; PP= Proactive Personality, EC=Employee Creativity.

$\Delta\chi^2$ tests are between the five-factor model and each alternative model.

+ represents two factors merge into one.

* $p < 0.05$; * * $p < 0.01$

Testing and Analysis of results

Descriptive statistics

The results of descriptive statistics contain Means, Standard deviations, Reliabilities, and Correlations of all variables (see table 2). Notably, Self-leadership (SL) was positively correlated to Employee creativity ($r=.71$, $p<.01$); Self-leadership (SL) and Creative Process Engagement (CPE) ($r =.67^*$, $p< .05$); In addition, Creative Process Engagement (CPE) was certainly correlated with Employee creativity (EC) ($r =.61^*$, $p<.05$). We conducted Structural Equation Modeling (SEM) analysis to test our hypotheses. To test hypothesis 1, and also hypothesis 1 (a, b, c), we estimated a direct effect model, containing all three self-leadership strategies (i.e., Behavior Focused strategy, Natural reward strategy, and Constructive thoughts pattern) predict a direct positive effect on employee Creativity. It has found that self-leadership (SL) strategies significantly related with self-leadership such as; Behavior focused strategy ($r=0.75^{**}$, $p<0.01$); Natural reward strategy ($r = 0.67^{**}$, $p<0.01$) and Constructive Thoughts patterns ($r=0.83^{**}$, $p<0.01$). However, self-leadership strategies such as Constructive thoughts patterns ($r=0.72^{**}$, $p<0.01$) and behavior focused strategy ($r = 0.69$; $p>0.01$) are significantly related with Employee creativity as compared to

natural reward strategy ($r=0.41$, $p>0.01$), found insignificant. These finding offers preliminary supports for our research hypotheses.

Further explanation is given in below table 2.

Table 2: Means, standard deviation and Inter-correlations of study variables

S.no	Variable	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12
1	Gender	1.50	0.49	-											
2	Age	34.76	3.89	-0.03	-										
3	Education	2.675	0.45	-0.21	0.01	-									
4	Tenure	3.711	2.21	-0.06	0.56**	-0.12	-								
5	Behavior Focused	4.219	0.39	0.23	-0.12	0.31	0.08	(0.78)							
6	Natural Reward Strategy	3.452	0.12	-0.01	0.05	0.98	0.52**	0.61**	(0.69)						
7	Constructive Thoughts patterns	3.898	0.38	0.18	-0.14	0.24**	0.32**	0.56**	0.76**	(0.72)					
8	Employee Creativity	4.122	0.32	0.76**	0.41	0.53	0.69*	0.69**	0.41	0.72**	(0.85)				
9	Creative Process Engagement	4.075	0.25	0.61	0.52	0.65	0.61	0.78**	0.76**	0.59*	0.61**	(0.89)			
10	Self-Leadership	4.239	0.49	0.98	-0.01	0.15	0.39	0.75**	0.67**	0.83**	0.71**	0.67**	(0.78)		
11	Meaningful work	4.013	0.23	0.56	0.65	0.87	0.76	0.81	0.89**	0.62**	0.65**	0.68**	0.74**	(0.91)	
12	Proactive Personality	3.983	0.23	0.65	0.21	0.32	0.19*	0.72**	0.64*	0.76**	0.43**	0.64**	0.56**	0.68**	(0.89)

Notes: N = 289

*p 0.05; **p 0.01;

Figures in parentheses indicate Cronbach's alpha value

Hypothesis Testing

We estimated the robustness of overall model, before testing of hypothesis and their proposed relationships. Firstly, we confirmed all measures were mean centered so that the effects of multi collinearity can be eliminate. For this, we considered Variance inflation factors (VIFs), just to recheck if multi collinearity could cause a significant problem The results show that all the VIF values were reported under 10 (the highest VIF-value was 2.09); consequently, based on the cutoff value, we conclude that the study measures do not report for multi collinearity issue.

Further, we used Linear Multiple Regression analysis, for investigating the proposed effects of Self-leadership, on employee creativity via by Creative Process Engagement (CPE). In addition, we observed the assumed interactional effects of Meaningful work and Proactivity personality in between SL, CPE and EC. In analysis of linear multiple regression analyses, we initially regressed Employee Creativity on the control variables (i.e., gender, age, qualification and organizational tenure) (Model 1). While in (Model 2), we investigated the regression analysis by adding other factors to this analysis. The result of this analysis show that SL, CPE,

WM, PP are positively and directly related to Employee Creativity (EC) (See Table 3).

Table 3: Linear Multiple Regression analysis

	Model 1 Liner regression model, control only unstandardized - coefficients	Model 2 Linear regression model, full model (unstandardized- coefficients)
Independent variables		
(Centralized)		
Direct effect		
Self-leadership (SL) (IV)		0.256***
Creative Process		0.376***
Engagement (CPE) (MV)		
Meaningful work (WM)		0.243***
(Moderator)		
Proactive Personality (PP)		0.254***
(Moderator)		
Controls		
Gender	0.03	
Age	0.01	0.51
Education	0.81**	.002
Tenure	-.043	0.56***
		-0.15
Intercept	2.0822***	
Adjusted R square	0.265	1.0967***
F-value	42.876	0.298
N	289	98.879
		289

Note: Unstandardized coefficients are reported; independent variables were centered.

*p < .05, **p < .01, ***p < .001.

Hypothesis 1, 2,3, and 4 were tested and results specifies a significant positive relationship in between Self-leadership and Creative process engagement ($\beta = 0.417$, $p < 0.001$), supporting Hypothesis 3; between Creative process engagement and employee creativity (EC) ($\beta = 0.312$, $p < 0.05$) supporting Hypotheses 2. For testing the Hypothesis 3, we then evaluate the mediating role of Creative process engagement (CPE) by linking an over-all total effect ($\beta = 0.379$, $p < 0.001$) and the direct effect ($\beta = 0.201$, $p < 0.05$) of Self-leadership (SL) on Employee Creativity (EC). We have also found that the effect of Self-leadership is lesser by monitoring the effect of CPE, suggesting the mediation effect of Creative process engagement.

Additionally, we have undergone for indirect-effect of Self-leadership (SL) on employee creativity (EC) via CPE. We found that this in-direct effect of CPE in between SL and EC is significant ($\beta = 0.162$, $p < 0.05$), provide support for Hypothesis 4. (See table 4).

Table 4: Direct and Indirect effects of the relationships

Relationships	β	p
SL→CPE	0.417	0.000
CPE→EC	0.312	0.002
SL→EC	0.379	0.000

	Direct effect (with Mediator)		Indirect effect	
	β	P	β	p
SL→CPE→EC	0.201	0.023	0.162	0.0110

Note: N = 289

SL = Self Leadership; CPE= Creative Process Engagement; WM= Work Meaningfulness; PP= Proactive Personality, EC=Employee Creativity.

* $p < 0.05$; * * $p < 0.01$.

To examine the total conditional (i.e., direct-effect & conditional indirect-effect), we have used Hayes' PROCESS macro for testing of Hypotheses 5 and 6. The projected conditional-effects are given in Table 5. Such as, the coefficients of the link between SL and WM is positive and significant ($\beta = 0.063$ $p < 0.05$), proposing the effect of SL on CPE varies with the levels of WM, being larger for higher levels of WM. This provide supports for Hypothesis H6. However, for testing the results of hypothesis 6, the coefficient of the link between CPE and EC is positive and significant ($\beta = 0.052$ $p < 0.05$) signifying the effect of CPE on EL differs with the levels of Proactive Personality (PP), being larger with high PP. This provide supports for Hypothesis 6. (See table 5).

Table 5: Conditional effect and conditional indirect effects

Path	β	p	LL CI	UL CI
Self-leadership →Creative Process Engagement				
SL→CPE	0.162	0.000	0.112	0.218
WM→CPE	0.301	0.000	0.243	0.351
SL x WM →CPE	0.063	0.031	0.005	0.123

Creative Process Engagement → Employee Creativity

CPE→EC	0.123	0.001	0.015	0.0312
PP→EC	0.201	0.000	0.234	0.345
CPE x PP → EC	0.052	0.023	0.001	0.156

Note: N = 289

SL = Self Leadership; CPE= Creative Process Engagement; WM= Work Meaningfulness; PP= Proactive Personality, EC=Employee Creativity.

* p < 0.05; * * p < 0.01

Agreeing to the techniques recommended by Edwards & Lambert (2007), the results of Moderated-Mediation suggesting if the indirect-effect of SL on Employee creativity via CPE varies considerably in between high and low levels of moderators (i.e., Work meaningfulness and Proactive personality). We have also inspected the conditional indirect-effect of WM in between indirect effect of Self-leadership and employee creativity via Creative Process Engagement (CPE). As shown in Table 6, we have found the effect is stronger ($\beta = 0.156$, $p < 0.05$) when high WM (+1 SD) and weaker ($\beta = 0.112$, $p < 0.05$) when low WM (-1 SD).

Additionally, the conditional indirect-effect of WM under (+1 SD) high value is significantly different from (-1 SD) lower value. This provide support for Hypothesis 7. However, the conditional indirect-effect of PP on the indirect effect of Self-leadership (SL) and employee creativity (EC) via Creative Process Engagement (CPE). As shown in Table 6, we found the effect is stronger ($\beta = 0.189$, $p < 0.05$) when WM (+1 SD) is high and weaker ($\beta = 0.117$, $p < 0.05$) when WM (-1 SD) is low. Furthermore, the conditional indirect-effect of WM under the high value (+1 SD) is substantially different from its effect at the low value (-1 SD). This provide supports for Hypothesis 7. (See table 6)

Table 6: Results of Moderated Mediation effects

Path	β	p	LL CI	UL CI
<i>Self-leadership → Creative Process Engagement → Employee Creativity (Moderator WM)</i>				
WM low -1SD	0.112		0.031	0.241
WM high +1SD	0.156		0.090	0.345
<i>Self-leadership → Creative Process Engagement → Employee Creativity (Moderator PP)</i>				
PP low -1SD	0.117		0.014	0.201
PP High +1SD	0.189		0.098	0.265

Note: N = 289

SL = Self Leadership; CPE= Creative Process Engagement; WM= Work Meaningfulness; PP= Proactive Personality, EC=Employee Creativity.

* $p < 0.05$; * * $p < 0.01$.

DISCUSSION

In this study, we sought to explore the processes underlying the ways in which self-leadership can motivate employees to act creatively. The findings indicate that when an individual exhibiting self-leading behavior by controlling his own emotions and behaviors, they create a psychological context of meaningfulness work (job resource) and proactive personality (individual resource), which helps them to involve in Creative process engagement (CPE) and in turn, their creativity. These findings also suggest that employees with high-PP and high-WM, are likely to display and engage in Creative processes and also benefit from it in the form of creativity.

Theoretical implications

In terms of theory implications, the study offers numerous new insights in self-leadership theory. It has seen that there are number of theoretical studies investigated on the self-leadership concept, however the SL research on its application found certainly limited (DiLiello, & Houghton, 2006). Calling to this, the new investigations require to underwrite to organizational behavior's literature and also to outline the dynamics of self-leadership along with strategies from HEI's context. We tested the mechanism of how to integrate self-leadership (SL) strategies i.e., behavior focused, natural reward, constructive thought patterns with employee creativity (Manz and Neck, 2004; Manz,1986). Collectively, all these aspects of SL enhance employee creativity, resulting to encourage a person to attempt new ways and methods to evaluate and resolve organizational problems in terms of being creative. These results support an agreement with related examinations by Gosh, (2015); Carmeli et al. (2006); and Pearce and Manz, (2005). This study empirically established that constructive thoughts pattern; one of significant aspects of self-leadership including mental thinking, reviewing and analyzing illogical beliefs, and mental descriptions for future projection; attempts found a strongly effect on employee creativity at workplace (Gosh, 2015). However, behavior focus strategy emphasis on internal self of an employee and focusing on self-drive to facilitate the progress of an individual's found another predictor of EL (Gosh, 2015).

Creativity theorists e.g., (Heye, 2006; Amabile, et al. 1996) argued that individual's creativity is significant in its own way and can be hypothesized as an essential initial step or precondition require for an organizational innovation. Our findings offer significant implications to understand an entire procedure (i.e., process and activities) underlie in employee creativity emergence. This relationship is well recognized in the literature, yet, the fundamental mechanism of this association has received relatively slight consideration and hence little is recognized about how CPE

is beneficial to creativity. Adding new insights in theory of Creative individual actions (Ford, 1996) and Social Cognition Theory, (Bandura, 1986); by demonstrating how the process involved in creative actions and the activities related problem recognition, information search and encode, and idea generation can lead to an important mechanism of employee creativity. These findings are also consistent with (Li, Yang, Lin, & Xu, 2021; Cheung et al., 2020).

This study also provides new insights in Self-regulation theory, Intrinsic motivation theory and Self-control theory (Neck & Houghton, 2006), by providing a valuable comprehension of how an individual's self-leading behavior is beneficial in an early stage of creative processes and creativity outcomes. The unique examination of SL, CPE and EC offer a further understanding in leadership and especially creativity literature. Yet scholar's emphasis their greater efforts on the relationship of CPE and EC with varied leadership styles and attitudes which can discourse the fundamental underpinnings of Individual-creativity research (Ghosh, 2015). However, research has not appropriately redefined the place of self-leadership in expansion of creative work involvement.

Our research findings demonstrate that creativity enhances as employees accept or appreciate their work as meaningful. These findings establish constant results with Bhatti et al., (2020). Consistent to creativity, meaningful work has linked with creative behaviors (Bawuro et al., 2019). Considering CPE as an important mechanism in creativity, limited studies have investigated WM and CPE association. Interrelated this phenomenon with SL, if employees control and lead themselves by focusing on strategies related to behaviors, rewards and thoughts patterns, likely to involve in processes in relations to creative activities. Such as, employee along with self-influencing behavior having a clear direction of their goal, inclines to actively involved in problem recognition, information search and idea generation activities. This consider a challenge to stimulate self-leading behavior in CPE as such by a personal means only, however an employee sense of meaningful work can enhance this relationship in which self-leading employees can perform the best in CPE by considering high WM.

Our study conceptualize creativity as a manner in which individuals are personally influenced to dedicate their extra effort, in creative acts. Likewise, creativity is an outcome of a person's inner intentional pursuit and it is only anticipated from those individuals, who encouraged to become creative. In the process of creativity, employee needs to be confident and self-assured in recognition of their abilities and skills. Given the importance to energetic and confident aspect of personality, our research improves the existing understanding by displaying how proactive personality is predominantly imperative in creative processes. The study results have established that employees high on PP, likely to involve in Creative Process engagement (CPE) such as involvement in the steps from problem identification to idea generation are equally important for employees high on PP, comparing to those who are low on PP. Our finding is consistent with Caniëls,

(2019), justifying Proactive behavior is more imperative for the first two initial stages of CPE i.e., problem recognition and searching of information.

Implications for practice

Since the prominence of Creativity (individual-level) in an entire organizational-context (Grant & Ashford, 2008; Shalley et al., 2004), it is significant for HEI's executives to recognize how creativity can be an imperative for organizational competitive sustainability. Our study provides valuable comprehensions regarding how a self-influenced and self-leading behavior of an individual is favorable for an initial stage of creative process. This self-initiative behavior can help them to bring creativity along with the institution of numerous practices and policies supporting the expansion of creative process engagement and creativity particularly in HEI's. The analysis of an employee's self-leading behavior through examining Behavioral, Natural reward and Cognitive thought strategies could help an organization to recognize which strategy is more or less significant to identify self-leadership and contributes towards creative endings (Gosh, 2015; Carmeli et al. 2006; & Pearce and Manz, 2005). This implies that HEI's should pay greater consideration towards the self-leading behavior of existing employee's and also encouraging them to focus on their positive aspects of personality through proper counselling, training and creativity culture. It is considered as harder to inspire self-leading behavior as such by a personal means only, however meaningful work and proactive personality can nurture and cultivate an organizational philosophy supporting the fact that self-leading employees can accomplish the best. The findings also suggest that employees with High-Proactive personality and High-Meaningful work are more likely to involve in CPE and its related activities and also benefit from it in the form of creativity. This may offer implications for recruiting and selecting practices for new employees, assuming the fact that individuals high on self-leadership and proactive personality could show greater reliability in their personality and as well as behaviors since long they have been employed, and involved in several work roles and jobs (Judge & Kammeyer-Mueller, 2011). Encouraging employees to consider their work as meaningful and valuable, it is significant for organizations that instead of focusing on single source, they should be substitute as various meaningfulness sources (e.g., personal, social, contextual) as possible (Wang, & Xu, 2019). These study outcomes suggest HEI's can offer a substantial role in refining employees' creativity by offering them such a creative work environment where they could intentionally take part in creative processes. Institutional practices should be designed in such a way that enhance individual differences and their creative behaviors among the organizational members. These practices must imply all the effective services, helping employees to involve in CPE activities such as identifying of problem, data searching and hence idea generation. Adding to this, effective engagement in Creative processes should be an imperative condition for selecting an employee for creative outcomes.

Accordingly, HEI's managers must focus on an entire procedure where employees could feel self-competent to be involved in creativity and its related

creative processes. This self-competent and self-initiating behavior, aids in striving towards improving their perceptions of meaningful behavior offering a sense of purpose and importance. Likewise, management could appliance several programs related to creative process engagement supporting learning and knowledge requests. In the end, is considered as critical for managers to take into account the importance of WM, and CPE mechanisms if they want to fully translate self-leading behavior and proactive personality and benefits for improving creativity of employees.

Limitation, and future work

This study has frequent limitations, which are interpreted in the light of above described implications. Initially, we used employee assessments to examine individual creativity (employee-rated), however supervisor evaluation (Supervisor-rated such as employee creativity from supervisor's point of views) could provide a vibrant picture and propose as an extensive development in creativity measurement in recent years (Anderson, Potočnik, & Zhou, 2014; Zhang et al., 2021). In this way, further research could implement more objective measures of creativity by examining supervisor's perceptions and facts related to employee creativity rather the subjective terms. Though, the results of this study could be generalized to several contexts other than a Higher Educational industry. This confirming our findings could be initiate in alternative settings such as diverse countries and diverse industries could offer thought-provoking outcomes. Consequently, we reflect this paper finding as a future exploring phenomenon expected to inspire future comprehensive studies verifying the whole mechanism between self-leadership and employee creativity.

In the current framework, we have examined the role of self-leadership strategies (i.e., behavior focused, natural rewards and cognitive thoughts patterns) on employee creativity separately, however these strategies could provide constructive understandings in terms of individually evaluating with other undertaken variables such as meaningful work, proactive personality and creative process engagement. In this way, future research could be focus on detail analysis of self-leadership strategies. In this study, we have investigated the mediating effect of Creative process engagement (CPE) as an entire construct in between SL and EC, However CPE has been operationalized in terms of three factors i.e., problem identification, information searching and idea generation. Further research could investigate the detail mediating role of CPE at each separate level in between SL and EL (Henker, Sonnentag, & Unger, 2015). We have investigated the moderating role of PP (personal specific) and Meaningful work (cognition/ job specific). Future research could examine other contextual factors such as culture, and supervisor support in between the undertaken model. Regardless of these limitations, we consider that the undertaken study has prolonged our comprehensions into the role of self-leadership and employee creativity. The moderating role of proactive personality and Meaningful work during the unfold mediating role of creative process engagement in between SL and EC. Further. This study has provoked several valued practices,

where individuals and organizations can accept, initiate and adopt to reassure creativity and innovation.

To add up, an organization having members with high potency of self-leadership supported by meaningful work can engage in CPE and make synergistic use of creativity through high Proactive personality (PP) for creating sustainable competitive advantage

CONCLUSION

In the end, our study enhances knowledge body in Leadership and Creativity literature by drawing upon Ford's theory of individual Creative actions and behaviors. We integrate Self-leadership and its inter-related framework, by revealing Self-leadership strategies (Behavioral, Natural reward, Constructive thoughts) heightened employees' creativity through Creative Process Engagement (CPE) while experiencing high meaningful work (WM) and high level of PP. The study shows the implications of creative process activities e.g., problem identification, information search and idea generation required in attaining creative outcomes. This study has also comprehended our insights into the role of SL and EC during the unfolding of the creative process and has provoked out several valuable practices that employees as well as organizations can implement to inspire creativity and innovation

This study is advisable for organizations to be able to frequently self-lead and respond to desirable organizational requirement such as creative processes leads to creative outcomes. A workforce with strong self-leading behavior, experiencing WM and high level of PP supporting CPE and EC could synergistically support an organization in upholding an all-important competitive advantage. The impact of these modifications may be precarious in shifting organizations in the face of a wide range of twenty-first century challenges.

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