

# ADAPTIVE LEADERSHIP OF PRINCIPALS IN BUILDING AN INSPIRING ORGANIZATIONAL CULTURE AND FOSTERING TEACHERS' CREATIVE BEHAVIOR

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## Abstract

An adaptive leader can assist a business meet evolving difficulties and remain relevant in the face of ongoing change. This study seeks to determine the impact of adaptive leadership on corporate culture and teacher creativity. The method used is a quantitative survey. The research sample comprises of 100 randomly selected high school teachers at Senior High School. Data was gathered using a Likert scale-based questionnaire. Tests performed include outer model, inner model, and hypothesis tests. The gathered data was then examined using the SEM-PLS program. The findings indicate that adaptive leadership has a significant influence on both organizational culture and teachers' creative behavior. Testing of the first hypothesis shows a positive effect of adaptive leadership on organizational culture, with a t-statistic of 24.432 and a p-value of 0.000, confirming the hypothesis. This result demonstrates that higher levels of adaptive leadership practiced by school principals contribute to the strengthening of a positive organizational culture. Furthermore, testing of the second hypothesis reveals that adaptive leadership also has a positive effect on creative behavior, supported by a t-statistic of 13.540 and a p-value of 0.000. These findings confirm that adaptive leadership encourages teachers to think creatively, engage in innovation, and respond effectively to changing school environments. The study offers practical insights for school leaders, showing that implementing adaptive leadership behaviors such as flexibility, problem-solving, and empowering teachers can enhance school culture and stimulate teacher creativity. These insights can guide principals in improving school performance through leadership transformation.

**Keywords:** adaptive leadership, organizational culture, creative behavior of teachers, principals, senior high schools

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## 1. INTRODUCTION

The principal's adaptive leadership is an important concept in creating an inspiring organizational culture and promoting creative behavior in schools. In an era of rapid and complex change, it needs to develop the ability to adapt to new challenges and inspire staff and students to innovate and be creative (Obolensky, 2014). An adaptive leader is someone who is able to face new challenges with flexibility and innovation (Torres et al., 2012). They have the ability to recognize changes occurring around them and respond to them quickly and effectively (Randall & Coakley, 2007). On the other hand, adaptive leadership needs to take steps to strengthen a positive organizational culture and facilitate individual and collective development (Yukl & Mahsud, 2010).

Building an inspiring corporate culture is an essential component of a school principal's adaptive leadership. Organizational culture represents values, attitudes, and norms that lead to school performance (Lumby, 2012). Principals must be role models in practicing the desired values and communicating them consistently to staff and students (Cotton, 2003). In addition, school principals must also encourage creative behavior among staff and students. Effective and innovative education requires creative thinking and *out-of-the-box solutions* (Nemiro et al., 2017). It provides support, inspires, and empowers individuals to develop new ideas and sees challenges as opportunities to learn and grow, where creative initiatives are accepted and rewarded (Carmeli & Schaubroeck, 2007).

Research has shown that principals who are able to adapt to change tend to achieve better results in terms of student academic achievement, student participation, positive school climate, and staff satisfaction (Engels et al., 2008). The ability to adapt to change can help him identify and implement effective solutions in dealing with complex and uncertain situations (Mumford et al., 2000). Factors such as organizational support, development, effective communication, and staff participation influence the principal's ability to become an adaptive leader (Hallinger & Heck, 2010). Furthermore, adaptive leadership is able to create an inclusive organizational culture (Moore & Huberty, 2020), build strong trust (Daly & Chrispeels, 2008), creating a creative and innovative work environment (Raney, 2014), optimizing individual potential (Norris, 2018), and motivating students to achieve higher achievements (Wong & Chan, 2018).

A strong organizational culture is essential for an organization's success, in addition to strategy and structure. Issues such as confusing ideals and aims, lack of communication and transparency, as well as power imbalances and strong hierarchies (Du et al., 2021) can disrupt the formation of a healthy and inspiring organizational culture. As research shows, injustice and discrimination (Matthew, 2017), resistance to change (Oreg et al., 2011), as well as a mismatch between declarative values and real behavior (Schein, 2010) are also problems that influence organizational culture.

Furthermore, research by Craft (2003) highlights several issues that can influence teachers' creative behavior in schools. Time constraints (Runco & Jaeger, 2012), fear of risk and failure (Sawyer, 2006), and lack of support and recognition (Amabile et al., 2005) have been identified as factors that can hinder exploration in teaching practice. In addition, a curriculum that is too focused on exams (Cropley, 2000) and limited resources (Kaufman & Sternberg, 2010) can also limit teachers' freedom to implement creative ideas.

To achieve long-term success, leaders and organizations must actively address the concerns raised above and create an organizational culture that is inclusive, communicative, and encourages creativity. Furthermore, by investigating the relationship between adaptive leadership, organizational culture, and creative teacher behavior, this study has the potential to significantly contribute to the development of educational leadership practices aimed at empowering teachers and improving school learning quality. As a result, researchers intend to conduct additional research to determine the impact of adaptive leadership on organizational culture and innovative behavior among high school teachers.

## 2. LITERATURE REVIEW

### 2.1 Adaptive Leadership

In 1994, Ronald Heifetz and Marty Linsky introduced the concept of adaptive leadership. They defined adaptive leadership as a leader's ability to deal with complexity and ambiguity in a creative and flexible manner (Heifetz et al., 2009). Transformation and risk-taking are required for adaptive leadership in the face of change (Doyle, 2017). Adaptive leadership motivates people to join the transformation process (Lowery, 2020). Adaptive leadership can manage conflict, establish trust, and drive change at all levels of an organization (DeRue, 2011).

Adaptive leadership places a focus on developing individual and team capabilities to face uncertain challenges, and enables continuous innovation and learning (Highsmith, 2013). Adaptive leaders can identify environmental changes and respond in innovative and effective ways (Yukl & Mahsud, 2010), providing space for team members to develop the skills, knowledge, and attitudes needed to adapt to change (Botero, 2008), creating an environment inclusive work and strengthens team involvement (Balda & Mora, 2011), leads to increased creativity and adaptability (Uhl-Bien & Arena, 2018), as well as courage to face challenges (Lee, 2021).

Adaptive leadership has special signs that can be seen in a leader such as being open to change and new ideas (Day & Schoemaker, 2016), the ability to deal with uncertainty and complexity (Khan, 2018), the ability to adapt to the needs of the team (Charbonnier-Voirin et al., 2010), encouraging teams to seek innovative and creative solutions (Obolensky, 2014), as well as the ability to build strong relationships with team members and other stakeholders (Olsson et al., 2006).

### 2.2 Organizational culture

Organizational culture refers to an organization's common values, beliefs, norms, and practices. It encompasses communal attitudes, norms, and practices that shape how people interact with one another, make decisions, and approach their work (Moran & Volkwein, 1992). Organizational culture is sometimes referred to as the organization's personality because it impacts the overall work environment and guides employee behavior (Hu et al., 2012).

Organizational culture is built on a number of core values and beliefs that guide the actions and decisions of its members. These values determine what is important to the organization and shape the organization's overall mission and goals (Bass & Avolio, 1994). Leadership style has a significant impact on organizational culture (Klein et al., 2013; Garengo & Betto, 2022; Ali et al., 2015; Block, 2000; Tseng, 2017; Gameda & Lee, 2020). Likewise with the way communication flows within an organization (Evans, 2012).

A positive organizational culture encourages high levels of employee engagement and commitment. When employees feel valued, supported, and aligned with organizational values, they are more likely to be motivated, productive, and satisfied at work (Brad Shuck et al., 2011). Organizational culture must embrace diversity and inclusion, valuing and respecting individuals from different backgrounds, viewpoints, and experiences (Boekhorst, 2015; Carrington & Robinson, 2006).

Organizational culture is influenced by several interrelated factors. One important factor is the history and origins of the organization. How the organization started and past experiences play a role in shaping the current culture (Smircich, 1983). Schein (2010) suggests that organizational culture is inherited through the socialization and learning processes that occur within the organization.

Other factors that influence culture are organizational structure, employee composition, and the external environment (Robbins et al., 2013). An open and collaborative organizational structure encourages an inclusive culture (Pless & Maak, 2004; Dessel, 2010; Harris et al., 2021), while a diverse employee composition can shape the norms and dynamics in organizational culture (Wright, 2021). On the other hand, the external environment such as industry conditions and competition can also influence organizational culture (Erserim, 2012; Wang & Ellinger, 2011).

### 2.3 Creative Behavior

Creativity is the ability to develop fresh and useful ideas, solutions, or expressions. This entails thinking outside conventional boundaries and investigating new alternatives (Zhou & George, 2001). Creativity can be used in a variety of contexts, including science, technology, business, and everyday problem solving (Cybulski et al., 2015).

According to studies, creativity involves a variety of characteristics and factors, including the courage to take risks, flexibility (Andiliou & Murphy, 2010), the ability to generate a large number of great ideas (Henriksen et al., 2021), connections between ideas (Cheng, 2011), persistence (Russ, 1993), and comfort in the face of uncertainty (Reisman et al., 2016). Amabile et al (2005) discovered that elements such as job independence, social support, and interesting tasks

can boost a person's creativity. Meanwhile, Dyer et al (2008) contend that the ability to establish unexpected connections between seemingly unrelated topics and uncover new patterns can spark inventive and creative thinking.

### 3. RESEARCH METHOD

This study employs a survey method with a quantitative focus. Quantitative research is useful for describing how one variable effects another (Stanley & Jarrell, 2005). This study's sample consisted of 100 randomly selected teachers. The strategy used to collect data is to distribute questionnaires. The scale form employed in this research is a Likert scale, as shown in Table 1 below.

**Table 1.** Likert Scale

Statement	Score
Completely agree	5
Agree	4
Doubtful	3
Do not agree	2
Strongly Disagree	1

In the adaptive leadership variable, the indicators used include (1) flexibility; (2) appreciate different perspectives; (3) team collaboration and empowerment; (4) openness; and (5) effective communication. For the organizational culture variable, the indicators used include (1) upholding organizational values; (2) orientation to quality; (3) adaptability; and (4) work-life balance. Meanwhile, for the creative behavior variable, the indicators used include (1) having encouragement; (2) involvement; (3) curiosity; (4) self-confidence; (5) independence; and (6) dare to have an opinion. Next, the results of respondents' answers will be processed using SmartPLS (Partial Least Squares) software. This software is very suitable for predicting, building theories, and analyzing small sample sizes, as well as testing the overall suitability of the model (goodness of fit) (Chin & Dibbern, 2010).

When testing with the PLS method, three key elements must be considered: outer model, inner model, and hypothesis testing. The outer model evaluates reflective indicators using the convergent and discriminant validity of the latent construct's indicators, as well as composite reliability and Cronbach alpha for blocks of indicators. Meanwhile, the outer model containing formative indicators is evaluated using substantive content, namely by comparing relative weights and assessing their significance to the latent construct. Inner model testing uses a structural model to assess the causal link between latent variables.  $R^2$  (R-square) is used to calculate the structural model's predictive capability for each endogenous latent variable. This test is conducted out between constructs that are measured using path coefficients and the degree of significance (Hair et al., 2019). Based on these considerations, the research framework is explained as follows:

#### 3.1 Adaptive leadership and organizational culture

An adaptive leader is a person who can quickly change and adapt when changes occur (Heifetz et al., 2009). They can respond well to new challenges and situations, shape and influence the culture in the organization so that it becomes adaptive (Barnes et al., 2020). An adaptive organizational culture is when everyone in the organization can easily adapt to change and work together to face difficult challenges (Schein, 2010). This culture creates a strong foundation for leaders to learn and adapt (Bell et al., 2014). When leaders are adaptable and the organizational culture supports change, organizational performance and success can improve in an ever-changing environment.

$H_1$  = adaptive leadership influences organizational culture

#### 3.2 Adaptive leadership and creative behavior

Adaptive leadership involves the leader's ability to adapt to environmental changes and handle complex challenges (Doyle, 2017). On the other hand, creative behavior involves the ability to think outside existing boundaries and create innovative solutions (White, 2020). The combination of these two concepts stimulates creativity and innovation among team members, encourages individual growth, and creates a competitive advantage for the organization. Adaptive leaders will be able to identify and adapt their leadership style to different situations (Yukl & Mahsud, 2010), while creative behavior will encourage leaders to look for new and innovative solutions (Zaitouni & Ouakouak, 2018). In this case, adaptive leadership provides a flexible framework, while creative behavior provides the ability to think creatively in facing challenges.

$H_2$  = adaptive leadership influences creative behavior

### 4. RESULTS

#### 4.1 Test of Outer Model

The first step in evaluating the outer model is to examine the results of the convergent validity test using the factor loadings. Figure 1 shows the outcomes of data processing.

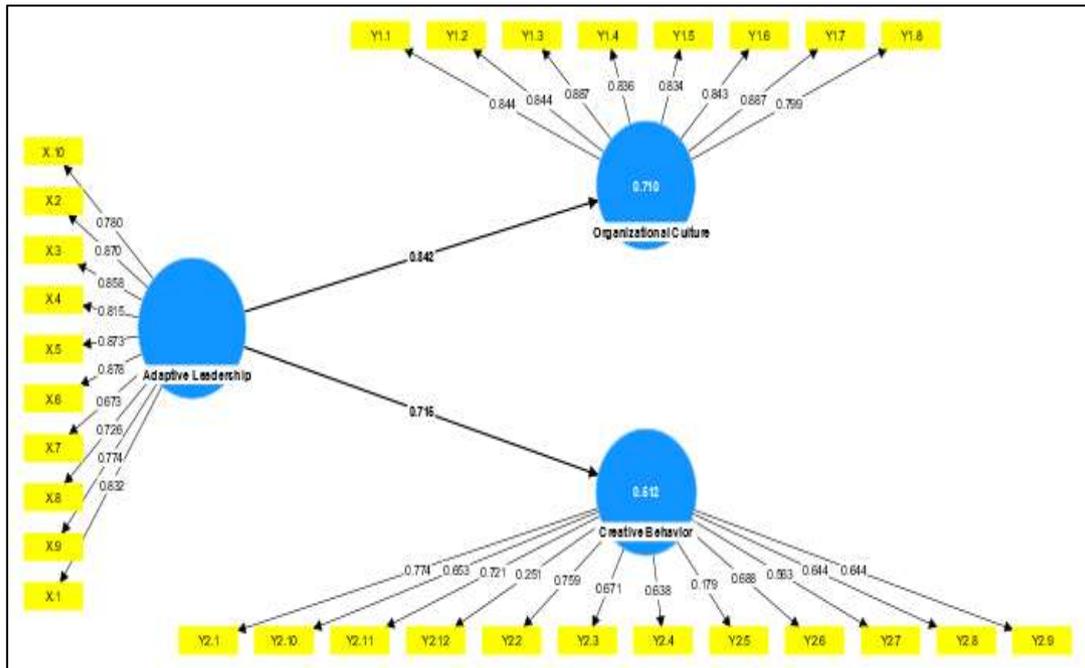


Figure 1. First Structural Model

As a result, there were 3 indicators that were declared unfit for use in further investigation, namely the creative behavior variable of 0.179 (Y2.5), 0.563 (Y2.6) and 0.251 (Y2.12). This means that these three indicators must be eliminated because the value is below 0.6 or strictly 0.7. The following are the results of the second structural model after eliminating invalid indicators.

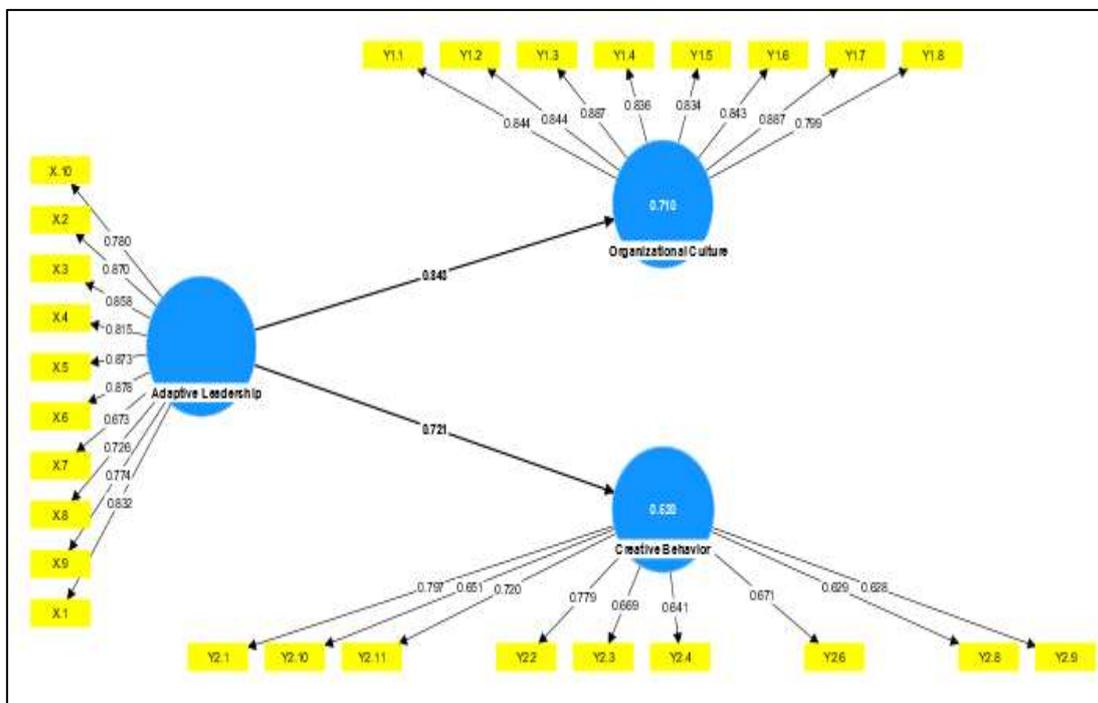


Figure 2. Second Structural Model

The next validity test is discriminant validity with the Fornell-Larcker Criterion, which determines a variable's validity when its correlation exceeds the correlation between various variables. Table 2 displays the values acquired as a result of these experiments.

Table 2. Discriminant Validity Fornell-Larcker Criterion

	Adaptive Leadership	Creative Behavior	Organizational Culture
Adaptive Leadership	0.860		

Creative Behavior	0.721	0.790	
Organizational Culture	0.843	0.834	0.847

Table 2 demonstrates that the related components have better correlation values than the other constructs, indicating that the model has good discriminant validity. In this situation, the Fornell-Larcker Criterion values show that innovative behavior has the lowest value (0.790), followed by adaptive leadership (0.860) and organizational culture (0.847). Higher values indicate that various constructs can be discriminated from one another, implying that the measurement instruments are successful at capturing variability across these constructs. The lower value of the creative behavior variable suggests that it is more closely related to the other factors in the study model.

Next, a search was carried out for Cronbach's alpha, composite reliability and AVE (Average Variance Extracted) values which can be seen in table 3 as follows:

**Table 3.** Cronbach's Alpha, Composite Reliability, and AVE

	<b>Cronbach's Alpha</b>	<b>Composite Reliability</b>	<b>Average Variance Extracted (AVE)</b>
Adaptive Leadership	0.941	0.947	0.857
Creative Behavior	0.858	0.897	0.776
Organizational Culture	0.944	0.948	0.878

Table 3 summarizes the evaluation results for numerous constructs in the context of the study, with a focus on dependability. Reliability is a measure of how much an instrument or measurement tool can be relied on or is consistent in measuring what it is designed to measure. In this context, three reliability measures serve as benchmarks: Cronbach's Alpha, Composite Reliability, and Average Variance Extracted (AVE). These three measurements are frequently employed as markers of reliability in factor analysis or constructs in scientific studies. First and foremost, Cronbach's Alpha is a statistical tool for determining the internal consistency of a measurement scale or instrument. Cronbach's Alpha values greater than 0.7 imply that the construct is dependable and produces consistent outcomes. Second, Composite Reliability is a popular reliability metric used in structural model research. Composite dependability scores greater than 0.7 suggest that the construct has appropriate dependability. Third, Average Variance Extracted (AVE) measures how well a construct can explain the variation in variables measured by the construct itself. AVE values greater than 0.7 imply that the construct can effectively explain variation in linked variables. By evaluating the outcomes, it is possible to conclude that all of the variables in this research model have good internal consistency. As a result, these variables are regarded as dependable for future study.

**4.2 Test of Inner Model**

Based on the data processing that has been carried out, a model suitability test (Goodness of Fit) is obtained, with the R-Square value as follows:

**Table 4.** R-Square Value

	<b>R Square</b>	<b>R Square Adjusted</b>
Creative Behavior	0.520	0.515
Organizational Culture	0.710	0.707

Q-Square is one of the parameters used in Partial Least Squares Structural Equation Modeling (PLS-SEM), a statistical method employed to test relationships among variables in a research model. Q-Square value is used to determine the quality of fit or Goodness of Fit. In analysis, the Q-Square value has the same significance as the coefficient of determination (R-Square), where the greater the Q-Square, the better or better the model fits the data. The following are the results of calculating the Q-Square value:

$$\begin{aligned}
 Q\text{-Square} &= 1 - [(1 - R_1^2) (1 - R_2^2)] \\
 &= 1 - (1 - (0.710)^2) (1 - (0.520)^2) \\
 &= 1 - (1 - 0.504) (1 - 0.270) \\
 &= 1 - (0.496) (0.730) \\
 &= 1 - 0.362 \\
 &= 0.638
 \end{aligned}$$

The Q-Square value of 0.638 indicates how well the research model explains the variability in the observed data. This number indicates that the proposed model can explain 63.8% of the variability in the research data. The remaining 36.2% cannot be explained by the study model and is attributable to factors other than the model. These external influences could include variables or aspects not found in the model. These results indicate that the research model is a good fit. In other

words, the model can provide a relatively accurate representation of the relationships between the variables addressed in the study framework.

### 4.3 Hypothesis Testing

To determine whether a hypothesis can be accepted or rejected, consider the significance value between constructs, t-statistics, and p-value. Bootstrap findings show that testing the research hypothesis is shown in table 5 below.

**Table 5.** Results of Research Hypothesis

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics ( O/STDEV )	P Values
Adaptive Leadership -> Creative Behavior	0.721	0.731	0.053	13,540	0,000
Adaptive Leadership -> Organizational Culture	0.843	0.847	0.034	24,432	0,000

H<sub>1</sub> : the influence of adaptive leadership on organizational culture

The first hypothesis was tested, and the t-statistic value was found to be 24.432. The t count (24.432) is greater than the t table (1.660) with a p-value of 0.000 < 0.05, indicating statistical significance. This suggests that the initial hypothesis has been accepted. As a result, adaptive leadership is shown to have a favorable impact on corporate culture. Adaptive leadership refers to the ability of a leader to adjust to environmental changes, overcome complicated challenges, and support team members' ingenuity and creativity. If test results show that adaptive leadership has a positive influence on organizational culture, it can be concluded that this leadership style promotes the development and maintenance of a positive organizational culture.

H<sub>2</sub> : the influence of adaptive leadership on creative behavior

The results of testing the second hypothesis reveal a t-statistic value of 13.540. This statistic is noteworthy as the t count (13.540) is more than the t table (1.660) with a p-value of 0.000 < 0.05. This suggests that the second hypothesis is accepted. As a result, adaptive leadership has been shown to enhance innovative behavior. Adaptive leaders encourage team members to develop, experiment, and innovate. They can provide assistance, foster collaboration, and stimulate new thinking. As a result, adaptive leadership can promote more creative behavior among team members.

## 5. DISCUSSION

### 5.1 The Influence of Adaptive Leadership on Organizational Culture

The first hypothesis is that adaptive leadership has a favorable and significant impact on corporate culture. This suggests that the better adaptive leadership is implemented in schools, the better the organizational culture becomes through flexibility, appreciation for different perspectives, collaboration and team empowerment, openness, and effective communication.

This study highlights the perspective that adaptive leadership plays a crucial role in addressing organizational change challenges (DeRue, 2011). The significance of adaptive leadership in managing organizational change is believed to assist organizations in navigating change more effectively. Adaptive leadership can create a strong culture within the organization, where employees feel connected to the goals and values embraced by the organization (Ali et al., 2020; Berl et al., 2022; Watanabe, 2021; Yeo, 2021). Their references indicate that the concept of adaptive leadership has gained recognition from several previous studies. Other research also suggests that adaptive leadership is associated with innovation and employee well-being, ultimately having a positive impact on overall organizational performance (Inceoglu et al., 2018). They explore the link between adaptive leadership that supports innovation and promotes employee well-being. The interconnection of these variables affirms that adaptive leadership is not only a response to organizational change but also a proactive approach contributing to positive outcomes such as innovation and employee well-being.

Thiel et al (2012) adds another dimension to the understanding of adaptive leadership. According to them, adaptive leadership not only contributes to managing organizational change but also promotes ethical leadership and shapes an organizational culture that values and encourages ethical principles in decision-making and actions. This indicates that adaptive leaders not only focus on organizational goals but also integrate ethical aspects into school leadership. The concept articulated by Chapman (2015) emphasizes that the adaptive leadership style can create an organizational culture oriented towards growth, development, and creativity. This suggests that adaptive leadership is not only related to change management but also to building an environment that supports innovation and the individual development within the organization. Statements from Northouse (2021) present an additional focus, stating that adaptive leadership centers on the leader's ability to create an environment that facilitates learning and development. This indicates that adaptive leaders not only respond to change but are also actively involved in shaping a context where organizational members can continue

to learn, develop, and enhance their skills. So, adaptive leaders not only adapt to change but also lead by prioritizing ethical values, creating an innovative culture, and providing support for sustainable growth and learning.

### **5.2 The influence of adaptive leadership on creative behavior**

The second hypothesis demonstrates that adaptive leadership has a favorable and significant impact on instructors' creative activity. This means that the principal is able to adapt his approach and leadership style according to different situations, can encourage employees or team members to show creative behavior.

Adaptive leaders provide flexibility and adapt to the team's needs (Lord et al., 2011). Adaptive leaders use various approaches, such as providing autonomy, empowering, and creating a work climate that supports exploration and innovation (Grass et al., 2020; Theurer et al., 2018). All these factors can stimulate and encourage creative behavior among teachers.

The results of research conducted by Randall & Coakley (2007); Klau & Hufnagel (2016); McKimm et al (2023); Boylan (2018); Chughtai et al (2023); Wong & Chan (2018); Krauter (2018); Yaghi (2017); Moore & Huberty (2020), they explain that adaptive leadership has a positive impact on creativity. Anderson and Haney (2021) looked at the effects of adaptive leadership on teachers' creative behavior by considering the role of *thrive at work* (achieving success in the workplace) and self-confidence. The research collectively implies that adaptive leadership is associated with a conducive environment for creativity. Adaptive leaders, by definition, are likely to support flexibility, experimentation, and open communication within the organisational setting, all of which foster creative thinking and innovative problem solving. It's worth noting that the specifics of how adaptive leadership promotes creativity may fluctuate depending on the setting and industry.

Reilly et al (2011) support this perspective by finding that teachers who feel supported and empowered tend to exhibit higher levels of creativity. The sense of responsibility, freedom, and support provided by adaptive leadership likely fosters a conducive atmosphere for teachers to explore innovative approaches, experiment with teaching methods, and engage in creative problem-solving within their educational roles. The idea presented, as indicated by Bagwell (2020) emphasizes the reciprocal relationship between adaptive leadership and an environment that supports and encourages innovation. This relationship suggests that the positive impact of adaptive leadership on creativity can be further enhanced when accompanied by a work environment that actively promotes and fosters innovation. In this context, a work environment supportive of innovation provides the necessary infrastructure, resources, and cultural norms that complement the principles of adaptive leadership. Adaptive leaders may empower and inspire their teams, but an innovative work environment offers the space for creative ideas to flourish and be implemented. This environment encourages experimentation, open communication, and a willingness to explore new and unconventional approaches.

## **6. CONCLUSION**

This study demonstrates that adaptive leadership has a positive impact on company culture and innovative behavior. The study model utilized successfully explained around 63.8% of the variability of the observed data, indicating that the model fits the research data. Hypothesis testing results suggest that adaptive leadership makes a major contribution to the development of a positive organizational culture. Adaptive leadership helps organizations adapt to change and encourages active participation from members. Apart from that, the research results also show that adaptive leadership positively influences creative behavior among organizational members. Through a leadership style that supports the exploration of new ideas, accepts innovative ideas, and provides freedom to take risks, adaptive leadership creates an environment that stimulates and supports the development of creative behavior. These findings have significant implications for firms looking to produce adaptive leaders and create workplace environments that foster innovation and creativity. The following suggestions are based on the findings of this study. First, future research can examine more deeply how adaptive leadership influences organizational culture and creative behavior. For example, examining how adaptive leaders interact with team members to shape a positive organizational culture and increase levels of creativity. Second, future research could consider factors that influence adaptive leadership. For example, how leadership training and development, an organizational culture that encourages innovation, or a reward system that supports adaptive behavior can influence adaptive leadership in an organization. Third, research can look at the long-term influence of adaptive leadership on organizational culture and creative behavior by observing changes over a longer period of time. Fourth, research can broaden its focus to include additional variables such as job satisfaction, organizational performance, or product innovation. Further research in this area will provide us with a better understanding of the role of adaptive leadership in fostering a positive workplace culture and boosting innovation.

## **7. RECOMMENDATIONS/SUGGESTIONS**

Based on the findings of this study, several recommendations are proposed to enhance adaptive leadership practices in senior high schools and to strengthen organizational culture and teachers' creative behaviour. First, school principals are strongly encouraged to adopt and consistently practice adaptive leadership behaviours particularly flexibility, responsiveness to change and proactive problem-solving. Given the significant influence of adaptive leadership on organizational culture, principals should position themselves as role models who are open to innovation, willing to adjust strategies and capable of navigating complex school challenges. This approach will help cultivate a positive, supportive and inspiring organizational culture within schools.

Second, principals should actively empower teachers by providing opportunities for participation in decision-making processes and encouraging autonomy in instructional practices. Empowerment has been shown to foster teachers' creative

behaviour as teachers feel trusted, valued and motivated to explore new teaching strategies. School leaders should create a safe environment where experimentation, innovation and constructive risk-taking are encouraged without fear of failure. Third, educational stakeholders and policymakers are advised to integrate adaptive leadership competencies into professional development and training programs for school principals. Leadership training should focus not only on administrative skills but also on developing adaptive capacities such as emotional intelligence, collaboration and the ability to manage uncertainty. Strengthening these competencies will support principals in leading organizational change and sustaining teacher creativity in dynamic educational contexts. Fourth, schools should institutionalize mechanisms that support an inspiring organizational culture such as regular reflective meetings, collaborative learning communities and recognition systems for creative initiatives. These practices can reinforce shared values, enhance collaboration among teachers and sustain the positive impact of adaptive leadership on school culture and performance. Finally, future research is recommended to expand the scope of this study by involving larger and more diverse samples, different educational levels or mixed-method approaches. Qualitative data such as interviews and observations could provide deeper insights into how adaptive leadership is enacted in daily school practices and how it shapes teachers' creative behaviour over time.

## REFERENCES

1. Ali, A., Wang, H., & Johnson, R. E. (2020). Empirical analysis of shared leadership promotion and team creativity: An adaptive leadership perspective. *Journal of Organizational Behavior*, 41(5), 405–423. <https://doi.org/10.1002/job.2437>
2. Ali, N. M., Jangga, R., Ismail, M., Kamal, S. N.-I. M., & Ali, M. N. (2015). Influence of Leadership Styles in Creating Quality Work Culture. *Procedia Economics and Finance*, 31, 161–169. [https://doi.org/10.1016/S2212-5671\(15\)01143-0](https://doi.org/10.1016/S2212-5671(15)01143-0)
3. Amabile, T. M., Barsade, S. G., Mueller, J. S., & Staw, B. M. (2005). Affect and Creativity at Work. *Administrative Science Quarterly*, 50(3), 367–403. <https://doi.org/10.2189/asqu.2005.50.3.367>
4. Anderson, R. C., & Haney, M. (2021). Reflection in the creative process of early adolescents: The mediating roles of creative metacognition, self-efficacy, and self-concept. *Psychology of Aesthetics, Creativity, and the Arts*, 15, 612–626. <https://doi.org/10.1037/aca0000324>
5. Andiliou, A., & Murphy, P. K. (2010). Examining variations among researchers' and teachers' conceptualizations of creativity: A review and synthesis of contemporary research. *Educational Research Review*, 5(3), 201–219. <https://doi.org/10.1016/j.edurev.2010.07.003>
6. Bagwell, J. (2020). Leading Through a Pandemic: Adaptive Leadership and Purposeful Action. *Journal of School Administration Research and Development*, 5, 30–34.
7. Balda, J. B., & Mora, F. (2011). Adapting leadership theory and practice for the networked, millennial generation. *Journal of Leadership Studies*, 5(3), 13–24. <https://doi.org/10.1002/jls.20229>
8. Barnes, M. L., Wang, P., Cinner, J. E., Graham, N. A. J., Guerrero, A. M., Jasny, L., Lau, J., Sutcliffe, S. R., & Zamborain-Mason, J. (2020). Social determinants of adaptive and transformative responses to climate change. *Nature Climate Change*, 10(9), Article 9. <https://doi.org/10.1038/s41558-020-0871-4>
9. Bass, B. M., & Avolio, B. J. (1994). Transformational Leadership And Organizational Culture. *International Journal of Public Administration*, 17(3–4), 541–554. <https://doi.org/10.1080/01900699408524907>
10. Bell, C., Chan, M., & Nel, P. (2014). The Impact of Participative and Directive Leadership on Organisational Culture: An Organisational Development Perspective. *Mediterranean Journal of Social Sciences*, 5(23), 1970.
11. Berl, R. E. W., Manfredo, M. J., Gasta, M., Smith, D., Sullivan, L., Jacobson, C. A., Bishop, C., Camuso, J., Eason, T., Hayes, J. P., Jacobson, R., Melcher, C., Newmark, J., Novotny, P., Pauley, S. P., Smith, C., Sparks, C., Stoner, K., Strong, J. d., & Ver Steeg, J. (2022). Building a systems framework to facilitate adaptive organizational change in state fish and wildlife agencies. *Conservation Science and Practice*, 4(2), e591. <https://doi.org/10.1111/csp2.591>
12. Block, L. (2003). The leadership-culture connection: An exploratory investigation. *Leadership & Organization Development Journal*, 24(6), 318–334. <https://doi.org/10.1108/01437730310494293>
13. Boekhorst, J. A. (2015). The Role of Authentic Leadership in Fostering Workplace Inclusion: A Social Information Processing Perspective. *Human Resource Management*, 54(2), 241–264. <https://doi.org/10.1002/hrm.21669>
14. Boylan, M. (2018). Enabling adaptive system leadership: Teachers leading professional development. *Educational Management Administration & Leadership*, 46(1), 86–106. <https://doi.org/10.1177/1741143216628531>
15. Brad Shuck, M., Rocco, T. S., & Albornoz, C. A. (2011). Exploring employee engagement from the employee perspective: Implications for HRD. *Journal of European Industrial Training*, 35(4), 300–325. <https://doi.org/10.1108/03090591111128306>
16. Carmeli, A., & Schaubroeck, J. (2007). The influence of leaders' and other referents' normative expectations on individual involvement in creative work. *The Leadership Quarterly*, 18(1), 35–48. <https://doi.org/10.1016/j.leaqua.2006.11.001>
17. Carrington, S., & Robinson, R. (2006). Inclusive school community: Why is it so complex? *International Journal of Inclusive Education*, 10(4–5), 323–334. <https://doi.org/10.1080/13603110500256137>
18. Chapman, K. (2015). *Complexity and Creative Capacity: Rethinking knowledge transfer, adaptive management and wicked environmental problems*. Routledge. <https://doi.org/10.4324/9781315680767>
19. Charbonnier-Voirin, A., El Akremi, A., & Vandenberghe, C. (2010). A Multilevel Model of Transformational Leadership and Adaptive Performance and the Moderating Role of Climate for Innovation. *Group & Organization Management*, 35(6), 699–726. <https://doi.org/10.1177/1059601110390833>

20. Cheng, V. M. Y. (2011). Infusing creativity into Eastern classrooms: Evaluations from student perspectives. *Thinking Skills and Creativity*, 6(1), 67–87. <https://doi.org/10.1016/j.tsc.2010.05.001>
21. Chin, W. W., & Dibbern, J. (2010). An Introduction to a Permutation Based Procedure for Multi-Group PLS Analysis: Results of Tests of Differences on Simulated Data and a Cross Cultural Analysis of the Sourcing of Information System Services Between Germany and the USA. In V. Esposito Vinzi, W. W. Chin, J. Henseler, & H. Wang (Eds.), *Handbook of Partial Least Squares: Concepts, Methods and Applications* (pp. 171–193). Springer. [https://doi.org/10.1007/978-3-540-32827-8\\_8](https://doi.org/10.1007/978-3-540-32827-8_8)
22. Chughtai, M. S., Syed, F., Naseer, S., & Chinchilla, N. (2023). Role of adaptive leadership in learning organizations to boost organizational innovations with change self-efficacy. *Current Psychology*. <https://doi.org/10.1007/s12144-023-04669-z>
23. Cotton, K. (2003). *Principals and Student Achievement: What the Research Says*. ASCD.
24. Craft, A. (2003). The Limits To Creativity In Education: Dilemmas For The Educator. *British Journal of Educational Studies*, 51(2), 113–127. <https://doi.org/10.1111/1467-8527.t01-1-00229>
25. Cropley, A. J. (2000). Defining and measuring creativity: Are creativity tests worth using? *Roepers Review*, 23(2), 72–79. <https://doi.org/10.1080/02783190009554069>
26. Cybulski, J. L., Keller, S., Nguyen, L., & Saundage, D. (2015). Creative problem solving in digital space using visual analytics. *Computers in Human Behavior*, 42, 20–35. <https://doi.org/10.1016/j.chb.2013.10.061>
27. Daly, A. J., & Chrispeels, J. (2008). A Question of Trust: Predictive Conditions for Adaptive and Technical Leadership in Educational Contexts. *Leadership and Policy in Schools*, 7(1), 30–63. <https://doi.org/10.1080/15700760701655508>
28. Day, G. S., & Schoemaker, P. J. H. (2016). Adapting to Fast-Changing Markets and Technologies. *California Management Review*, 58(4), 59–77. <https://doi.org/10.1525/cmr.2016.58.4.59>
29. DeRue, D. S. (2011). Adaptive leadership theory: Leading and following as a complex adaptive process. *Research in Organizational Behavior*, 31, 125–150. <https://doi.org/10.1016/j.riob.2011.09.007>
30. Dessel, A. (2010). Prejudice in Schools: Promotion of an Inclusive Culture and Climate. *Education and Urban Society*, 42(4), 407–429. <https://doi.org/10.1177/0013124510361852>
31. Doyle, A. (2017). Adaptive Challenges Require Adaptive Leaders. *Performance Improvement*, 56(9), 18–26. <https://doi.org/10.1002/pfi.21735>
32. Du, Y., Hu, Z., & Wang, F. (2021). A hierarchical power system transient stability assessment method considering sample imbalance. *Energy Reports*, 7, 224–232. <https://doi.org/10.1016/j.egy.2021.08.052>
33. Dyer, J. H., Gregersen, H. B., & Christensen, C. (2008). Entrepreneur behaviors, opportunity recognition, and the origins of innovative ventures. *Strategic Entrepreneurship Journal*, 2(4), 317–338. <https://doi.org/10.1002/sej.59>
34. Engels, N., Hotton, G., Devos, G., Bouckennooghe, D., & Aelterman, A. (2008). Principals in schools with a positive school culture. *Educational Studies*, 34(3), 159–174. <https://doi.org/10.1080/03055690701811263>
35. Erserim, A. (2012). The Impacts of Organizational Culture, Firm’s Characteristics and External Environment of Firms on Management Accounting Practices: An Empirical Research on Industrial Firms in Turkey. *Procedia - Social and Behavioral Sciences*, 62, 372–376. <https://doi.org/10.1016/j.sbspro.2012.09.059>
36. Evans, N. (2012). Destroying collaboration and knowledge sharing in the workplace: A reverse brainstorming approach. *Knowledge Management Research & Practice*, 10(2), 175–187. <https://doi.org/10.1057/kmmp.2011.43>
37. Garengo, P., & Betto, F. (2022). The role of organisational culture and leadership style in performance measurement and management: A longitudinal case study. *Production Planning & Control*, 0(0), 1–19. <https://doi.org/10.1080/09537287.2022.2058431>
38. Gameda, H. K., & Lee, J. (2020). Leadership styles, work engagement and outcomes among information and communications technology professionals: A cross-national study. *Heliyon*, 6(4), e03699. <https://doi.org/10.1016/j.heliyon.2020.e03699>
39. Grass, A., Backmann, J., & Hoegl, M. (2020). From Empowerment Dynamics to Team Adaptability: Exploring and Conceptualizing the Continuous Agile Team Innovation Process. *Journal of Product Innovation Management*, 37(4), 324–351. <https://doi.org/10.1111/jpim.12525>
40. Hair, J. F., Sarstedt, M., & Ringle, C. M. (2019). Rethinking some of the rethinking of partial least squares. *European Journal of Marketing*, 53(4), 566–584. <https://doi.org/10.1108/EJM-10-2018-0665>
41. Hallinger, P., & Heck, R. H. (2010). Collaborative leadership and school improvement: Understanding the impact on school capacity and student learning. *School Leadership & Management*, 30(2), 95–110. <https://doi.org/10.1080/13632431003663214>
42. Harris, C. A., Dimick, J. B., & Dossett, L. A. (2021). Cultural Complications: A Novel Strategy to Build a More Inclusive Culture. *Annals of Surgery*, 273(3), e97. <https://doi.org/10.1097/SLA.0000000000004219>
43. Heifetz, R. A., Grashow, A., & Linsky, M. (2009). *The Practice of Adaptive Leadership: Tools and Tactics for Changing Your Organization and the World*. Harvard Business Press.
44. Henriksen, D., Mishra, P., Creely, E., & Henderson, M. (2021). The Role of Creative Risk Taking and Productive Failure in Education and Technology Futures. *TechTrends*, 65(4), 602–605. <https://doi.org/10.1007/s11528-021-00622-8>
45. Highsmith, J. (2013). *Adaptive Leadership: Accelerating Enterprise Agility*. Addison-Wesley.
46. Hu, Q., Dinev, T., Hart, P., & Cooke, D. (2012). Managing Employee Compliance with Information Security Policies: The Critical Role of Top Management and Organizational Culture\*. *Decision Sciences*, 43(4), 615–660. <https://doi.org/10.1111/j.1540-5915.2012.00361.x>

47. Inceoglu, I., Thomas, G., Chu, C., Plans, D., & Gerbasi, A. (2018). Leadership behavior and employee well-being: An integrated review and a future research agenda. *The Leadership Quarterly*, 29(1), 179–202. <https://doi.org/10.1016/j.leaqua.2017.12.006>
48. Kaufman, J. C., & Sternberg, R. J. (2010). *The Cambridge Handbook of Creativity*. Cambridge University Press.
49. Khan, S. Q. (2018). Emotional Intelligence of High Secondary School Student & Parents' Educational Backgrounds: *International Journal of Islamic Psychology*, 1(01), Article 01.
50. Klau, M., & Hufnagel, J. (2016). Strengthening Communities through Adaptive Leadership: A Case Study of the Kansas Leadership Center and the Bangladesh Youth Leadership Center. In *Creative Social Change* (pp. 279–294). Emerald Group Publishing Limited. <https://doi.org/10.1108/S2058-88012016040>
51. Klein, A. S., Wallis, J., & Cooke, R. A. (2013). The impact of leadership styles on organizational culture and firm effectiveness: An empirical study. *Journal of Management & Organization*, 19(3), 241–254. <https://doi.org/10.1017/jmo.2013.34>
52. Kozlowski, S. W. J., Watola, D. J., & Jensen, W., Jaclyn M. (2008). Developing Adaptive Teams: A Theory of Dynamic Team Leadership. In *Team Effectiveness In Complex Organizations*. Routledge.
53. Krauter, J. (2018). The Adaptive Leader: The Influence of Leaders' Psychological Capital on Their Task Adaptive Performance Managing Adversity. *International Journal of Knowledge, Culture & Change Management: Annual Review*, 18(1), 19–45. <https://doi.org/10.18848/1447-9524/CGP/v18i01/19-45>
54. Lee, M. R. (2021). *Leading Virtual Project Teams: Adapting Leadership Theories and Communications Techniques to 21st Century Organizations*. CRC Press.
55. Lord, R. G., Hannah, S. T., & Jennings, P. L. (2011). A framework for understanding leadership and individual requisite complexity. *Organizational Psychology Review*, 1(2), 104–127. <https://doi.org/10.1177/2041386610384757>
56. Lowery, K. (2020). Critical Development of Courage Within Social Justice School Leaders: Silence, Tempered Radicals, and Revolutionaries. In R. Papa (Ed.), *Handbook on Promoting Social Justice in Education* (pp. 355–373). Springer International Publishing. [https://doi.org/10.1007/978-3-030-14625-2\\_150](https://doi.org/10.1007/978-3-030-14625-2_150)
57. Lumby, J. (2012). Leading Organizational Culture: Issues of Power and Equity. *Educational Management Administration & Leadership*, 40(5), 576–591. <https://doi.org/10.1177/1741143212451173>
58. Matthew, D. C. (2017). Racial Injustice, Racial Discrimination, and Racism: How Are They Related? *Social Theory and Practice*, 43(4), 885–914.
59. McKimm, J., Ramani, S., Forrest, K., Bishop, J., Findyartini, A., Mills, C., Hassanien, M., Al-Hayani, A., Jones, P., Nadarajah, V. D., & Radu, G. (2023). Adaptive leadership during challenging times: Effective strategies for health professions educators: AMEE Guide No. 148. *Medical Teacher*, 45(2), 128–138. <https://doi.org/10.1080/0142159X.2022.2057288>
60. Moore, M. E., & Huberty, L. L. (2020). Adaptive Leadership: An Opportunity for Increasing the Representation of People with Disabilities in the Workplace. In S. L. Fielden, M. E. Moore, & G. L. Bend (Eds.), *The Palgrave Handbook of Disability at Work* (pp. 471–484). Springer International Publishing. [https://doi.org/10.1007/978-3-030-42966-9\\_27](https://doi.org/10.1007/978-3-030-42966-9_27)
61. Moran, E. T., & Volkwein, J. F. (1992). The Cultural Approach to the Formation of Organizational Climate. *Human Relations*, 45(1), 19–47. <https://doi.org/10.1177/001872679204500102>
62. Mumford, M. D., Zaccaro, S. J., Harding, F. D., Jacobs, T. O., & Fleishman, E. A. (2000). Leadership skills for a changing world: Solving complex social problems. *The Leadership Quarterly*, 11(1), 11–35. [https://doi.org/10.1016/S1048-9843\(99\)00041-7](https://doi.org/10.1016/S1048-9843(99)00041-7)
63. Nemiro, J., Larriva, C., & Jawaharlal, M. (2017). Developing Creative Behavior in Elementary School Students with Robotics. *The Journal of Creative Behavior*, 51(1), 70–90. <https://doi.org/10.1002/jocb.87>
64. Norris, S. E. (2018). An Adaptive Leadership Approach to Adult Learning and Organizational Research. In *Handbook of Research on Innovative Techniques, Trends, and Analysis for Optimized Research Methods* (pp. 99–114). IGI Global. <https://doi.org/10.4018/978-1-5225-5164-5.ch007>
65. Northouse, P. G. (2021). *Leadership: Theory and Practice*. SAGE Publications.
66. Obolensky, M. N. (2014). *Complex Adaptive Leadership: Embracing Paradox and Uncertainty*. Gower Publishing, Ltd.
67. Olsson, P., Gunderson, L. H., Carpenter, S. R., Ryan, P., Lebel, L., Folke, C., & Holling, C. S. (2006). Shooting the Rapids: Navigating Transitions to Adaptive Governance of Social-Ecological Systems. *Ecology and Society*, 11(1). <https://www.jstor.org/stable/26267806>
68. Oreg, S., Vakola, M., & Armenakis, A. (2011). Change Recipients' Reactions to Organizational Change: A 60-Year Review of Quantitative Studies. *The Journal of Applied Behavioral Science*, 47(4), 461–524. <https://doi.org/10.1177/0021886310396550>
69. Pless, N., & Maak, T. (2004). Building an Inclusive Diversity Culture: Principles, Processes and Practice. *Journal of Business Ethics*, 54(2), 129–147. <https://doi.org/10.1007/s10551-004-9465-8>
70. Randall, L. M., & Coakley, L. A. (2007). Applying adaptive leadership to successful change initiatives in academia. *Leadership & Organization Development Journal*, 28(4), 325–335. <https://doi.org/10.1108/01437730710752201>
71. Raney, A. F. (2014). Agility in Adversity: Integrating Mindfulness and Principles of Adaptive Leadership in the Administration of a Community Mental Health Center. *Clinical Social Work Journal*, 42(3), 312–320. <https://doi.org/10.1007/s10615-014-0487-0>
72. Reilly, R. C., Lilly, F., Bramwell, G., & Kronish, N. (2011). A synthesis of research concerning creative teachers in a Canadian context. *Teaching and Teacher Education*, 27(3), 533–542. <https://doi.org/10.1016/j.tate.2010.10.007>

73. Reisman, F., Keiser, L., & Otti, O. (2016). Development, Use and Implications of Diagnostic Creativity Assessment App, RDCA – Reisman Diagnostic Creativity Assessment. *Creativity Research Journal*, 28(2), 177–187. <https://doi.org/10.1080/10400419.2016.1162643>
74. Robbins, S., Judge, T. A., Millett, B., & Boyle, M. (2013). *Organisational Behaviour*. Pearson Higher Education AU.
75. Runco, M. A., & Jaeger, G. J. (2012). The Standard Definition of Creativity. *Creativity Research Journal*, 24(1), 92–96. <https://doi.org/10.1080/10400419.2012.650092>
76. Russ, S. W. (1993). *Affect and Creativity: The Role of Affect and Play in the Creative Process*. Psychology Press.
77. Sawyer, R. K. (2006). Group creativity: Musical performance and collaboration. *Psychology of Music*, 34(2), 148–165. <https://doi.org/10.1177/0305735606061850>
78. Schein, E. H. (2010). *Organizational Culture and Leadership*. John Wiley & Sons.
79. Smircich, L. (1983). Concepts of Culture and Organizational Analysis. *Administrative Science Quarterly*, 28(3), 339–358. <https://doi.org/10.2307/2392246>
80. Stanley, T. D., & Jarrell, S. B. (2005). Meta-Regression Analysis: A Quantitative Method of Literature Surveys. *Journal of Economic Surveys*, 19(3), 299–308. <https://doi.org/10.1111/j.0950-0804.2005.00249.x>
81. Theurer, C. P., Tumasjan, A., & Welpe, I. M. (2018). Contextual work design and employee innovative work behavior: When does autonomy matter? *PLOS ONE*, 13(10), e0204089. <https://doi.org/10.1371/journal.pone.0204089>
82. Thiel, C. E., Bagdasarov, Z., Harkrider, L., Johnson, J. F., & Mumford, M. D. (2012). Leader Ethical Decision-Making in Organizations: Strategies for Sensemaking. *Journal of Business Ethics*, 107(1), 49–64. <https://doi.org/10.1007/s10551-012-1299-1>
83. Torres, R., Reeves, M., & Love, C. (2012). Adaptive Leadership. In *Own the Future* (pp. 33–39). John Wiley & Sons, Ltd. <https://doi.org/10.1002/9781119204084.ch4>
84. Tseng, S.-M. (2017). Investigating the moderating effects of organizational culture and leadership style on IT-adoption and knowledge-sharing intention. *Journal of Enterprise Information Management*, 30(4), 583–604. <https://doi.org/10.1108/JEIM-04-2016-0081>
85. Uhl-Bien, M., & Arena, M. (2018). Leadership for organizational adaptability: A theoretical synthesis and integrative framework. *The Leadership Quarterly*, 29(1), 89–104. <https://doi.org/10.1016/j.leaqua.2017.12.009>
86. Wang, Y., & Ellinger, A. D. (2011). Organizational learning: Perception of external environment and innovation performance. *International Journal of Manpower*, 32(5/6), 512–536. <https://doi.org/10.1108/01437721111158189>
87. Watanabe, R. (Lisa) W., Ryosuke (Reo). (2021). Kabuki Leadership: Cultivating Adaptive Leadership in a Hierarchical Collectivist Culture in Japan. In *Adaptive Leadership in a Global Economy*. Routledge.
88. White, H. A. (2020). Thinking “Outside the Box”: Unconstrained Creative Generation in Adults with Attention Deficit Hyperactivity Disorder. *The Journal of Creative Behavior*, 54(2), 472–483. <https://doi.org/10.1002/jocb.382>
89. Wong, G. K. W., & Chan, D. L. H. (2018). Adaptive leadership in academic libraries. *Library Management*, 39(1/2), 106–115. <https://doi.org/10.1108/LM-06-2017-0060>
90. Wright, E. S. (2021). The Effects of Organizational Culture on Employee Turnover. *Performance Improvement Quarterly*, 34(3), 303–319. <https://doi.org/10.1002/piq.21372>
91. Yaghi, A. (2017). Adaptive organizational leadership style: Contextualizing transformational leadership in a non-western country. *International Journal of Public Leadership*, 13(4), 243–259. <https://doi.org/10.1108/IJPL-01-2017-0001>
92. Yeo, R. K. (2021). In praise of COVID-19: Discovering adaptive leadership in unprecedented times. *Strategic HR Review*, 20(3), 102–108. <https://doi.org/10.1108/SHR-01-2021-0009>
93. Yukl, G., & Mahsud, R. (2010). Why flexible and adaptive leadership is essential. *Consulting Psychology Journal: Practice and Research*, 62, 81–93. <https://doi.org/10.1037/a0019835>
94. Zaitouni, M., & Ouakouak, M. L. (2018). The impacts of leadership support and coworker support on employee creative behavior. *International Journal of Productivity and Performance Management*, 67(9), 1745–1763. <https://doi.org/10.1108/IJPPM-10-2017-0264>
95. Zhou, J., & George, J. M. (2001). When Job Dissatisfaction Leads to Creativity: Encouraging the Expression of Voice. *Academy of Management Journal*, 44(4), 682–696. <https://doi.org/10.5465/3069410>