

CREATIVITY IN THE WORKPLACE:

A CALL TO CREATE

A Thesis

by

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## ABSTRACT

Creativity is a vital component in today's fast-paced society focused on innovation and output. In order to maintain a competitive advantage, organizations are adopting a culture of dynamic adjustment internally. Difficulties in measuring concrete outcomes from creativity can lead organizations to neglect the importance of promoting it in the workplace, subsequently impacting their ability to be successful. Based on the idea that behavior is a complex interaction between person and situation, organizational creativity for the entire system results from the creative outputs of constituent groups and situational. While most of the workplace literature focuses on broad theoretical concepts, creating evaluation instruments, and the assessment of outcomes, very few studies propose comprehensive approaches for organizations to easily reference in order to confidently implement evidence-based practices related to creativity. Given the gaps in literature and difficulties in measuring creative outcomes, organizations may be at a disadvantage, because they do not have a clear path to developing a creative workplace. This literature review summarizes recent research examining workplace creativity with the goal of identifying and connecting best practices, so that organizations can develop creative workplace interventions suited to their respective needs. The impact of organizational practices on creativity are assessed within the context of recruitment, selection, training, and in regards to organizational culture; focusing on antecedents of creativity to guide organizational efforts.

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### **Contributors**

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## 1. INTRODUCTION

A company's capacity to innovate has always played an important role in its longevity, but now more than ever this capacity has become more of a requirement for companies both small and large (Lukoschek, Gerlach, Stock, & Xin, 2018). Suddenly appearing industry-wide disturbances should be expected, as accelerated technological advancements have become the norm. Organizations are regularly engaging in a multitude of changes simultaneously, which makes it important to adopt a continuous learning culture (Begum et al., 2017; Grunberg, Moore, Greenberg, & Sikora, 2008). Smart companies have realized that technology is continuously developing and in order to keep up with it, they have developed cultures that mimic technology's persistent change. In order to keep up with the fast pace of change and inundation of information, organizational learning opportunities are more likely to be structured as smaller learning units emphasizing the development of skills to achieve the goals that need to be achieved in the present instead of skills that last an entire career (Petrucci & Rivera, 2018).

Moreover, what is expected from employees has shifted as organizations have come to accept the standard of perpetual transformation. Job-relevant knowledge is no longer sufficient, as employees are expected to extract meaning out of information that is readily available (Cooper, Basson, & Schaap, 2006). With organizations placing great value on an employee's ability to update and develop skills in order to flexibly adjust to the wavering landscape of the workplace, workers find themselves needing to be as dynamic as the technology around them (Lent, 2013). This capacity to adapt to the dynamic changes that has become characteristic of a vast majority of successful organizations might seem limited to younger individuals who grew up with the technology that drove this monumental shift, but that is not likely the case. Although they did not grow up with current technology, older workers who have found ways to adapt and

acquire new skills, so they have not experienced a decline in employment (Ng & Law, 2014).

This observation might imply that individual success in the workplace is defined by one's ability to adjust to the changing environment even more than general familiarity with technology. Thus, it is important for organizations to consider innovative approaches to endorse and promote employee adaptability in order to maintain a competitive advantage.

Creativity is often characterized as the capacity to offer novel and useful output in the face of new challenges (Zhou & Shalley, 2011). In an organizational context, novel output includes the way currently available concepts and knowledge are combined to create a unique approach to solving problems (Lau, 2016). Because of this, creativity has become an essential competitive advantage (Mathieu, 2015). The reason for this is likely linked to the connection between flexibility of thought and creativity. Müller, Gerasimova, and Ritter (2016) suggest that increases to cognitive flexibility, or the ability to overcome fixed thoughts and create novel associations between concepts, are associated with increased creativity. Originality of ideas is also a critical part of creativity (De Bloom, Ritter, Kühnel, Reinders, & Geurts, 2014). High levels of creativity are associated with divergent thinking which, similar to originality, is characterized by thoughts that do not align with the status quo (George & Wiley, 2018).

At this point, technological advances are commonplace and the world of work has had time to adjust and accept creativity as an important concept. Companies are changing their practices to recruit creative people in industries that have been considered both traditionally and not traditionally creative (Cromheecke, Van Hoyer, & Lievens, 2013; Hunter, Cushenbery, & Friedrich, 2012; Mastracci, 2009; Wreyford, 2015). Selection practices have been restructured to measure creativity in order to identify creative individuals (Hunter, et al., 2012; Leung, Maddux, Galinsky, & Chiu, 2008). Organizations are implementing training programs that are specifically

aimed at improving employee creativity (Preece, Katz, Richards, Puccio, & Acar, 2017). Finally, companies have implemented leadership strategies and team building interventions with the ultimate goal of fostering a creative workplace climate (Collins & Cooke, 2013; Ismail, 2005; Zhao, 2015).

Despite the prevailing positive impact that creativity has in modern day's technology-saturated workplace, creativity can be neglected by organizations because of difficulties in measuring concrete outcomes from such a seemingly abstract construct. This neglect is ultimately misguided, as all organizational leaders should have a thorough understanding of the impact that creativity has on the workplace, as well as confidence in its capacity to drive results. Creativity is a function of both individual employee factors and situational/environmental characteristics (De Dreu, Nijstad, & Baas, 2011). With this in mind, organizations can gain insight about where to start, even if they do not have a strategic plan. Correspondingly, organizations can implement creativity initiatives and ensure they stay relevant in today's transformed landscape. The purpose of this paper is to summarize recent research on creativity in the workplace emphasizing connections that have implications for creative workplace interventions.

## 2. RECRUIT, SELECT, AND TRAIN CREATIVE EMPLOYEES

Sometimes the appropriate approach for organizations to take in order to maximize creativity is to focus on individual employee's capacity for it. Organizations have a wide array of options. First, organizations can attempt to attract creative individuals through recruitment. Once individuals have applied, organizations can tailor their selection methods to focus on hiring creative individuals. Following selection, organizations can offer training that enhances employees' creative capacity. Each of these approaches are described in more detail in the next three subsections.

### *2.1 Recruitment*

Generally recognized as the first instance of job candidate engagement, recruitment is intended to generate and source potential employees, maintain applicant interest, and ultimately influence job decisions (Ployhart, Schmitt, & Tippins, 2017). There is no shortage of available recruitment interventions. They range from the enhancement of workplace attractiveness, to encouraging internal and external referrals, to transitioning contingent positions and interns into full-time positions. Organizations often recruit individuals for specific personal characteristics, the most common ones being education, experience, and assorted personality traits (Bryen, Potts, & Carey, 2007; Fleming & Jia, 2016; Grimpe, Kaiser, & Sofka, 2018). Hunter et al. (2012) advise organizations to market organizational characteristics when wanting to make the organization seem more attractive to creative individuals. Specifically, they recommend organizations highlight job autonomy, support for risk taking, encouragement of diverse expertise, a passionate workplace, as well as willingness to offer recognition and rewards. While Hunter et al.'s list provides some general pillars for fostering a creative workplace, they fail to provide a comprehensive approach for recruiting creative individuals. In order to address the



growing need for workplace innovation, a more coherent connection needs to exist between the research about the recruitment of creative individuals and the practice of it.

When it comes to the enhancement of workplace attractiveness, there are multiple studies on the different organizational attributes to highlight. One of the more well-established organizational characteristics is the work-life benefits they offer which encompass childcare, schedule flexibility, wellness, and elder care (Firfiray & Mayo, 2017). A study by Huang, Cheng, and Chang (2019) highlights the importance of ensuring employees have leisure time which can promote creative thinking and behaviors. An extension of those findings suggests that vacation packages may be particularly attractive to creative applicants. Firfiray and Mayo (2017) describe how organizations can use benefits to signal their fundamental beliefs (i.e., an organization with good maternity benefits supports feminism) which can help to promote perceptions of person-organization fit. This implies that organizations can signal their support for creativity by providing benefits consistent with what is valued. Moreover, Russell and Brannan (2016) found that establishing person-organization fit during the hiring process can foster a workplace that encourages employees to take part in creative behaviors. Based on these two studies, organizations could partner with educational and community vendors specializing in non-job-related creative endeavors (such as art, theater, or music) to provide discounted learning opportunities and experiences to hired applicants and employees that signal support for creativity.

In addition to benefits, research has shown that job candidates are attracted to other workplace attributes including perceived authenticity and organizational fun, which could include applicant beliefs that a workplace is honest with their marketed features or is fun to work at (Ehrhart, Mayer, & Ziegert, 2012; Reis, Braga, & Trullen, 2017; Tews, Michel, & Bartlett,

2012). In their study, Islam and Tariq (2018) found that the perception of a workplace that supports employee development by providing learning opportunities can serve to promote creativity. Correspondingly, when attempting to recruit creative individuals, organizations could emphasize learning opportunities offered by the organization.

Another way for organizations to recruit creative individuals is to capitalize on their current employees and disseminate recruitment messages through them. For example, referral-based systems, where workers refer acquaintances can be an effective way to provide incoming employees with a realistic understanding of the job prior to entering, encourage workgroup belonging upon entering, and establish a sense of obligation to the recruiting organization (González & Rivarés, 2018). Liu, Keeling, and Papamichail (2016) provide a more nuanced take on referral-based systems as they point out that people with dispositions towards skepticism are less likely to entertain word-of-mouth job recommendations, while those with a disposition to trust others will more arbitrarily pursue word-of-mouth job recommendations. Thus, referral systems are likely to recruit more trusting rather than skeptical individuals. In their study of strategies used to promote creative work environments, Hunter, Bedell, and Mumford (2007) found a positive relationship between trusting others and creative behaviors. Based on these three studies, organizations seeking to encourage a creative environment could implement referral-based recruitment campaigns and promote a trusting environment, though admittedly this might require assessing the current levels of creative workers as it runs a risk of bringing forth a more homogeneous workforce.

Internships and contingent work arrangements are recruitment approaches that emphasize job exposure, and if used correctly, can lead to successful creative hires. Dailey (2016) found that internships are associated with positive socialization outcomes for employees hired

following their internship. While these benefits can occur once the intern is hired, in order to really utilize internships as a recruitment tactic, organizations should find ways to sell the value of working there during the corresponding time period. Emphasizing person-organization fit by exposing interns to potential career opportunities within the organization fosters acceptance of job offers extended after the internship (Beenen & Pichler, 2014). In their study, Simmons and Ren (2009) assert that individuals with low avoid goal orientations also engage in more creative behaviors when achieving goals and will perform more creatively than others in situations where the stakes are higher. Based on these two studies, organizations could ensure they provide interns opportunities to make decisions holding weight in the organization and extend future job offers to those who do not avoid such difficult situations in order to enhance their odds of extending job offers to interns that will actually display creativity.

When it comes to contingent worker arrangements, research has found that those who are converted to full-time employees do not perform as well as internal hires, however internal hires can be costlier to an organization so actions taken in these scenarios are really dependent on organizational needs (Dahling, Winik, Schoepfer, & Chau, 2013). When pursuing a recruitment method, allowing room for creativity improves the odds that creative applicants will apply in the first place and pursue employment (Zhao & Liden, 2011). Organizations seeking to recruit creative individuals through job exposure but wishing to keep costs low could hire contingent workers, offering them opportunities to continue to engage in creative work.

Research on organizational recruitment is abundant, but studies specifically about recruiting creative individuals are not as common and often focus on broad notions instead of specific strategies. Thus, there is a gap in the recruitment literature. Although not conclusive, the

connections laid out in this subsection are intended to provide some ideas for linking established recruitment practices to creativity-related recruitment outcomes.

## *2.2 Selection*

Workplace selection might be one of the most extensively researched topics in industrial/organizational psychology, with a considerable number of studies focused on identifying valid methods to predict future performance from applicants. Montag, Maertz, and Baer (2012) assert that future creative behaviors can be broadly predicted by measuring two distinct predictors: creative performance behaviors and creative outcome effectiveness. Other studies, such as the one conducted by Zeng, Proctor, and Salvendy (2011) point out that when it comes to selecting for creativity, tailoring constructs to the corresponding industry where it will be expressed improves reliability and validity that would be lost with a more generalizable assessment. To further complicate the matter, Sullivan and Ford's (2010) study illustrates that there can be complications associated with selecting the appropriate measurement tool even when creativity has been well-defined. Although all of these studies suggest difficulties in the formation and measurement of an all-encompassing predictor that could predict future creativity, the benefits associated with a creative workforce should justify efforts required to do so.

One way that organizations can select for creativity is to measure at least some of the Big Five personality traits. Creativity scholars speculate that elevated levels of openness to experience and reduced levels of conscientiousness are predictive of creativity (George & Zhou, 2001; Patterson & Zibarras, 2017). The notion that creativity is related to openness to experience is pretty straight forward and has been demonstrated in countless studies (Batey & Furnham, 2006; Hammond, Neff, Farr, Schwall, & Zhao, 2011; Silvia, Nusbaum, Berg, Martin, & O'Connor, 2009). This is likely due to its connection with the element of novelty which is a core

component of the definition of creativity. So, when attempting to select for creativity, openness to experience should be a dimension that is explored, but when it comes to conscientiousness the approach is not as straightforward. For instance, Le, Oh, Robbins, Ilies, Holland, and Westrick (2011) found that conscientiousness has an inverse u-shaped relationship with creative job performance, but that relationship was mainly present in high complexity jobs, while not so much in low complexity jobs. Due to its potential for an inverse relationship with creative job performance, conscientiousness is not necessarily a good predictor for creativity in all settings, but general academic consensus suggests that openness to experience is.

Another construct associated with creativity is domain-specific expertise (Baer, 2015; Hunter, Cushenbery, & Friedrich, 2012). Creativity researchers assert that some semblance of domain-specific expertise is necessary before creativity in that domain can materialize. Selecting for it should be done carefully however, as other research has found that domain-specific expertise can inhibit creativity by causing a fixation on solutions coinciding with what is already known (Wiley, 1998). This could indicate that organizations selecting for creativity stand to benefit from supplementing expertise with other elements of creativity in order to more accurately select creative individuals.

One such supplement could be exploring an applicant's outside interests. Familiarity with unrelated domains can facilitate connections between previously unrelated topics and is thought to be a knowledge-based indicator of creativity (Hunter, Cushenbery, & Friedrich, 2012). Familiarity with unrelated domains might just be indicative of openness to experience though, so simply measuring that might be enough. While both types of domain familiarity could play a role in predicting creativity, domain-specific expertise stands to capture the element of usefulness found in countless definitions of creativity, justifying its inclusion in the broader construct of it.

While openness to experience likely captures the ability to come up with novel ideas found in many of definitions of creativity, there is another potential component that could capture that element of creativity. Divergent thinking ability is another characteristic that is commonly associated with creativity (An, Song, & Carr, 2016; Benedek, Könen, & Neubauer, 2012; Kim, 2008; Mayer, 2004). Thinking that does not directly result in the correct solution has a higher probability of resulting in novel ideas (Acar & Runco, 2015). Runco and Acar (2012) pointed out that divergent thinking might only be useful in finding original ideas with no regard for their usefulness. This is problematic given that creativity is generally defined as the production of novel and useful ideas. Nevertheless, a combination of divergent thinking ability and domain-specific expertise promotes the generation of useful divergent ideas (Vincent, Decker, & Mumford, 2002). This finding suggests that, despite its faults, divergent thinking ability might still be a useful variable to measure when selecting for creativity.

The above research summarizes a few trends found in the research that have implications for selecting for creativity. There might be a few more elements that could be included, but a battery of openness to experience, domain-specific expertise, and divergent thinking ability measures should result in selecting more creative individuals. Measuring these predictors will be discussed next.

Big Five personality inventories are commonly used for selection in workplace settings (Diekmann, & König, 2015; Nikolaou, & Foti, 2018; Widhiarso, Steyer, & Ravand, 2019). This means many organizations are already measuring their applicants' openness to experience. There is also no shortage of studies proposing tactics for the measurement of expertise and domain-specific knowledge (Charness, & Tuffiash, 2008; Froehlich, Liu, & Van der Heijden, 2018; Pauley, O'Hare, & Wiggins, 2009), but even more practically, organizations can likely gather

this information from assessments of prior education and experience. The latter are extremely common minimal qualifications that applicants have to provide evidence of, so again many organizations are already collecting this information.

Generally, divergent thinking is assessed by a timed test where people are asked to come up with as many solutions to a problem as possible with little to no regard for practicality (Acar, Runco, & Park, 2019; Zeng, Proctor, & Salvendy, 2011). Unlike the previous constructs, assessments for divergent thinking are not as commonly used in workplaces, but composing one is not fairly difficult so they retain practicality in an organizational context. On their own, openness to experience, domain-specific knowledge, and divergent thinking ability might not be enough to measure creativity, but a weighted combination of the three could go a long way to measuring creativity potential in a way that brings practical value to organizations.

One important consideration when making selection decisions is ensuring the organization avoids adverse impact (Fisher, Truxillo, Finkelstein, & Wallace, 2017; Saxena & Morris, 2019; Van Iddekinge, Lanivich, Roth, & Junco, 2016). Selection batteries disregarding adverse impact could end up facing lawsuits from individuals that feel discriminated against, but methods measuring predictors of creativity, might not face such a problem. Sternberg's (2018) study described a method of measuring creativity that actually showed little to no potential for adverse impact for several underrepresented groups. The possibility for creativity testing in selection to yield limited to no subgroups differences, thus less chances for adverse impact is intriguing and further underscores its applicability for organizations. Research on this is actually quite scarce, so additional research is warranted.

As one of the most well-researched organizational topics, selection practices are always being developed and improved upon. As is evident from the literature, effective mechanisms for

the selection of creative individuals is scattered. Given the important role that creative behaviors play in the workplace, this is due for a change and the research that does exist is ripe for practical elaboration. While there is a research need when it comes to calculating the degree of importance that creativity has in a given organization for scoring purposes (e.g., return on investment, utility analysis), the research presented supports three predictors of creativity that can be further elaborated upon in future research and are relatively practical to measure in a selection context.

### *2.3 Training*

Training is one of the most engaging interventions that organizations can use to actively equip employees with skills, knowledge, and aptitudes that are applicable to their position (Aguinis & Kraiger, 2009). In general, the main goal of training is transferring what is taught to the job (Grohmann, Beller, & Kauffeld, 2014). While there is research suggesting that workplace training programs can improve creative capacity (Molineux & Haslett, 2007; Preece, Katz, Richards, Puccio, & Acar, 2017), the majority of the studies revealing successful instructional interventions tend to be intended for use by K-12th grade educators and higher education systems (Karpova, Marcketti, & Barker, 2011; van de Kamp, Admiraal, & Rijlaarsdam, 2016). The problem with this is school-based interventions tend to be administered throughout the entire school year, making them difficult to convert into shorter workplace training interventions. In workplace-related research, some studies dismiss training's capacity to successfully transfer skillsets related to creativity, pointing to complexities in establishing work relevance and insufficient methods for measuring outcomes (Laker & Powell, 2011; Ricchiardi & Emanuel, 2018). However, these types of claims might be overly pessimistic as ineffective training programs generally result from superficial approaches to their development and misalignment with organizational context (Nemec, 2018). In contrast, school-based interventions are more



likely to have a robust theoretical foundation that can be applied to the development of training programs for the workplace. Combining this line of research on school-based creativity interventions with the workplace training literature could support the successful development of interventions elevating employee creativity.

Organizations looking to boost employee creativity through training might be initially unsure of how to approach the process, but building familiarity with effective skill transfer techniques is a good place to start. Certain tactics, such as presenting training in similar context to the job environment where newly acquired and honed skills will be demonstrated generally improves transfer for all types of skills due to contextual fidelity (Bhatti, Ali, Isa, & Battour, 2014; Hochmitz, & Yuviler-Gavish, 2011; Proteau, Marteniuk, & Lévesque, 1992). Much of the workplace literature classifies creativity as skill with less concrete outcomes (Michnick Golinkoff & Hirsh-Pasek, 2016; Yelon, Ford, & Bhatia, 2014). However, replicating specific scenarios where these types of skills need to be displayed is not very straightforward so establishing proper context might be challenging. That said, some of the literature claims that fidelity is not as important if trainees understand on how to apply learned skills to their job (Grossman & Salas, 2011). This could prove effective for transfer in creativity training programs, as trainers could offer trainees suggestions on how to apply lessons learned to their jobs. There are other approaches that have larger effects on the transfer of skills that result in less concrete outcomes than for those that do, such as ending training with setting goals to use the learned skills (Blume, Ford, Baldwin, & Huang, 2010; Brown, McCracken, & Hillier, 2013). With this in mind, engaging in goal setting after creativity training based on the trainer's suggestions of how to apply the skills could serve to further enhance trainee skill transfer. While transfer is important, the content used to enhance a skill also needs to be considered. In order to

get a better idea of what that might look like, organizations should turn to the more education-oriented creativity instruction methods.

Research from education-based instruction for creativity makes it fairly clear that the undertaking is generally a long-term one, but there are some workshop-based interventions that could be easily implemented into the workplace. When looking at the more applicable research from education, one can start to establish proper transfer tactics that could support performance-based outcomes. Van de Kamp, Admiraal, and Rijlaarsdam (2016) found positive effects on creative artistic output in students after participation in a 14-week course where they were instructed on and practiced creative strategies 50 minutes a week. Although the output was aimed at artistic creativity, performance was evaluated using indicators of divergent thinking, so it is possible that the benefits of this program could transfer to the workplace. Another study by Karpova, Marcketti, and Barker (2011) found a similar improvement in student creative output following participation in an 8-12-week course where students were taught about creativity, then prompted to recognize, generate, and evaluate creative ideas. While the number of hours spent in the classroom was not specified, the course included students from a wide variety of majors which advances the possibility for these types of interventions to have a positive impact outside of artistic endeavors. Poon, Au, Tong, and Lau (2014) found improved creative output from students who participated in a single 3-hour course that taught participants about creative principles followed by practicing the principles. While this study did not test the long-term effects of the workshop, the immediate impact it had on creativity was evident and given that it was a one-time intervention, it could be appropriate as a workplace training intervention. Although Poon et al.'s study showcases a workplace-relevant option, long-lasting effects on creativity tend to result from long-term interventions. While this might seem impractical for

workplace training, there are modifications that companies might be able to implement to make it more practical.

Technology has changed the landscape of training in a big way through e-learning (Tracey, 2014). This platform might be one of the better ways to deliver continuous creativity interventions. In their 2016 study, Bustillo and Garaizar examined an e-learning intervention that was delivered two hours at a time over the course of 25 weeks and found it improved creativity of the participants. This study was not performed in a workplace setting so the time spent might not be practical, but the study highlights the potential for creativity interventions to extend over time with less extensive instructor involvement. Another advantage to e-learning was highlighted by Gegenfurtner, Quesada, and Knogler (2014), who suggest that e-learning might be able to improve transfer of training by simulating scenarios similar to what trainees' experience in real life. Simulating scenarios where trainees have to demonstrate creative behavior might be difficult in person due to limitations in creating realistic environments, but virtual training could better replicate such scenarios with much less effort. Mast, Kleinlogel, Tur, and Bachman (2018) take this idea one step further by suggesting that training programs using virtual reality to simulate one-on-one human interactions are able to improve interpersonal skills. Since interpersonal communication and creativity are both skills that result in less concrete outcomes, it can be inferred that e-learning might be a fruitful training method to improve creativity. Instruction on e-learning platforms might serve to overcome much of the possible challenges faced in training such as job similarity, or consistent spacing, or even goal-setting if structured strategically, but e-learning training might not be able to extend its reach to all realms of creativity.

Despite emphasizing the potential for e-learning to impact one-on-one interpersonal communication (highlighted in the previous paragraph), Mast, Kleinlogel, Tur, and Bachman

(2018) did not focus on its impact on the more complex communication tactics involved in teamwork. Also, the literature on team-based training and e-learning do not tend to overlap much. The broader employee training literature emphasizes team-based interventions so its connection to creativity should be further considered (Aguinis & Kraiger, 2009). In their study, Hatcher, Ion, Maclachlan, Marlow, Simpson, and Wodehouse (2018) presented a training program using improvisational comedy exercises that enhanced group capacity to generate creative ideas by helping participants overcome barriers such as self-censorship, unequal contribution, premature rejection of ideas, and idea fixation. This type of training might be effective in certain settings, but more formal interventions are better suited for companies dismissive of informal approaches. Molineux and Haslett (2007) highlight the positive effects of a more grounded method where strategies to enhance team creative behaviors are presented to a team followed by practicing those strategies in hypothetical scenarios. The format of these team training programs somewhat echoes the format of interventions presented in school-based research for improving individual creativity. This connection provides empirical support for the team creativity training in the workplace that might be extended to individual interventions through more extensive research. A more indirect way of improving group creativity is highlighted in a study by Homan, Buengeler, Eckhoff, van Ginkel, and Voelpel (2015) where they assert that diversity training promoting employee communication about shallower differences can improve team creativity under certain conditions. While it does not work in all settings, their study reveals that group creativity could be enriched through more indirect interventions.

Whether implementing team or individual training, in-person or e-learning, teaching skills with concrete or abstract outcomes, effectively measuring performance outcomes

following training is always an important task for organizations. Across the literature, development generally has complexities associated with all variations of training interventions (Blume, Ford, Surface, & Olenick, 2019). Because of this, meticulous approaches should be taken when developing methods for measuring creativity training outcomes. Some of the research proposes that positive affective reactions associated with creativity-based training is enough to elicit future creative actions so measuring such reactions can be an effective precursor to and indicator of creative output (Preece, Katz, Richards, Puccio, & Acar, 2017). Other researchers argue that measuring behaviors are also important when determining the effectiveness of training and suggest that this can be done through outside observation (Puccio, Firestien, Coyle, & Masucci, 2006). Though seemingly a subjective and difficult way to verify creativity, Tsai, Wee, and Koh (2019) demonstrate that frame-of-reference training can result in more objective and accurate ratings of performance. This is a promising approach, but their study is not specific to creativity, so the generalizability of their findings to creative performance needs to be tested. Outside of workplace outcomes like more patents, the measurement of tangible results of creativity is actually not very direct and ratings of creative behaviors is what is most commonly measured (Ucar, 2018). Measuring creative outcomes from training is certainly not an easy task to take on, but organizations hoping to do so should understand the proposed methods found within the literature and be open to shaping approaches to meet unique needs.

Training interventions intended to elicit or improve creative behaviors in employees have a presence in the workplace literature, but comprehensive interventions still require some experimentation. Instead of looking at this as an obstacle, organizations should welcome the development of their own interventions, as the implementation of a training that sharpens employee creativity could provide an edge over competitors. Extensive reviews might be

necessary, but there is no shortage of research for companies confident in their ability to synthesize findings from differing fields. This subsection offers potential pathways for organizations uncertain in how to approach the development and successful implementation of a creativity training.

One thing that is not considered in this section however, is the important role that organizational context plays in the success of a creativity training, or any type of intervention intended to produce creative behaviors in a workforce. This caveat is important to consider as even the most carefully constructed creativity intervention can fail without the proper contextual support.

### 3. ENVIRONMENTAL FACTORS FOR SUCCESSFUL CREATIVITY INITIATIVES

Woodman, Sawyer, and Griffin (1993) asserted that the definition of individual creativity can be applied more broadly to organizations as a whole and identified organizational creativity as an important factor behind organizational capacity to innovate and change. As has already been established, this capacity to innovate and change is invaluable in the current workplace climate. Despite the potential positive impact, desired organizational outcomes stemming from individual interventions are typically fostered through environmental features (Jackson, Schuler, & Carlos Rivero, 1989; Jiang, Lepak, Hu, & Baer, 2012; Keats, & Hitt, 1988). There are a wide variety of studies focusing on the organizational context thought to foster creativity on a broader scale (Binnewies, Ohly, & Niessen, 2008; Heffernan, Harney, Cafferkey, & Dundon, 2016; Wang, 2017). Compared to the research on individual creativity interventions, research concerning broad organizational creativity has a higher degree of sophistication, which might indicate that the attribute is better captured within an all-encompassing workplace context. Thus, the next section establishes a conceptual connection between individual creativity interventions and the organizational context best suited for their success.

#### *3.1 Building Context for the Successful Recruitment and Selection of Creative Individuals*

Once hired, individuals are generally expected to exhibit the talents and attributes for which they were recruited and selected. While a properly executed creativity recruitment and selection program might result in a motivated creative individual who wants to work for the long-term, failing to provide them with the proper context could drive them away (Chamorro-Premuzic & Akhtar, 2018). Amabile and Pratt (2016) emphasize that a sense of progression towards creative idea development, finding meaning in work, positive affect, and feeling extrinsic motivation from diverse responsibilities are common individual aspirations that work

environments should seek to foster in order to promote creativity. An understanding of the underlying aspirations that precede creativity in the workplace could serve as a foundation for organizations that want to cultivate a creative environment from scratch. Some common organization-wide features for fostering a creative environment are job autonomy and complexity, constructive leadership, and creative collegial collaboration (Lapierre & Giroux, 2003; Mathisen, 2011; Yoo, Jang, Ho, Seo, & Yoo, 2018). While the broad aspirations of a creative workforce might be a bit abstract, these features provide a more tangible path for organizations to foster a creative workforce.

Research shows that job autonomy improves creativity by giving employees the opportunity to merge their own personal aims with the responsibilities they have at work (Li, Li, & Chen, 2018). This might connect well with the aspirational characteristic of finding meaning at work by affording employees the freedom to accomplish tasks using approaches that they can consider meaningful to life outside of work. One way that organizations can improve job autonomy is by designing jobs with less built-in routines and formalized processes (Marinova, Peng, Lorinkova, Van Dyne, & Chiaburu, 2015). This would likely introduce ambiguity to job responsibilities which highlights why job autonomy is at times connected to job complexity. Although the two are similar, they do differ in that job autonomy allows for individuals to create their own meaning for their work, while job complexity often implies that the job itself brings meaning (Chae & Choi, 2018). Incorporating many differing responsibilities into a job could serve to enhance the complexity while also addressing the creative aspiration of feeling extrinsic motivation from diverse tasks. Nevertheless, the extent to which job autonomy fosters creativity is often found to depend on whether leadership supports the creative pursuits of employees (Gebert, Boerner, & Lanwehr, 2003; Hetland, Skogstad, Hetland, & Mikkelsen, 2011). This



nuance serves to highlight the interplay between the major features that serve to foster organization-wide creativity.

Even if jobs are not autonomous or complex, leadership support for creativity can play an important role in broadly fostering creativity in the workplace (Li & Zhang, 2016). One constructive leadership strategy that is often referenced as effective for fostering creativity is providing consistent feedback to employees (Battistelli, Montani, & Odoardi, 2013). Consistent feedback could provide a creative individual a sense of progression on a creative idea. In their study, Gonçalves and Brandão (2017) found that leadership humility can foster the psychological security of employees, which in turn fosters a creative workplace. Leaders might be able to accomplish this by being open to admitting when they are wrong, which in turn could positively impact the aspiration of feeling positive affect. One other way that leadership could foster a creative workplace is by being role models and demonstrating the creative behaviors they wish to see in their employees (Collins & Cooke 2013). This type of approach could once again serve to provide creative individuals with a sense of progress towards creative idea development by providing them with a frame of reference that they can use to know whether or not they are approaching creativity adequately. These may all seem to address the individual more directly, but leaders are often exposed to large numbers of employees and therefore play an important role in fostering a creative environment.

Constructive leadership can also be directed at individual employees. Encouragement of knowledge sharing among the larger employee population is thought to be an effective way to foster a creative work environment (Zhang, Sun, Jiang, & Zhang, 2019). Approaches to doing this might be expedited through the use of social networking platforms that allow and encourage employee collaboration and could serve to address the creative aspiration of sensing progress

towards creative idea development by facilitating outside input when developing ideas. Richard, Avery, Luksyte, Boncoeur, and Spitzmueller (2019) assert that encouraging open communication about shallower diversity traits can also lead to a more creative work environment. Organizations might approach this by facilitating employee development of platforms that encourage communication about diversity which could foster positive affect by allowing diverse groups to build support for themselves within the organization. Overall, these organizational approaches give context to the idea of creative collegial collaboration and allow for organizations to advance toward fostering workplace creativity from that direction.

While all of these are approaches to foster a creative work environment, it is important to remember that job autonomy and complexity, constructive leadership, and creative collegial collaboration can also work synergistically to foster a creative workplace. This is important for organizations to understand as there is the possibility that they do not obtain immediate results from the implementation of a single approach and may need to combine multiple approaches to best foster a creative environment. Furthermore, all three of these approaches for fostering broad organizational creativity are generally aimed at new employees, so existing employees need to play a large role in supporting these organizational initiatives. Not all organizations have a creative workforce in place, so those that are trying to instill this value might need to cultivate creativity within the employees that they already have.

### *3.2 Building Context that Fosters the Enhancement of Creativity through Training*

Enhancement of individual creativity through training has already been discussed, but successful outcomes from such interventions also require a proper organizational context (Burke & Hutchins, 2007). The organizational features that have been previously described play an important role in supporting the successful enhancement of creativity through training, but one

feature that is specific to such an undertaking is an organizational learning climate, which is an organization's disposition to develop workers through learning experiences (Lau, 2016). While an organizational learning climate plays an important role in improving the transfer of creativity training, training interventions also foster an organizational climate for learning (Ismail, 2005). Ultimately, organizational climate is largely influenced by the general employee population and in order to establish a learning climate that is supportive of creativity, organizations should garner buy-in from all employees (Martin, 2010).

Buy-in from new employees plays an important role in organization-wide shifts toward learning climates. Banerjee (2013) asserts that onboarding can play an important role in the establishment of an innovative work environment when it establishes how an individual can grow within an organization and ties it to its mission, vision, and values. While setting the tone early on can be an effective way to instill a learning climate, current employees also play a role in such organizational shifts. Generally speaking, garnering support from current employees towards a training could require organizations to ensure employees know about the training, clearly define the purpose of the training, and encourage involvement from multiple levels of the organization (Sitzmann & Weinhardt, 2018). These approaches might not be full-proof, but they provide a direction that organizations can take in order to foster a learning climate that can lead to widespread organizational creativity in the incumbents. Overall, organizations hoping to establish a learning climate that fosters creativity training initiatives should be prepared to provide simultaneous attention to both new employees and current employees in order to do so.

Not surprisingly, leadership also plays an important role in the success of training interventions aimed at the enhancement of creativity. Transformational leadership is generally aimed at expanding and advancing follower goals while developing their confidence to perform

beyond what is expected of them (Dvir, Eden, Avolio, & Shamir, 2002). Mittal and Dhar (2015) assert that transformational leadership approaches improve employee creative self-efficacy by spreading messages that foster their belief that they can produce creative work outcomes. Cheung and Wong (2011) elaborate on this point by emphasizing that transformational leadership is thought to improve organizational creativity when leaders provide task and relational support. Employee perception of leader expectations for creativity play a role in the impact that transformational leadership can have on creativity (Qu, Janssen, & Shi, 2015). Organizations hoping to use transformational leadership to foster a learning climate that promotes creative behaviors could draw on these findings and ensure that leaders outwardly and enthusiastically provide task and relational support for employee creative behaviors. Overall, these studies provide support for the important role that transformational leadership plays in fostering workplace creativity.

Though not explicitly stated in the literature, transformational leadership could be construed as a managerial approach to fostering an organizational learning climate. When it comes to successfully enhancing creativity through training, this subsection shows the important role that a learning climate can play. However, organizations should take into account the role of a learning climate, not just for training purposes, but also for cultivating an environment supportive of creativity. Fostering an overarching organizational climate might be more challenging than implementing an individual intervention. Taking this into account, the research in this subsection could be useful for organizations to consider the ways that training interventions serve to advance a creative workplace and how those advancements can then be leveraged to further promote creative enhancement through training.

#### 4. CONCLUSION

Many strategies and interventions exist across the spectrum of industrial/organizational psychology for those seeking to recruit, select, and train creative employees, as well as those seeking to foster a creative workforce and adopt a work culture prioritizing creativity. The sheer bulk of research on the study of creativity in the workplace implies that it has important cultural value in today's workplace and should not be neglected by organizations that wish to maintain their competitive advantage and stimulate valuable employees. Although limitations exist within individual studies of creativity in the workplace, any organization with an inclination toward creative work interventions can use the research summarized in this paper as inspiration for finding new ideas.

Ideas and suggestions made within this manuscript are based on a review of select articles, but should not be taken at face value without considering situational and contextual factors. Overall the literature makes it fairly clear that individual creativity interventions are dependent on proper context: even the most well-developed intervention aimed at improving creativity in the workplace stands to fail without proper organizational context to support it (Gonçalves, & Brandão, 2017; Vanhala, & Ritala, 2016; Richard et al., 2019). All research implications found in this paper are limited by context so it is unclear whether or not any specific study will generalize to other contexts. As with any review of existing research, the articles identified are a function of the words and phrases utilized within database keyword searches. Some relevant studies may not have been included because they were not located in the search. Nevertheless, this review summarizes the articles located and attempts to convey the relevance of creativity to organizations.

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