Situational Outlook Questionnaire℠

Research Literature on the

CCQ & SOQ

An Annotated Bibliography

Scott G. Isaksen

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Research Literature on the CCQ and SOQ: An Annotated Bibliography

Scott G. Isaksen

The Creative Problem-Solving Group - Buffalo

BI - Norwegian Business School

The focus of this selected bibliography is on the concept of organizational climate for creativity and change with particular emphasis on the Creative Climate Questionnaire (CCQ, the precursor to the SOQ) and the Situational Outlook Questionnaire® (SOQ) both of which were designed to assess organizational climate and have been used as tools to promote and direct organizational change initiatives.

The references are divided into four sections:

Theses and Dissertations that have used the CCQ or SOQ in their study (n=74)	**Pages 3-509**
Articles, Papers, and Chapters that include the CCQ or SOQ (n=207)	**Pages 51-157**
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Theses/Dissertations

Adam, M. N. (2009). *The critical success factors of enterprise resource planning implementation: Malaysian and American experiences.* (Unpublished doctoral dissertation). Faculty of Management, Multimedia University: Malaysia.

This study reports the Enterprise Resource Planning (ERP) experiences of Malaysian and the USA companies. The aim of the research is to examine the critical success factors needed to ensure success of ERP implementation and to explore the impact of ERP on various operational performance measures. Based on Dehning and Richardson (2002) theoretical model, this research adopts a survey study approach with data obtained from directors of various publicly listed firms through the use of questionnaires. The results were compared between Malaysia and the USA using statistical analysis. Since few ERP studies have been conducted in Malaysia, this research provides a better understanding of ERP practice across cultures, particularly for multinationals operating in Malaysia and the USA. The study shows that Malaysia had different critical success factors compared to the USA (t-test, $p < 0.05$), faced different problems compared to the USA (t-test, $p < 0.05$) and was driven by different motivations compared to the USA (t-test, $p < 0.05$). The study confirms that ERP delivered positive impacts on operational performance in Malaysia and the USA on four measures cost, quality, delivery and flexibility (t-test, $p < 0.05$). Multiple regression test shows that the firm size in terms of revenue and number of employees, length of ERP, work climate, cost, quality, delivery and flexibility performance had significant impacts on overall performance (F-test, $p < 0.05$). Multiple regression test confirms that length of ERP and quality performance are the most important variables influencing overall firm performance (F-test, $p < 0.05$). Finally, the study concludes that the USA was more successful than Malaysia in the sense that it scored higher on the overall performance (t- test, $p < 0.05$), perceived more positive impacts on various operational measures (t-test, $p < 0.05$) and had a better creative climate (t-test, $p < 0.05$).

Adolfsson, J., Stojcevski, T., & Lamskemper, J. (2013). *Influence of leadership characteristics on creative climate in research and development teams.* (Unpublished Executive MBA Thesis). Gothenburg University, Sweden.

If you take highly creative people and put them into a work environment that rigidly blocks change or inhibits new ideas, what do you suppose happens to their creativity? Although the people might have a capacity to imagine new possibilities the immediate situation may undermine such efforts, consequently, the creativity is unlikely to flourish. Early creativity research focused on individual attributes that predisposed people to achieve high levels of creativity while more recent research has considered the effects of people's environment on their ability to be creative. One of the strongest factors that influence the organizational environment is Leadership. A number of organizational studies have provided empirical evidence in support of the profound impact that leadership has on the organizational climate for creativity. This indicates that the leaders set the tone for creativity, and as a consequence, the climate then determines the degree to which employees generate creative ideas. We looked into the influence of certain leadership characteristics that promotes or decreases the levels of Creative Climate within a context of 8 development teams in 2 different companies.

Aerts, W. (2008). Exploring the relationships between problem-solving style and climates in best and worst-case work experiences. (Unpublished master's thesis). Vlekho University, Brussels.

This study looked at person-environment fit within the field of innovation and creativity, specifically examining the relationship between problem-solving style and organizational climate. How do people of different problem-solving styles view their environments differently? Aerts found that there were significant differences between individuals of stronger contrasting problem-solving styles and the climate in best and worst-case work environments.

Akkermans, H. (2008). Organizational climate as an intervening variable between leadership behavior and innovative productivity: An exploratory study. (Unpublished master's thesis). Vlekho University, Brussels.

This thesis examined what specific leader behaviors help or hinder the creation of an innovatively productive climate. Using qualitative analysis, eight categories of leader behavior were classified, and specific behaviors were identified that helped or hindered innovation. Climate was also found to be a significant intervening variable. Leaders affect the organizational climate through their behaviors, which in turn affects innovative productivity.

Aragaki, D. M., & Tomina, E. (2018). *Developing innovative thinking in an IT company: A case study.* (Unpublished master's thesis). Uppsala University, Sweden.

The aim of the study is to determine what type of activities and factors would support creativity and innovation in Visma Enterprise. In order to evaluate the current situation at Visma Enterprise authors used Ekvall Situational Outlook Questionnaire and found that employees have lack of motivation and that they have problems with communication between teams. To improve the current situation authors suggested that by organizing activities like hackathons to train employees, guide them through the process and show them what is expected from them and how it can be achieved.

Argona, C. A. (2001). *Identifying Ekvall's creative climate dimensions in an aesthetic education setting.* (Unpublished master's project). International Center for Studies in Creativity, State University College at Buffalo.

The questions that guided this study were: (1) How do Ekvall's climate dimensions manifest themselves in an aesthetic education setting? (2) What descriptions of creative climate in aesthetic education exist in the literature? (3) What observed behaviors are indicative of creative behavior in aesthetic education classes? And (4) How does aesthetic education help to enhance creative climate in the classroom?

Nine classes from grades K-2 were observed in an urban elementary school setting. Classes were observed using a personal observation protocol and teacher observation protocols. These data were collected, examined and sorted into characteristics similar and different to Ekvall's definitions. Each dimension was summarized and identified considerations for further research. In addition, a literature review presented key behaviors of creative climate in education and the importance of aesthetics in education. Ultimately, both the data and literature demonstrated the benefits and behaviors of aesthetic education. However, further research is needed to solidify the importance and benefits of aesthetics in the academic setting.

Aspenberg, H., & Kumlin, A. (2012). Open innovation and organizational creativity – Do they go together? A case study of the creative climate in an open innovation arena. (Unpublished master's thesis). Department of Technology Management and Economics, Chalmers University of Technology: Göteborg, Sweden.

This thesis assesses the creative climate in an open innovation arena called SAFER and compares it to a previous assessment done in 2009 in the same arena. Furthermore, the challenges and possibilities associated with creative climate in an open innovation setting are studied. The empirical data contains the results of a Creative Climate Questionnaire (CCQ) performed at SAFER. The questionnaire was followed up with interviews with people from SAFER, which provide a deeper understanding of the motives to the result of the CCQ, as well as other insights about creative climate within an open innovation arena. The thesis finds that an open innovation arena facilitates creative climate by being organized in a cross-functional way. However, the project form that SAFER is organized in also has some disadvantages. The analysis shows that the output of an open innovation arena depends on that the partner organizations are devoted to the work, and that there is a flow of knowledge and ideas between the arena and the partners. This implies that the success of open innovation initiatives is dependent on their surrounding

organizations and actors. People at SAFER have some identity issues, and the view of SAFER is fragmented. As the purpose of open innovation is to create diverse meetings, we recommend that open innovation arenas not to strive for one singular creative climate. In a future with looser organization forms, it would be interesting with future studies that look more into this.

Bakkar, A. A. (2003). Creativity-enhancement in media organizations: A study of the perception of journalists and media managers in Saudi Arabia. (Unpublished doctoral dissertation). University of Oklahoma Graduate College: Norman, OK.

This dissertation examines how creativity can be enhanced in Saudi Arabian media organizations. In the study, managers and employees from seven Saudi media organizations were asked to complete an Arabic translation of the Situational Outlook Questionnaire® (SOQ). The sample included a total of 209 participants (43 managers and 166 employees). The data was then used to address research questions focused on understanding how managers and employees differ in their perceptions of the climate in their organizations. In addition, the research questions focused on the effect of demographic factors on the participants' perception. Results show that there is a statistically significant difference between males and females in Saudi media organizations and that gender is a statistically significant factor in defining differences between managers and employees on the SOQ dimensions of Challenge, Trust, and Freedom. The author suggests that this finding reflects a unique situation in Saudi media organizations when compared to results reported in other international organizations. This study also uses an extensive literature review of factors that lead to creative climates in organizations as a means to introduce a model of building a creative organization. This model includes three major factors: a) the management system of the organization, b) daily work activities, and c) organizational life. An exploration of the model's strengths and weaknesses is offered.

Bertlett, J. (2011). An employeeship model and its relation to psychological climate: A study of congruence in the behavior of leaders and followers. (Unpublished doctoral dissertation). Department of Psychology, Lund University: Sweden.

This doctoral dissertation was driven by an inspiration to study how employees behave toward each other from an interactive perspective where all members of an organization are considered active contributors. Employeeship holds this perspective and acknowledges the importance of productive relationships. The objective of this dissertation is to contribute to the conceptual and methodological development of employeeship. The aims are further to construct and present the Employeeship-Leadership-Relationship Model (ELR) that visualizes the leadership, peer employee, and leader-follower perspectives of employeeship, to present and test two questionnaires by which the ELR Model is operationalized, and to study the behavioral factors of the ELR Model (i.e., vertical leadership behavior, horizontal peer employee behavior, and reciprocal congruent leader-follower behavior) relative to psychological climate. Three studies were conducted of which two were empirical and carried out at Stockholm-Arlanda airport in Sweden. The first empirical study included the apron and passenger services of a ground handling company, tower and ground control of air traffic service, and an airline's operation division. The second empirical study included the same divisions of the ground handling company and the ground control of air traffic service. The psychological climate was measured with the Creative Climate Questionnaire (CCQ; Ekvall, 1990), the leadership behavior with a modified version (Holmkvist, 2000) of the Leader Effectiveness and Adaptability Description (LEAD; Hersey & Blanchard, 1988), the peer employee behavior with the Your Employeeship Questionnaire (YEQ; Appendix B), and the congruent leader-follower behavior was computed based on the responses from corresponding items of the LEAD and YEQ. The main conclusions were that congruent leader-follower behavior expands leadership beyond the traditional conceptions of formal leadership and subordination in organizational hierarchies,

that organizations should use this finding in their training programs and include followers in leadership development, and that the ELR Model can facilitate the understanding of how employeeship works in different work situations where leaders and follower can learn how to support each other to reach congruent behavior.

Biekart, E. A. (2014). Supporting creativity in organizations: Research considering predictors of perceived and expressed support for creativity in organizations. (Unpublished thesis). Utrecht University, The Netherlands.

The current research considers the role of support for creativity in two studies, respectively the perceived and expressed support for creativity. Study one uses a multilevel analysis (n = 2996) to investigate whether individual and organizational characteristics explain the climate for creativity employees perceive, using Ekvall's nine-dimensional model for the climate for creativity. Findings suggest that mostly individual characteristics (age, gender, educational attainment, and organizational tenure) explain employees' assessment, as opposed to organizational size and industry. It was concluded that employees will constitute their own representation of the work environment, but that a significant part remains to be explained on the organizational level, which was not accounted for by size and industry. Study two (n = 131) uses surveys to investigate employees' attitudes towards creative traits to measure the support employees express towards creative traits and new ideas. It was found that people show less support for creative traits as opposed to non-creative traits. Especially people who support non-creative traits showed a wrong understanding of creativity. Subsequently, this expressed support is explained using the climate for creativity and the prevention and promotion focus, in which the latter are expected to fulfill a mediator function. Results show that no mediator structure is distinguished, though both the promotion focus and the climate for creativity partially explain the support employees express towards new ideas. It was concluded that a paradoxical role for creativity in organizations was confirmed, and that this paradox was explained by the organizational climate.

Blakey, J. D. (2015). *The impact of workspace on innovation.* (Unpublished doctoral dissertation). Brandman University – School of Education: Irvine, California.

The purpose of the mixed methods study was to identify and describe the extent to which individual or team workspace contributes to innovation in an organizational setting as perceived by knowledge workers in California. In addition, the purpose was to identify stimulators and barriers in the physical workspace on innovation. A literature review revealed the importance of creativity and innovation in organizations. Gaps in the literature between workspace and innovation were examined and perspectives on the combination of workspace design and innovation were assessed. Respondents identified core dimensions within the Situational Outlook Questionnaire that led to innovation and creativity in the workspace environment. To further expand respondents acknowledged individual and team workspace factors that led to more innovative outcomes. Within the individual workspace technology surfaced as a primary driver of innovation. When asked about team workspace respondents were more constructive indicating concern over noise and interruptions. Additionally, the study asked about stimulators and barriers to innovation within the workspace. Stimulators included placement of staff within close proximity to key team members, design that encourages trust, and inspiring décor that awakens creativity. Lastly, barriers to innovation in the workspace included status quo mentality, decreasing square footage from individual workspace, and concerns with open-space design.

Bold, L. A. (2013). Comparative analysis of student creativity and creativity instruction in international baccalaureate programs and advanced placement programs. (Unpublished doctoral dissertation). Immaculata University: Immaculata, Pennsylvania.

The purpose of this study was to examine student creativity and creativity instruction in International Baccalaureate Programs (IB) and Advanced Placement (AP)

programs. This mixed methodology study was completed in 12 high schools in the mid-Atlantic region with a combination of public and private parochial schools. Data were collected through (a) 137 teacher surveys with Likert scale and open-ended questions, (b) 60 student surveys with affirmative or negative choices and open-ended questions, (c) analysis of 67 syllabi/curricula by three raters, (d) 16 teacher observations, and (e) 62 student scores from the Torrance Tests of Creative Thinking – Figural (TTCT). Results indicated that teachers and students reported direct instruction of creativity is occurring in both the AP and IB programs. When creativity climate was assessed, the combination AP/IB teachers reported lower levels of creativity instruction than the other groups and AP/IB students reported a higher incidence of creativity instruction in IB coursework than AP coursework. Data from the TTCT show that AP/IB students' average scores were higher than the other two student groups in all measured areas, save one, Abstractedness of Titles, in which the IB students had the higher average scores. When student survey results were matched with TTCT scores, there was a positive correlation for IB students as a statistically significant level. The other two student groups demonstrated no correlation.

Boney, P. K. (2009). Predicting team-level climate for innovation productivity through the Tilt 360 LP multi-rater assessment of balanced character strengths in transcendent leadership. (Unpublished master's thesis). North Carolina State University, Raleigh, North Carolina.

This study found a positive correlation between Tilt results and a team-level application of climate for innovation (SOQ). Implications for leadership and organizational climate are discussed.

Boström, A-M. (2007). Evidence-based care of older people: Utopia or reality? Healthcare personnel perceptions of using research in their daily practice. (Unpublished thesis). Karolinska Institutet: Stockholm, Sweden.

The overall aim of this thesis was to generate knowledge of research utilization of registered nurses (RNs) and other healthcare personnel in the care of older people. Five questionnaires were used to collect data: The Research Utilization Questionnaire (Papers I-IV), the Creative Climate Questionnaire (Paper II), the BARRIERS Scale (Paper IV), a Demographic Data Questionnaire (Papers I-IV) and an Organizational Data Questionnaire (Paper III). Data were analyzed using descriptive and inferential statistics. Four determinants of research use among staff were identified: positive attitudes to research and seeking research that is related to clinical practice (individual determinants) and access to research findings at the workplace and support from the unit manager (organizational determinants). There is an urgent need to develop strategies to enhance research use by focusing on the determinants and barriers identified in this thesis, which include access to information sources, interventions for increasing knowledge on research methodology and caring science, adequate training in the use of information sources and a supportive organization.

Bridges, K. (2020). *Vulnerabilty: The untapped source of creativity and innovation.* (Unpublished master's thesis). City University of London, UK.

Vulnerability is foundational to our basic human need to connect with others. We develop trust and belonging through acts of vulnerability. However, fear of appearing weak or unprofessional keeps most individuals from revealing their vulnerabilities in personal and professional relationships. The skills needed to leverage vulnerability's strengths and combat its barriers are not regularly discussed or developed in organizations. In these uncertain times, recognition around the importance of vulnerability and its relationship to climate at work can be a valuable resource needed to cultivate creativity and innovation. This research explored the role of

vulnerability in the workplace and its connection to creativity and innovation through climate creation. Using a mixed-methods approach, the study introduced and investigated the ABCs of vulnerability – vulnerability awareness, vulnerability behavior and climate. It also informed the creation of the Vulnerability Indicator model to illustrate and test the researcher's hypothesis. A detailed questionnaire gathered initial data and follow-up interviews helped the researcher understand the real- life relationship across all these variables.

Britz, A. (1995). *The assessment of climate for innovation in organizations.* (Unpublished master's thesis). Technische Hochshule Darmstadt, Germany.

The purpose of this master's thesis was two-fold. The first was to examine the relationship of the concept of climate to Creative Problem Solving (CPS) in organizational settings through a literature review. The second was to determine if there was a difference in the way individuals responded to the Situational Outlook Questionnaire® (SOQ) when they were asked to reflect on their perception of a work environment they were in that was most conducive to their creativity and then an environment that was least conducive. The study suggested that climate has a large impact on creativity and that there were significant differences between an individual's perception of their 'best' and 'worst' experiences. The study further suggested that even in the best-case scores on the climate dimensions, seldom did people attain an absolute high score of 300, and inversely, in the worst case an absolute low score of 0 is seldom achieved.

Brossing, M. (2010). *Leadership, organizational climate and work-related sense of coherence.* (Unpublished master's thesis). Psychological Institute, Lund University: Lund, Sweden.

The main aim of this thesis was to examine the relationship between leadership style and creative organizational climate. The aim was also to examine the relationship between leadership style and work-related sense of coherence. The material for our study has been part of a project at the University of Lund, aimed to study

organizational conditions for creativity and innovation. The information was gathered through a web-based survey. The sample consisted of 528 participants from the public sector in the southern part of Sweden. Out of these, 224 questionnaires were returned. A random selection was done, consisting of 100 participants with a distribution of 51% women and 49% men. Three questionnaires were used for the study; the leadership style questionnaire CPE (Change, Production, Employee-centered leadership style), the creative organizational questionnaire CCQ (Creative Climate Questionnaire) and the WSOC questionnaire (Work-related Sense of Coherence). The results of the study indicated that the employee-centered leadership style is highly correlated with the creative organizational climate. The employee-centered leadership style, as well as the production-centered leadership style showed a high significant relation with the Work-related Sense of Coherence. The result for the creative organizational climate indicated a high value, which was higher than the defined standard for a creative climate in general.

Bushart, R. (2015). Examining the relationship between collaborative relationships and organizational innovation within the Third-Party Logistics industry. (Unpublished doctoral dissertation). North Central University, Prescott Valley, AZ.

This study focuses on the problem in the Third-Party Logistics (3PL) industry where growth was in jeopardy because shippers viewed their 3PL partners as mostly transactional and incapable of fostering collaborative business relationships leading to the types of inter-organizational innovation required to solve the vexing challenges facing global supply chains. To find a solution for this problem, the quantitative, cross-sectional study used the SOQ to measure the predictor variable of collaborative relationships and outcome variable of organizational innovation. Data from 222 employees working in the 3PL-industry provided new evidence on the statistically significant relationships between increased collaborative relationships and organizational innovation. These findings can assist 3PLs in creating new training programs, corporate policies, and best practices within the industry.

Cabra, J. F. (1996). *Examining the reliability and factor structure of the Climate for Innovation Questionnaire.* (Unpublished master's thesis). International Center for Studies in Creativity: State University College at Buffalo, New York.

The purpose of this study was to determine the extent to which the Situational Outlook Questionnaire® (SOQ) had improved on its reliability and internal factor structure in relation to earlier versions of the SOQ. A comparison was made across three previous versions -- the Climate for Innovation Questionnaire (CIQ IVA), the CIQ IIIA, and the Creative Climate Questionnaire (CCQ IIA). The sample included 1841 respondents who were administered the CIQ IIA, 1297 subjects who were administered the CIQ IIIA, and 639 respondents who were administered the CIQ IVA. Most of the respondents participated in Creative Problem-Solving training programs. All other subjects were students enrolled in Creative Studies courses at the State University College at Buffalo. Responses were subjected to inter-item correlations, exploratory factor analyses, and reliability studies. The results suggested that the CIQ IVA operated as it was designed and did so in a consistent manner. The results also suggested that the questionnaire had been improved but may need some minor refinements. Areas for future research with the measure are also suggested.

Carlfjord, S. (2012). *The challenge of changing practice: Applying theory in the implementation of an innovation in Swedish primary health care.* (Unpublished doctoral dissertation). Division of Community Medicine, Department of Medical and Health Sciences, Linköping University: Sweden.

The aim of the thesis was to apply theory in the study of the implementation of an innovation in Swedish PHC and identify factors that influenced outcome. The study was performed using a quasi-experimental design, and included six PHC units, two from each one of three county councils in the southeast part of Sweden. Questionnaires were distributed to staff and managers, and data was also collected from the CLT database and county council registers. The baseline questionnaire included assessment of the organizational climate. Implementation outcome was

defined as the proportion of eligible patients being referred to the CLT, and was also measured in terms of Reach, Effectiveness, Adoption, Implementation and Maintenance according to the RE-AIM framework. Focus group interviews and individual interviews were performed to explore experiences of the implementation process as perceived by staff and managers. Both inductive and deductive methods were used for the analysis of data. A positive organizational climate seemed to promote implementation. Organizational changes or staff shortages coinciding with the implementation process had a negative influence on outcome. The explicit implementation strategy seemed to be more effective than the implicit strategy in the short term, but the differences levelled out over time.

Dahl, T. J., & Nyland, R. B. (2013). *Climate for job engagement: A win-win situation.* (Unpublished Master of Management Thesis on Human Resource Management). Bergen, Norway: Norwegian Business School.

This study applied the SOQ and the Utrecht Work Engagement Scale with 95 employees of a major Ministry in Bergen Norway. All dimensions of the SOQ correlated significantly with work engagement, with Challenge and Involvement having the highest r value of .71 ($p<.0001$). Regression analysis showed that higher scores on Challenge and Involvement and slightly lower scores on Debate were good predictors of engagement (B = .831; F=50.63, $p<0001$).

Dutcher, A. J. (1997). *Understanding the relationship of vision to creative climate and leadership practices.* (Unpublished master's project). International Center for Studies in Creativity, State University College at Buffalo.

This project examined the dynamics of psychological climate and the dynamics of leadership practices within the context of organizational vision. The four questions in these areas that guided this research were: (1) What were the dynamics of psychological climate operating in this data? (2) What leadership dynamics were in this data? (3) How do these leadership dynamics relate to the leadership practices identified by Kouzes and Posner (1987)? And (4) What are the implications for

organizational vision? Three of the six open-ended survey questions that related to the concepts of climate, leadership, and vision were analyzed. Qualitative methods were used in coding and sorting of data according to Ekvall's (1996) ten dimensions of creative climate. Then, the same themes were examined for evidence of Kouzes' and Posner's (1987) leadership practices. Participant comments from the vision survey clustered primarily within Ekvall's (1996) climate dimensions of Challenge, Dynamism & Liveliness, and Trust & Openness. Evidence of all Kouzes' and Pozner's (1987) leadership practices appeared, but the data clustered primarily within the process of Modeling the Way.

El Gendi, R. (2017). The relationship between employees' perceptions of climate for innovation, organizational innovativeness, and customer experience in a major telecommunications organization in Egypt. (Unpublished doctoral dissertation). School of Marketing and Reputation, Henley Business School, University of Reading: UK.

The purpose of this study is to investigate and provide an in-depth understanding of the relationship between employees' perceptions of climate for innovation, organization innovativeness, and customer experience in a service setting. This study adopts a qualitative single case study research design to provide an in-depth investigation and understanding of the phenomena under study in a major telecommunications organization in Egypt. Findings from this study show that there is a relationship between employees' perceptions of climate for innovation, organization innovativeness, and customer experience in a service setting. The study identifies five main themes of climate for innovation that enhance organization innovativeness. Finally, a key finding of this research is identifying that there are certain dimensions of climate for innovation that are highly related to customer experience than other dimensions: customer centricity, idea support, senior management support, risk-taking, open innovation, idea time, teamwork and

cohesion, employee empowerment, structure of functional units, rewards and recognition, challenging jobs, and employee involvement.

Erickson, D. R. (2010). *The climate for nursing creativity and risk-taking: A magnet environment versus non-magnet environment.* (Unpublished doctoral dissertation). University of Oklahoma Graduate College: Norman OK.

Using the Situational Outlook Questionnaire, a non-experimental, cross-sectional descriptive quantitative study was done to compare the perceived organizational support for creativity and Risk-Taking between nurses working in a Magnet hospital and a non-Magnet hospital. As predicted, the Magnet environment supported Idea-Time, Idea-Support, Freedom, Debate, and Risk-Taking. However, Challenge and Involvement, Playfulness, and Trust/Openness were not supported and there was no difference in the perception of Conflict between the two environments.

Eriksson, H., & Svensson, E. (2011). *Enablers for improving the innovative culture where ideas emerge from all coworkers: A case study of Saab Naval Operations.* (Unpublished master's thesis). KTH Industrial Engineering and Management: Stockholm, Sweden.

The purpose of the thesis was to investigate a large established Swedish high-technology organization's innovation culture and give suggestions for how it could be improved in order to support the capability of generating ideas. The investigation was performed at Saab Naval Operations. To find improvements, the current culture and the desired culture that supports innovation were identified. Finally, necessary changes were identified to be able to achieve the desired culture. Semi structured interviews were held to understand the prevailing problems today and the desired future state. Additionally, a climate questionnaire was sent out to all coworkers at Naval Operations to reveal the current state from coworker's perspectives. The analysis of the qualitative and quantitative results together provided an overall understanding of the existing culture. Workshops were held to determine the

changes needed to reach the desired culture. Finally, an action-plan with four improvement areas was identified.

Gaulin, J. P. (1985). *Creativity: Unlocking the productive work environment.* (Unpublished master's project). International Center for Studies in Creativity: State University of New York College at Buffalo.

The purpose of this project was to determine what methods might be used to develop and maintain a work environment that supports creativity. The project puts forward a documented and theoretically supported argument that by developing and maintaining an environment conducive to creativity the organization can realize many benefits. These benefits include increased productivity, reduced absenteeism and improved morale. The study developed a survey, and it was administered to 13 individuals. The quantitative and qualitative portions of the survey were analyzed. The results support the value of creativity in the work environment. Implications, limitations and areas for further research are discussed.

Geurts, M. (2009). *An examination of the model for organizational change, innovation and creativity.* (Unpublished master's thesis). Hogeschool-Universiteit: Brussels, Belgium.

This study found strong support for the current elements of the climate-centric Model for Organizational Creativity (MOC) and the SOQ. A new element called "physical environment" was also identified. This study was the first to directly study the support for the elements depicted in the MOC.

Gnädinger, L. F., & Sandve, S. B. (2021). *Do differing work environments influence organizational resilience: A quantitative and qualitative investigation.* (Unpublished master's thesis). International Marketing and Management, Copenhagen Business School.

Organizations' readiness for change and resilience are more crucial than ever to deal with their ever- changing environments. Nevertheless, many organizations and

their members lack these abilities. This master's thesis explored this discrepancy and investigated how the work environment perceptions of managers and staff influence organizational change readiness and resilience. To answer this question, we followed a two-step, mixed methods approach, combining a quantitative survey data analysis with qualitative, structured interviews in a multiple case study setting. In the quantitative study, we compared the work environment perceptions of managers and staff utilizing more than 1,200 observations from a work climate assessment database, the Situational Outlook Questionnaire. We found a meaningful and significant difference between managers and staff, with managers perceiving their work environment overall more positively, indicating managers' higher change readiness levels. In the subsequent qualitative study, we found a lack of communication and involvement, and managers being ahead in the change curve as the main reasons for the gap in a planned change setting. To close this gap, managers enhance so-called change readiness facilitators, i.e., improve the effectiveness and timeliness of communication, increase staff involvement and encourage cross-departmental collaboration, which ultimately leads to higher organizational change readiness levels. Since these change readiness facilitators were found to also impact the resilience attributes preparedness, collaboration and trustworthiness, they ultimately enhance organizational resilience. Therefore, we found that closing the gap in work environment perception between managers and staff in a planned change context enhances organizational resilience, i.e., it improves an organization's ability to cope with crises and unexpected circumstances in emergent environments. From a managerial perspective, this study emphasizes the value of work climate assessments in helping to identify a potential gap. Further, it shows that the resources spent on bringing managers and staff closer together by increasing staff's change readiness have a positive double effect. It enhances change readiness in a planned change context, and simultaneously makes organizations more resilient, i.e., equips them to better deal with unexpected, emergent changes.

Grivas, C. C. (1996). *An exploratory investigation of the relationship of cognitive style with perceptions of creative climate.* (Unpublished master's thesis). International Center for Studies in Creativity: State University of New York College at Buffalo.

This multi-method study explored the relationship of cognitive style with perceptions of creative climate. The theoretical background and relationship of these two constructs was presented. The analysis of this relationship was conducted using the Kirton Adaption-Innovation Inventory (KAI), a measure of creative style, and the Climate for Innovation Questionnaire (CIQ), a measure of creative climate. Participants (n-147), all from the research and development division of a large manufacturing company, were divided by KAI preference into two distinct groups consisting of the strongly adaptive (n=46) and the strongly innovative (n=49). Responses obtained from the open-ended questions on the CIQ by both adaptive and innovative groups were then contrasted with one another using qualitative analysis. Results from this analysis indicated that people of strongly different cognitive styles were similar in primarily two ways: both groups valued communication and desired to experiment with and conduct research. The latter finding may be due, in part, to the group's research and development role in the company. The groups also differed in three keyways: the groups valued the community differently, approached obstacles differently, and desired different types of relationships with management. Numerical data obtained from both measures was also analyzed, however few statistically significant results were found. Conclusions, implications, and recommendations for future research and development are presented and discussed.

Hertzberg, E., & Blom, L. (2018). *Creative climate: A prerequisite for supporting an innovation culture.* (Unpublished master's thesis). School of Business, Economics, and law, University of Gothenburg, Sweden.

Innovation is a widely used concept, which is considered as an important factor to remain competitive in an everchanging business environment. Research suggest that creativity is a prerequisite for innovation to occur. Creativity relates to the generation of new and useful ideas, whereas innovation is considered the implementation of those ideas. Meaning that companies must first create or develop an environment that promotes creativity in order for innovation to occur at a later stage. CEVT, that is the research subject for this exploratory case study, has the vision to become 'World Leading Innovation and Research Centre, Developing cars for a different tomorrow'. Through a qualitative research method performing semi-structured interviews, the research aims to assess the current creative climate at CEVT to give recommendations on how the company can support the development of a successful innovation culture. A framework was therefore developed by the authors, which includes seven categories containing different success factors and activities for developing an innovation culture. The findings show that the categories organizational structure and processes, management support and resources have the greatest impact on the current creative climate at CEVT among the categories in the framework. The company demonstrates great potential in fostering a creative climate through its management support. To improve it further, findings suggest that the company should focus on the communication of the strategic direction and alignment of resources for creative activities, to support the innovation culture.

Hill, N. (2017). *The influence of innovative work climate and leadership behavior on employees' innovative work behavior.* (Unpublished master's thesis). Business Administration and Human Resource Management, University of Twente, The Netherlands.

A structured literature review including 49 studies has been used to illuminate the influence of innovative climate and leadership behavior on employees IWB. To especially examine the synergy effect of both factors on IWB, a case study in cooperation with a medium-sized personnel service provider in western Germany including a semi-structured interview with two of the companies' CEOs and a focus group with five employees from different departments has been conducted. Most importantly, the structured literature review and especially the case study analysis revealed that leadership behaviors can autonomously influence employees innovative work behavior while climates cannot independently emerge and exert influence and require the support of leaders.

Hohn, H. D. (1999). Playing, leadership and team development in innovative teams: A reflection on theory confronted with the perspective of experienced leaders. (Unpublished master's thesis). Delft University of Technology: Delft, The Netherlands.

This thesis compares and contrasts theoretical reflections with the practical perspectives of experienced leaders (n=75) who completed a survey titled 'Leadership and Team Development in Innovative Teams'. The research is positioned in the domain of group processes and leadership on the relations-process level, which refers to the atmosphere in the team, leadership issues and the psychodynamic development of the group. As a conclusion, the author states that both the theoretical survey and, to a similar extent, the practitioners' perceptions indicate many keys to fostering a creative climate in small group settings that leads to successful innovation. These are: Playfulness, Freedom to have destructive

thoughts, Challenge and Risk-Taking. The author provides implications of the study and areas for future research.

Hoßbach,, C. (2017). Exploring the influence of distinct types of individual differences on the perception of organizational climate. Unpublished Masters' Thesis, Martin-Luther University, Halle-Wittenberg, Germany.

This thesis followed a relatively new approach to examining the impact of individual differences, including individual problem-solving style, on the perception of creative climate by asking people to recall a positive and negative work situation in which they felt most and least creative and to assess the climate for creativity in these critical situations. A multi-method approach was taken to assess the climate for creativity from a quantitative and qualitative perspective. Assessments of creative climate in a best- and worst-case work situation were collected from 123 participants. The results suggest that participants of different problem-solving styles and gender had different perceptions of the climate in which they felt most or least creative. Especially those tending towards an exploratory approach to problem-solving perceived a larger difference of creative climate in their best- and worst-case situation and had different perceptions concerning the degree of autonomy that supported or inhibited their creativity. Participants tending towards an external approach to problem-solving reported higher levels of interaction, support for ideas and risk-taking as supportive to their creativity. Furthermore, higher levels of trust were observed as an enabling condition among participants preferring a person-oriented approach to problem-solving. Gender differences were mainly found concerning the perception of risk-taking and the quality of interpersonal relationships as well as the negative impact of personal tensions. Furthermore, potential interaction effects between gender and problem-solving style were observed. Implications of these findings for research and practice are discussed and a prospect for future research in this area is given.

Huisman, J. R. (2006). *What happened after the brainstorm?* (Unpublished master's thesis). Department of Human Performance Management, Faculty of Technology Management University of Technology: Eindhoven, The Netherlands.

This thesis was conducted at Royal Phillips Electronics in The Netherlands and investigated 28 projects that made use of brainstorming. Intellectual property was created by those teams that came up with many ideas, and perceived high levels of Idea-Time, Debate, and Risk-Taking during their NPD project. Groups that contributed to end products were relatively small and perceived high levels of Debate and Risk-Taking during their NPD project.

Indra, P. (2014). Performance and efficiency analysis based on learning organization culture and knowledge management in Indian education institutions. (Unpublished doctoral dissertation). Anna University, Chennai.

This thesis identified factors that strengthen the quality and performance that ensure continuous and ongoing learning activities in Higher Education Institutions (HEIs). The study developed the 'Knowledge Performance Model' to analyze the performance of these institutions. The model was based on the respondent's perceptions on the learning organization culture, creative organizational climate, knowledge creation practices, and knowledge performance. Indra developed a structured questionnaire using multiple theoretical frameworks which one of them was Ekvall's Creative Climate Dimensions. The results found that learning organizational culture, creative organizational climate, and knowledge creation practices impact the knowledge performance of HEIs. Finally, the study suggested that creative organizational climate predicts the learning organizational culture.

Iqbal, A. (2006). An investigation of leadership styles and their effect on organizational climate and organizational commitment: a case of the Pakistani knitwear industry. Unpublished Doctoral Dissertation, University of Manchester.

This mixed method study investigated the relationship among leadership styles, the dimensions of organizational climate and organizational commitment in the

Pakistani knitwear industry. The knitwear industry was chosen because of two reasons 1) highly labor intensive; and 2) suitable to test the three variables (leadership styles, organizational climate and organizational commitment), which are entirely employee related concepts. The quantitative data was collected from the 100 organizations in Lahore and Faisalabad. Five sets of questionnaires per organization were distributed to get the perceived leadership styles, organizational climate and employees' commitment. Leadership styles were measured by Leader Behavior Description Questionnaire (LI3DQ), organizational climate was measured by Situational Outlook Questionnaire and employees' commitment was measured by Organizational Commitment Questionnaire (OCQ). Of the 415 questionnaires 365 were found to be valid, which is a useable response rate of 74%. Statistical analysis was carried out using SPSS (v. 13). The results of the data showed statistically significant correlations between leadership styles, organizational climate and employees' commitment. This study explored that currently top management exercises initiating structure style in their organizations while literature has highlighted that consideration style of leadership is most favorable and influential style of leadership on organizational climate and employees' commitment. Therefore, it is suggested that CEOs/top-management in knitwear industry should change their management style.

Jutbo, M., & Wahlstrom, F. (2013). ***The climate for creativity and innovation in the fuzzy front end of innovation: A case study at Arla Foods.*** **(Unpublished master's thesis). School of Industrial Management, KTH Industrial Engineering and Management: Stockholm, Sweden.**

This thesis is a case study which aimed to investigate the climate for creativity and innovation at an innovation department at Arla Foods Sweden. The innovation department is working successfully with NPD but lately, the ideas that the innovation department has produced have been rather few and not good enough for the results they want to achieve. Therefore, this case study had the overall goal to find

improvements areas regarding the climate for creativity and innovation in the FFE. The results of this thesis revealed that the current climate is relatively favorable for working in the NPD while it is not favorable for the FFE. Thus, it was indicated that additional requirements are placed on a climate that are to be favorable for creativity and innovation in the FFE. For this specific case study, several dimensions (risk taking, idea time, dynamism/liveliness, playfulness/humor, idea support and encouragement, debates, and discussion) and underlying factors (input and inspiration, idea process, and clarity) that could be improved at the Innovation department were identified.

Khokhar, F. Q. (2001). *Transformational and transactional leadership: An exploratory study in a developing country.* (Unpublished doctoral dissertation). University of Manchester, Manchester, UK.

For quantitative data collection the researcher translated, tested and applied English and Urdu versions of standard transformational and transactional inventory - Multifactor Leadership Questionnaire (MLQ) by Bass & Avolio 1997. A similar process was followed with a climate inventory - Creative Climate Questionnaire (CCQ) by Ekvall 1993. These inventories were completed by followers. In total 290 usable questionnaires were obtained. Transformational leadership had strong positive correlation with outcome factors and creative climate and transactional leadership also showed positive correlation with outcome factors and creative climate. Hierarchical regression analysis also showed that transformational leadership showed significant add-on effects to transactional leadership in explaining the outcome factors and creative climate. Its importance flows from the critical difference in implications when we challenge the orthodoxy of Bass and Avolio. The Creative Climate Questionnaire (CCQ) was employed to test the convergent and discriminant validity of MLQ. MLQ showed strong convergent validity as the indicated strengths of the correlation were decidedly in favor of the transformational leadership factors and transactional leadership. Furthermore, it also showed a strong

discriminant validity as there was strong negative correlations between creative climate and passive leadership factors. The content analysis of interviews of both leaders and followers showed that there were distinct differences between reported characteristics of transformational leaders and non-transformational leaders. The leadership characteristics that differentiated transformational and non-transformational leaders were vision, captivating/inspiring speaking skills, an ability to excite, and countercultural/nontraditional behavior and practices, high energy and dynamism, brilliance in terms of strategic insight and knowledge and active campaigning for organizational goals. Context was also examined to determine its role in fostering the appearance of the phenomenon. No specific context appeared to play a determining or catalytic role. Evidence from three surrogate measures for context appears to confirm the hypothesis that no one specific context (e.g. context of crisis) plays the determining role in the appearance, presence, and therefore impact of a transformational leader. Nonetheless the findings do not preclude the possibility that an underlying, determining dimension exists or that certain environments are more conducive to emergence of transformational leadership than others.

Kireby, M. H., & Johansson, E. (2024). *Leading creativity: Nurturing creativity in internals and externals.* (Unpublished master's thesis). Department of Leadership and Organizational Psychology, BI-Norwegian Business School, Bergen, Norway.

The quantitative data from this study is gathered from people in different positions, ages, nationalities, and industries, with a total of 484 respondents. The respondents were asked to report their preferences when processing information, and their responses to nine dimensions of climate through their experiences within a best and a worst-case scenario. The data was analyzed using a mixed-method approach to gain a richer understanding of the phenomena. The results indicated significant differences between respondents´ best and worst-case scenarios. Further, the results have provided a rich and nuanced understanding of the similarities and differences

between individuals with different styles of processing information. Based on this, we provide concrete suggestions for actions leaders can take to facilitate individual differences in the workplace. Based on the findings in this study, we suggest further research to look deeper into the role basic psychological needs play on differences in Problem-solving styles in creative processes.

Klop, C. (2007). *The "big idea:" Nowhere inside the business is there any factor as potentially valuable as the "big idea."* (Unpublished master's thesis). Department Technology Management: Eindhoven, The Netherlands.

The major findings of the study were that the availability of creative skills of the participants, low accountability, and high multi-disciplinarity of the team leads to more idea generation during a workshop or a more effective workshop. This study also found a high level of idea-support, debate, and idea time was found to lead to a more effective workshop. Finally, high levels of Challenge, Freedom, Idea-Support, Trust, Playfulness, Conflict, and Risk-Taking at the organizational climate leads to more idea implementation or a more effective NPD process.

Knox, S. (2003). *Time travel and role maps: A pilot initiative in Creative Problem Solving.* (Unpublished master's thesis). Royal Roads University: Victoria, British Columbia.

This thesis focused on trying to understand if experience in Creative Problem Solving has an influence on perceptions of organizational support for creativity in a health care setting. The researcher used the Situational Outlook Questionnaire® (SOQ) to understand the initial level of support for creativity so that training of Creative Problem Solving to the staff could be tailored. The hypothesis was that this training would improve perceptions of organizational support and assist the staff's ability to address day-to-day problems more effectively. This pilot study consisted of 37 occupational therapists of which 20 completed the SOQ prior to and following a three-hour training session. Multivariate analysis of covariance (MANCOVA) was conducted to analyze the differences between pre-intervention and post-

intervention with the covariate, time in the organization, removed. Results suggested that the creative problem-solving intervention had a statistically significant effect on three SOQ dimensions: Trust and Openness, Conflict and Risk-Taking. The researcher hypothesized that despite the organizational downsizing that was occurring during the study, which other researchers have found to decrease employee perceptions of the climate, the increase seen in this study was due to the training and use of CPS techniques to address climate issues derived from the first application of the SOQ. Implications, limitations and areas for further investigation are suggested.

Lamers R. (2007). To be or not to be: Innovativeness by a coherent climate for creativity and change. (Unpublished thesis). University of Twente: The Netherlands.

In this research, the climate is measured by a questionnaire consisting of nine dimensions that are characteristics for a climate that supports creativity and change. This questionnaire is filled in by the manager of the new product development (NPD) department. These nine dimensions are also presented towards the employees of that department. By analyzing their scores on climate, the coherency of the climate can be assessed. The hypothesis is that a coherent climate has a larger impact on innovativeness than an incoherent climate.

Lauer, K. J. (1994). *The assessment of creative climate: An investigation of Ekvall's Creative Climate Questionnaire.* (Unpublished master's thesis). International Center for Studies in Creativity: State University College at Buffalo, New York.

The purpose of this multi-method study was to examine the validity of the first version of the Situational Outlook Questionnaire®, that at the time was known as the Creative Climate Questionnaire (CCQ). Creativity literature from the domain of Psychology, Sociology, Business, and Philosophy was examined for the existence of the ten dimensions of creative climate assessed by the CCQ. The results suggested that the ten dimensions are theoretically supported. The study also examined the psychometric properties of the instrument as derived from subject responses to its

items. The sample included 434 subjects (196 males, 235 females, and 3 unidentified) who participated in Creative Problem-Solving training programs. The subjects represented six organizations that were classified as either educational (n=248) or business (n=186). Responses were subjected to exploratory principal component analyses. The results suggest that this instrument tends to function as it was designed to and does so in a reliable manner. However, variations in the factor structure suggest the instrument should be used as a research tool pending further study and possible modification. Implications for future research and development are presented and discussed.

Letchumanasamy, R. S. (2013). The impact of transformational leadership on organizational climate for innovation, innovative work behavior and organizational performance in government-linked companies. Unpublished doctoral dissertation. School of Management and Marketing, Charles Sturt University, Australia.

The purpose of this study was to empirically test the effect transformational leadership has on organizational climate for innovation, innovative work behavior and organizational performance of Malaysian Government-linked Companies (GLCs). The first step was to ensure that the established scales used were valid in a Malaysian setting. Factor analysis was performed to examine the factor structure of each of the four constructs in this study: transformational leadership, organizational climate for innovation, innovative work behavior and organizational performance. Structural Equation Modelling (SEM) was then employed to establish the measurement models and structural model to address the behavioral relationships hypothesized. This study provides several contributions to theory and practice. Firstly, it validates the structure of the scales used in a Malaysian context. Secondly, the hypothesized relationship of the constructs in the theoretical model was supported and results consistent with previous empirical work done in the West. In terms of practice, this research leads to a better understanding of the desired

leadership style that will build the right climate to enhance individual innovativeness and highlights the need to take appropriate steps to revamp an organization's human resources policy and training needs.

Moorhead, S. (2014). *What Impacts Culture and Climate More: Benign Structures or Senior Management's Personality Preferences?* (Unpublished MSc Innovation, Creativity and Leadership Thesis). City University London-Cass Business School London.

This thesis was a study to understand the level of impact that benign structures and senior management's personality preferences (and their credibility) have on culture and climate in the researcher's workplace. The methodology was constructed to research, test and analyze the multiple hypotheses regarding this area. To provide a fuller picture of the subject, the Situational Outlook Questionnaire and a specifically created Leadership Credibility Survey, which used mixed methods to produce quantitative and qualitative data, were selected for this study. Analyzing the dimensions of the SOQ showed that perception of climate from constituents 'engaged in benign structures' is more closely correlated to stagnated organizations than those 'not engaged in benign structures. Moorhead also used an aggregated heat map by adding the score of all the SOQ dimensions together. These results are compared to the optimal aggregated 'Heat Map' score for innovative organizations and stagnated organizations.

Nagmer, R. (2011). Creative potential, expertise, social desirability and group climate: Their relation in work teams dedicated to creativity and innovation. (Unpublished master's thesis). Department of Psychology, University of Lund: Sweden.

Relationships between personal factors creative potential, expertise, social desirability, and the factor group climate studied in real life work teams dedicated to creativity and innovation. Sample of four groups, three with five members (n = 5), one with three members (n = 3), in total eighteen people (N = 18); nine women (n =

9), nine men (n = 9). Prominent instruments used: for creative potential, the Creative Functioning Test (CFT) (Smith & Carlsson, 1990a, 1990b); for expertise, a self-report questionnaire based on the Generalized Expertise Measure (GEM) (Germain & Tejeda, 2009); for social desirability, the Strahan-Gerbasi 20-item social desirability scale (Strahan & Gerbasi, 1972); for group climate, the Creative Climate Questionnaire (CCQ) (Ekvall, 1990). CFT measures according to CFT manual (Smith & Carlsson, 1990a), questionnaires answered via a survey server. Statistical calculations made using correlations, t-tests, ANOVA and ANCOVA. Three work teams judged having innovative climate, one as having a climate between innovative and stagnating. Significant correlation between creative function and social desirability ($r = -.434$, $N = 18$, $p = .036$, one- tailed). No significant influence on group climate by any personal factors. Results explained by small sample and larger influence on group climate by other factors. Future research could include development of the expertise questionnaire and a wider range of work teams.

Ortisi, G. (2020). The relationship between innovation and creative climate: A quantitative study on the effects of creative climate dimensions on individual innovation behavior. Unpublished Masters' Thesis. University of Gothenburg School of Business, Economics and Law.

The aim of this research was to study the relationship between creative climate and innovation at the individual level of analysis. Seventeen independent variables were selected for the model (age, gender, tenure, business line, immigrant, challenge, freedom, trust, conflict, idea support, idea time, debate, risk-taking, management support, diversity, playfulness and humor, and innovation perception. The results obtained from the variables of conflict, debate, idea-support, and risk-taking seem to indicate that a more challenging environment is positively related to innovative behaviors of individuals.

Parrish, E. L. (2004). A comparative study of the organizational climate at the Army Materiel Command regarding creativity and change. (Unpublished doctoral dissertation). North Central University: Minneapolis, MN.

The purpose of this study was to examine the climate for creativity and change at the Army Materiel Command (AMC), using the Situational Outlook Questionnaire® (SOQ), and to compare the results with those of other organizational data to determine the degree to which AMC supports or hinders creativity and change. Questionnaires were completed by 76 respondents (39.8%) of the 191 randomly selected personnel in AMC. The results indicated that AMC was consistently in the stagnated category for each of the nine climate dimensions assessed by the SOQ. Analysis of variance (ANOVA) did not reveal any statistically significant difference for age, gender, and experience in the present position. There were statistically significant differences for educational status and experience at AMC. The significant difference between climate and education was on the dimension of Conflict. Exploration of this revealed that as the educational level of participants increased so did scores for the Conflict dimension. The author's interpretation was that there was a direct correlation between the educational level of participants and their degree of personal and emotional tension within the organization. Implications, limitations, and areas for further investigation are put forward by the author.

Peters, R. G. (2002). *Identifying Ekvall's creative climate dimensions in elementary through high school settings.* (Unpublished master's project). International Center for Studies in Creativity: State University College at Buffalo.

This project examined Ekvall's ten creative climate dimensions of an organizational setting and described how they appeared in classroom settings. Classroom observations were conducted at the elementary, middle school and high school levels. Notes were made on a standard protocol of occurrences that fit into each of Ekvall's dimensions. Observations that pertained to student conversations in the classroom were separated and examined for their similarities and differences to

Ekvall's definitions of the ten dimensions (Lauer, 1994). Teacher interviews at the high school and elementary school settings were also conducted and sorted for similarities and differences to Ekvall's definitions. These data were summarized under each dimension heading according to findings that were similar to Ekvall's definition of that dimension; findings that were different from his definition; and a list of questions or ideas that deserve further consideration. The project contains literature on 15 general climate topics sorted by category from the Wilson Select Plus Index, and the ERIC database. Findings indicate that each of the ten creative climate dimensions as defined by Ekvall were present and observable in elementary through high school settings. Both teachers and students demonstrated behavior indicative of creative classroom climate. The literature that existed prior to this study was heavily unrelated to the topic of creative classroom environment, thus validating the need for this project. While the observations support the consistent presence of Ekvall's dimensions in classroom settings, further research is recommended to elaborate and develop the educational implications.

Pupal, S. (2020). An exploratory examination into cultural differences on climates for creativity and innovation: Viewing culture through the lens of language. (Unpublished thesis). BI-Norwegian Business School, Bergen, Norway.

This exploratory study aims to explore potential differences in individuals` organizational climate perception from the perspective of culture. Potential differences according to gender is also explored. In order to achieve the goal of the study, nine climate dimensions were examined by self- administered questionnaires that were conducted and obtained from six different languages including Norwegian, English, French, Dutch, German and Chinese. Usable answers were obtained from 19 229 individuals. To make the comparison fair, a random 100 persons were collected from each language using random probability sampling. A total of 600 participants were analyzed. The data that was collected through the questionnaire was analyzed by using SPSS 26 and the relationship between climate perception on nine

dimensions and cultural/gender differences was analyzed. The findings indicate that there are significant differences in climate perception both culturally and when comparing the two genders. The results found significant differences in five of the climate dimensions cross culturally and four dimensions when comparing gender.

Pupal, S. (2022). Exploring the differences in perception of the work environment for creativity and innovation based on the position of leader and manager? (Unpublished Master's thesis). Kingston University, London, UK.

This paper aims to explore potential differences in how leaders and managers perceive their working climate based on Elliott Jaques stratified systems theory. In order to achieve the goal of the study: nine climate dimensions were examined by self-administered questionnaires that were conducted and obtained from one large manufacturer of appliance and eleven credit union organizations all located in North America. The results were analyzed both quantitively and qualitatively. The results reveal a high correlation between the hierarchical position of leader/manager and perceived organizational climate. Statistically significant differences were found in multiple dimensions. The results indicates that leaders perceive their work environment more positively than managers.

Pureta, T. (2007). *Correlation between leadership styles and creative climate in working teams.* (Unpublished master's thesis). Organizational and Industrial Psychology, Department of Psychology, Faculty of Philosophy: University of Zagreb, Croatia.

The objective of this thesis was to examine the link between managerial styles and creative climate within working groups. Pureta wished to examine whether there were gaps between employees' and managers' evaluations of creative climate, between employees' and managers' perceptions of managerial style, and how managerial style affects creative climate. Results showed that there were significant differences between employee and manager evaluations and perceptions. A discriminatory analysis of creative climate and managerial styles assessments

resulted in a significant connection between creative climate and managerial style assessment, namely in a positive sense in the presence of a democratic/friendly style, and in a negative sense in the presence of an authoritarian/model style. The study also found that most managers are unaware of the impact their managerial behavior has on development of creative climate inside the teams.

Rasulzada, F. (2007). Organizational creativity and psychological wellbeing: Contextual aspects of creativity and psychological well-being from an open systems perspective. (Unpublished doctoral dissertation). Department of Psychology – Work and Organizational Psychology Division, Lund University: Lund, Sweden.

This dissertation reported the results from three studies. The first study highlighted the joint contribution of contextual variables (organizational climate, team climate, change-oriented leadership style, work resources, and workload). It also pointed out that organizational creativity and innovation may be a means to increase psychological well-being. Study 2 illustrated that the better the climate for creativity the lower the stress. It also showed that relationship-oriented leadership, as well as educational level were related to lower employee stress. Study 3 clearly illustrated those contextual aspects such as structure dependency, organizational defenses, collaboration difficulties, and political cannibalism, among other things, made it difficult for engineers to engage in creative work.

Retz, K. (2011). Factors that affect the climate for creativity and innovation in an aerospace engineering organization. (Unpublished doctoral dissertation). Apollos University: Huntington Beach, CA.

This study examined what factors can affect the creative climate within an aerospace engineering organization from the perspective of the engineers and technical professionals. By utilizing the Situational Outlook Questionnaire, the study confirmed that leadership, time to reflect, and working climate significantly affect the ability of engineers to be creative and innovative.

Richards, T. M. (2002). *Identifying Ekvall's creative climate dimensions in gifted and talented enrichment programs.* (Unpublished master's project). International Center for Studies in Creativity, State University College at Buffalo.

This project uses Ekvall's ten creative climate dimensions in the business setting as a baseline for identification of creative climate dimensions in a gifted and talented classroom. Socioeconomic background and age of the participating schools and classrooms are given. Data from eight gifted and talented classroom observations display the connection of behaviors indicating Ekvall's ten climate dimensions along with "other" behaviors that may indicate new dimensions appropriate for a classroom setting. Included are interviews with gifted and talented teachers reflecting their thoughts on creative classroom dimensions. Recommendations for further exploration are also included.

Ryhammar, L. (1996). Kreativ funktion, perceptgenetisk rekonstruktion och organisatoriska förutsättningar för kreativ verksamhet. En studie av högskolelärare (Creative functioning, percept-genetic reconstruction and organizational conditions for creative activity. A study of university teachers). Lund, Sweden: Lund University Press.

This represents the individual level in a broad conception presented here dealing with how both inner and outer factors can influence the human being within a university setting and bring about conditions conducive to or hindering creative activity. Data were collected using various percept-genetic techniques: CFT (Creative Functioning Technique), SAT (Spiral Aftereffect Technique) and DMTm (Defense Mechanism Technique modified); various self-assessment scales: BPE (Assessment of Personal Characteristics) and three scales concerning creativity; and, finally, questionnaires concerning the following: Organizational Structure, Organizational Values, Academic Values, Organizational Climate, Sufficient Resources, Workload Pressure, the Leadership Style of one's immediate superior and two criterion scales: Creativity and Productivity. creative activity within the

organization appeared to be supported by teachers' experiencing there to be a high degree of freedom and debate, and to be hindered by the presence of a high degree of emotional tension and a lack of openness in teachers' contacts with one another; (4) the degree of creativity and productivity within the organization was found to be closely related to the accessibility of resources and to how positive the organizational climate was assessed as being.

Santhridan, S. (2010). Influences of employees' motivation and work environment on creative productivity in research and development. (Unpublished doctoral dissertation). University Malaya, Kuala Lumpur.

Applying 'Social Psychology Theory of Creativity' (Amabile, 1996) in the Malaysian context, this study aims to measure employees' motivation, work environment for creativity and creative productivity among researchers in research and development (R&D) related public and private organizations in Klang Valley. The data collection of this study relies on three main research instruments namely Work Preference Inventory (WPI) (Amabile et al., 1994), Situational Outlook Questionnaire (SOQ) (Isaksen & Lauer, 2001) and Creative Activities and Accomplishments Check List (CACL) (Runco & Okuda, 1988; Oldham and Cummings, 1996; Scott and Bruce, 1994; Tierney et al., 1999). Using a total of 202 samples, the data was analyzed with means of descriptive statistics and inferential statistics. The research finding shows that there is a significant difference in creative productivity between public and private sectors. The public sector is higher in creative productivity than the private sector. In contrast, for employees' motivation dimensions such as intrinsic motivation, extrinsic motivation, enjoyment, Challenge, outward, findings indicate no significant difference between public and private sector. However, in employees' motivation, compensation shows there is a significant difference between the public and private sectors. Additionally, for the work environment there are significant differences between the public and private sector on dimensions such as Challenge in work, Freedom, Idea-Support, interpersonal Conflict, Risk-Taking, Debate and Idea-

Time. Pearson *r* for overall sample shows there are significant correlations between creative productivity and challenge, challenge in work, Freedom, Idea-Support, Trust and Openness, Risk-Taking, Debate and Idea-Time. There are significant correlations between creative productivity and Challenge, challenge in work, Idea-Support, Openness and Time in the sample from the public sector. For the sample from the private sector there is a significant correlation between creative productivity and Risk-Taking. Multiple linear regressions for the overall sample show three dimensions (Risk-Taking, Challenge and extrinsic motivation) explaining 14% of variance in creative productivity. However extrinsic motivation is a negative predictor for creative productivity in the overall sample. For the sample from the public sector, two dimensions (Challenge and challenge in work) explained 13% of variance in creative productivity. In the sample from the private sector two dimensions (Risk-Taking and Humor) explained 12% of variance in creative productivity. However, Humor is a negative predictor for creative productivity in the sample from the private sector.

ellgren, S. F. (2007). *Nursing management at a Swedish university hospital: Leadership and staff turnover.* (Unpublished doctoral dissertation). Karolinska Institutet: Stockholm, Sweden.

The aim was to study the relationship between leadership behavior of nurse managers and staff turnover considering creative work climate and intrinsic factors of job satisfaction. All four studies were conducted at the Karolinska Hospital in Stockholm. At the time of the study the hospital had about 5000 employees working with nursing care. There were 92 nurse managers and 77 of these were included. Ten subordinates of each included manager were randomly selected and invited to participate (n=770). In this context of nursing the direct relationships between leadership behavior, including the dimension of change, and actual staff turnover was weak. The relationships between leadership behavior and creative work climate, between creative work climate and job satisfaction and between job satisfaction and actual staff turnover indicate that the nurse manager plays a key role in

developing a creative work climate that might increase nurses' job satisfaction and by extension decrease staff turnover. According to the results it seems easier to achieve group cohesion, recognition and participation in units where a manager works close to the staff.

Senekal, E. (2007). *The influence of organizational climate on creativity and innovation in a technology firm in South Africa.* (Unpublished master's thesis). Faculty of Management, the University of Johannesburg.

The purpose of this study was to investigate creativity, innovation and certain determining factors, which have an influence on creativity and innovation in the micro business environment and specifically in an information technology firm. The information and communications technology (ICT) sector is very dynamic and very fast paced both in the world and in South Africa. Businesses in this sector have to adapt, almost constantly, to incessantly changing technology, customer demands and macro-environmental variables. A vast amount of research exists to suggest that businesses have to adapt to and embrace change in order to survive in this environment. Creativity and innovation are central to change in the organization. The study specifically focused on creative environment and in this case – the organizational climate. The goal of this study was to identify and measure organizational climate factors known to have a significant, determining influence on the work environment, conducive to creativity and innovation. The organizational climate of a firm in the South African ICT sector was measured and analyzed. The Situational Outlook Questionnaire® (SOQ) was used to measure the organizational climate observable in the organization. The results indicated the organization had a strong climate supportive of and conducive to creativity and innovation. The organization's SOQ results across all dimensions, except the Freedom and Debate dimensions, compared very well with other innovative organizations.

Sinnappan, S. (2010). *Influences of employee's motivation and work environment on creative productivity in research and development.* (Unpublished doctoral dissertation). Institut Pengajian Siswazah, Universiti Malaya: Malaysia.

This study aimed to measure employees' motivation, work environment for creativity and creative productivity among researchers in research and development at public and private organizations in Malaysia. Results showed a significant difference in creative productivity between public and private sectors, with the public sector having higher creative productivity.

Sjölund, E. (2018). *A study of creativity and innovation within agile project management: A quasi-experimental case study of a scrum team.* (Unpublished master's thesis). Faculty of Science and Technology, University of Uppsala: Sweden.

The purpose of the study was to enhance the creative and innovative output of agile project teams within the organization by revising and improving an existing management system. The thesis was divided into two main phases. The first phase had a theoretical focus and included a literature study with the objective to create a knowledge baseline from academia, compare it with the existing system, and to revise and improve the management system. The second phase had an empirical and consisted of a quasi-experimental case study of a scrum team and implementation of the management system with the objective to get information of how the studied team perceived the improved system.

Skovli, T., & P. & Myhre, P. O. (2015). *An examination of problem-solving style differences in best and worst-case work environments.* Unpublished Masters' Thesis. BI-Norwegian Business School, Nydalen, Norway.

This multi-method study examined the relationships between creative climate via the Situational Outlook Questionnaire (SOQ) and individual problem-solving style via VIEW: An Assessment of Problem Solving Style. The aim was to examine the differences observed between best and worst-case climates and preferred

problem-solving style. One hundred and fifty-seven participants responded to the SOQ twice – once for best and another for worst- case work experiences. All participants also completed VIEW. Numerous differences, both quantitative and qualitative, were found such that individual styles identified meaningful distinctions between what made for a best and worst-case work environment.

Ślusarczyk, A. (2005). *Środowisko pracy I cechy indywidualne pracownika jako wyznaczniki twórczości w organizacji* (Work environment and individual characteristics as determinants of creativity in the organization). (Unpublished doctoral dissertation). Uniwersytet Jagielloński: Kraków, Poland.

This study provided evidence surrounding the Polish translation and validation of the SOQ. It also provided in-depth analysis of the relationship between the climate assessments from five Polish organizations and various personality characteristics. The dissertation is written in Polish.

Snöbohm, J. (2015). *A study of creativity and innovation support within an agile context: Applied on a scrum team.* (Unpublished master's thesis). Department of Machine Design, KTH Industrial Engineering and Management: Stockholm, Sweden.

The thesis was divided into a literature study and a case study. Several shared success factors between creativity, innovation and agile principles emerged from the literature study. There were also discovered contradictions be- tween the three concepts. Guidelines were extracted from the literature and sup- ported the design of the new dimension in the management system. The main part of the implementation of the management system was to evaluate the requirements in relation to the Scrum team. Two workshops were held, primarily to establish an action plan. The result showed that nine requirements were fulfilled by agile practices. The empirical findings strengthened ten success factors that were derived from research. Also, three new success factors emerged; diverse insight, communication channels and reflection. External pressure was the only

strengthened contradiction in relation to the literature. Two new contradictions emerged; 'documentation', 'processes and tools'.

Sobieck, M. A. (1996). Examination of cross-site narrative responses on the CIQ and SOQ (Unpublished master's thesis). International Center for Studies in Creativity, State University of New York College at Buffalo.

This project focused on learning more about how the Situational Outlook Questionnaire® (SOQ) narratives related to the applied and theoretical purposes for assessment of organizational climate. The purpose of this qualitative project was to: (1) provide explicit baseline data on a purposefully selected sample of SOQ data for a future multi-method examination of the instrument; (2) maintain a researcher log to describe both content and process learning during the analysis in preparation for stronger triangulation on SOQ narrative development; (3) identify similarities, differences, and unique perceptions offered by the participants in the SOQ narratives; (4) determine if a relationship exists between the participants' comments and the SOQ dimensions; (5) determine what, if any, similarities, differences, and unique perceptions exist in the SOQ narratives between the ten dimensions (Version III) and the nine dimensions (Version IV) regarding Dynamism, Challenge and Freedom; and (6) determine how Dynamism is demonstrated in the Version IV narratives of the SOQ. Findings of the qualitative analysis supported the works of Ekvall (1982, 1983, 1991, 1994), Lauer (1994), and Cabra (1996) regarding the internal reliability of the items of the SOQ. Results further supported the analysis done by Lauer and Cabra on the dimensions of Dynamism and Liveliness and Challenge and Freedom that led to another revision of Version III of the SOQ. Version IV emerged as a tighter instrument. The results of the changes made in Version IV appeared to strengthen the instrument. The analysis of Dynamism and Liveliness indicated a weak representation in Version III and is not represented in any obvious way in any of the other dimensions in Version IV. The analysis of the "Un-coded" category in Level II qualitative analysis indicated support for other influences on organizational climate

identified by Ekvall (1991, 1996) and Amabile and Gryskiewicz (1988). Findings and observations from this project suggest further study and development to strengthen the SOQ as a multi-method instrument by both the researcher and practitioner.

Speranzini, G. D. (1997). *Understanding the impact of a climate intervention: Debriefing the Situational Outlook Questionnaire® (SOQ).* (Unpublished master's thesis). International Center for Studies in Creativity: State University of New York College at Buffalo.

This study examined the content and process contingencies for successfully debriefing the Situational Outlook Questionnaire® (SOQ). The focus was on the balance of theory with practice. Specifically, two questions guided this inquiry: "What impact does a debrief of the SOQ have on a single leader and his/her organization?" and "What are the implications of these data for developing debriefing skills when using the SOQ?" The method used was an action research study of a single leader within a single site. The design was qualitative and reflective in nature. Three triangulated data points were established consisting of the SOQ debrief session, the researcher's log, and a follow-up interview. Using the technique of constant comparison, all three data sets were examined in light of the study's questions. The results included guidelines for debriefing the SOQ; the impact of an SOQ intervention; applied theory and research considerations; and future considerations for practitioners and researchers.

Speranzini, G. D. (2004). *Cognitive style and climate for creativity and change.* (Unpublished doctoral dissertation). University of Manchester Institute of Science and Technology, Manchester School of Management, UK.

This exploratory study examined the relationships among cognitive style (KAI), the organizational climate for creativity and change (SOQ), and creative performance and job satisfaction. Contrary to other studies, there were some differences in climate between those who were clear adaptors and innovators. When considering

the differences between current and preferred climate, when the discrepancies are small – job satisfaction increases.

Stanley, T. (2016). *Work environments, creative behaviors, and employee engagement.* (Unpublished doctoral dissertation). Queensland University of Technology, Australia.

This study explored the relation between creative behavior and engagement of employees by conducting a detailed qualitative examination within a project-based organization. Numerous characteristics of the work environment were identified for creativity and engagement, as well as those that appeared to overlap. The study demonstrated support for many of the dimensions of creative climate assessed by the SOQ.

Susa, A. M. (2002). Humor type, organizational climate, and outcomes: The shortest distance between an organization's environment and the bottom line is laughter. (Unpublished doctoral dissertation). University of Nebraska, Lincoln.

This study explored the relation between the three major classifications or types of humor (superiority, incongruity, and relief) and job satisfaction, organizational commitment, organizational creativity, perceived organizational support, absenteeism, and job performance. Humor's role relative to organizational climate was also investigated. Subjects who completed the battery of surveys were employed in a mid-sized financial service company (N=175). The surveys used included the Organizational Humor Scale and Situational Outlook Questionnaire® (SOQ). As hypothesized, correlations between scores on the organizational climate, organizational humor, and individual sense of humor measures, and job satisfaction, organizational commitment, organizational creativity, perceived organizational support, and overall job performance yielded distinct patterns based on humor type. Support was also found for the hypothesis that superiority humor would be negatively correlated to organizational climate and outcomes (low levels of satisfaction, commitment, creativity, and job performance and poor attendance).

Findings also indicated that incongruity humor, and to a lesser extent relief humor, were more aligned with the positive organizational outcomes (high levels of satisfaction, commitment, creativity, and job performance). Overall, the findings indicated that humor seems to be related to organizational climate. The results also suggest that the type of humor used and observed in an organizational setting is an important factor in the workplace. Limitations of this study and areas for future inquiry are discussed.

Swanevelder, S. M. (2000). *Die aard en wese van entrepreneurskap en die belangrikheid daarvan vir sakesukses* (The nature of entrepreneurship and its importance for business success). (Unpublished master's thesis). Randse Afrikaanse Universiteit: Johannesburg, South Africa.

The purpose of this study was to explore aspects of entrepreneurship and to highlight the relationships between entrepreneurship and business success. To explore this relationship the creative organizational climate of two branches of a paint manufacturer in South Africa were assessed and compared. Headquarters evaluated these two branches as successful and less successful based upon their standard evaluation tools. The Situational Outlook Questionnaire® (SOQ) was used to assess the branch employees' perception of their organizational climate. The goal of the study was to support the hypothesis that there would be a correlation between the successful branch and the existence of a favorable creative organizational climate, as well as a correlation between the less successful branch and the absence of a favorable creative organizational climate. The results did not support this hypothesis since it did not show any statistically significant differences between the two branches. Further investigation showed that both branches compared well with previous studies on innovated organizations. To understand why the expected relationships did not appear the author reviewed the tools the branch headquarters used to evaluate and rate the branches. It was found that some success factors were subjectively evaluated by the headquarters and that some were not in line with

internationally accepted financial measurements. The researcher found that the branch originally judged as less successful, was not as unsuccessful as claimed by headquarters. The positive organizational climate of both these branches correlates with the success results of the two branches. The author concludes from the study and her study of relevant literature that a creative organizational climate is one of the most important prerequisites for entrepreneurship and business success. Limitations of the study and areas for future research are put forward.

Swinnen, M. (2018). ***The relationships among leadership support for innovation, climate for creativity, and innovative productivity.*** **(Unpublished master's thesis). KU Leuven – Faculty of Economics and Business Studies: Brussels, Belgium.**

This study investigated the importance of leadership behavior to create a climate that is supportive of creativity which enhances innovative success. In order to conduct this study, a multimethod research was required, meaning quantitative and qualitative data were analyzed. Three hypotheses were tested in the quantitative part with data provided by 320 respondents from 104 different organizations, 32 industries and 10 countries. Results indicated a significant relationship between leadership support for innovation and climate for creativity. Climate for creativity was also significantly related to innovative productivity. The hypothesis that assumed climate for creativity operates as a mediator between leadership support for innovation and innovative productivity was partially supported. Confirmation of the three hypotheses indicated it is also important to know what leadership behaviors are important to influence the climate and innovative productivity. Therefore, in the qualitative part of this study, 140 respondents were asked to identify specific leadership behaviors that help and hinder moving innovation forward. The answers to two open-ended questions were analyzed using the qualitative technique of constant comparison. This resulted in a list of 9 positive leadership behaviors and 13 negative leadership behaviors.

Van den Beucken, R. (2006). Validating the measurement of the organizational climate for creativity in a longitudinal design: A longitudinal study of the organizational climate for creativity of teams during the NPD project, to determine if the need for creativity always is high and if data collection is valid. (Unpublished master's thesis). Department of Human Performance Management, Faculty of Technology Management, University of Technology: Eindhoven, The Netherlands.

This longitudinal study applied the SOQ to better understand the nature of the creative climate within NPD project teams within Phillips Electronics. The results supported the use of the SOQ as a worthwhile assessment in discriminating climates within teams with high rates of production relating to NPD.

Villaluz, M. K. (2018). *Organizational climate in public schools of Sibulan: A basis for school climate creativity and innovation.* (Unpublished Ed. D. Dissertation). Faculty of the Graduate School, Foundation University: The Philippines.

This study aimed to assess the organizational climate in public schools using Ekvall's nine climate dimensions with demographic profiles of school heads and teachers, and the relationship among the variables in the public schools in Sibulan District. The respondents of this study were 31 school heads and 257 teachers in the public elementary and secondary schools of Sibulan district. The findings revealed that most of the nine climate dimensions were terms of idea support. The position of the teachers was significantly and inversely related to the nine climate dimensions such as challenge, freedom, idea time, idea support, trust and openness, playfulness and humor, conflicts, debates, and risk- taking. The educational attainment of the school heads were significantly and inversely related to their perception in terms of trust and openness.

Wardlaw, J. H. (2015). *Collaborative creative climate study: Using creative systems to improve organizational performance.* Unpublished masters project. International Center for Studies in Creativity, Buffalo State College.

In response to an increasingly complex and fast-moving competitive landscape, organizational creativity is more frequently being identified as an area of potential strategic advantage. Leadership often lacks the knowledge, tools and access necessary to effectively incorporate creativity in a manner that meets the strategic and tactical demands of businesses. The Collaborative Creative Climate Study explores this challenge and proposes a systemic approach to creativity in organizational performance that provides leadership with a comprehensive view of creativity at all levels within the organizational framework that identifies weak dimensions in the creative climate, enhances teamwork and increases employee engagement.

Articles and Chapters on CCQ or SOQ

This section includes published articles, papers, and chapters in books that specifically include the CCQ or SOQ within their work.

Abbasinezhad, A. (2017). The relationship between creative climate and entrepreneurship with a mediating role of employee empowerment. *International Journal of Economic Perspectives, 11,* 717-726.

The present study aims to evaluate the relationship between creative climate and corporate entrepreneurship with mediating role of employees' empowerment in state organizations of Ahvaz township. The results of data analysis showed that creative climate had a positive and significant relationship with corporate entrepreneurship with the mediating role of employees' empowerment. Some of the creative climate dimensions including (Challenge, Idea-Support, dynamism, humor, conflict, Idea-Time, risk taking and freedom) have a positive and significant relationship with corporate entrepreneurship. Creative climate has a positive and significant relationship with corporate entrepreneurship and empowerment of employees and empowerment of employees has a positive and significant relationship with corporate entrepreneurship.

Abdullah, H. S., Chik, R., & Deen, R. (2006). Influence of cultural orientation of perceived organizational creativity climate: An exploratory study of two steel plants in Malaysia. *Asian Academy of Management Journal, 11,* 51-72.

The study explores the relationship between cultural values and perceptions of the creativity climate. Asian culture is allegedly inimical to creativity and innovation in organizations. High power distance, high femininity, and greater orientation towards collectivity are discordant with the cultural underpinnings of the flatter, fluid, less formal, and networked organization. One hundred and seventy executives and non-executives of two steel mills were tested for the value orientation using an adaptation of Hofstede's measures for values and Ekvall's Creativity Climate Questionnaire for assessing the creativity climate of the organization. The executives'

perceptions of the creativity climate in the organization were low and coincided only weakly with their value orientation. However, power distance and uncertainty avoidance stood out as the single most influential variable in creativity perceptions. Attention must be paid to the relationship and steps to ameliorate these influences by cultural profiling – a move that identify subcultures whose values may be more amenable to innovation and creativity than most.

Abdel-Razek, R., & Alharbi, F. B. (2017). Assessment of technological innovation climate in organizations. *Journal of Innovation Management, 5,* 34-54.

The objectives of this paper are to assess the technological innovation climate in one of the largest oil and gas company in the world, to compare the results with published standards, and to suggest recommendations to improve the innovation climate in the company. The study used the situational outlook questionnaire to assess nine key dimensions of innovation climate. The results showed that the extent to which each of the nine dimensions is applied were: debate (70%); idea support (67%); challenge/involvement (67%); trust and openness (59%); freedom (57%); idea time (56%); playfulness/humor (52%); risk taking (50%) and conflict (46%). These results were compared with published norms and the results revealed that the company is categorized as innovative in debate, idea time, idea support and trust; categorized as average in challenge and risk taking; and as stagnated in freedom, playfulness and conflict. The comparison using the t-test confirmed the results. Recommendations and details of the actions required for improvement were outlined.

Aerts, W. (2012). Creativity and innovation: The case of two major communications firms and an aerospace engineering organization. Leading Edge Forum – CSC Papers, Computer Sciences Corporation.

People, organizations and societies benefit when there is an appropriate fit between individuals and their environments, especially when it comes to innovation. This article elaborates on the findings of two case studies in the telecommunications

industry dealing with different style preferences when innovating. The article also describes the findings of a research project within one of the biggest professional aerospace organizations and elaborates on the role of organizational climate and leadership influence on innovation. In addition, we tie both cases together and look for the impact of people and their environment on innovation. This article indicates the impact leadership has on organizational climate and what levering power climate has on innovation processes. Furthermore, it underscores the necessity of not letting chance interfere with putting together a team, which needs to be done through a deliberate process. Finally, the article suggests that problem-solving styles make a difference for some of the dimensions of creative climate and therefore should be considered when leading or managing people.

Afshari, A., & Arshadi, N. (2015). An investigation into the relationships between transformational leadership style, organizational structure, and organizational climate with employee creativity considering the mediating role of creative self-efficacy and intrinsic motivation. *Innovation & Creativity in Human Science, 4,* 77-95.

The participants in this study were some 300 employees of National Iranian South Oil Company who were selected by stratified random sampling method. The instruments which were used in this study were Transformational Leadership Scale (GTL), Creative Climate Questionnaire (CCQ), Creative Self-Efficacy Scale (CSE), Intrinsic Motivation Inventory (IMI) and Employee Creativity Questionnaire (ECQ). Fitness of the proposed model was examined through structural equation model (SEM), using SPSS-21 and AMOS-21 software packages. The results showed that direct paths from transformational leadership to employee creativity, organizational climate to employee creativity and organizational structure to employee creativity were non-significant. The indirect relationships were tested by using bootstrapping procedure in Preacher and Hayes Macro command. The model fitted the data properly and all indirect effects were significant.

Al-Beraidi, A., & Rickards, T. (2003). Creative team climate in an international accounting office: an exploratory study in Saudi Arabia. *Managerial Auditing Journal, 18*, 7 – 18.

Conventional wisdom presumes that accounting professionals have little capability for creative thinking. An alternative view is that accountants display creativity when provided with organizational opportunities. This view has been tested in a comparative study of professionals drawn from similar educational backgrounds and allocated to consulting, audit and tax duties within the headquarters of a major international firm in Saudi Arabia. A benchmarking approach was adapted. Those professionals placed in the consulting department reported more positive climates and creative outputs. There was evidence that there was scope for increasing the creativity to organizational advantage within the audit, tax and related functions, through more transformational leadership interventions. In view of the educational similarities of the samples, it is concluded that any lack of creative performance within the audit and tax functions is not due to individual deficiencies. Team development and leadership interventions are suggested as promising means of addressing any "creativity gap" in audit and tax team processes.

Alias, A. H., Ismail, I. A., Alias, S. N., & Omar, Z. (2019). Building organizational resilience via creative climate: A literature review. *Malaysian Journal of Social Science and Humanities, 4*(3), 76-84.

Organizational resilience is crucial in improving service delivery when facing crises, natural disaster, and etc. that have adverse impacts on organizations. To be flexible, organizations depend on skills of individuals or groups to manage such challenges. Basically, organizations through their creative people will look for a solution to overcome such challenges to gain organizational value. For organizational resilience to be achieved, there must be the existence of an environment of creativity that employees can seize for organizational success. In other words, to facilitate organizational resilience, it is needed to create a creative climate within

organizations. One of the indicators for organizational resilience is creativity support. Therefore, organizations should develop better practices and policies of creative climate in striving towards organizational resilience. It is highly recommended that an organization is looking into dynamic strategy of improving its resiliency by implementing the creative climate developed by Ekvall (1996) that consists of ten dimensions: challenge, freedom, idea time, trust and openness, dynamism, playfulness, debates, conflicts, risk-taking, and idea support within organization.

Aliberti, D., & Paolino, C. (2018). Being absorbed in technological learning environments: Distraction, boredom, and the effects of a creative climate on learning and training transfer. In Lazazzara A., Nacamulli R., Rossignoli C., & Za S. (Eds.), *Organizing for digital innovation* (pp. 189-197). Singapore: Springer.

The gaps this study addresses included: the relationship between absorption, its negative antecedents—distraction and boredom—and its outcomes on learning and training transfer in environments characterized by technological learning. To address this research goal, the purpose of this study is to develop a theoretical model to explain these relationships, to understand the role of absorption to shape different training outcomes. While some research has emphasized the positive antecedents of absorption, we focus on the drawbacks of distraction and boredom. In addition, we theorize how creative climate moderates the link between distraction, boredom, absorption and training outcomes.

Allen, D. C., & Zeisler, S. (2015). An educational climate for innovation at the U.S. Army War College. *Leader to Leader, 76,* 27-34.

Allen highlights the importance for organizations to maximize the potential of their leaders so they can optimally operate in a rapidly changing world. In many high-performing organizations, leaders will tell you that there is a deliberate effort to identify and develop high-potential enterprise leaders in development processes. The focus of the article is on the climate that supports one pillar of leader development: education. The educational setting of the U.S. Army War College

(USAWC) provides this climate for innovation to enable the development of its graduates as contributors to innovation within the U.S. military. Allen makes a clear distinction between culture and climate. He suggests that climate is the true opportunity for leaders to shape the day-to-day atmosphere that enables individual and organizational creativity. The article uses the research of Ekvall on the 9 dimensions and the SOQ to demonstrate the effect of climate on innovation. Approximately 1000 respondents scored the climate of USAWC. This resulted in scores that indicate that the student perceived the climate as innovative. They add an important note about the measure. The results of the SOQ are a description of the organization and not a prescription of what to do to become innovative. Every organization is different, and leaders must examine the data in the light of the purpose, mission, and goals of an organization to determine which of the 9 dimensions should be addressed and what actions to take. These SOQ-results helped the faculty to improve awareness and understanding of their ability to develop and maintain a supportive climate. Further, the article demonstrates applications of the creative climate that go beyond the USAWC.

Arezah, E., & Himam, F. (2023). The employability of government institution: The role of job crafting and creative climate. Gadjah Mada Journal of Psychology, 9(2), 215-231.

One's behavior in crafting a job could lead to one's employability. Organizational climate, which in this study was the creative climate, had a moderating role in affecting job creation toward employability. This study aimed to explain the role of job crafting in predicting employability in a government institution. Moreover, the creative climate played the moderating role between said variables. The quantitative approach was applied to this research, by distributing Employability Scale (α = 0.937), Job Crafting Scale (α=0.922), and Creative Climate Scale (α=0.950) to 129 employees of government institution X. The study showed that job crafting significantly predicted the employability (R2 = 56.7%; p = 0.000, p < 0.05). It can be

concluded that job crafting had benefits for employees' employability. On the other hand, the creative climate moderating effect was lessened the prediction of job crafting to employability ($p = 0.027$, $p < 0.05$). The lessening effect occurred because the study was conducted in bureaucratic environment, so that powerful and hierarchical climate was much common.

Arvidsson, M., Johansson, C. R., Ek, A., & Akselsson, R. (2006). Organizational climate in air traffic control: Innovative preparedness for implementation of new technology and organizational development in a rule governed organization. *Applied Ergonomics, 37,* 119-129.

A positive and innovative organizational climate is of great importance in order to manage and adapt to change. Such a climate seldom evolves in organizations closely governed by rules and regulations. Because of ongoing organizational and technical changes within the Swedish Air Navigation Services Provider, a study concerning the organizational climate for changes and innovations was conducted to investigate the organization's capacity to cope with changes. Study locations were the two Swedish main air traffic control centers and parts of the civil aviation administration headquarters. In the study 390 subjects took part and the CCQ questionnaire was used to measure the organizational climate. The results show that the organizational climate is quite positive despite the rule-governed work. The results also show that administrative personnel assess the organizational climate as more positive than operative personnel. Comparisons between management positions did not result in any differences.

Arvonen, J., & Ekvall, G. (1999). Effective Leadership Style: Both universal and contingent? *Creativity and Innovation Management. 8*(4), 242-250.

This study explores aspects of the universal and contingent models of leadership. The authors express the opinion that leadership should be linked to level of change in the workplace and their ability to adapt their leadership style to the environment where they work. This theory is tested by relating subordinates rating of their leaders

in relation to this model. The correlational results support the hypothesis that subordinates in all environments studied judge high change leaders to be the most competent. The authors conclude that these correlations support adding a change orientation to the universal model that identifies leadership style as either production or people orientated.

Babij, B. (2008). Vitality or cancer in the c-suite. In G. J. Puccio, C. Burnett, J. F. Cabra, J. M. Fox, S. K-M, M. C. Murdock, & J. A. Yudess (Eds.), *Creativity and innovation management: An international Conference Proceedings – Book 1* (pp. 44-57). Buffalo, NY: International Center for Studies in Creativity.

Chief Executive Officers (CEOs) and their seconds in command (often a Chief Operating Officer) are arguably the most visible people in any organization. The nature of the relationship between these two, therefore, can have enormous impact on the health and success of a company. The purpose of this study is to explore some of the functional and dynamic elements of this relationship. This is a case study using two creativity assessments: VIEW, a measure of problem-solving styles, and Situational Outlook Questionnaire (SOQ), a measure of creative climate. Two CEO/COO pairs completed both measures. Their results suggest that perhaps these two measures could be used to design interventions that would sustain, repair, or strengthen this key relationship.

Babij, B., & Lauer, K. (2000). The perfect client: Using the SOQ and KAI for organizational transformation. *Communiqué, 11*, 29-31.

This article recounts a situation where a client was ready, willing and able to fundamentally change his entire organization. As part of this process, climate was assessed and the notion of cognitive style as a foundation for change was incorporated. The SOQ was used to gauge the readiness for change in the company. After the results were reviewed it was clear that the areas of Freedom and Risk-Taking needed improvement. The KAI was also used to address interpersonal relations. The development of interventions using this data led to an environment

that underwent productive changes that enhanced employee commitment and involvement.

Baker, S. A., Aly, R. I., El-gather, H. E., & Abdel Hady, R. M. (2023). The creative climate and its relation to risk-taking among nurses at Port Said hospitals. *Port Said Scientific Journal of Nursing, 10*(3), 65-90.

Aim of the study was to investigate the creative climate of nursing and its relation to risk-taking at Port Said hospitals. A descriptive correlational approach was taken with 291 nurses at the governmental hospitals at Port Said. It incorporated the Situational Outlook Questionnaire and Risk-taking Questionnaire. The work environment was perceived as having a moderate level of creativity by 56.7% of the nurses polled, a low level of creativity by 23.7%, and a high level of creativity by 19.6%. Moderate risk-taking levels as reported by 52.3% of the nurses polled, a high risk-taking level of 5.8%, and a low risk-taking level of 21.9%. There is a positive correlation between all risk-taking dimensions and the total creative climate. Finally, there are statistically significant positive correlations between the creative climate and risk-taking among nurses. The study suggested that nurses attend a workshop on how to foster a creative and risk-taking environment.

Bavec, D. (2009). On the creative climate and innovativeness at the country level. Proceedings of the Rijeka Faculty of Economics, University of Rijeka, Faculty of Economics,27(1), 9-30.

The paper presents an explorative study on creative climate and innovativeness at the county level in the EU27. We explored a possibility to extend the Ekvall's concept of creative climate for innovativeness from the level of individual organization to the national level. The main research goal was to identify fragments of national creative climate and to prove its relation to innovativeness. As the measurement for national innovativeness, we took the Summary Innovation Index. The fragments of national creative climate were identified by 25 questions and answers selected from different public opinion polls published in the Euro-barometers. Using hierarchical clustering

we clustered all EU member states and compared them with the clusters that identify Innovation Leaders, Innovation Followers, Moderate Innovators, and Catching-up countries. We found membership of both sets of clusters similar, which means that two essentially different sets of variables arriving from two completely different sources led to comparable result. We also identify top ten variables that contributed the most to distinguishing between Creative climate clusters. Finally, we argued that understanding creative or innovative climate in the EU countries is an important national policy-making tool that could complement hard macro-economic indicators that are focused on innovative performance only, and not also on innovative socio-cultural environment. We wished-for a unified approach in the EU to develop an objective measurement for creative climate at country level. We also discussed some research challenges linked to this idea.

Benderix, Y., Nordstrom, B., Nyberg, P., & Sivberg, B. (2009). Staff members' views of the work climate in sheltered homes for adults with autism spectrum disorders. *Nordic Journal of Nursing Research, 29,* 38-41.

The mean scores of the Creative Climate Questionnaire for 152 staff members working in 58 sheltered homes for individuals with autism were rated closer to creative than to stagnant organizations. There was a significant difference between two types of settings. In sheltered homes, the persons with autism had their daily activity outside the home. Here staff members had higher scores in all creative dimensions compared to homes with daily activities. Staff in sheltered homes, where the residents leave the premises for their daily work or activities, perceived the work climate as significantly more creative and satisfying

Berg, A., Hansson, U. W., & Hallberg, I. R. (1994). Nurse's creativity, tedium and burnout during 1 year of clinical supervision and implementation of individually planned nursing care: Comparisons between a ward for severely demented patients and a similar control ward. *Journal of Advanced Nursing, 20,* 742-749.

The aim of this study was to study creativity and innovative climate, tedium and burnout among the nurses on two wards during 1 year of systematic clinic supervision combined with the implementation of individualized care on an experimental ward (EW) for severely demented patients, as compared with a similar control ward (CW). EW nurses had systematic clinic supervision and each patient had his/her nursing care carefully planned, documented and evaluated. The intervention was evaluated by means of the Creative Climate Questionnaire, Burnout Measure and the Maslach Burnout Inventory. Creativity and innovative climate improved significantly among the EW nurses (n = 19) in eight out of 10 factors during the year of intervention while there was no change on the control ward (n = 20). Tedium and burnout decreased significantly among the EW nurses while no change was seen in this respect among the CW nurses. It seems reasonable to assume that systematic clinical supervision and individualized planned care decreases the negative outcome of stress caused by the psychological burden imposed by nursing care. It also increases nurses' creativity, which, in turn, may benefit patient care. The findings of this study point to the necessity for a support system that focuses on the work itself, i.e. the nursing care. Individualized planned care and systematic clinical supervision may offer this kind of support.

Berg, A., & Hallberg, I. R. (1999). Effects of systemic clinical supervision on psychiatric nurses sense of coherence, creativity, work-related strain, job satisfaction and view of the effects from clinical supervision: A pre-posttest design. Journal of Psychiatric and Mental Health Nursing, 6, 371-381.

A pre=post–test design study was used in which 22 psychiatric nurses, on a general psychiatric ward were examined before, during and after one year of systematic

clinical supervision combined with supervised documented, planned, individualized care. The methods used were the Sense of Coherence scale (SOC), the Creative Climate Questionnaire (CCQ), the Work-Related Strain Inventory and 34 statements from the Satisfaction with Nursing Care and Work Questionnaire (SNCW). The baseline values for the CCQ indicated a stagnant organization and a high score in the conflict dimension indicated personal and emotional tensions within the organization. The intervention led to a significantly increased creative and innovative climate in the dimensions for trust, idea time and reduced conflicts. However, the organizational climate remained stagnant. The nurses' view of the effects from clinical supervision also increased significantly. The results gave some support to the idea that systematic clinical supervision and supervised nursing care plans constitute one type of support strategy that improves creativity and the organizational climate. It may, not, however, buffer for interpersonal problems. Further research is required to explore the need for and effects of various support systems depending on the circumstances in the organization.

Bertels, H. M. J., Kleinschmidt, E. J., & Koen, P. A. (2011). Communities of practices versus organizational climate: Which one matters more to dispersed collaboration in the front end of innovation? *Journal of Product Innovation Management, 28*, 757-772.

The findings of this study suggest that managers should simultaneously invest in increasing proficiency in dispersed collaboration and supporting communities of practice. Either one by itself is insufficient. Dispersed collaboration has many benefits for organizations, such as enabling people with the appropriate skills, knowledge, and abilities to work together despite geographical constraints; however, workers must be proficient in communication tools and technology, as well as in understanding and dealing with cultural differences. This research also found strong support for the idea that an open climate favoring Risk-Taking, Trust, and open interaction positively influences the front-end of innovation.

Bertlett, J., Johansson, C. R., Ardidsson, M., & Jern, S. (2012). A two-way approach of congruent behavior between leaders and staff in the employeeship concept: Test of model, questionnaires, and influence on climate. *Leadership & Organization Development Journal, 33,* 428-446.

The purpose of this paper is to examine the relationship between the conceptualization and operationalization, as well as between the model and psychological climate. In total, four organizations operating at an airport participated. The quantitative approach involved data gathered from expected leadership and employee behaviors and psychological climate attitude questionnaires. The leadership and peer employee variables are separately based on the leadership and employeeship questionnaires, whereas the leader-follower variable is based on the results of both questionnaires. All analyses were made on the variable level. The results show that expected leadership, peer employee, and congruent leader-follower behaviors all have a positive correlation with psychological climate. Hierarchical regression analyses indicated that congruent leader-follower behavior had augmented value to leadership behavior and its relationship to psychological climate.

Bharadwaj, S., & Menon, A. (2000). Making innovation happen in organizations: Individual creativity mechanisms, organizational creativity mechanisms or both? *Journal of Product Innovation Management, 17*, 424-434.

Marketing managers increasingly face a product innovation dilemma. Managers will have to sell more with fewer new products in an environment where new products are providing lower revenue yields. Therefore, understanding what drives successful innovation is of paramount importance. This paper examines the organizational innovation hypothesis that innovation is a function of individual efforts and organizational systems to facilitate creativity. Our model formulates creativity as a property of thought process that can be acquired and improved through instruction and practice. In this context, individual creativity mechanisms refer to activities

undertaken by individual employees within an organization to enhance their capability for developing something, which is meaningful and novel within their work environment. Organizational creativity mechanisms refer to the extent to which the organization has instituted formal approaches and tools and provided resources to encourage meaningfully novel behaviors within the organization. Using data collected from 634 organizations, we find support for this hypothesis. The results suggest that the presence of both individual and organizational creativity mechanisms led to the highest level of innovation performance. The results also suggest that high levels of organizational creativity mechanisms (even in the presence of low levels of individual creativity) led to significantly superior innovation performance than low levels of organizational and individual creativity mechanisms. The paper also presents managerial and academic implications. This study suggests that it is not enough for organizations to hire creative people and expect the innovation performance of the firm to be superior. Similarly, it is not enough for firms to emphasize management practices to enhance creativity and ignore individual mechanisms. Although it is true that doing either will improve innovation performance, doing both should lead to higher innovation levels. Our understanding of what and how creativity influences innovation performance can be greatly enhanced by additional research that integrates the intrinsic and extrinsic drivers of creativity. Research that examines the role of team creativity efforts in enhancing innovation performance is also vital to an overall improved understanding of creativity, learning, and innovation within organizations.

Björkdahl, J., & Börjesson, S. (2011). Organizational climate and capabilities for innovation: A study of forest-based Nordic manufacturing firms. *Scandinavian Journal of Forest Research, 26,* 488-500.

Forest-based manufacturing firms are currently under pressure to achieve higher margins and increased profits. Many firms have tried to maintain profits by cutting costs, however, the effects of this, in markets suffering from overcapacity and

declining demand, are temporary. Instead, innovation is seen as being the key to firm growth and sustained profit. This article presents a study of nine large Nordic (Swedish and Norwegian) forest-based manufacturing firms, with operations ranging from pulp and paper chemicals, pulp production, packaging boards, packaging paper, and specialty paper to food processing and packaging solutions. The purpose of this study is to investigate the prerequisites for innovation at firm level in terms of firms' organizational climate and capabilities for innovation, and how these firms could improve their innovation processes. The paper draws on data from a collaborative research project that includes these nine firms, derived from interviews and questionnaires. The results show that forest-based firms are creative and have the potential to be innovative. However, the capabilities for innovation, that is the capabilities to do things differently and to exploit ideas, differ among firms. The study highlights two capabilities that may be obvious but are critical for innovation management willingness and awareness, and the implementation of a strategy for innovation and that the potential exists for increased output through appropriate managerial action.

Boström, A. M., Wallin, L., & Nordström, G. (2007), Evidence-based practice and determinants of research use in elderly care in Sweden. *Journal of Evaluation in Clinical Practice, 13*, 665–673.

Evidence-based practice is a strategic ingredient in today's health care. Despite extensive efforts to produce and disseminate clinical guidelines, research uptake is still a difficult task. In Sweden, elderly care (EC) has shifted from hospital care to community-based care, and the major nursing-staff group in EC has no university education. These and other factors make implementation of evidence-based care particularly challenging in EC settings. The purpose of this study was to identify determinants of research utilization in EC. Two questionnaires that cover research utilization and organizational climate were mailed to all staff (n = 132) working in seven EC units. The response rate was 67%. Of all respondents, 28% reported that

they used research findings in daily practice (the RU group). Remaining respondents constituted the non-RU group. Significant differences existed between the RU group and the non-RU group as per six individual and six organizational factors. Using logistic regression models, four factors were significantly related to research utilization, namely: attitudes toward research (OR = 5.52, P = 0.004); seeking research that is related to clinical practice (OR = 5.56, P = 0.019); support from unit manager (OR = 4.03, P = 0.044) and access to research findings at the work place (OR = 6.65, P = 0.005). Individual and organizational factors were associated with the use of research in EC. Despite distinguishing conditions in EC settings, identified factors reflect well-known determinants of research use that, as in many other health care contexts, should be considered in the endeavors of evidence-based practice.

Cabra, J. F., Talbot, R. J., & Joniak, A. J. (2005). Exploratory study of creative climate: A case from selected Columbian companies and its implications on organizational development. *Cuadernos de Administracion, 18*, 53-86.

This paper identifies organizational characteristics that help or obstruct creativity at the workplace in order to establish the existence of relevant or distinctive concepts of organizational climate in Colombia. To that aim, a questionnaire was designed including indicators taken from existing relevant literature. The questionnaire was applied to 52 CEO's, managers, supervisors, and first line employees in eight Colombia-based firms and to nine people from other companies. Data obtained was analyzed according to the grounded theory method and results proved to be in line with those cited in literature concerning categories such as reaction speed, leadership style, trustworthiness, answers to social, political and cultural conditions, freedom, dynamism, room for ideas, resources, synergy, trustworthiness strengthening); other categories need revision (support) and yet other are plainly different (envy and jealousy, belonging, deliberated creativity, standards on influence management, fairness). Data suggest a new survey is due.

Cardellino, P., & Finch, E. F. (2005). The nature of innovation climate in facilities management. In K. Kåhkönen & M. Sexton (Eds.), *Combining forces: Advancing facilities management and construction through innovation* (pp. 585-595). 11th Joint CIB International Symposium, Helsinki, Finland.

Despite the abundance of research on innovation in organizations, very little is known about service innovation as opposed to product innovation. Novel developments in customer care, front-of-house FM and new ways of working share parallels with service innovations in other sectors where a change of process has profound effects. More specifically, little is known about the FM environment most likely to stimulate service innovation. This paper attempts to describe the emerging concept of 'innovation climate' and proposes using a measurement instrument to measure this phenomenon. The approach will enable characterization of FM organizations in terms of their predisposal to innovate within the prevailing climate.

Carlfjord, S., Andersson, A., Nilsen, P., Bendsen, & Lindberg, M. (2010). The importance of organizational climate and implementation strategy at the introduction of a new working tool in primary health care. *Journal of Evaluation in Clinical Practice, 16,* 1326-1332.

The study was conducted using a prospective intervention design. The computer-based concept was implemented at six PHC units. Contextual factors in terms of size, leadership, organizational climate and political environment at the units included in the study were assessed before implementation. Organizational climate was measured using the Creative Climate Questionnaire (CCQ). Two different implementation strategies were used: one explicit strategy, based on Rogers' theories about the innovation-decision process, and one implicit strategy. After 6 months, implementation outcome in terms of the proportion of patients who had been referred to the test, was measured. The CCQ questionnaire response rates among staff ranged from 67% to 91% at the six units. Organizational climate differed substantially between the units. Managers scored higher on CCQ than staff at the

same unit. A combination of high CCQ scores and explicit implementation strategy was associated with a positive implementation outcome. Organizational climate varies substantially between different PHC units. High CCQ scores in combination with an explicit implementation strategy predict a positive implementation outcome when a new working tool is introduced in PHC.

Carlfjord, S., & Festin, K. (2015). Association between organizational climate and perceptions and use of an innovation in Swedish primary health care: A prospective study of an implementation. *Biomed Central Health Services Research, 15,* 364-371.

There is a need for new knowledge regarding determinants of a successful implementation of new methods in health care. The role of a receptive context for change to support effective diffusion has been underlined and could be studied by assessing the organizational climate. The aim of this study was to assess the association between organizational climate when a computer-based lifestyle intervention tool (CLT) was introduced in primary health care (PHC) and the implementation outcome in terms of how the tool was perceived and used after 2 years. The units were divided into three groups according to the creative climate: high, medium and low. The main finding was that the units identified as having a positive creative climate demonstrated more frequent use and more positive perceptions regarding the new tool than those with the least positive creative climate. More positive perceptions were seen at both individual and unit levels.

Cedergren, S., Backström, T., Blackwater, H., Johansson, P. E., & Schaeffer, J. (2017, June). A new instrument for assessing the innovation climate. A paper presented at the *XXVII ISPIM Innovation Symposium – Composing the innovation symphony*. Vienna, Austria: The International Society of Professional Innovation Management.

The broad definition of innovation implies that is not and cannot be isolated to the responsibility of a single department or function in an organization. Innovations are the result of work done by people and successful organization create conditions

for individuals to be innovative, what generally is described as an organization's innovation climate. In this paper, we have developed a new survey instrument based on the CCQ and the HID model to help managers develop the innovation climate in an organization.

Chandrika, C., & Setyawati, I. (2023). The influence of ethical leadership, creative work climate, and self-efficacy on employee performance with knowledge sharing as an intervening variable. *International Journal of Social Service and Research, 3*(10), 2430-2444.

This study aims to determine the effect of ethical leadership, creative work climate, and self-efficacy on employee performance and the role of knowledge sharing as a mediating variable. The research sample consisted of 100 employees at the Central Office of the Ministry of Industry with simple random sampling. The research approach is a quantitative method. The research instrument used the Individual work performance questionnaire (IWPQ), Ethical Leadership Scale, Creative Climate Questionnaire (CCQ), General Self-Efficacy Scale (GSE), and knowledge sharing measurement based on a combination of social capital factors and theory of reasoned action, all of which were modified and adapted to the needs of this research. The research findings show that ethical leadership, creative work climate, and self-efficacy have a direct positive and significant effect at the moderate level on knowledge sharing, and shows that ethical leadership, creative work climate, and self-efficacy have a direct positive and significant effect at a strong level on employee performance. Unexpected results reveal that the mediating role of knowledge sharing between the influence of ethical leadership, creative work climate, and self-efficacy on employee performance is negatively significant at a low level.

Chang, Y-H., & Hong, H-Y. (2010). The creative power of online collaborative environment: Using knowledge forum as an example. In L. Dirckinck-Holmfeld, V. Hodgson, & C. Jones (Eds.), *Proceedings of the 7th International Conference on Networked Learning* (79-87). Lancaster: Lancaster University.

The purpose of this study was to investigate the impact of a collaborative knowledge building environment called "Knowledge Forum" (KF) on students' perceived creative climate in class. Participants were 30 college students who took a university course about living technology. Data analysis includes: (1) descriptive statistics which analyzed student online discourse activities recorded in a KF database, (2) social network analysis which explored how students collaborated online; and (3) a survey called "Creative Climate Questionnaire (CCQ)" which investigated the characteristics of KF as a creative learning environment. Preliminary findings indicate that students were able to generate, exchange, and elaborate ideas by, interacting and collaborating with one another in KF. Further, the results based on the CCQ suggest that of ten factors that characterize a creative environment, seven of them (including playfulness/humor; idea support; liveliness; debate; trust/openness; and freedom) were perceived as much superior than another two reference groups: (1) Taiwanese graduate students (N=703) and (2) Swedish company employees (N=245). The results showed that KF as a knowledge building environment is conducive to creative group collaboration.

Chaubey, A., Sahoo, C. K., & Das, K. C. (2020). Examining the effect of training and employee creativity on organizational innovation: A moderated mediation analysis. *International Journal of Organizational Analysis,* https://doi.org/10.1108/IJOA-06-2020-2271

The purpose of this study to understand the effects of training and creativity on organizational innovation under the moderating influence of the organizational climate. This study provides prospective insights to management leaders and practitioners by establishing how training can bring about positive change in the

innovative front of the organization. It also offers keys to the organizations for an active engagement of the employees through a supporting climate conducive for harnessing of individual creativity and innovative potential.

Chaudhry, S. A., Nawab, S., & Shafi, K. (2024). Unveiling the secrets of innovative performance: a path analytical exploration of authentic leadership, task, engagement and creative climate. *International Journal of Business and Management Sciences, 5*(2), 48-67.

This study had four goals in mind. To support our reliance on social exchange theory to explain the effect of authentic leadership on employees' innovative performance, we first looked at how authentic leadership affects employees' innovative performance. Second, we examined the relationships that impacts innovative behavior and moral leadership among staff members. Whether task engagement had a mediation role in this connection will be determined. Third, we examined how creative climate affected the relationship between employees' innovative performance and task engagement. Lastly, we explored the possibility of the relationship between innovative performance and authentic leadership through moderation by creative climate.

Chermack, T. J., Coons, L. M., Nimon, K., Bradley, P., & Glick, M. B. (2015). The effects of scenario planning on participant perceptions of creative organizational climate. *Journal of Leadership and Organizational Studies, 22,* 355-371.

This research reports on the effects of scenario planning on participant perceptions of organizational creative climate. Participants from scenario planning projects in four different organizations were asked to contribute to the study as well as participants from four similar organizations that did not receive scenario planning. The scenario work took place over the course of 3 months and data were collected as pre- and post-tests. Comparisons were made that suggest some significant changes over the course of the intervention period for the intervention group, but not

for the comparison group. Results and limitations are discussed in detail and recommendations for future research are provided.

Cirella, S., Canterino, F., Guerci, M., & Shani, A. B. (2016). Organizational learning mechanisms and creative climate: Insights form an Italian fashion design company. *Creativity and Innovation Management, 25,* 211-222.

This paper investigates the relationship between different types of organizational learning mechanisms and creative climate. In the context of an action research study, this paper focuses on insights from a survey that was administered to all the employees of the Product Design and Development unit of the company. The results demonstrate that the three different types of organizational learning mechanisms considered in the study (cognitive, structural and procedural mechanisms) are associated with creative climate. The study generates new scientific knowledge about the role of organizational learning mechanisms and provides specific recommendations for organizations that aim to enhance creative climate.

Clapp, R. G., & Kirton, M. J. (1994). The relationship between cognitive style and psychological climate: Some comments on the article by Isaksen and Kaufmann. *Studia Psychologica, 36*, 129-134.

This article offered a critical commentary on the initial investigation into the relationship of the KAI as a measure of cognitive style and the SOQ as a measure of climate. This commentary prompted a response by Isaksen and Lauer (1999).

Cokpekin, O., & Knudsen, M. P. (2012). Does organizing for creativity really lead to innovation? *Creativity and Innovation Management, 21,* 304-314.

Stimulation of creativity has long been assumed to enhance innovation. Accordingly, organizing the work environment to unleash the creative potential of employees has been studied extensively. However, the present creativity literature has yet to produce sufficient empirical evidence to confirm this assumption, and therefore the generalizability of the relationship between organizational creativity and innovation

remains indeterminate. This paper adopts the leading creativity and innovation models to identify the work environment characteristics stimulating creativity, and subsequently analyses whether this environment leads to product and process innovation in small and medium sized firms. The findings demonstrate that this environment does not yield the same results for product and process innovation, and particular factors of the work environment do not behave according to the expectations to enhance the likelihood of doing innovation. The study discusses these findings and advances the literature by showing that the relationship between organizational creativity and innovation is not generalizable, but is contingent upon the innovation type and, as the discussion will show, characteristics related to the firm. Accordingly, the paper suggests new research opportunities to further explore organizational creativity and innovation.

da Silva Veiga, H. M., & Cortez, P. A. (2022). Creativity climate: An analysis of measurement scales. In M. O. Macambira, H. Mendonça, & M. d. G. T. Paz (Eds.), *Assessing organizational behaviors: A critical analysis of measuring instruments* (pp. 173–189). Springer Nature Switzerland AG. https://doi.org/10.1007/978-3-030-81311-6_8

Creativity is considered essential for the survival and competitiveness of organizations in work contexts, as it is positively associated with innovation and performance. The emergence of creativity happens when the person has certain characteristics, skills, and knowledge in a specific domain, works intrinsically motivated, and realizes that the work environment is supportive. It is a complex construct, necessary to define it conceptually and specify its level of measurement. In this chapter, we analyzed the psychometric properties of measures focusing on conditions for creativity published in English. We discussed the possibility of using them by researchers and managers, considering the scales: (a) Creative Climate Questionnaire (Ekvall, 1996), (b) Measure of the Climate for Creativity (Isaksen et al., 1999), (c) KEYS (Amabile et al., 1996), (d) Creative Environment Perceptions (Mayfield

and Mayfield, 2010), and (e) Indicators of Conditions to Create in the Workplace (Bruno-Faria et al., 2018). The analyses of the scales show that they have psychometric quality, and their possibilities of use are discussed.

Dackert, I., & Carlsson, I. (2007). Creative organizational climate –Testing Ekvall's 10-dimension model. Paper presented at *The XIIIth European Congress on Work and Organizational Psychology - Sustainable Work: Promoting Human and Organizational Vitality*, Stockholm, Sweden.

To measure organizational climate for creativity and innovation Ekvall's 10-dimension model is widely used both in research and in practice. The model consists of the 10 dimensions; challenge, freedom, idea support, trust, dynamism, playfulness, debate, conflicts risk-taking, and idea time. Outgoing from these dimensions Ekvall (1996) developed the Creative Climate Questionnaire (CCQ), shown to distinguish between innovative and stagnated organizations. However, in a review of instruments measuring creativity and innovativeness within the work environment the 10-factor model version of CCQ was criticized for lacking psychometrically documentation (Mathisen & Einarsen, 2004). Furthermore, in a study using an English translation of the CCQ the factor structure showed support for only 9 dimensions (Isaksen, Lauer & Ekvall, 1999). The purpose of the current study was to test Ekvall's 10-factor model of creative organizational climate on a large Swedish sample in order to gain knowledge on the psychometrical attributes of CCQ. Data collected from 3830 individuals representing both public and private organizations was used for the analyses. The factor structure was largely confirmed. In total the 10 components explained 66 per cent of the variance. However, the first and the second extracted component consisted of 11 items each and explained 46 per cent of the variance. The tenth component contained only 1 item with a loading over .40. The result suggests a model consisting of 9 dimensions rather than 10 as the two dimensions "dynamism" and "playfulness" seem to melt together in the second component. The components contained between 3 and 11 items each, which means that the structure of 5 items in

each climate factor was not confirmed. The result points to that the 10-factor model needs to be revised. However, before changing the model more data from private as well as innovative organizations has to be included in the analyses as these kinds of organizations were not so well represented in the current study.

Dorabjee, S. (1997). The effect of corporate culture on the efficiency of pharmaceutical R&D: A pilot study. In S. Dorabjee, C. E. Lumley, & S. R. Walker (Eds.) *The effect of corporate culture on the success of research and development.* (pp. 37-44). Centre for Medicines Research International.

Reports on a pilot study carried out to investigate methods for determining corporate culture in the pharmaceutical industry and its effect on innovation and development of new medicines. The study focused on five organization units and allowed comparison of the results for the Climate for Innovation Questionnaire.

Dorabjee, S., Lumley, C., & Cartwright, S. (1998). Culture, innovation and successful development of new medicines: An exploratory study of the pharmaceutical industry. *Leadership & Organizational Development Journal, 19*, 199-210.

Reports on a pilot study carried out to investigate methods for determining corporate culture in the pharmaceutical industry and its effect on innovation and development of new medicines. The results showed that it is possible to use a questionnaire-based approach for this type of investigation to demonstrate cultural differences between companies and between departments. Furthermore, the results could be related to factors most suited to fast development and to innovation. This study was undertaken in collaboration with Coopers & Lybrand, UK. Their support in funding the project and providing a suitable questionnaire is gratefully acknowledged. We also thank and acknowledge the help of The University of Manchester Institute of Science and Technology, (UMIST), UK, Joe Jordan (UMIST), K. Lauer of Creative Problem-Solving Group, Buffalo, USA who provided the second questionnaire, each of the key contacts in the five pharmaceutical companies taking part in the study and the individuals who completed the questionnaires.

Douglas, J., Muturi, D., Douglas, A., & Ochieng, J. (2017). The role of organizational climate in readiness for change to lean six-sigma. *The TQM Journal, 29,* 666-676.

The purpose of this paper is to examine the role of organizational climate in readiness for change (RFC) with particular focus on Lean Six Sigma (LSS) and to develop and operationalize an instrument to measure organizational climate to determine the organizational readiness of the Kenya Institute of Management (KIM) to progress to the next stage of the LSS implementation lifecycle. A case study outlining the KIM journey to LSS is described. A quantitative survey was developed based on the ten organizational climate dimensions discovered by Ekvall (1983) and redefined by Lauer (1994). This was then used to measure the climate of the case study organization. Data were analyzed to determine individual perceptions of the climate dimensions within KIM. The average score for each dimension was used to determine overall organizational performance and hence RFC. The generally positive scores across each dimension of the survey indicate that the KIM climate is ready for the next stage of its LSS implementation lifecycle although there may be some isolated pockets (individuals or groups) of resistance to change. However, the range of scores on each dimension indicates that there is disagreement within the survey group about the overall organizational climate.

Edward, K-L., Hercelinskyj, G., Giandinoto, J-A. (2017). Emotional labor in mental health nursing: An integrative systematic review. *International Journal of Mental Health Nursing, 26,* 215-225.

The aim of the present integrative systematic review was to investigate the emotional labor of mental health work and how this manifested, the impacts, and the ways to mitigate these impacts. In June 2016, using Preferred Reporting Items for Systematic Reviews and Meta-Analyses methodology, a systematic search of the bibliographic databases was undertaken to identify relevant literature. We identified a total of 20 papers to be included in this review. Thematic synthesis of the findings revealed three emergent themes: emotional labor and caring, emotional exhaustion,

and self-protection (expressed as emotional intelligence). Emotional labor, emotional exhaustion, and emotional intelligence were considered to be intrinsically linked, where they were both the influencing factor for burnout and a contributor to attrition. The results highlighted that emotional labor could inspire the development and personal growth of emotional intelligence in mental health nurses. In light of these findings, recommendations for clinical practice were considered; they included supportive work environments, involving nurses in shared decision-making, and the provision of ongoing professional development opportunities that facilitate the development of emotional intelligence and resilience.

Ekvall, G. (1976). Creativity at the place of work: Studies of suggestors and suggestion systems in industry. *Journal of Creative Behavior, 10*(1), 52-54.

This study focused on factories and blue-collar workers only, it was comprised of four main aspects 1) psychological goals of the system and obstacles 2) the individual suggestors 3) the origin and aptitude of a suggestion and 4) the organization and administration of a suggestion. The findings indicated a large number of suggestors had their self-confidence rise from having their suggestions accepted and rewarded. Also, the suggestors did not differ from other workers in ordinary intelligence tests, however there were differences in divergent thinking tests i.e. they had a significantly higher mean score on intellectual fluency and flexibility of designed type by Guilford. Nearly all the suggestors received inspiration for their suggestion while on the job to include almost if not all of their conscious thinking and development of the solutions. This study also concluded the best climate for the suggestion systems was created by 1) unbiased methods of analysis 2) the presence of special personnel and 3) the reasonable compensation for the suggestions.

Ekvall, G. (1987). The climate metaphor in organization theory. In B. Bass & P. Drenth (Eds.), *Advances in organizational psychology* (pp. 177 - 190). Beverly Hills, CA: Sage.

This article talks about the concept of climate as it describes psychological conditions in a social "region." This concept is popular in our everyday language, as well as in the social and behavioral sciences. "Organizational climate" has become a well-established subject of research in recent years. Addressed in this article are sections like: organizational climate as a scientific concept; research methods; organizational climate and "psychological climate"; the genesis of organizational climate; consequences of climate; total climate or sub-climate; climates for different contexts; and importance of the climate concept.

Ekvall, G. (1988). Change centered leaders: Empirical evidence of a third dimension of leadership. *Creativity & Innovation Yearbook, 1*, 36-46.

A report of an empirical study that supports the concept of a third style of leadership in addition to the classic styles. This leadership style is hypothesized to be adaptive when creating and supporting renewal in an organization as a means to keep pace with the internal and external change it encounters. This contrasts with other studies and theories that stress a dualistic, bipolar concept of leadership that is described as task orientated or people orientated. The style put forth by this study as an addition to these two classic theories is described as "change-centered". This study of 130 employees from four divisions of one company provided initial support for the theory since a Principal Component Analysis of the data yielded the three hypothesized dimensions.

Ekvall, G. (1989). Organisatiecultuur: Modelgril, theoretische uitbouw en paradigma (Organizational culture: Fad, theory extension and paradigm). In P. J. Drenth, H. K. Thierry, & C. J. Wolff (Eds.), Nieuw handoek a&o psychologie (3rd ed.) (pp. 471-508) (New handbook of work and organizational psychology). Houten: Bohn, Stafleu, Van Loghum.

This chapter provides a comprehensive review of the theoretical foundations of organizational culture and climate. Citing relevant historical and theoretical literature, Ekvall compares and contrasts the foundations for both constructs.

Ekvall, G. (1989). Organisationsklimat och ledarskap för kreativitet [The organizational climate and leadership for creativity]. In G. Ekvall (Ed.), Kreativa arbetsmiljöer: Perspektiv på 90-talets arbetsliv (Creative work environments: Perspectives on the working life of the 90's) (pp. 5–19). Lund, Sweden: TCO.

This chapter provides a linkage between leadership behavior, particularly change-oriented leadership behavior and the climate for creativity and innovation.

Ekvall, G. (1991). Change-centered leaders: Empirical evidence of a third dimension of leadership. *Leadership & Organization Development Journal, 12*(6), 18-23.

Qualitative data was gathered from a medium-sized Swedish chemical company. All the white-collar workers and supervisors (excluding the divisional managers) were asked to fill out a climate survey of 70 questions, leadership descriptions consisting of 50 statements on their leader's behavior, a structure scale consisting of 40 questions and a satisfaction questionnaire comprised of three items. The data collected was broken down into three leadership factors. The first two were the "classic" factors (employee-centered and structure-centered), but the third factor that emerged was labeled change-centered by the author. The author went on to conclude this new factor is probably a by-product of the new changing business environment, also that the most effective leaders are a blend of the three factors.

Ekvall, G. (1991). The organizational culture of idea-management: A creative climate for the management of ideas. In J. Henry and D. Walker (Eds.), *Managing innovation*, (pp. 73-79). London: SAGE Publications Ltd.

This article deals with the concept and phenomenon of idea-management. It talks about the several forces of change in industrially developed societies which are said to cause the appearance of idea-management which include (1) the accelerating rate of development in technical fields, (2) fast, world-wide commerce, (3) frequent fluctuation in the life-styles and preferences of customers due to media, communications, travel, secularization, affluent conditions, etc., and (4) new values, ambitions and attitudes. It also describes the relationship between climate and organization with the assistance of a chart in addition to the author's descriptions.

Ekvall, G. (1993). Creativity in project work: A longitudinal study of a product development project. *Creativity and Innovation Management, 4*(3), 152-159.

This study was conducted to view the effects of control versus a creative environment in a long-term technology project. The project team was comprised of thirty engineers, certain consultants at different stages and a management team of one section manager supported by three section leaders, the group's climate was measured eleven times through-out the three-year project. The climate throughout the project was highly creative however it lowered some at the end, the management was loose and structure weak. Due to poor communication, the outcome of the project differs depending on the views of the individual, this is because the final product did not fit the customer's goal, but another aspect of the of project was to produce "spear head" technology that could be used in the future and this was accomplished. A follow-up study conducted three years later showed the product had been used several times in new defense projects.

Ekvall, G. (1995). Participation and Creativity: New Forms of Suggestion Schemes in Sweden. *Creativity and Innovation Management, 4*(3), 17-26.

In this article, the current evolution of suggestion systems was reviewed, as well as more specific research of two specific companies. The results showed the need for companies to treat the suggestion systems more as a tool of management, as well as a need to re-organize the systems to more of a local focus. The review of the suggestion should be done at or near the area of origin. The author also discussed the need for a more multi-functional committee for the adoption of new policy, on-going education of the rewards system, more dissemination of knowledge and a better appreciation of subordinates as a creative source of innovation.

Ekvall, G. (1996). Organizational climate for creativity and innovation. *European Journal of Work and Organizational Psychology, 5* (1), 105-123.

This article describes an instrument for measuring organizational structure and climate for creativity and innovation called the Creative Climate Questionnaire or CCQ. The application and validation of this instrument in organizational settings is also described. Recommendations are made for using the CCQ to develop interventions to promote organizational innovation.

Ekvall, G. (1996). The creative-innovative organizational climate: Research, measurements and applications. In S. Dorabjee, C. E. Lumley, & S. R. Walker (Eds.) *The effect of corporate culture on the success of research and development.* (pp. 9-16). Centre for Medicines Research International.

In this chapter, Ekvall defines climate as an intervening variable and presents the CCQ with its 10 dimensions. He illustrates climate profiles uses case study scores to show the differences between innovative vs. stagnated organizations and radical vs. incremental innovations. Further, Ekvall concludes there is interplay between leadership style, organizational structure and the individual in relation to their contribution to a creative climate.

Ekvall, G. (1997). The creative-innovative organizational climate: Research, Measurement, and applications. In S. Dorabjee, C. E. Lumley, & S. R. Walker (Eds.), *The effect of corporate culture on the success of research and development* (pp. 9-16). Carshalton, Surrey, UK: Centre for Medicines Research International.

The CCQ has been used in more than 50 studies and distinct climate patterns have been determined for innovative as opposed to stagnated organizations. It is also possible to differentiate between radical and incremental innovation.

Ekvall, G. (1997). Organizational conditions and levels of creativity. *Creativity and Innovation Management, 6* (4), 195-205.

Two levels of creativity can be identified whether we look at the concept from the product, the person, or the process point of view. The one is radical and revolutionary, the other adaptive and confirmatory. Are there organizational structures and practices that support lower-level creativity but hamper higher level, or vice versa? Some research results on organizational climate and structure variables are presented that indicate differing influences on higher and lower-level creativity. It is argued that the issue of innovation in organizations harbors a couple basic dilemmas, the management of which requires understanding and taking into consideration the psychology of creativity.

Ekvall, G. (1999). Creative climate. In M. Runco, & S. R. Pritzker (Eds.), *Encyclopedia of creativity* (pp. 403-412). San Diego, CA: Academic Press.

This article shows that creative climate is an organizational phenomenon that has gained increasing attention and support from researchers and practitioners in many disciplines. The author reviews how child psychologists, historiographers, educational researchers, historians and cultural geographers have been engaged in research on climate's influences on creativity. The article highlights how organizational researchers have studied the factors that stimulate or block creativity and innovations in companies and public service organizations. He suggests that this line

of research has been the most extensive since the early 1970's due to an accelerating demand on organizations for adaptations and innovations.

Ekvall, G. (2000). Management and organizational philosophies and practices as stimulants or blocks to creative behavior: A study of engineers. *Creativity and Innovation Management, 9*(2), 94-99.

This study was conducted with 242 engineers from Sweden, made up of 84% male and 16% female. The engineers filled out questionnaires made up of nine management practices and were asked how each affected their creativity. The nine practices were "just in time", "lean production", TQM, "concurrent engineering", ISO 9000, Kaizen, Project groups, CAD, and creative methods. The positives outweighed the negatives of all nine practices, however there were several differences when the data was further broken down. The two largest sub-groups (R&D engineers and production engineers) were further analyzed finding production engineers had a larger percent of positive responses and the R&D engineers had a larger frequency of negative responses. The author then discussed possible variance due to cognitive style and personality.

Ekvall, G. (2007). Change-centered leaders: Empirical evidence of a third dimension of leadership. *Leadership & Organization Development, 12,* 18-23.

Current thinking on leadership emphasizes task orientation and people orientation. This article demonstrates the existence of a third dimension related to change.

Ekvall, G., & Arvonen, J. (1991). Change-centered leadership: An extension of the two-dimensional model. *Scandinavian Journal of Management, 7*(1), 17-26.

Three samples of people taking courses at staff training centers from Sweden, Finland and the USA were utilized to analyze leadership behavior. The subjects were given a 36-item questionnaire, the managers were also examined by competence and the respondents personal attitude toward the manager. Three strong factors emerged, the two "classic" factors (employee-centered and production-centered),

but also a new factor emerged that dealt with promoting change. The authors went on to hypothesize that the new change-oriented factor could be a derivative of the new and quickly changing business environment.

Ekvall, G., & Arvonen, J. (1994). Leadership profiles, situation and effectiveness. *Creativity and Innovation Management, 3*(3), 139-161.

This is a report on a study of leadership styles of approximately 4,000 supervisors and managers from 13 countries. Leadership style is described according to a model that contains three behavioral dimensions. These dimensions are labeled: a) Change /Development, b) Production/Task/Structure, c) Employee/Relations. The authors theorize that these three dimensions blend to create a personal style of a leader, marked by one of 10 profiles. Cluster analysis show that the 10 profiles correspond to the clusters in the data set and supported the authors' theory. The authors promote the belief that the results favor a universal versus contingency theory of leadership styles.

Ekvall, G., & Ryhammar, L. (1998). Leadership Style, Social, Climate and Organizational Outcomes: A study of a Swedish University College. *Creativity and Innovation Management, 7*(3), 126-130.

This study raises the question of the dual influence of leadership style on organizational outcomes - by way of climate and directly. Research material primarily collected for a study of a state university college in Sweden was utilized and further analyzed. Included is a brief history of the university that was utilized for this study. A sample of 130 teachers answered questionnaires about the creative climate in their departments, the department head's leadership style, and the performance of the department in terms of creativity and productivity. The results indicate that, in this organization, the behavioral style of the manager affects organizational results only through influencing the social climate. The implications of the results considering the kind of organization studied are also discussed.

Ekvall, G., & Ryhammar, L. (1999). The creative climate: Its determinants and effects at a Swedish university. *Creativity Research Journal, 12*(4), 303-310.

A study of the creative organizational and individual resources of a state university college in Sweden was initially carried out by Ryhammar (1996). A sample of 130 teachers answered several questionnaires on organizational parameters and went through creativity and personality tests. One of the questionnaires is a measure of the creativity aspects of the social climate. This study consisted of further analyses, according to a causal model, of the climate dimension and its relations to other organizational dimensions and to outcomes in terms of creative achievements of the different departments. Some of the results are logical, expected and easy to interpret. Others are more puzzling and can be tentatively explained only in view of the special character of the academic milieu and its inhabitants. The main and clear finding is that climate and resources seem to exert the strongest influence on the creative outcome and that climate operates in the organization as a lever for leadership and as a manifestation on the behavioral level of the organization's culture, defined as basic values. The more confusing results are that some organizational parameters with positive influences on climate, nevertheless, seem to have suppressing effects on creativity, and other parameters with a negative impact on climate seem to support creativity.

Ekvall, G., & Tångeberg-Andersson, Y. (1986). Working climate and creativity: A study of an innovative newspaper office. *Journal of Creative Behavior, 20*(3), 215-225.

This article focuses on strategies for measuring a creative working climate in an organizational setting. The authors reference a newspaper office they worked with in Sweden. The case study shows how successful and productive an office can be when the conditions are favorable for employee creativity. The 10 dimensions of the creative climate assessed by the Creative Climate Questionnaire (CCQ) are explored with references to specific practices in the newspaper office.

Fallahpour, M., Borell, L., Sandberg, L., & Boström, A-M. (2020). Dementia care education targeting job strain and organizational climate among dementia care specialists in Swedish homes. *Journal of Multidisciplinary Healthcare, 13*, 85-97.

An increasing number of older persons live at home with various limitations, such as dementia, requiring well-educated and trained home care staff to meet their complex care needs. Dementia care specialists working in home care service have reported high levels of job strain in comparison with home care staff in general. This pilot study aims to evaluate the effects of a dementia care education model targeting self-reported job strain and organizational climate, among dementia care specialists in home care service. A quasi-experimental, one-group pretest–posttest design was applied, with 12 months' follow-up. Participants were dementia care specialists who worked in home care service (n=34 baseline; n=30 follow-up). The data were collected using the Strain in Dementia Care Scale and Creative Climate Questionnaires, administered pre- and post- intervention. The intervention applied an educational model based on previous research in dementia care and a person-centered approach.

Filipczak, B. (1997). A blueprint for creativity. *Training, 34,* 5-35.

This practical article outlines how to know if your organization is ready, willing and able to encourage creativity by using the dimensions of creative climate assessed by the SOQ.

Fomujang, V. A., M., Wu, C., & Tassang, A. (2019). Assessment of a creative climate within an organization. *International Journal of Science and Research, 8*, 1-8.

Every organization's level of innovativeness is being determined or influenced by the working atmosphere it offers its employees. This paper therefore had as objective to use the situational outlook questionnaire (SOQ) to determine the type of creative climate within Premier Games Mutengene which shall henceforth be referred to as (PGM). PGM is a lottery/ betting company in the English part of Cameroon. The results gotten from a sample size of 134/150 respondents were processed and compared

with the benchmarks scores of Isaksen and Tidd (2006) to ascertain the execution rate of the SOQ dimensions to determine whether PGM was innovative or stagnated. The results revealed PGM to be innovative only in two dimensions, i.e. Idea time(53.7% execution rate) and risk taking(92.22% execution rate). The company was average in Freedom(63.3%), Idea support (60.15%) and Debate (49.05). Finally, PGM was weak or stagnated in Playfulness and humor (48.15%) and very weak in Challenge (49.95%), Trust (46.35%) and Conflict (69.9%). A one sample t-test was conducted which confirmed risk taking as a strength within PGM while also portraying conflict as a grave weakness.

Francischeto, L. L., & Neiva, E. R. (2019). Inovação nas empresas e orientação cultural à inovação: Um estudo multinível (Innovationin companies and cultural orientation: A multi-level study). Revista de Administração Mackenzie, 20(3). doi:10.1590/1678-6971/eRAMG190135

The influence of cultural orientation on innovation was tested in the number of innovations measured in Brazilian companies. The study used multilevel analysis. Five factors of cultural orientation towards innovation were considered: rituals and stories; innovation strategies; symbols and heroes; autonomy; and standards and communication. Innovation was subdivided into four types: product, service, technology and management. The study consisted of a sample of 345 individuals in 60 organizations. The relationship between the variables was analyzed using linear regression and multilevel modeling. The results of the regression analysis showed positive and negative relationships of all cultural factors with some kind of innovation. Multilevel analysis indicated a relationship between the two variables only in the ritual factors and stories and symbols and heroes, both at the individual level. The study indicates the existence of organizational culture characteristics that favor and inhibit innovation. We highlight the complexity of the subject and the consequent need for further studies.

From, I., Nordstrom, G., Wilde-Larsson, B. & Johansson, I. (2013). Caregivers in older peoples' care: Perception of quality of care, working conditions, competence and personal health. *Scandinavian Journal of Caring Sciences, 27,* 704-714.

Altogether 70 nursing assistants, 163 enrolled nurses and 198 registered nurses completed a questionnaire comprising Quality from the Patient's Perspective modified for caregivers, Creative Climate Questionnaire, Stress of Conscience Questionnaire, items on education and competence and Health Index. The caregivers reported higher perceived reality of quality of care in medical–technical competence and physical–technical conditions than in identity-oriented approach and socio-cultural atmosphere. In subjective importance, the highest rating was assessed in one of the physical–technical items. The organizational climate was for three of the dimensions rather close/reached the value for a creative climate, for seven dimensions close to a stagnant climate. In perceived stress of conscience, there were low values. Nursing assistants had lower values than enrolled nurses and registered nurses. The caregivers reported highest values regarding previous education making them feel safe at work and lowest value on the item about education increasing the ability for a scientific attitude. Registered nurses could use knowledge in practice and to a higher degree than nursing assistants/enrolled nurses reported a need to gain knowledge, but the latter more often received education during working hours. The health index among caregivers was high, but registered nurses scored lower on emotional well-being than nursing assistants/enrolled nurses. The caregivers' different perceptions of quality of care and work climate need further attention. Although stress of conscience was low, it is important to acknowledge what affected the caregivers work in a negative way. Attention should be paid to the greater need for competence development among registered nurses during working hours.

From, I., Wilde-Larsson, B., Nordstrom, G., & Johansson, I. (2015). Formal caregivers' perception of quality of care for older people: Associating factors. *BMC Research Notes, 8,* 623-632

The aim was to describe formal caregivers' perceptions of quality of care for older people in the community and explore factors associated with these perceptions. In total, 70 nursing assistants, 163 enrolled nurses and 198 registered nurses from 14 communities in central Sweden participated in the study. They filled out the following questionnaires: a modified version of Quality from the Patient's Perspective, Creative Climate Questionnaire, Stress of Conscience Questionnaire, items regarding education and competence, Health Index and Sense of coherence questionnaire. The overall response rate was 57 % (n = 431). In the perceived reality of quality of care respondents assessed the highest mean value in the dimension medical-technical competence and physical technical conditions and lower values in the dimensions; identity-oriented approach, socio-cultural atmosphere and in the context specific dimension. The caregivers estimated their competence and health rather high, had lower average values in sense of coherence and organizational climate and low values in stress of conscience. The PR of quality of care were estimated higher among NA/ENs compared to RNs. Occupation, organizational climate and stress of conscience were factors associated with quality of care that explained 42 % of the variance. Competence, general health and sense of coherence were not significantly associated to quality of care. The mentioned factors explaining quality of care might be intertwined and showed that formal caregivers' working conditions are of great importance for quality of care.

Gaddis, B. H., Helton-Fauth, W., Scott, G., Shaffer, A., Connelly, S., & Mumford, M. D. (2003). Development of two measures of climate for scientific organizations. *Accountability in Research, 10,* 253-288.

The aim of this article was to develop two measures of ethical climate for scientific organizations. The dimensions of the SOQ are included as validated dimensions of

organizational climate. These two measures will be used to predict integrity in the early part of a scientists' career based on various situational influences that occur in scientific organizations.

Gisbert-López, M. C., Verdú-Jover, A. J., & Gómez-Gras, J. M. (2014). The moderating effect of relationship conflict on the creative climate–innovation association: The case of traditional sectors in Spain. *The International Journal of Human Resource Management, 25*(1), 47-67.

A good creative climate is considered one of the main capacities inherent in groups that establish innovation processes. Creative climate emerges from different forces interacting in a way that can be stimulated or inhibited. The scholars identify six dimensions of creative climate. By analyzing them jointly, they found that some are more relevant than others for the purposes of innovation. One of the results of the study showed that trust and support are the dimensions that favor innovation and that the dimension of relationship conflict has neither a positive nor a negative effect on innovation.

Glinska-Newes, A., Sudolska, A., Karwacki, A., & Gorka, J. (2017). Innovations among people: How positive relationships at work can trigger innovation creation. Ekonomika a Management, 20, 84-100.

This study applied the dimensions of the SOQ to examine the role of positive relationships at work in producing innovation outcomes with a sample of Eastern European companies (200 Polish companies). The results clearly indicated that positive relationships at work stimulate employee individual commitment to innovations and internal communication supporting innovativeness.

Gundry, L. K., Kickul, J. R., & Prather, C. W. (1994). Building the creative organization. *Organizational Dynamics, 22,* 22-37.

This practical article outlines a variety of approaches to understanding and developing creativity within organizations and provides a model for things that can

be done to promote creativity and innovation. The work done in a variety of organizations is shared with an emphasis on the DuPont company to illustrate their suggestions.

Hai, T. T., Lan, M. T., & Ngoc, L. T. (2024). The relationship between work environment and employees' innovative work behaviors: A proposed model. *VNU Journal of Economics and Business, 4*(2), 103-112.

Fostering a work environment that encourages and celebrates IWB becomes crucial for organizations seeking to maximize their innovation potential. This study delves into the intricate relationship between work environment, encompassing both its social and physical facets, and IWB. Building upon theoretical foundations in innovation, innovative behavior, and work environment research, the article presents an analytical framework to unravel the influence of these factors. The proposed framework leverages an integrated approach by combining insights from Affective Events Theory (AET) and Expanded Person-Environment Fit (PEF) theory. This integrated lens posits that IWB are shaped by both the social and physical environment, mediated by innovation trust, with personal innovativeness acting as a moderator. This framework paves the way for further research in the fields of innovation management.

Hellzen, O., Kristiansen, L., & Norbergh, K. (2004). Living in a group dwelling: How do residents spend their time in a psychiatric group dwelling? *International Journal of Nursing Studies, 41,* 651-659.

The aim of the study was to investigate how residents at psychiatric group dwellings spend their time. The study consisted of two parts: questionnaires and an observation survey. It included all the staff at two municipal psychiatric group dwellings where the residents were primarily diagnosed as having long-term schizophrenia. This study indicated that, even if the dwellings had a creative climate, there was a negative process in terms of nurses' well-being with a high level of depersonalization. The residents who displayed a predominant picture of negative

symptoms were left alone for 84% of the day, and 29.5% of this could be explained by their illness. The remainder of the residents' time alone remains unexplained.

Hong, H-Y., Chai, C. S., & Chang, Y-H. (2010). Enhancing the creative climate of a college course through computer-supported collaborative knowledge building. *Paper presented at the 2010 Knowledge Building Summer Institute, Toronto, Canada*.

This study explored effects of engaging students in a knowledge building environment assisted by Knowledge Forum (KF) on their collaborative learning processes and their perceived creative climate of that environment. Participants were 30 teacher-education students who took a university course in which knowledge building theory and KF technology was integrally employed to foster a knowledge building environment. The main data sources came from: (1) student online discourse recorded in a KF database; (2) a modified Creative Climate Questionnaire (CCQ), and (3) course evaluation administered at the end of the course. Findings indicate that students were highly interactive and collaborative in working with knowledge in KF. Further, the CCQ results indicate that the participants tended to perceive the climate of the knowledge building environment they were engaged as highly supportive for knowledge creation. Additional evidence based on course evaluation ratings also showed a significant preference for the present course operated under knowledge-building pedagogy over other courses offered in a more traditional way of instruction. Implications for designing effective knowledge building environments are discussed.

Hong, H-Y., Chang, Y-H., & Chai, C. S. (2014). Fostering a collaborative and creative climate in a college class through idea-centered knowledge-building. *Instructional Science, 42,* 389-407.

This study explored the effects of student engagement in a knowledge-building (KB) environment on their collaborative learning process and the perceived creative climate of that environment. The participants were 30 college students who

undertook a living technology course in which KB were employed. The main data sources include students' online discourse and a creative climate questionnaire. The findings indicate that the students became progressively more collaborative and productive over time, and they also tended to perceive the climate of the learning environment as highly supportive of knowledge creation. Implications for designing creative learning environments are discussed.

Hunter, S. T., Bedell, K. E., & Mumford, M. D. (2005). Dimensions of creative climate: A general taxonomy. *Korean Journal of Thinking and Problem Solving, 15,* 97–116.

In consideration of what makes organizations innovative, creative climate stands out as a significant contributor. To this point, however, researchers have been forced to choose from a wide range of dimensional conceptualizations when conducting climate research. By proposing that climate is important to creativity the extent to which it facilitated a work context for innovation, 14 climate dimensions were derived. These dimensions were examined, via a coding process, in relation to the taxonomies existing in the literature. As a whole, the results suggest that the proposed taxonomy is a useful framework, providing common ground for researchers to better explore the exact nature and impact of creative climate on organizational innovation.

Hunter, S. T., Bedell, K. E., & Mumford, M. D. (2007). Climate for creativity: A quantitative review. *Creativity Research Journal, 19*, 69-90. https://doi.org/10.1080/10400410709336883

This article presents the results of a meta-analysis of 42 prior climate studies designed to assess the extent to which certain climate dimensions were predictive of creative performance. Climate dimensions were effective predictors of creative performance in turbulent, high-pressure, competitive environments.

Hunter, S. T., Farr, J. L., Heinen, R. L., & Allen, J. B. (2020). Integrating creative climate and creative problem solving. In M. D. Mumford, & E. M. Todd (Eds.), *Creativity and innovation in organizations* (pp. 137-160). New York: Routledge.

This chapter highlights the need to integrate work done on creative climate with the learning and application of creative problem solving. It builds on earlier work to develop and apply a taxonomy of creative climate dimensions and through CFA a number of higher order factors were found including work autonomy and stimulation, positive peer exchange, leadership direction and encouragement, organizational capacity and support, and organizational integration and extension.

Hussein, R. S., Salim, B. T., & Azo, F. M. (2022). The impact of creative climate dimensions on individual innovation behavior. *Twejer, 5*(3), 8718-8761.

The purpose of the study was to examine the impact of creative climate dimensions on individual innovation behavior. Data were collected from 249 randomly selected respondents for 2021 using a survey questionnaire. Statistical analyses were assessed using, a statistical package for social science (SPSS version 22); Descriptive analysis was done for categorical variables by using frequency and percentage, and Logistic regression analysis was done at the ordinal level to determine the relationship between creative climate and individual innovation behavior. A descriptive study was organized. The results were drawn based on empirical data collected by university staff. From the results, it can be concluded that the six independent variables under study sufficiently influence individual innovation behavior. The model is statistically significant, as indicated by the chi-square value (66.066) since the p-value is less than 0.000. As a result, we conclude that the dependent variable and independent factors have a very strong association. In addition, the model Parallel line test is 0.077,

Isaksen, S. G. (2007). The Situational Outlook Questionnaire®: Assessing the context for change. *Psychological Reports, 100*, 455-466.

This article presents a summary of the psychometric properties of the current version of the SOQ. The article includes an overview of the questionnaire and its foundations, as well as a summary of its factor structure, item performance, etc. on a sample of 4,730 subjects.

Isaksen, S. G. (2007). The climate for transformation: Lessons for leaders. *Creativity and Innovation Management, 16*, 3-15.

This article reports insights for organizational leaders based on a series of case studies describing the use of the Situational Outlook Questionnaire® as a tool to assist them with their transformation efforts. Leaders often assert the need to change their organizational cultures. This article seeks to clarify and differentiate culture from climate, and then focus on what leaders can do to transform their climate by applying a deliberate assessment tool. As the case studies illustrate, making organizational transformation happen is best approached through a systemic or ecological approach. This approach includes considering the people involved, the methods deployed, the desired outcome of the change, as well as the context within which the transformation occurs. The broadest concept within this framework is context, which includes both culture and climate, among other things. Since context is key to initiating and sustaining transformation, emphasis on the leader's role in climate creation will be emphasized.

Isaksen, S. G. (2009). Exploring the relationships between problem-solving style and creative psychological climate. In P. Meusburger, J. Funke, & E. Wunder (Eds.) *Milieus of creativity: An interdisciplinary approach to spatiality of creativity, Knowledge and Space 2*. (pp. 169-188). Springer Science.

This chapter explores the issue of person-environment fit through an operational framework of creativity and innovation, specifically how problem-solving style relates to creative psychological climate.

Isaksen, S. G. (2009). Creative organizational climate. In B. Kerr (Ed.). *Encyclopedia of Giftedness, Creativity and Talent* (pp. 183-185). Thousand Oaks, CA: SAGE Publications.

This short entry within the encyclopedia provides definitions of climate and outlines some general suggestions for establishing a creative environment.

Isaksen, S. G. (2013). Managing for innovation: Examination of a climate-centric model for organizational creativity. *Kindai Management Review, 1*, 39-56.

This article deeply examines why the need for a new model for organizational creativity is necessary to understand and account for the many factors that interact and affect innovation. It reports the results of a content analysis of over 6,000 narrative comments. It also presents a new model that more exhaustively takes into account the various antecedents and elements that affect climate and creativity.

Isaksen, S. G. (2017). Leadership's role in creative climate creation. In M. D. Mumford and S. Hemlin (Eds.), *Handbook of research on leadership and creativity* (pp. 131-158). Cheltenham, UK: Edward Elgar Publishing.

The purpose of this chapter is to make some important conceptual distinctions and present a framework that includes critical dimensions of the creative climate and elements of the work environment that leaders can consider in meeting this responsibility. Once the distinctions are made, each dimension and element of the model will be defined, selected empirical literature will be provided to support its consideration, and preliminary illustrative recommendations for leaders will be identified to put into practice.

Isaksen, S. G. (2022). Assessing the work environment for creativity and innovation: Building on Mathisen and Einarsen's review 2004. *Creativity Research Journal,* https://doi.org/10.1080/10400419.2022.2112837

This article was stimulated by a review of instruments assessing creative and innovative social environments seventeen years ago. This stands alone as the only

published, comprehensive, comparative review of multiple instruments aimed at this conceptual space. Although this review provided an important contribution to the literature, there are a number of critical conceptual issues that should be considered when reviewing assessments of this kind. This article raises these issues and points out their relevance when developing, evaluating, or applying instruments – and applies these issues to the instruments included in the review. Further, the aim was also to provide updated information on the Situational Outlook Questionnaire, as there were a few potential misunderstandings contained within the Mathisen and Einarsen review. Finally, numerous criteria are offered for those creating or choosing to use measures of the work environment, climate, or culture that promotes organizational creativity and innovation

Isaksen, S. G., & Kaufmann, G. (1990). Adaptors and innovators: A discriminant analysis of the perceptions of the psychological climate for creativity. *Studia Psychologica: The Journal for Basic Research in Psychological Sciences, 32*, 129-141.

The purpose of this paper is to share some preliminary findings of research into the relationship of two assessment approaches, creative style and creative climate. Because these two approaches have remained somewhat independent of each other in prior research, this study sought to determine whether the styles of Adaptor and Innovator as measured by the Kirton Adaptor-Innovator Inventory (KAI) had a relationship with the dimensions of creative climate as assessed by the Creative Climate Questionnaire (CCQ). The 634 subjects were selected and divided into groups identified as either having a strong innovator orientation or a strong adaptor orientation. The study found that some statistically significant differences did exist, specifically in the areas of Challenge and Conflict. The authors discuss the results, strengths and weaknesses of both creative style and creative climate in respect to the individual, team and organization.

Isaksen, S. G., & Lauer, K. J. (1999). Relationship between cognitive style and individual psychological climate: Reflections on a previous study. *Studia Psychologica, 41*, 177-191.

This article reviews an earlier study that explored the relationship between cognitive style and individual perceptions of creative climate (Isaksen & Kaufmann, 1990). Clapp and Kirton (1994) questioned the theoretical constructs and methodology used in the original study, therefore this secondary study was done to address those issues. The authors re-evaluate the aspects of the exploratory study and remark on its strengths and weaknesses.

Isaksen, S. G., & Lauer, K. J. (2001). Convergent validity of the Situational Outlook Questionnaire®: Discriminating levels of perceived support for creativity. *North American Journal of Psychology, 3*, 31-40.

The purpose of this study was to continue examining the validity of the Situational Outlook Questionnaire® (SOQ) by evaluating the relationship between an individual's perceptions of the degree of support for their personal creativity and the climate for creativity and change at their particular workplace. The relationship between mean ratings of the SOQ's nine dimensions and the self-perception of the organizational climate as conducive to creativity was tested. One thousand, eight hundred and thirty individuals were separated into categories based on their level of perceived support for creativity. Results indicated that the means of all nine dimensions of the Situational Outlook Questionnaire® were different, and statistically significant for each level of perceived support for creativity in the work environment. These results indicated that the Situational Outlook Questionnaire® may be capable of discriminating effectively among different levels of perceived support for creativity in the immediate work environment. Limitations and areas for future research are discussed.

Isaksen, S. G., & Lauer, K. J. (2002). The climate for creativity in teams. In J. Buijs, R. Van der Lugt, & H. Van der Meer (Eds.), *Idea Safari: Proceedings of the Seventh European Conference on Creativity and Innovation* (pp. 151-168). Enschede, The Netherlands: Twente University Press.

This chapter examines the ability of the SOQ to differentiate between climates that encourage or discourage creativity, and the ability to initiate change in a team setting. The chapter evaluates those characteristics, which are thought to promote teamwork and conversely those aspects that pose challenges for team development and productivity. The nine dimensions that have been found to effectively assess the degree to which a climate supports creativity were then defined in terms of teams. The results of this empirical study (N = 154) are consistent with previous research with the SOQ both on an individual and organizational basis. The study showed that when individuals are asked to complete the SOQ regarding their best and worst experience in team situations that the SOQ is able to consistently and significantly discriminate climates that support from those that hinder a team's ability to implement change and creativity. Implications and areas for further research on team climate are explored.

Isaksen, S. G., & Lauer, K. J. (2002). The climate for creativity and change in teams. *Creativity and Innovation Management Journal, 11*, 74-86.

This article reports the results of a study conducted to examine the ability of the Situational Outlook Questionnaire® (SOQ) to effectively discern climates that either encourage or discourage creativity and the ability to initiate change in a team setting. Characteristics that promote teamwork were identified and clearly defined followed by descriptions of challenges that may threaten teamwork. Nine dimensions have been found to effectively discriminate the degree to which a climate supports creativity as measured by the SOQ. The 154 subjects completed the SOQ, based on their recollection of a best- and worst-case team experience. Results show that the individuals' responses to the SOQ consistently and significantly

discriminated between the two types of experiences. The authors discuss the results and suggest productive areas for further inquiry.

Isaksen, S. G., & Ekvall, G. (2010). Managing for innovation: The two faces of tension in creative climate. *Creativity and Innovation Management, 19*(2), 73-88.

This article points out the distinction between two forms of tension that appear within the research on organizational climates for creativity, as well as the conflict management literature. A practical model for the constructive use of differences is shared, along with a few strategies for reducing the negative tensions associated with Conflict and increasing the positive aspects associated with Debate.

Isaksen, S. G., & Aerts, W. S. (2011). Linking problem-solving style and creative organizational climate: As exploratory interactionist study. *The International Journal of Creativity & Problem Solving, 21*(2), 7-38.

People, organizations, and societies benefit when there is an appropriate fit between individuals and their environments. The study aims to see how problem-solving style and organizational climate are related through an interactionist approach. Findings suggest that problem-solving styles make a difference for some of the dimensions of creative climate.

Isaksen, S. G., & Akkermans, H. J. (2011). Creative climate: A leadership lever for innovation. *Journal of Creative Behavior, 45*(3), 161-187.

This study examines the effects leadership has on climate, which in turn affects innovative productivity. Those who perceived more leadership support for innovation had significantly better creative climate scores. Those who perceived higher levels of innovative productivity also had better climate scores. Organizational climate as an intervening variable between leadership behavior and innovation was confirmed, supporting the pivotal role that creative climate plays between leadership behavior and innovative productivity.

Isaksen, S. G., Lauer, K. J., & Ekvall, G. (1999). Situational Outlook Questionnaire®: A measure of the climate for creativity and change. *Psychological Reports, 85,* 665-674.

The purpose of this study was to examine the internal consistency and factor structure of the Situational Outlook Questionnaire® (SOQ), a measure designed to assess the climate for creativity and change. A sample of 1,111 subjects was used. Cronbach's alphas and exploratory factor analysis supported the reliability and construct validity, providing sound psychometric evidence of the Situational Outlook Questionnaire's internal structure. The authors discuss the importance of research on other forms of the measure's validity, as well as noting specific strengths and weaknesses of the study.

Isaksen, S. G., Lauer, K. J., Ekvall, G., & Britz, A. (2001). Perceptions of the best and worst climates for creativity: Preliminary validation evidence for the Situational Outlook Questionnaire®. *Creativity Research Journal, 13*(2), 171-184.

The purpose of this article is to share the results of two studies that examine the concurrent criterion-related validity of the Situational Outlook Questionnaire® (SOQ), and its ability to discern climates that either encourage or discourage creativity and the ability to initiate change. Climate for creativity and change is defined as well as the domain within which the instrument is expected to operate. The context for the use of the measure in organizational settings is established through the development of a model for organizational change. Background information for the development of the SOQ is discussed and a description of the questionnaire is given. The methodology and results of both studies are reported. Findings show that when individuals completed the SOQ, based on their recollection of a best and worst-case work experience, the measure was able to consistently and significantly discriminate between the two types of experiences. This proved to be the case for both studies and the patterns were consistent across the studies. Conclusions are discussed and

the authors point out areas of future interest and advise further examination of the validity of the SOQ.

Isaksson, U., Astrom, S., Sandman, P-O., & Karlsson, S. (2009). Factors associated with the prevalence of violent behavior among residents living in nursing homes. *Journal of Clinical Nursing, 18,* 972-980.

The aim of this study was to investigate the associations between environmental and organizational factors as well as resident and caregiver characteristics in nursing home wards with a high respectively low prevalence of residents with violent behavior. The study was performed in 10 nursing homes consisting of 33 wards. Data were collected using the Multi-Dimensional Dementia Assessment Scale and the Geriatric Rating Scale. Variables concerning organization and environment were gathered by means of a questionnaire. Differences between wards with high (HPW) or low prevalence of violence (LPW) were analyzed. In HPWs, the prevalence of behavior and psychiatric symptoms, residents needing assistance with dressing and psychological workload were found to be higher, while job satisfaction was lower compared to LPWs. This study has also shown that caregivers in HPWs had less experience of working with older people and they experienced their working climate as less positive. Furthermore, HPWs had more residents, lower caregiver-to-resident ratio and longer corridors, and caregivers in these wards experienced more difficulties to supervise the residents.

Ismail, A. (2003). Organizational creative climate and learning organization: Factors contributing toward innovation within an organization. *Pertanika Journal of Social Science & Humanities, 11*(1), 51-68.

This case study examines the influence of creative climate and learning culture variables on innovation and to determine which one of the two can be a better predictor for technological and organizational innovation. The results indicated that both learning culture and creative climate significantly contributed 80.4% to the variance in the innovation construct with organizational creative climate on its own,

contributing 55.6% and the learning culture on its own, contributing 63.7% of the observed variances in innovation. The results of the study also found that the learning organization dimensions contributed more to the variances in innovation, particularly the dimension of 'Strategic Leadership* which had a significantly high predictive power on innovation occurring within the case organization as compared to the ten organizational creative climate factors and the rest of the six learning organization dimensions.

Ismail, M. (2005). Creative climate and learning organization factors: Their contribution towards innovation. *Leadership & Organization Development Journal, 26*, 639 – 654.

The purpose of this study is to explore the effects of two independent variables, creative climate and learning organization, on innovation separately and simultaneously. The methodology used was multiple regression analysis executed on the data collected. Apart from that, the study also used T-tests to compare the means of variables between the randomly selected local organization and MNCs. ANOVA was also conducted to compare the means of the variables between three different employee categories of job levels, namely the top, middle/lower management and supporting staff. The results indicated that both learning culture and creative climate contributed 58.5 percent to the explanation of the observed variances in the innovation construct. The learning organization culture separately was found to have a significantly stronger relationship with innovation (r=0.733) than did the organizational creative climate (r=0.473). This implied a larger contribution from the learning organization variable towards innovation. The findings also showed that there were no significant differences in the mean scores (P>0.05) among the three organizational job levels included, in the members' perceptions of innovation, creative climate and learning culture. The study also found no significant differences in the mean scores (P>0.05) among the small, medium, large and very large organizational population sizes in the members' perceptions on innovation, creative

climate and learning culture. The study involved a sample of 18 private organizations selected at random from a list of 165 organizations across various core businesses. The instrument used for innovation was developed by the researcher and validated by post hoc factor analysis involving 259 respondents.

Ismail, M. (2006). Organizational Creative climate and learning organization factors: Their contribution towards innovation within the private sector Malaysia. Proceedings of the *Knowledge Management International Conference & Exhibition, June 8, 2006 (pp. 335-346). Kuala Lumpur, Malaysia.*

It is widely acknowledged despite achieving considerable success economically, that innovation practices in the Malaysian private organizations still remains relatively under-researched. This study applied the CCQ, the Dimensions of Learning Organization Questionnaire, and a measure of organizational innovation and concluded that for this study, the learning organization variable with its seven dimensions had significant higher contribution towards explaining innovation as compared to the ten factors of the organizational creative climate. However, there is a considerable amount of contribution from the creative climate factors towards innovation, about 35% when the multiple regression analysis was done separately involving just the climatic factors. This showed that there was a certain amount of creativity present within the organizational members which contributed to innovation. This creativeness was mostly generated by having a challenging environment (Challenge) and a climate of trust and openness (Trust) present in the organizations.

Iqbal, A. (2011). An empirical assessment of the creative climate dimensions: Evidence from the knitwear sector. *African Journal of Business Management,*

This study was aimed at examining the concept of organizational climate in the context of Pakistani Knitwear sector. Ekvall's creative climate dimensions were examined. To achieve the goals of the study, self-administered questionnaires were distributed to a sample of 415 employees in Pakistani Knitwear sector. Usable

answers were obtained from 353 subjects. High climate scores were found on only three dimensions of Ekvall's creative climate dimensions and low scores on the remaining six. The climate dimensions towards which employees had a high perception were Challenge, Trust and Conflict. The dimensions of climate that were perceived low by the employees of the Knitwear sector were Freedom, Idea support, Playfulness & humor, Debate, Idea time and Risk. To address the low levels of climate dimensions, it is suggested that organizations should formulate empowerment strategies or participative management techniques for their employees to think creatively.

Iqbal, A. (2011). The influence of personal factors on the perceived organizational climate: Evidence from the Pakistani industrial organizations. *Interdisciplinary Journal of Contemporary Research in Business, 2*(9), 511-527.

Organizational climate is perception of members about their work environment, and it is greatly influenced by individual attributes. This study explores the relationship of organizational climate perceptions according to employees' demographic (age, and education, tenure and Job Ranks) background patterns. To achieve this goal, self-administered questionnaires were distributed to 500 subjects in Pakistani industrial organizations. Usable answers were obtained from 353 subjects. The results of the study showed that the personal factors of the employees were found to account for significant differences in the perception of several dimensions of climate. Specifically, in attempting to build a positive creative climate, Pakistani industrial organizations must consider not only the size, ownership and existing structures of the organizations, but must also consider the job tenure, training experience, length of service, education level and age of the employees (sonority at workplace). Policies based on organizational factors only may have no effect on improving the organizational climate and may not make effective use of the organization's resources.

Iqbal, A. (2019). The strategic human resource management approaches and organizational performance: The mediating role of creative climate. *Journal of Advances in Management Research, 16(2),* 181-193.

Despite the strategic importance of the approaches, most of the approaches consider "internal fit" or "external fit", and do not consider the role of creative climate. The purpose of this paper is to explore the relationship between approaches to strategic human resource management (SHRM) and organizational performance through a creative climate. This study can serve as a starting point for future research on the relationship between SHRM practices, creative climate and organizational performance in terms of financial, human resource and customer retention. Researchers and practitioners need to understand the relationship between the three constructs.

Jensen, M. B., & Beckmann, S. C. (2009). Determinants of innovation and creativity in corporate branding: Findings from Denmark. *Journal of Brand Management, 16*, 468-479.

Recent innovation literature describes a move from purely technical innovations towards more strategic innovations based upon social relations, a concept at the core of newer brand management and relationship marketing theories. Organizations that depend on innovation and have also adopted corporate branding as their management philosophy are therefore suggested to rely on a brand management philosophy characterized by a high innovation and creativity climate. Using the Creative Climate Questionnaire, the study presented here compares the climate measured in the corporate branding departments of two large Danish companies with existing empirical reference material for very creative and innovative companies. The study results reveal that the climate in the corporate branding departments is at the same high level as the reference material. Further, by use of structural equation modeling the main driver for improving the overall

perceived climate is identified as the organization's capability of creating debates such as discussions about different viewpoints, ideas, experiences and knowledge.

Josse-Eklund, A., Wilde-Larsson, B., Petzall, K., & Sandin-Bojo, A-K. (2014). Individual and organizational factors influencing registered nurses' attitudes toward patient advocacy in Swedish community health care of elders. *Scandinavian Journal of Caring Sciences, 28,* 486-495.

In a quantitative cross-sectional study, data were collected from 226 RNs in community health care of elders. A questionnaire was used to measure a number of factors including attitudes towards patient advocacy, nursing competence, personality traits, individual preferences regarding the quality of health care and working climate. A multiple regression analysis was performed. The results showed that individual factors of nursing competence and individual preferences of the quality of health care, as well as organizational factors of the working climate, explained 26.2% of the variance in the RNs' attitudes towards patient advocacy. The proportion of explained variance indicates that additional factors also influence attitudes towards patient advocacy, and more research is needed to shed further light on these factors.

Jurcova, M., & Stubnova, L. (2004). Creative climate: To whom does it fit best and who might feel threatened by it? *Studia Psychologica, 46*, 3-19.

This is a synthesis of research data on three essential sources of a person's perception of creative climate, original thinking, and personality traits and social skills. The sample comprised 227 adolescents in whom all the three components were compared in extreme groups of high (n = 32) and low originality (n = 37). The methods employed included: The Torrance Figural Test of Creative Thinking - TTCT, Riggio's Social Skills Inventory - SSI, Cattell's 16PF - Fifth Edition, and The Creative Climate Questionnaire - CCQ (Isaksen, Kaufmann). The findings permitted a deeper insight into the interaction of the personality-environment fit issue as follows: 1) original thinking is an effective mediator for perceiving the characteristics of creative

climate. 2) A key role is played by climate's bonds with pro-social traits that are the components of extroversion, independence and receptivity. The most conspicuous source of social skills in relation to creative climate is empathy. A mutual interplay between high originality, pro-social traits and empathy permits not only to positively reflect, but also to generate a climate that stimulates creativity and promotes it - where precisely subjects with these particular traits can draw most profit from it. On the other hand, climate dimensions need not suit introverts and those with lower social skills and originality, with whom they are not compatible. For persons with lower originality (in its relations with anxiety and excessive self-control), creative climate may spell uncertainty and subjective threat that becomes reflected in a higher rating of the dimensions representing emotional safety.

Karlsson, S., Bucht, G., Eriksson, S., & Sandman, P-O. (2005). Factors relating to the use of physical restraints in geriatric care setting. *Journal of the American Geriatric Society, 49*, 1722-1728.

Physical restraints are commonly used on older persons living in geriatric care settings. The aim of this study was to investigate the influence of environmental and organizational variations and resident and staff characteristics on restraint prevalence. In this cross-sectional study of 33 nursing home wards and 12 group living units for old persons with dementia in two municipalities in northern Sweden, 540 residents (mean age 82) and 529 staff members were evaluated for resident and staff characteristics and organizational and environmental variables. The proportion of residents with impaired mobility function, the number of behavioral disturbances, and nursing staff's attitudes towards use of restraints were the strongest discriminators between restraint-free wards and wards that used restraints. A classification function analysis showed that these three variables could correctly classify the wards as restraint-free, low-use, and high-use wards in 63.6% of the cases, with the highest figures for restraint-free wards (91%). This study has shown

that the use of physical restraints is strongly connected with residents' functional status and nursing staffs' attitudes toward their use.

Kermani, Z. J., & Solhdoost, F. (2017). Relationship between innovation climate and innovative behavior of librarians: Case study of libraries, museums, and documentation center of Astan Quds Razavi. *International Journal of Information Science and Management, 15,* 59-72.

This study aims to determine the relationship between innovation climate and the librarians' innovative behavior in Organization of Libraries, Museums and Documentation Center of Astan Quds Razavi, as the largest public library of Iran. The methodology for this study is based on a survey research. To this purpose, the innovative behavior questionnaire and Ekvall's (1996) innovation climate, developed by the Creative Problem-Solving Group, Buffalo, USA, were used. The study population consisted of 104 librarians working in Organization of Libraries, Museums and Documentation Center of Astan Quds Razavi. The results show that there is a significant relationship between innovative behavior of librarians and innovation climate in the library (44%). That is, innovation climate and innovative behavior factors can explain 44% of variation in each other.

Kijacki, D. (2021, May). The impact of transformational leadership and creative organizational climate on employees' creativity. *International Scientific Conference on Strategic Management and Decision Support Systems in Strategic Management* (pp. 243-253). Subotica, Serbia.

Many researchers said that the main role in encouraging employee's creativity has transformational leadership. It motivates employees to make an additional effort and find new, inventive work and problem-solving approaches. The subject of the research is reflected in the analysis of the importance which transformational leadership has for the employee's creativity. paper aims to determine whether or not there is a positive relationship between transformational leadership, its dimensions, and employee's creativity. Under the influence of transformational leadership comes

to the establishing of the creative organizational climate, which components strongly motivate employee's creative thinking in order to increase the performance of the organization. Therefore, this research's purpose is also to investigate the existence of the positive impact of creative organizational climate on employee's creativity. The research hypotheses were empirically tested based on a survey that was conducted in the territory of the Republic of Serbia. The survey was developed by combining Multifactor Leadership Questionnaire-MLQ, Creative Climate Questionnaire- CCQ formulated by Ekvall, and a creativity survey formulated by Tierney, Farmer and Graen.

Klimoviene, G., Urboniene, J, & Barzdziukiene, R. (2010). Creative classroom assessment for the advancement of foreign language acquisition. *Studies About Languages, 16*, 114-121.

The study at the Lithuanian University of Agriculture investigated the students' studying perceptions of their classroom climate with regard to creativity. The study aims to investigate the students' studying at the Lithuanian University of Agriculture perceptions of their classroom climate with regards to creativity. It uses the self-adapted questionnaire model relying on the works of Ekvall (1971, 1987, 1999), Isaksen (1995, 1998) and Amabile (1988, 1989, 1997) in order to establish the extent to which the internal climate factors are favorable for the development of creativity. The research is based on the results of the creative classroom climate assessment questionnaire and provides some implications for supporting and encouraging the creative class climate to facilitate the advancement of foreign language teaching/learning.

Ku Saud, K. A. (2017). The influence of organizational creative climate on creative problem-solving behavior among library employees. *Proceedings of the International conference on librarians - Toward lean libraries.* August 2-3, 2017, Vistana Hotel, Penang, Malaysia.

Creativity is one of the dominant elements that significantly affect all type of human needs especially in organizational architecture which spans across working behavior, technological change, innovative products and performance in service delivery. Problem solving as part of being creative also indirectly contributes crucial directions in solving the demands and issues from customers or the public. This cognitive skill has become essential for many organizations hiring demand and it has grown dramatically at all levels and across different types of job including in the library perspective. However, acquiring such creative people into an organization will be a complete waste if the organization itself pauses to adapt the values of creative climate in their environment. On such background, this paper examines the relationship between the problem-solving skill with creative climate values such as challenge/motivation, freedom, idea support, trust/openness, dynamism/liveliness, playfulness/humor, debates, conflicts, risk taking and idea time among the library employees. It is also important to understand the impact on employee's behavior in delivering services. Using a quantitative and descriptive approach, the data was analyzed using parametric method and tools which enabled confirmation on the significant correlation between such values with the creative problem-solving process. It has also mustered the library employee's behavior in decision making, communication, coordination, controlling, innovation, motivation and commitment enthusiasms. Simultaneously, it showed a critical point to the importance of building a climate that triggers or maintains an individual creative skill which affected library services in response to the accelerate rate of information evolution.

Lapierre, J., & Giroux, V-P. (2003). Creativity and work environment in a high-tech context. *Creativity and Innovation Management, 12,* 11-23.

Creativity is essential for success in business, especially in the high-tech field where knowledge is the key resource. This study addresses the ways in which creativity is fostered in high- tech organizations. It melds the different perspectives on organizational creativity into one six-dimensional model that defines the creativity work environment. Those dimensions are: work atmosphere; vertical collaboration; autonomy/freedom; respect; alignment; and lateral collaboration. They are valid, reliable predictors of the creativity achieved in high-tech organizations.

Lauer, K., Isaksen, S. G., & Dorval, K. B. (1996). Exploring the relationship between creative climate and leadership: A preliminary report. *Communiqué, 2,* 10-12.

This article discusses two of the questionnaires often used to assess leadership practices and dimensions of creative climate. These are the Leadership Practices Inventory (LPI) and the Situational Outlook Questionnaire® (SOQ). In November 1995, both questionnaires were given to a manager and his small work group of 20 individuals. A pattern emerged suggesting that as you get higher up in an organization, people tend to have a more positive perception of organizational life than those in lower positions.

Lauer, K. J., & Isaksen, S. G. (2001). Managing the organizational climate for creativity and change: What you should be considering. In L. van Geoffen, H. van der Meer, & T. Rickards (Eds.) *Fit for the future: Proceedings of the sixth European conference on creativity and innovation* (pp. 132-141). Enschede, Netherlands: Twente University Press.

The goal of this paper was to bring focus to the climate for creativity and change and add further information about sub-climate differences to the literature in an effort to influence further research and more focused practice. Empirical data was collected from five international companies by means of the Situational Outlook Questionnaire® (SOQ). The SOQ's demographic profile was used to sort the results on

the SOQ for an exploratory analysis focused on how gender, age, educational level, years of service, and time in current position may create sub-climates. Results showed some statistically significant relationships between demographic groupings and dimensions of the SOQ. As hypothesized, the relationships varied across the companies in the sample depending on situation, context and the dimension of climate for creativity and change. The authors illustrate implications of this study and demonstrate areas of focus for future research.

Lauer, K. J., & Isaksen, S. G. (2002). Driving through changing climates: Using the SOQ to direct organizational change. In J. Buijs, R. Van der Lugt, & H. Van der Meer (Eds.), *Idea Safari: Proceedings of the Seventh European Conference on Creativity and Innovation* (pp. 231-238). Enschede, The Netherlands: Twente University Press.

This paper presents empirical data from two organizations in the USA that have implemented aggressive organizational change initiatives. Both organizations used the Situational Outlook Questionnaire®(SOQ) to gauge the current status of their employees' perceptions of the organizational climate to support creativity and change. The data obtained from the SOQ was then used to develop interventions to promote change. After a minimum of nineteen months, the employees in both organizations completed the SOQ a second time. Organization One had a statistically significant change on the dimension of Conflict. Organization Two had statistically significant changes on all the dimensions except the dimension of Trust. These results propose that it is possible to use previous results of the SOQ to design initiatives that have a positive effect on perceptions of climate. The authors discuss some of the study's limitations and potential areas for further research.

Loewenberger, P. (2013). The role of HRD in stimulating, supporting, and sustaining creativity and innovation. *Human Resource Development Review, 12,* 422-455.

Challenging environments call for creativity and innovation, dynamic processes that depend upon the interaction of the individual with the social and organizational environment, Extant literature suggests a number of problems that HRD is well placed

to address. This article proposes a synthesis of extant literature in the field of creativity and innovation with HRD leading to an exploration of practical implications.

Lofquist, E. A., & Isaksen, S. G. (2019). Cleared for takeoff? A snapshot of context for change in the Norwegian air traffic management organization – Avinor. *The Journal of Applied Behavioral Science, 55,* (3), 277-305.

Civil aviation is a high-risk industry where actors are experiencing increasing focus on economic performance, greater international competition, and growing safety threats that require continual organizational adjustments. In this paper, we present the findings of a case study conducted within the Norwegian national air traffic management organization – Avinor, in preparation for a major reorganization initiative. In this study, we mapped the aggregated readiness and positioning for organizational change in the three main Air Traffic Control Centers (ATCC) in Norway using a mixed-method approach to help organizational leaders better understand each unit's positioning for change, and more specifically, individual preferences for change styles. The results suggest that participants at the different ATCCs had developed distinctly different change preferences at both the group and individual levels, and that each was distinctly different from the other units in their positioning and readiness for change.

Lofquist, E. A., Isaksen, S. G., & Dahl, T. J. (2018). Something fishy: Exploring change, job engagement, and work environment in the Norwegian Directorate of Fisheries. *Journal of Change Management, 18,* 281-303.

It is widely accepted by researchers and HR practitioners alike that engaged workers produce better results. But there is a general lack of agreement as to the meaning of employee engagement. Whether referred to as employee engagement, work engagement, or job engagement, 'engagement is a desirable condition, has an organizational purpose, and connotes involvement, commitment, passion, enthusiasm, focused effort, and energy, so it has both attitudinal and behavioral components' [Macey, W. H., & Schneider, B. (2008). The meaning of employee

engagement. Industrial and Organizational Psychology, 1, 3–30]. Yet, there have been few empirical studies that explore the linkage between work environment and job engagement. It is this linkage between the attitudinal and behavioral components of engagement, and the work environment in the context of organizational change, that is explored in this paper using a combination of psychometric and qualitative tools, and how these interact to affect behavioral outcomes leading to a change in the Norwegian Directorate of Fisheries. The findings indicate that different levels of engagement are clearly related to how individual employees both perceive their work environment and how they approach their job.

Lone, J. A., Bjorklund, R. A., Osterud, K. B., Andersson, L. A., Hoff, T., & Bjorkli, C. A. (2014). Assessing knowledge-intensive work environments: General versus situation-specific instruments. *European Journal of Work and Organizational Psychology, 23,* 469-482.

The aim of the present study is to examine to what extent general and situation-specific work environment instruments capture the salient work characteristics in a knowledge-intensive context. We conducted qualitative open-ended interviews with 30 employees (24 men and six women) from a Norwegian university department. The information from the interviews was content-analyzed and coded on the scales of five work environment instruments; two general instruments (the General Nordic Questionnaire for Psychological and Social Factors at Work [QPSNordic] and the Job Diagnostic Survey [JDS]) and three situation-specific instruments (Assessing the climate for creativity [KEYS], Situational Outlook Questionnaire [SOQ], and the Organizational Climate Measure [OCM]). The results showed that situation-specific work environment instruments covered significantly more statements about the work environment than the general instruments. More statements could be categorized on the organization and individual levels, compared to group and leadership levels. The situation-specific instruments covered more statements than general instruments at the organization level. These statements were mainly related to the

organizational context, social and relational characteristics, and encouragement of creativity and organizational impediments to creativity. The findings support the value of situation-specific instruments for assessing the work environment in knowledge-intensive organizations.

Lövgren, G., Rasmussen, B. H., & Engström, B. (2002). Working conditions and the possibility of good care. *Journal of Nursing Management, 10,* 201-209.

This study aimed to examine working conditions before and 3 years after the implementation of the care policy. All personnel working on four hospital wards in the county described their experiences in questionnaires in a baseline measure in 1995 (n 1/4 119) and a follow- up measure in 1998 (n 1/4 106). Lower ratings for working conditions were found in many respects in the follow-up measure. Fewer respondents from three wards expressed satisfaction with their current work situation. More respondents in one of these wards expressed, in addition, an inability to keep up with their work and fewer also evaluated their immediate superiors as good leaders. More of the respondents from one ward expressed the intention of looking for alternative employment and wanted to have another job. More respondents in two wards reached scores indicating burnout risk or burnout, and lower means were seen in two to 10 work climate dimensions per ward, out of 10 possible, in the follow-up measure compared with the baseline. The working conditions seen as requisite for the possibility of providing good care seem to have deteriorated in a number of respects on the wards studied over a three-year period and improvements are needed if the care offered is to be in line with the stated care policy. A concurrent study investigating patient satisfaction of the care quality in the same county showed a deterioration in their assessments between measurements carried through with a three-year interval, implying a relationship between the working conditions of the personnel and the patients' experiences of care.

Lundmark, E., & Bjorkman, H. (2011). New Job – new ideas: The relationship between tenure and perceived creative climate. *Human Resource Development International, 14,* 605-621.

Human resource development (HRD) practices are intertwined with organizational creative climate (CC). Understanding the factors that influence CC is important since CC influences not only employees' possibilities to share and develop ideas, but also potentially employees' decision to leave their current organization. This study focuses on how perceptions of CC is related to tenure in organizations by analyzing perceived CC in a random sample of unionized Swedish white-collar workers (n 1/4 1303). It finds tenure to be negatively related to perceived CC for the first few years of employment. The level of knowledge required for a position does not moderate this relationship, but more knowledge- intensive work in itself, tends to be associated with higher levels of perceived CC. Implications for HRD are discussed.

Lundstrom, M., Graneheim, U. H., Eisemann, M., Richter, J., & Astrom, S. (2005). Influence of work climate for experiences of strain. *Learning Disability Practice, 8,* 32-38.

Caregivers who work with people with learning disabilities have to deal with violent behavior as a part of their role. For some, however, the stress arising from these experiences can lead to burnout. The study investigated the experiences of caregivers working in Sweden with the aim of developing strategies to help those who manage violence and improve their working lives.

Luo, L., Deng, X., & Zhou, C. (2015). The complexity of the assessment of creative climate and group creativity. In F. K. Reisman (Ed.), *KIE handbook of creativity: Research papers on knowledge, innovation and enterprise, Volume III* (192-201). Leeds, UK: Corporate Document Services.

This paper provides a literature review that firstly demonstrates a growing interest in studies on creative climate and group creativity that is followed by a discussion on the important methodological significances of assessment of climate and the

complexity of assessing group creativity. From the discussion, we suggest that the nature of the diversity of members of a group should be part of an assessment index. This contributes to future instrument development in assessment of group creativity.

Mafabi, S., Munene, J. C., & Ahiauzu, A. (2015). Creative climate and organizational resilience: The meditating role of innovation. *International Journal of Organizational Analysis, 23,* 564-587.

This study aims to investigate the mediation role of innovation between creative climate and organizational resilience. The study used a cross-sectional design to collect data about the study variables from parastatal managers using self-administered questionnaires. Hierarchical regression and Medigraph were used to test hypotheses. Creative climate has a significant association with innovation and organizational resilience. Innovation partially mediates the effect of creative climate on organizational resilience.

McLellan R., & Nicholl, B. (2008). *Creativity in crisis in D&T: Are classrooms conducive for creativity in English secondary schools?* Paper presented at the British Educational Research Association Annual Conference, Heriot-Watt University, Edinburgh, UK.

Creativity is acknowledged to be important in education both for economic growth and as an everyday life-skill. The National Curriculum for Design & Technology (D&T) stipulates that students should 'think and intervene creativity' but this hasn't been seen in practice or in student work leading commentators to suggest that creativity is in 'crisis' within the subject. Research has indicated that organizational climate, defined as 'the recurring patterns of behavior, attitudes and feelings that characterize life in the organization', can help or hinder creativity. Hence 'climate' is a potential explanatory factor for the lack of creativity documented in student outcomes. This paper, therefore, explores whether the classroom climate experienced by secondary students (aged 11-16 years) in D&T lessons is conducive for creativity. Data are drawn from a number of sources including student (N=126)

and teacher (N=14) interviews and student (N=4996) and teacher (N=69) questionnaires gathered across a total of 15 schools, as part of an on-going Gatsby-funded research and intervention project. Coded data and survey questions relating to the nine climate dimensions outlined in Ekvall and Isaksen's climate model were identified. The paper focuses on three of these dimensions; Challenge, Freedom and Idea-Support. The analysis revealed that students felt much of the work they do lacks Challenge and Freedom. They also perceived a lack of support for their design ideas. Hence students do not perceive the climate in their classrooms as conducive for creativity. Teachers' perceptions differed somewhat and this is discussed with reference to the performativity culture in which they are located. Whilst acknowledging the difficulties this poses, it is argued that, as the literature indicates climate is 'in the hands of the manager', teachers can change their practice to enable creativity to flourish. Tentative suggestions for ways forward are suggested.

McLellan, R., & Nicholl, B. (2013). Creativity in crisis in design and technology: Are classroom climates conducive for creativity in English secondary schools? *Thinking Skills and Creativity, 9,* 165-185.

Creativity is acknowledged to be important for economic growth and as an everyday life- skill but several reports have indicated that education should do more to harness it. In England legislation has made provision for creativity in schools but it continues to be problematic. This paper takes secondary Design & Technology (D&T) education in England as its focus, where creativity is acknowledged to be crucial for the design process but has been found to be lacking in student work. Research conducted in commercial organizations has indicated that organizational climate can help or hinder creativity. Thus, this paper explores whether organizational climate models can be usefully applied to the D&T classroom con- text and assesses whether the climate experienced by secondary students (aged 11–16 years) is conducive for creativity. Data are drawn from a number of sources including student (N = 126) and teacher (N = 14) interviews and student (N = 4996) and teacher (N =

69) questionnaires gathered across a total of 15 schools. In mapping the data to the nine climate dimensions outlined in the climate model outlined by Ekvall and Isaksen three themes emerged; challenge, freedom and idea support. Students felt much of the work they do lacks challenge, they have limited freedom, and they are not always supported in realizing their design ideas. Hence students do not perceive the climate in their classrooms as conducive for creativity. Teachers' perceptions differed somewhat and this is discussed with reference to the performativity culture in which they are located and the implications of this for professional identity. As teachers can influence classroom climate, teachers can change their practice to enable creativity to flourish. Tentative suggestions for ways forward are outlined.

Mohamed, M. Z. (1995). Innovation implementations in Malaysian firms: Process, problems, critical success factors and working climate. *Technovation, 15,* 375-385.

This paper reports on the results of a field study on the implementation of innovations by eight firms manufacturing in Malaysia. The study investigated the innovation process followed by the firms, the problems faced by them, the factors perceived to be favorable to the success of innovation implementation, and the working climates of the firms. The results from the study indicate that the innovation process followed by the firms and the factors favorable to innovation implementation were similar to those found in the literature (mainly Western). However, not all of the factors cited are applicable to all the firms and industry sectors, which indicates the contingent nature of the innovation. There were also differences in the types of problem faced by the firms when implementing their innovations. Generally, the more innovation-active firms (those which introduced and implemented more incremental innovations, continuous improvements and technological innovations, those which interacted more with their environments, and those which organized more training programs or campaigns aimed at encouraging the employees to be creative and innovative) were found to have encountered less

behavioral problems when implementing their innovations. The more innovation-active firms were therefore more successful in their implementation efforts than the less innovation-active ones. Finally, the results also show that in order for firms to be successful at implementing innovations they need to provide a favorable working climate for their workers.

Mohamed, M. Z., & Rickards, T. (1996). Assessing and comparing the innovativeness and creative climate of firms. *Scandinavian Journal of Management, 12,* 109-121.

The innovativeness of eight manufacturing firms (or four matched pairs of firms) in Malaysia was measured and compared using certain criteria. Initially, we selected the four matched pairs of firms (each pair is comprised of a more innovative and a less innovative firms) from various manufacturing sectors based on whether or not the firms in each pair have implemented computerized manufacturing systems. Further assessments of the innovativeness of the firms were based on: changes/continuous improvements carried out; introduction and implementation of technologies (machines, processes, etc.); interactions of the firms with their external environments; and number of training programs organized by the firms to stimulate innovation and creativity among its employees. In addition to assessing the innovativeness of the firms, the creative climate questionnaire (CCQ) developed by Ekvall et al. was utilized to assess their creative climates. As expected, the results obtained demonstrate that the more innovative firms were found to have introduced more computerized systems and incremental and technological changes, to have more interactions with their external environments, to have organized more training programs aimed at encouraging creativity and innovation, and to have more creative climates when compared to the less innovative ones. The results of this study indicate that in order for a firm to be innovative, it needs to continuously implement many types of changes and technologies in response to environmental needs. Furthermore, the results also confirm in a different culture (i.e. a developing

country) earlier Scandinavian studies which have been used to justify the international use of the Ekvall's CCQ. However, it appears that, although the CCQ is a good predictor of higher and lower innovative performance of firms, the instrument on its own is unable to indicate the extent of innovative strengths/weaknesses without using additional criteria or benchmarking.

Moultrie, J., & Young, A. (2009). Exploratory study of organizational creativity in creative organizations. *Creativity and Innovation Management, 18*(4), 299–314.

The creative industries represent an important and growing sector of the UK economy. This paper explores organizational creativity in firms within the creative industries. A questionnaire based on both Amabile's 'Organizational Creativity' model and Ekvall's 'Creative Climate' model was completed in ten firms in different sectors of the creative industries. Follow-up interviews with five firms were also conducted, to compare the outputs from each model as well as the variation in responses from firms in different sectors. The results indicate that both models of organizational creativity are complementary, although not necessarily fully applicable in the creative industries. Specific differences between firms in the graphic design/branding sector and firms in product design were also observed.

Montes, F. J., Moreno, A. R., & Fernández, L. M. (2004) Assessing the organizational climate and contractual relationship for perceptions of support for innovation. *International Journal of Manpower, 25*, 167 – 180.

The aim of this paper is to study the relationship between organizational climate and perceptions of support for innovation, considering that the relationship may be moderated by the type of labor contract the employees have. This moderating effect may have its origins in the perception of reality and the type of knowledge applied on the job. The results drawn from empirical research among 312 observations of the employees in 80 offices of a Spanish financial company enable us to verify, on the one hand, that an organizational climate characterized by support, cohesion and intrinsic recognition favors perceptions of support for innovation. On the other hand,

that there are differences in the dimensions of climate that favor perceptions of support for innovation depending on the employees' contractual relationship with the organization.

Munir, R., & Beh, L-S. (2019) Measuring and enhancing organizational creative climate, knowledge sharing, and innovative work behavior in startups development. *The Bottom Line, 32*, 269 – 289.

The purpose of this paper was to examine the role of the organizational creative climate, knowledge sharing and innovative work behavior in startups development. This study also aimed to discover the R square, predictive relevance and effect size of the developed model. A quantitative method was used, and a total of 352 usable questionnaires were collected from employees at startups particularly in services sector in Malaysia. The structural equation was developed to explain the complicated relationship between organizational creative climate, knowledge sharing and innovative work behavior. The results of hypothesis were analyzed using structural equation modeling – partial least square (SEM-PLS) test. The results indicate that organizational creative climate significantly influence innovative work behavior (H1), organizational climate positively affects knowledge sharing (H2) and knowledge sharing significantly influence innovative work behavior (H3). In addition, the results also show that the R square values of innovative work behavior is weak (R2 = 0.067), while the predictive relevance value demonstrating the model has sufficient predictive relevance. Further, the results of effect size show medium effect for organizational creative climate and knowledge, while the remaining indicates small effect size.

Nasurdin, A. M., Ling, T. C., & Hou, K. B. (2014). The influence of organizational creative climate on product innovation: A study of Malaysian manufacturing firms. *International Journal of Economics and Management, 8,* 40-69.

The purpose this study is to examine the effect of organizational creative climate on product innovation. organizational creative climate is conceptualized as comprising

of challenge, freedom, idea support, trust/openness, dynamism/liveliness, playfulness/humor, debate, conflict, risk taking and idea time. A total of 163 large manufacturing firms in Malaysia were sampled. Ten hypotheses were tested using regression analyses. Our results showed that of the eight dimensions of organizational creative climate (risk taking & idea time, playfulness/ humor & dynamism/liveliness, absence of conflicts, trust/openness, debates, challenge, idea support, freedom), only challenge, debate, and idea support were found to have significant positive effects on product innovation. Implications and limitations of the study are also discussed.

Nisula, A-M., Kallio, A., Oikarinen, T. & Kianto, A. (2014). Fostering team creativity and innovativeness with playfulness: A multi-case study. *International Journal of Innovation and Learning, 17,* 79-97.

This paper extends understanding on the practical development of team creativity and innovativeness in organizations by exploring the concept of playfulness and its implementation in practice. We discuss what playfulness means in the context of creativity and innovativeness and illustrate its application through three action research projects. As a conclusion, we propose playfulness as a useful metaphor for illustrating creative activities and practical methods, which can be a viable means for stimulating team creativity and innovativeness and thereby in a broader sense encouraging innovation and organizational renewal in non-creative businesses.

Norbergh, K-G., Sandman, P-O., & Asplun, K. (2002). The relationship between organizational climate and the content of daily life for people with dementia living in a group dwelling. *Journal of Clinical Nursing, 11*, 237-246.

One factor influencing the outcome of care may be nursing staff's experience of the organizational work climate. The aim of the study was to investigate how people with dementia spend their time in group-dwelling units (GD) with either a creative or less creative organizational climate. For the study, two GD units assessed as having a creative organizational climate and two units assessed as having a less creative

climate were selected. Eighteen residents living in the units assessed as creative and 20 residents living in the units assessed as less creative participated in the study. For measuring the organizational climate, the Creative Climate Questionnaire was used. Observations of residents' activities were classified according to the Patient Activity Classification. For measuring residents' functional ability, the Multi-Dimensional Dementia Assessment Scale was used. Their cognitive capacity was measured with the Mini Mental State Examination. Residents living in the units assessed as having a creative organizational climate spent 45.2% of the time with nursing staff, while those in the less creative climate spent 25.6% ($P < 0.001$). Time spent with fellow residents in the creative climate was 13.9% and in the less creative climate 31.3% ($P < 0.001$). There was no significant difference between the units according to time spent with relatives and time spent alone. Since the purpose of GD is to offer care adapted to the abilities and psychosocial needs of people suffering from dementia, a less creative climate can be a threat to the aims of GD. In order to maintain these, it is important for managers to be aware of the work climate and its impact on care for people with dementia.

Norrgren, F., & Schaller, J. (1999). Leadership style: Its impact on cross-functional product development. *Journal of Product Innovation Management, 16,* 377-384.

This article reports the results of a study in which cross-functional product development projects in six companies were analyzed. Data was collected on leadership styles among project managers, as well as organizational climate and team learning. Leadership style, especially the leaders' employee orientation, co-varied significantly with how members of the cross-functional teams perceived their work climate and possibilities for innovative learning. The results of the analysis point to the leader's behavior, rather than his power, as an important factor determining the work climate in successful cross-functional product development projects.

Olsson, A., Blome, M., Kaulio, M., Guve, B., Bergendahl, M. N., & Odenrick, R. (2009). Organizational factors affecting product innovation capability: Findings from the mid-tech industry. *Proceedings of the International Conference on Engineering Design* (pp. 157-168). Stanford University: Stanford, CA.

The study aimed to explore how product innovation be improved by identifying and changing organizational factors. Interviews and the use of the CCQ and identified six factors related to innovative capability. All factors were related to the CCQ. Having the time to freely debate ideas and risk-taking were very important. User involvement and understanding needed to be improved and needs further attention.

Olsson, A., Paredes, K. M., Johansson, U., Roese, M. O., & Ritzen, S. (2019). Organizational climate for innovation and creativity – A study in Swedish retail organizations. *The International Review of Retail, Distribution and Consumer Research, 29,* 243-261. https://doi.org/10.1080/09593969.2019.1598470

Innovation in retailing is under-investigated in academia and yet a highly relevant concern given the current changes in the retail landscape. Although retailing is often characterized by a dynamic and highly competitive environment, retail organizations are not often considered as 'innovative,' at least when compared with manufacturing industries, or when using existing innovation frameworks in academic literature. There are many aspects of innovation discussed in literature and a need to consider different ways of looking into retail's innovativeness. Among them, the importance of organizational climate on influencing creativity and innovation may help explain how to enable innovation in service organizations, such as retailers. The purpose of this study is to evaluate the climate for innovation and creativity and examine how retail organizations perceive it. We applied a mixed-methods approach using an established organizational climate survey and semi-structured, one-on-one interviews regarding the innovation climate and other aspects of innovation management in the companies. The study shows that despite retail organizations still struggling to incorporate innovation on a strategic level and move

beyond incremental developments in their operations, retailers score positively on being innovative regarding certain dimensions of the organizational climate survey. This indicates that retailers (especially conventional ones) could benefit from challenging current practices and moving towards becoming more active and strategic innovators since their organizational climate to a certain extent allows for it. Respondents within the organizations also express a need for better innovation support, whether it is through established structures and processes or an improvement in the current conditions of the organizational climate. How retailers could enable themselves to become more active innovators – based on what we know that retailers look more towards entrepreneurship and continuous development as a driving force rather than formalized innovation practices per se – is a potential avenue for further research.

O'Shea, D. & Buckley, F. (2007). Towards an integrative model of creativity and innovation in organizations: A psychological perspective. *The Irish Journal of Psychology, 28* (3-4), 101-128.

This article addresses the value that research into creativity, primarily investigated by psychologists, has to the field of innovation, more commonly researched in business, science, and technology arenas. It takes a look at the multiple factors that influence innovation, including how problem-solving style and creative climate contribute to innovation in organizations.

Peter-Szarka, S. (2012). Creative climate as a means to promote creativity in the classroom. *Electronic Journal of Research in Educational Psychology, 10*, 1011-1034.

In the past few decades, this person-centered spectrum of creativity has been broadened, and today we encounter several theories that emphasize the importance of environmental factors. These research results underline the fact that individual qualities cannot evolve without a supportive environment, and environmental factors may mobilize and even develop personal creative skills. This paper provides a survey of the international professional literature of the new,

environmental approach to enhancing creativity, with a special emphasis on previous organizational psychological findings and their adaptability in a school context. The concept of 'creative climate' is also introduced: its theoretical background, an overview of measurement techniques and its relationship with classroom motivation is presented. Finally, some future research questions and educational practical issues are addressed.

Porter, J. (2010). Review of Situational Outlook Questionnaire. In R. A. Spies, J. F. Carlson & K. F. Geisinger (Eds.), *The eighteenth mental measurements yearbook* (pp. 546-548). Lincoln, NE: Buros Institute of Mental Measurements.

A technical review of the Situational Outlook Questionnaire conducted by an independent reviewer selected by Buros.

Porzse, G., Takacs, S., Csedo, Z., Sara, Z., Fejes, J. (2012). The impact of creative organizational climate on the innovation activity of medical devices manufacturing firms in Hungary. *European Journal of Business and Management, 4*, 1-12.

The purpose of this study was to empirically investigate the impact of creative organizational climate on the innovation activity of medical devices manufacturing firms in Hungary. A combined qualitative and quantitative research model was applied, focusing on two firm's case studies that are active in the above- mentioned sector and differ to a substantial degree in their innovation activities. The connection between innovative climate and innovation was analyzed by comparing their organizational climate and perceptions of organizational members of innovation activities. Findings revealed that classical models of creative organizational climate explained the differences partially, although on the level of individual perceptions of climate and innovativeness there were some clear connections. One factor that differentiated the two firms in terms of organizational climate in the predicted direction: the amount, quality, sincerity and depth of debates going on in the organization. The level of challenge (high involvement, commitment and challenging

goals) and the time devoted to think about new ideas and innovative solutions (idea time) turned out to be contrary to the expectations based on previous research – although these results are less significant statistically. The results trigger further research into the sources of competitiveness in the Hungarian medical devices manufacturing sector.

Prokesh, S. (2009). How GE teaches teams to lead change. *Harvard Business Review, 87* (1), 99-106.

An article that outlines the Leadership for Innovation and Growth program that GE uses as a part of its leadership curriculum. The use of the SOQ is included within this case example.

Rasmussen, C. C. (2014). Intangible resources as drivers of high growth. *International Journal of Innovation Management, 18*, 1-20.

This paper examines the effects of innovativeness, creative climate and learning on high growth. We study how fast-growing SMEs, known as gazelles, differ from other SMEs. A survey of 345 Norwegian gazelles and 135 non-gazelles supports the idea that innovativeness is an important factor in whether a company becomes a gazelle. Creative climate, learning and innovativeness were conceptualized and analyzed as first-order constructs using confirmatory factor analysis, OLS and Probit regression. Learning and creative climate were found to have a positive impact on growth through innovativeness. Based on the data, it seems that younger companies are more likely to be innovative and grow quickly.

Rasulzada, F., & Dackert, I. (2009). Organizational creativity and innovation in relation to psychological well-being and organizational factors. *Creativity Research Journal, 21*, 191-198.

This study investigated the relationship between organizational creativity and innovation and the psychological well-being of 95 employees within the high-tech

field. Organizational climate and work resources were found to be significantly related to perceived creativity and innovation of the organization.

Rodrigues, A. F., & Veloso, A. L. (2013). Organizational trust, risk and creativity. *Review of Business Management, 15,* 545-561.

The competitiveness has guided companies to an investment in creativity as a means of innovation. Organizational trust has a positive impact in organizations, leading to an increase in cooperation, creativity and innovation. We start with the question: can trust in leadership influence the behavior of employees to risk more new ideas? 244 employees of different functional areas and levels of work seniority participated in this study. We detected that there is a positive relationship between trust and behavior to provided new ideas. Employees from non- productive areas have higher levels of trust in leadership and as such take more risks in creating new ideas, than direct employees.

Ronquillo, J. C. (2013). Conceptualizing the climate for innovation in public and nonprofit organizations. In B. L. Kedia & S. C. Jain (Eds.), *Restoring America's global competitiveness through innovation* (pp. 126-147). Cheltenham, UK: Edward Elgar.

This chapter reviews the literature on innovation within with public and nonprofit organizations with a particular focus on the organizational context. The review highlights a variety of dimensions of the climate for innovation including Ekvall's work.

Ryhammar, L., & Smith, G. J. (1999). Creative and other personality functions as defined by percept-genetic techniques and their relation to organizational conditions. *Creativity Research Journal, 12*(4), 277-286. https://doi.org/10.1207/s15326934crj1204_5

Individual differences influencing how the conditions in an organization are experienced can depend on a variety of factors. Differences in personality, for

example, and variations in individual creative capacity are probably influential. This study concentrated on university teachers at Orebro University in Sweden, and dealt first with how their creative functioning, defined within the percept-genetic frame of reference, was related to their experiences of organizational conditions, including organizational outcomes as creativity and productivity. The academic organization was defined, described, and measured in terms of organizational structure, culture, climate, resources, workload pressure, and leadership style. Because the results showed that creative functioning related to 1 of the organizational structural factors, the second part of the study concentrated on how an experience of the university as open, manifold, and complex was related to percept-genetic personality descriptions about anxiety and defense against anxiety and to the individual's way of balancing subjective and objective influences. Viewed from the perspective of personality the results showed that the crucial variable in the university organization was openness and diversity. Those who regard this quality to be particularly typical of the university were likely to be creative, open both to their emotional resources and fantasy and to the possibilities offered by the work situation. Even if easily aroused, they could transform their anxiety in a constructive direction.

Ryhammar, L., & Andersson, A. L. (2001). Relations between university teachers' assessed degree of creativity and productivity views regarding their organization. *Journal of Creative Behavior, 35*(3), 199-204. https://doi.org/10.1002/j.2162-6057.2001.tb01046.x

A stratified sample of 118 university teachers took part in an investigation in which they assessed their organization on 17 dimensions. Two of the dimensions, creativity and productivity, were regarded as consequences of organizational conditions. Each of two factor analyses carried out, one including gender and the other not, yielded five factors, one of them formed by the dimensions of creativity, productivity, sufficient resources, and organizational climate. Productivity was also found to be

related to the variables of human orientation, developmental orientation and academic values.

Samad, S. (2003). The differential effects of creative organizational climate and organizational commitment on learning organization. *Universitiy Teknologi MARA*, Selangor, Malaysia, 3.

The purpose of this paper was to examine the differential effects of creative organizational climate and organizational commitment on learning organization. The sample consisted of 584 lower and higher-level managers in Telecom Malaysia (TM). The study revealed that creative organizational climate and organizational commitment were positively and significantly related to learning organization. Therefore, they had a significant effect on learning organization. On the other hand, the results found that creative organizational climate had more effect on learning organization than from affective and continuance commitment. Hence, all hypotheses were supported. Based on the implications of the research findings, several recommendations are discussed.

Samad, S. (2006) The relationship between creative organizational climate and learning organization. In: Knowledge Management International Conference and Exhibition 2006 (KMICE 2006), 6-8 June 2006 (pp. 557-563). The Legend Hotel Kuala Lumpur.

The purpose of this study was to investigate the relationship between creative organizational climate and learning organization. Consequently, this study determined the contribution of creative organizational climate components on learning organization and identified the differences in perception of creative organizational climate based on the selected demographic variables. The sample consisted of 584 lower and higher-level managers in Telecom Malaysia (TM). The results hypothesized that creative organizational climate perceptions are positively related to learning organization. The study revealed that all of the creative organizational climate components made significant contribution to learning

organization. Significant differences of creative organizational climate by the selected demographic variables were also shown for some components. Based on the implications of the research findings, several recommendations were put forward.

Samad, S. (2010). The role of creative organizational climate on learning organization: A key component of knowledge management. A paper included in the *International Conference on Computer Engineering and Applications Proceedings* (pp.404-409). Bali Island, Indonesia.

The purpose of this study was to determine the role of creative organizational climate on learning organization, a key component on knowledge management. Consequently, this study was to investigate the relationship between creative organizational climate and learning organization and to identify the differences in learning organization based on the selected demographic variables. The sample consisted of 500 middle and senior level management staff in Malaysian telecommunication companies. The results hypothesized that creative organizational climate is positively related to the learning organization. The study also revealed that all of the creative organizational climate components played significant role on learning organization. Significant difference in learning organization was also reported between male and female and senior and middle management staff. Based on the implications of the research findings, several recommendations are put forward.

Sample, J. (2010). Review of Situational Outlook Questionnaire. In R. A. Spies, J. F. Carlson & K. F. Geisinger (Eds.), *The eighteenth mental measurements yearbook* (pp. 548-550). Lincoln, NE: Buros Institute of Mental Measurements.

A technical review of the Situational Outlook Questionnaire conducted by an independent reviewer selected by Buros.

Sandberg, L., Borell, L., Edvardsson, D., Rosenberg, L., & Boström, A-M. (2018). Job strain: A cross-sectional survey of dementia care specialists and other staff in Swedish home care services. *Journal of Multidisciplinary Healthcare, 11,* 255-266.

The study applied a cross-sectional survey design. Participants were dementia care specialists who work in home care (n=34) and other home care staff who are not specialized in dementia care (n=35). The Strain in Dementia Care Scale (SDCS) and Creative Climate Questionnaire instruments and demographic variables were used. Descriptive and inferential statistics (including regression modeling) were applied. Home care staff perceived job strain – particularly because they could not provide what they perceived to be necessary care. Dementia care specialists ranked job strain higher (m=5.71) than other staff members (m=4.71; p=0.04). Job strain (for total score and for all five SDCS factors) correlated with being a dementia care specialist. Correlations also occurred between job strain for SDCS factor 2 (difficulties understanding and interpreting) and not having Swedish as first language and SDCS factor 5 (lack of recognition) and stagnated organizational climate.

Sandvik, A. M., Espedaal, B., & Selart, M. (2015). Leadership drivers of organizational creativity: A path model of creative climate in a professional services firm. *Beta: Scandinavian Journal of Business Research, 29,* 74-90.

The purpose of this study was to explore how and under what conditions two different leadership roles are able to facilitate an organizational climate that supports creativity. The study was conducted in a leading professional service firm. The introduced hypotheses were tested by means of a structural equation model. Findings indicate that the leadership roles are conceptually different and that organizational structure is important for leaders' ability to create a climate that supports creativity. The results also indicate that relational and change leadership behaviors are vital for leaders when creating a climate that supports creativity. Furthermore, both job autonomy and intrinsic motivation are found to be important dimensions for enhancing the creative climate.

Sandvik, A. M., Croucher, R., Espedal, B., & Selart, M. (2018). Intellectual stimulation and team creative climate in a professional services firm. *Evidence-based HRM: A Global Forum for Empirical Scholarship, 6,* 39-53.

The purpose of this study was to investigate the role of intrinsic motivation and autonomy in relation to intellectual stimulation in creating a creative climate within a professional services firm. The authors found that intrinsic motivation and autonomy mediate the relationship between intellectual stimulation and creative climate.

Saud, K. A. (2017). Influence of organizational creative climate on problem-solving behavior among library employees. *Proceedings of the International Conference on Libraries: "Towards Lean Libraries"* August 2-3, 2017, Vistana Hotel, Penang, Malaysia

this paper examines the relationship between the problem-solving skill with creative climate values such as challenge/motivation, freedom, idea support, trust/openness, dynamism/liveliness, playfulness/humor, debates, conflicts, risk taking and idea time among the library employees. It is also important to understand the impact on employee's behavior in delivering services. Using a quantitative and descriptive approach, the data was analyzed using parametric method and tools which enabled confirmation on the significant correlation between such values with the creative problem-solving process. It has also mustered the library employee's behavior in decision making, communication, coordination, controlling, innovation, motivation and commitment enthusiasms. Simultaneously, it showed a critical point to the importance of building a climate that triggers or maintains an individual creative skill which affected library services in response to the accelerate rate of information evolution.

Sellgren, S. F., Ekvall, G., & Tomson, G. (2007). Nursing staff turnover: Does leadership matter? *Leadership in Health Services, 20,* 169-183.

The aim of this paper is to study the relation between leadership behavior of nursing managers and staff turnover with respect to the intervening variables "work climate"

and “job satisfaction”. Three different well-documented questionnaires were used to assess perceived leadership behavior, work climate and job satisfaction. Data on staff turnover were collected from a computerized follow-up system. Different statistical analyses such as correlation analyses, regression analyses and analyses of variance were performed in order to explore the relations. The results show strong correlations between leadership behavior, work climate and job satisfaction. No significant direct relation between leadership behavior and staff turnover was shown. Staff turnover shows statistically significant correlations with the job satisfaction variable “feeling” ($p < 0.005$), and the work climate variables “challenge” and “playfulness” ($p < 0.001$). In order to limit staff turnover, decision makers should put effort into recruiting and retaining managers that perform very well according to the needs of staff. Managers that are both relations-oriented and production-oriented, can manage change and are able to stimulate the staff with challenges have the best opportunities to achieve low staff turnover.

Sellgren, S. F., Ekvall, G. & Tomson, G. (2008), Leadership behavior of nurse managers in relation to job satisfaction and work climate. *Journal of Nursing Management, 16*, 578–587.

This study examines how nurse managers’ leadership behavior relates to job satisfaction and a creative work climate. The nursing shortage is a challenge for managers all over the world. Leadership is a core element of management and it is important to elucidate leadership behavior in order to increase knowledge about attracting and retaining talented staff. We studied 770 subordinates at a large university hospital. Three questionnaires for assessing perceived leadership behavior, creative work climate and job satisfaction were used. Subordinates with a manager perceived as ‘super’ have the highest rates on job satisfaction. The correlation between leadership and creative work climate is stronger than between leadership and job satisfaction. Between job satisfaction and work climate the correlation is strong. The study shows that the relationship between a creative work

climate and job satisfaction is strong. A manager's ability to lead has a major effect on work climate.

Shanker, R., Bhanugopan, R., & Fish, A. (2012). Changing organizational climate for innovation through leadership: An exploratory review and research agenda. *Review of Management Innovation and Creativity, 5,* 105-118.

Leadership styles; particularly transformational and transactional, should be given further prominence in organizations, as there is evidence to support, their dimensions influence organizational innovation, and manipulating leadership behaviors can affect the climate for innovation. Further research is required to empirically explore the relationship between transformational and transactional leadership styles and their impact on the organizational climate most conducive to creativity and innovation. The purpose of this study is to understand how and in which ways transformational and transactional types, potentially impact the climate for innovation at the organizational level and to propose a direction for further research.

Shanker, R., Bhanugopan, R., van der Heijden, B. (2017). Organizational climate for innovation and organizational performance: The mediating effect of innovative work behavior. *Journal of Vocational Behavior, 100,* 67-77.

Despite a plethora of literature on organizational climate for innovation and the persuasive arguments establishing its link to organizational performance, few studies hitherto have explored innovative work behavior of managers. Specifically, limited attention has been paid to explaining how organizations perceive the importance of stimulating innovative work environments. Drawing from organizational climate theory, this study investigates the mediating effects of innovative work behavior on the relationship between organizational climate for innovation and organizational performance. Our findings from a survey of 202 managers working in Malaysian companies demonstrate that innovative work behavior plays a mediating role in the relationship between organizational climate

for innovation and organizational performance. Implications of these findings and avenues for future research are discussed.

Sharman, D., & Johnson A. (1997). Innovation in all things! Developing creativity in the workplace. *Industrial and Commercial Training, 29*(3), 85-87.

States the need for all managers into the next millennium to innovate and respond in new ways. Sets out a way in which managers can act differently in order to create a creative climate within their work groups. Sets this practical approach in the context of research carried out by Goran Ekvall on the creative climate of groups. Describes a sequence of activities, discovered by the authors, that was effective in stimulating the group problem-solving climate and a technique for bringing back this atmosphere. Outlines this sequence, called "RAJiMAR" as the letters stand for the various stages of the group problem-solving process: Reversal-Absurdity-Jokes–incubation-Metaphor- Anchoring-Recall.

Sheffield, R., Kars-Unluoglu, S., & Jarvis, C. (2022). Climate for innovation: A critical lever in the leadership of innovation. In R. Agarwal, E. Patterson, S. Pugalia, & R. Green (Eds.), Innovation (pp. 39-60). London: Routledge.

Innovation involves an uncertain journey and, although leadership cannot ensure innovation success, it can certainly influence its odds. In this chapter we will explore the concept of organizational climate, an arena where leadership can have a significant influence, in the context of healthcare teams in the National Health Service (NHS) in England. Drawing on data from a longitudinal mixed-methods study conducted between 2012 and 2017, this chapter draws insights from six case studies to explore ways in which leadership can influence climate to support or hinder innovation. We focus on the journey for three teams who improved their climate for innovation, according to a team climate measure administered twice 12 months apart, and another three teams whose climate deteriorated. Including vignettes as illustrations, we identify climate dimensions and leadership practices that catalyze or act as a barrier in making innovation happen. The findings highlight the importance

of: understanding the wider context; establishing an agenda for purposeful innovation; protecting ideas in their early, fragile stages through risk mitigation; bounded experimentation; and securing the support of senior influencers. The findings demonstrate climate for innovation is amenable to leadership interventions and practices. These practices can be adapted and adopted in many organizational contexts and will have particular resonance for innovation leaders in high-stakes and/or highly regulated environments. We conclude by posing questions leaders can consider for improving the climate for innovation in their teams and organizations.

Skogstad, A., & Einarsen, S. (1999). The importance of a change-centered leadership style in four organizational cultures. *Scandinavian Journal of Management, 15,* 289-306.

The existence of a change-centered leadership style as hypothesized by Ekvall and Arvonen has been scrutinized in a sample consisting of four organizations, described to reflect each of the four ideal cultures proposed by Quinn and his colleagues. Exploratory factor analyses yielded substantial support for a distinct change-centered dimension. Significant positive correlations were found in the sample as a whole between a change-centered leadership style and job satisfaction, organizational commitment and evaluations of the leader's competence. However, the notion that such correlations would be strongest in the developmental culture was confirmed only in the case of organizational commitment. Differences in sampling procedures may explain some of the differences between the present study and other studies.

Soderlund, M., Norberg, A. & Hansebo, G. (2014). Validation method training: Nurses' experiences and ratings of work climate. *International Journal of Older People Nursing, 9,* 79-89.

To explore nurses' experiences of a 1-year validation method training program conducted in a nursing home for residents with dementia and to describe ratings of

work climate before and after the program. Twelve nurses participated in the training and were interviewed afterwards. These individual interviews were tape-recorded and transcribed, then analyzed using qualitative content analysis. The Creative Climate Questionnaire was administered before (n = 53) and after (n = 56) the program to the entire nursing staff in the participating nursing home wards and analyzed with descriptive statistics. Analysis of the interviews resulted in four categories: being under extra strain, sharing experiences, improving confidence in care situations and feeling uncertain about continuing the validation method. The results of the questionnaire on work climate showed higher mean values in the assessment after the program had ended.

Speranzini, G. (1998). Competencies and guidelines for Situational Outlook Questionnaire® practitioners – Part One. *Communiqué, 6*, 13-16.

The purpose of this paper is to outline the specific tasks of a practitioner of the Situational Outlook Questionnaire®. Each activity is thoroughly defined, its time requirement is noted and its intent is explained. The activities include: 1) Task appraisal with the client, 2) A choice determining whether or not to conduct the SOQ intervention, 3) Order of the SOQ forms, 4) Preparation of the cover letter, 5) Analyzing the data, and 6) Planning the debriefing process. The practitioner tasks will take upwards of thirteen hours, but the result will be a quality SOQ feedback event.

Speranzini, G. (1999). Competencies and guidelines for Situational Outlook Questionnaire® practitioners – Part Two. *Communiqué, 6*, 4-7.

The goal of this paper is to thoroughly explain the role of the practitioner of the Situational Outlook Questionnaire® pertaining to full engagement in the content and process of the feedback activity. The article further emphasizes the need for specific knowledge and skills required of the practitioner, including all aspects of the SOQ, ability to judge and listen, and the importance of continuous learning. The role of the SOQ practitioner is complex and multi-faceted.

Spivack, A. J., & Rubin, B. A. (2011, February). Spaces to control the creative output of the knowledge worker: A managerial paradox? Published in the *Proceedings of the 2011 iConference* (pp. 312-318). Seattle, Washington.

Due to technological advances, knowledge workers have become more mobile, expanding the variety of environments in which they may complete work. Despite the affordances of technology, however, knowledge workers may not have the autonomy to use these alternative work sites. Autonomy is a key criterion to producing creative work as well, so limits to autonomy are especially troubling for creative knowledge workers tasked with generating creative solutions---an increasingly important output to organizations given the turbulent environment. This paper draws on labor process theory to explore the sources that may be playing a role in diminishing the autonomy of these workers. Several propositions are presented relating forms of control, work environment options, autonomy, and creative performance.

Stetler, K. L., & Magnusson, M. (2015). Exploring the tension between clarity and ambiguity in goal setting for innovation. *Creativity and Innovation Management, 24,* 231-246.

In this article, we analyze the role of goal setting for innovation in an R&D context. The literature on goal setting for innovation is inconclusive; some scholars claim that goals should be ambiguous in order to inspire novel ideas, but others claim that clear project goals are important in order to undertake innovation projects in an efficient manner. We aim to explain this inconsistency by taking a more fine-grained view of innovation where we study goal setting in relation to exploratory aspects such as idea generation separately from exploitatory aspects such as idea implementation. The results from an empirical survey study in the R&D department of an automotive company reveal that a general ambition to be innovative is positively related to all phases of innovation, but the effects of clear project goals are more complex. We found that idea novelty increases under conditions of either high

or low levels of goal clarity, whereas mid-range levels of goal clarity are related to fewer novel ideas. These findings inform existing knowledge about goal setting and innovation, and in particular challenge the body of literature showing that only high levels of ambiguity in goal setting are a fruitful means for innovation.

Sundren, M., Dimenäs, E., Gustofsson, J., & Selart, M. (2005). Drivers of organizational creativity: A path model of creative climate in pharmaceutical R&D. *R&D Management, 35*, 359-374.

A path model of organizational creativity was presented; it conceptualized the influences of information sharing, learning culture, motivation, and networking on creative climate. A structural equation model was fitted to the data from the pharmaceutical industry to test the proposed model. The mode accounted for 86% of the variance in the creative climate dependent variable. Information sharing has a positive effect on learning culture, which in turn had a positive effect on creative climate, while there were negative direct effects of information sharing on creative climate and on intrinsic motivation. This study suggests that information sharing and intrinsic motivation are important drivers for organizational creativity in a complex R&D environment in the pharmaceutical industry. Implications of the model are discussed.

Swinnen, M., Teirlinck, P., & Isaksen, S. G. (2019). Leadership support for innovation: The intervening role of the climate for creativity. *Kindai Management Review, 7,* 78-98.

This multi-method study examined the mediating effect of climate for creativity between leadership behavior and innovation at the work-unit (proximal) and organizational (distal) levels. The study was conducted with a sample of 180 engineers in the aerospace industry. Creative autonomy, idea-support, challenge and involvement, and conflict were identified as underlying constructs for the climate for creativity. The analysis revealed that climate for creativity complementarily mediates the relationship between leadership support for

innovation and innovation, with idea-support as the most influential dimension. A distinction between work-unit innovation and organizational-level innovation showed that the conflict dimension was influential only at the more proximal work-unit innovation level. Qualitative analysis confirmed these dimensions and identified the underlying constructs for leadership behavior in relation to climate for creativity, for both helping and hindering innovation.

Szobiova, E. (2015). Creativity in organizational environments. *Acta Technologica Dunicae, 5,* 69-79.

The contribution is focused on the conditions which allow the application of creativity in the context of an organization. The aim of the article is to reveal the work environment factors influencing the creativity of the employees. Another aim is to demonstrate how management style of an organization can affect the creativity of employees in order to successfully exploit their creative potential. The contribution also presents the manner how a manager can influence creativity of one's own employees. Moreover, the article deals with the process of innovation and transmission of creative ideas and solutions into practice.

Tafsir, M., Shaari, R., & Sarip, A. B. (2015). The role of transformational leadership on creativity climate development in the workplace. *Humanistic Management Network, 46,* 1-10.

The study involved 230 respondents working in the banking sector were selected at random. Instruments used for transformational leadership and creativity climate developed by researchers from some of the instruments that have been used in some previous studies. Instruments validated by a post hoc analysis of factors involving 125 respondents. Results of the analysis showed that the relationship between transformational leadership with the climate of creativity to a high correlation (r = 0.313, p = 0. 0001). This study shows that transformational leadership has a significant relationship to the development of creative climate, or it can be

concluded that transformational leadership has an important role to the development of creativity in the workplace climate.

Talbot, R., Cooper, C., & Barrow, S. (1992). Creativity and stress. *Creativity and Innovation Management, 1*(4), 183-193

An organizational change program in a UK service division of a multinational equipment and systems company provided an opportunity to study the correlation between stress and creativity. The study was comprised of 1,083 people from five levels of the company hierarchy. Although the overall stress level of the company was comparable to the popular norms, the creativity level was close to a stagnated company as provided by the Creative Climate Questionnaire (Ekvall, 1988). A strong negative association between stress and the Creative Climate Questionnaire scores was found especially from relationships with others and organizational structure and climate. It was also found the higher a person was in the hierarchy the less stress was felt and the better creative climate was perceived.

Tan, C. L., & Ho, M. Y. (2015). Organizational creative climate in determining work innovativeness among knowledge workers. *Global Journal of Business and Social Science Review, 3*(2), 14-26.

The main purpose of this study is to examine the effect of organizational creative climate on the Information and Communications Technology (ICT) engineer's work innovativeness. Work innovativeness is conceptualized as unidimensional construct, while organizational creative climate is theorized as multidimensional construct that consists of ten dimensions. The findings revealed that only three out of ten dimensions of organizational creative climate (challenge/motivation, trust/openness, and debates) had significant positive influence on work innovativeness of knowledge workers whereas another seven dimensions (freedom, idea support, playfulness/humor, idea time, dynamism/liveliness, conflicts and risk taking) were not significant with work innovativeness.

Thiruvenkadam, T., & Kumar, K. S. (2018). Organizational climate for innovation and creativity. *BVIMSR's Journal of Management Research, 10,* 165-173.

The organizational climate indicates the behavior of employees in an organization based on the accepted values, beliefs and assumptions. An organization's innovativeness mainly comes from its employees. Hence for achieving creative results, the appointment of creative people along is not sufficient; organizations should create an environment that fosters and brings out innovations and to be innovative, an organization should be structured in a way that facilitates rather than inhibits innovative practices. Based on the Literature Review, the objective of the study is to understand the impact of the following factors which has an influence on fostering an innovative climate: Characteristics of work; Support of Management and Co-workers; Emotional Safety; Resource availability/accessibility; Diversity of the work force; Dynamism and Risk-taking propensity; Systems, Procedures and Processes in the Organization. The study also focuses on the impact of demographic characteristics of employees on their perception towards innovative climate. The study had been conducted in a Leather Research Institute located at Chennai, India. It is a research organization focused on achieving excellence in research and innovation for the leather industry through R & D efforts. The findings indicate that there is innovative climate in the organization and the organization can further nurture the climate to become highly innovative. Work characteristics and diversity are found to be the significant contributors to innovative climate. The findings also suggest that there is significant association between the organizational innovative climate and the demographic variables like qualification and designation.

Traav, M. K., Forsman, H., & Eriksson, M. (2022). Registers nurses' self-rated research utilization in relation to their work climate: Using cluster analysis to search for patterns. *International Journal of Nursing Practice, 28*, https://doi.org/10.1111/ijn.12944

The aim of this study was to describe and study the association between registered nurses' self-rated research utilization and their perception of their work climate. This cross-sectional study was conducted using the Creative Climate Questionnaire together with three questions measuring instrumental, conceptual and persuasive research utilization. The analysis was done using variable- and pattern- oriented approaches. An association was found between research utilization and experience of dynamism/liveliness. Women reported higher use of conceptual research utilization. Regarding work climate, younger registered nurses and registered nurses with less work experience gave higher scores for playfulness/humor and conflicts. The results showed an association between having a Bachelor's or Master's degree and higher instrumental research utilization. Research utilization was higher in registered nurses with higher academic education. Low users of research tended to experience a lack of dynamism and liveliness, which indicates the importance of improving the work climate by creating a climate that allows opinions and initiate discussions. The findings support the importance of creating a work climate that encourages reflection and discussion among registered nurses, and to promote academic education for nurses plus an optimal work-place staffing-mix.

Tri, H. T., Nga, V. T., & Sipko, S. (2019). Predicting overall staff's creativity and innovative work behavior in banking. *Management & Marketing: Challenges for the Knowledge Society, 14*, 188 - 202.

This study focuses on the impact of empowering leadership and challenges work environment on both sale employee's creativity and innovative work behavior in the Vietnamese banking industry. An empirical test, a structural equation model comprising a sample of 319 sale employees in 15 banks, indicates a strong

relationship between sales staff creativity and innovative work behavior. Moreover, the findings indicate that both an empowering leadership and a challenging work environment can trigger sale employees' creativity. Finally, innovative work behavior has a positive impact on innovative output. In general, this study contributes with some suggestions for bank managers to identify appropriate methods in order to stimulate the creativity and innovative work behavior of employees with the objective of achieving strong and sustainable business performance.

Turnipseed, D. (1994). The relationship between the social environment of organizations and the climate for innovation and creativity. *Creativity and Innovation Management, 3*, 184 - 195.

This study investigated the influences of social environment factors, both personal and organizational, on organizational climate for innovation. A large sample (n=375) from a single automotive related company was given the Climate for Innovation Questionnaire (CIQ), Work Environment Scale (WES), and a Likert-scale type questionnaire for personal and job satisfaction. Results indicate many statistically significant correlations between personal job satisfaction items and dimensions of the CIQ.

Turnipseed, P. H., & Turnipseed, D. L. (2013). Testing the proposed linkage between organizational citizenship behaviors and an innovative organizational climate. *Creativity and Innovation Management, 22*, 209-216.

This study investigates the link between an innovative organizational climate and organizational citizenship behavior (OCB). OCB is discretionary individual behavior that is not directly rewarded and that promotes organizational functioning. The genesis of OCB is Barnard's innovative and spontaneous behaviors instrumental for effective organizational functioning, yet innovation has not been part of the OCB construct development. Using employees of a financial services firm in the Midwest, we examine the relationship between an organizational climate conducive to innovation and OCB using the Climate for Innovation Questionnaire (CIQ) and Van

Dyne et. al.'s OCB scale, which assesses the dimensions of organizational Obedience, Loyalty and Participation. The CIQ was reduced to three dimensions (context, ideas and risk) via factor analysis. Our results indicate that OCB is not linked to an Innovative Organizational Context. The Participation dimension of citizenship behavior was positively linked to Innovative Ideas. Loyalty OCB was negatively linked to Risk, and Obedience OCB was negatively linked to Ideas. Results suggest the need to re-examine the OCB construct. Pragmatic implications include examining the organizational characteristics when innovation is desired. Additionally, managers should be cautious with interventions designed to increase OCB, as the available evidence indicates a generally negative OCB–innovative climate relationship.

Übius, U., Alas, R., & Elenurm, T. (2013). Impact of innovation climate on individual and organizational level factors in Asia and Europe. *Journal of Business Economics and Management, 14* (1), 1-21.

The purpose of this paper was to investigate connections between the innovation climate and individual and organizational level factors. Surveys were conducted among Japanese, Chinese, Estonian, Czech and Slovakian enterprises. Linear regression analysis was conducted. The results showed that the innovation climate predicts differently some individual and organizational level factors in studied countries. Two innovation climate facets – commitment and freedom predict individual level factors– attitude toward the firm in all 5 countries. In two Asian countries, Japan and China, commitment predicts meaning of work and job satisfaction whereas in all three new European Union member states some links between facets of the innovation climate and individual meaning of work and job satisfaction were missing. Implications of the innovative climate for organization were more similar, at least in industries that are influenced by rapid technological development and globalization.

Varsani, M. (2015). Organizational climate: Links to managerial practices and innovation. *Humanities and Social Sciences – Latvia, 23*, 86-102.

This article provides an overview of the role of organizational climate in context with managerial practices and innovation. Based on existing studies this article explicates the mediating role that climate plays between leadership as an antecedent factor influencing the intervening variable of climate, which, in turn, affects innovation. The purpose of this article is to discuss how leaders and managers affect innovation and creativity through their efforts to deliberately foster a work climate that supports creative thinking.

Varsani, M. (2015). Linkage between innovation and organizational climate. *Journal of Interdisciplinary Research, 5*, 79-83.

This paper provides an overview of the role of organizational climate in context with managerial practices and innovation. Based on existing studies this paper explicates the mediating role that climate plays between leadership as an antecedent factor influencing the intervening variable of climate, which, in turn, affects innovation. The purpose of this paper was to discuss on how leaders and managers affect innovation and creativity through their efforts to deliberately foster a work climate that supports creative thinking.

Wallin, A. O., Jokobsson, U., & Edberg, A-K. (2012). Job satisfaction and associated variables among nurse assistants working in residential care. *International Psychogeriatrics, 24,* 1904-1918.

A total of 225 respondents completed a questionnaire measuring general job satisfaction, satisfaction with nursing-care provision and measures concerning person-centered care, work climate, leadership, and health complaints. Job satisfaction was the outcome measure and comparisons were made among those reporting low, moderate, and high levels of job satisfaction; multiple regression analyses were used to explore associated variables. The caring climate and personalized care provision were associated with general job satisfaction. High levels

of satisfaction with nursing-care provision were also associated with the general work climate, organizational and environmental support, and leadership. Low job satisfaction was mainly associated with health complaints. Nurse assistants working in a positive work climate, caring climate, with a positive attitude to their leaders, who receive organizational and environmental support, provide person-centered care and experience a higher degree of job satisfaction. It seems essential, however, to include both general and context-specific measures when investigating job satisfaction in this field as they reveal different aspects of the nurse assistant's work situation.

Wikström, B., Edoff, P., & Cedergren, S. (2016). Capturing the dynamics of innovation climate in organizations. Published in *The ISPIM Conference Proceedings*. Manchester, UK: The International society for Professional Innovation Management.

The research on innovation climate has provided valuable information on organization in the last 30 years. Building on the CCQ questionnaire this study reports result from a leaner version that enable longitudinal measurements of the innovation climate. The results indicate that there are several types of dynamics on how the innovation climate varies over time that have not been accounted for in previous research (e.g. the differences in levels over time, due to departmental differences, seasonal events, and organizational decisions. The longitudinal approach can be used by managers to proactively and systematically develop their innovation climate each week in order to make sure that the climate in the organization enables innovation.

Wikström, B., Ekvall, G., & Sandström, S. (1994). Stimulating the creativity of elderly institutionalized women through works of art. *Creativity Research Journal, 7*(2), 171-182.

Forty women were featured in this study, ages 70-97 with a mean of 82.6 years of age. All of which were located at an assisted living apartment building, twenty were

selected for the intervention group and twenty for the control group. After the intervention, the intervention group showed significant improvement with regards to being more open and flexible with a stronger deposition to creative behavior than subjects in the control group. The intervention group also showed greater freedom and variation in drawing circles and making pictures. In the puzzle tests the intervention group created increasingly imaginative, irregular, and open alternatives with colored patterns while the control group constructed closed and black forms. Despite these findings both the control group and the intervention group described themselves as rational and precautious personalities on the Assessment of Personality Qualities questionnaire (Ekvall, 1986).

Wilkins, A. (1999). Developing creativity in a company whose business is creativity. *Communiqué, 6*, 12-15.

This article is a personal account of Wilkins' experiences with a large advertising company's Thailand branch. A conference was held where the Kirton Adaption-Innovation Inventory (KAI) was given to many of the attendees. The results showed a very homogenous group. The workshop concluded with an exploration of ideas to improve the climate, based on leadership practices by Kouzes and Posner.

Yee, W. F., Pink, L. S., & Sern, M. L. (2014). The effect of a psychological climate for creativity on job satisfaction and work performance. *International Journal of Economics and Management, 8,* 97-116.

The organizational climate for creativity has been widely acknowledged to influence various work outcomes such as employee innovation and productivity. This study aims to investigate the effects of a psychological climate for creativity on job satisfaction and work performance. Additionally, this study seeks to establish the role of job satisfaction as a mediator on the relationship between organizational climate and work performance. The results from a sample of 118 electrical engineers working only within the area of the Klang Valley suggest that all variable relationships were positively and significantly correlated: Job satisfaction - Work performance,

Psychological climate for creativity - Job satisfaction and Psychological climate for creativity - Work performance. Moreover, job satisfaction was found to mediate between the psychological climate for creativity and work performance when an analysis was carried out on three separate regressions.

Ystrom, A., Aspenberg, H., & Kumlin, A. (2012). *What's creative about open innovation? A case study of the creative climate in an open innovation arena.* A paper presented at the 13th International CINet Conference – September, Rome, Italy.

This paper investigates the relationship between open innovation and organizational creativity by assessing and discussing the creative climate in an open innovation arena. It is a case study of an open innovation arena called SAFER, where 27 partner organizations meet to innovate together. The study uses a mixed method consisting of a quantitative Creative Climate Questionnaire complemented by qualitative data gathering through interviews. The findings suggest that the networking and cross-functional meetings within the arena are beneficial to facilitate a creative climate, but there are challenges in handling uncertainties such as work identities, information sharing, and knowledge transparency. The arena is found to be rather dependent on interaction with the outside environment, implying that a well-constructed arena from an organizational point of view is in itself not enough to ensure a creative climate. The project organization of the arena makes the general perception of SAFER fragmented, and it is questioned whether such an arena could or should strive for only one creative climate.

Ystrom, A., Aspenberg, H., & Kumlin, A. (2015). Exploring the creative climate in an open innovation arena: Identifying challenges and opportunities. *European Journal of Innovation Management, 18,* 70-85.

By increasing connectivity between multiple partners, the new paradigm of open innovation has been argued to stimulate creativity. However, there are still few empirical studies exploring what influence this new form of organizing for innovation

has on the creative climate. The purpose of this paper is to start filling that knowledge gap by exploring the creative climate in an open innovation arena called SAFER, where 26 partner organizations meet to innovate together. The findings suggest that the networking and cross-functional meetings within the arena are beneficial to facilitate a creative climate, but there are challenges in handling uncertainties such as work identities, information sharing and knowledge transparency. The arena is found to be rather dependent on interaction with the outside environment, implying that a well-constructed arena from an organizational point of view is in itself not enough to ensure a creative climate. The project organization of the arena makes the general perception of SAFER fragmented, and it is questioned whether such an arena could or should strive for only one creative climate.

Zain, M., & Kassim, N. M. (2012). The influence of internal environment and continuous improvement of firms' competitiveness and performance. *Procedia – Social and Behavioral Sciences, 65,* 26-32.

This paper investigates the organizational internal environment, climate and continuous improvement implementations on competitiveness of firms in a developing country environment. The results indicated that of the ten Ekvall s creative climate factors examined only four had some positive influence on firms' competitiveness. Continuous improvements implemented by the firms were also found to have a significant positive influence on the firms' competitiveness. Furthermore, the firms' internal environment was found to have significant positive influence on the competitiveness of the firms. Finally, the firms' competitiveness in turn was found to significantly influence the firms' performance. Some managerial implications of the findings are also provided.

Zain, M., Kassim, N. M., & Kadasah, N. (2017). Isn't it now a crucial time for Saudi Arabian firms to be more innovative and competitive? *International Journal of Innovation Management, 21,* 1-22.

We investigate the influence of innovations, creative organizational climate and culture on competitiveness and performance of firms. Data came from a survey of 135 Saudi Arabian executives. Findings indicate that incremental innovations directly influence the performance of Saudi Arabian firms. We found significant influence of firms' working environment on their competitiveness, which in turn directly influences their performance. The overall results of this study point to the need of firms in Saudi Arabia to improve their innovativeness, competitiveness, and performance in the light of the recent drop in oil prices that has resulted in drastic reduction in the country's revenues.

Zain, M., Richardson, S., & Adam, M. N. (2002). The implementation of innovation by a multinational operating in two different environments: A comparative study. *Creativity and Innovation Management, 11,* 98-106.

The aim of the paper is to examine the innovation initiatives and processes followed by two subsidiaries of a German multinational company operating in Europe and Asia and to compare the innovativeness of their operations in these two locations. The study examined the innovation processes followed by the two subsidiary firms operating in Germany and Malaysia, the actual problems faced by them, the critical success factors involved in the implementation, and the work climates of the firms. Interestingly, it was found that both firms followed similar innovation processes. Nevertheless, different types of problems and critical success factors were applicable to both firms. The results showed that the Malaysian subsidiary faced more behavioral problems while the German subsidiary encountered more technical problems. Further, the study showed that a lack of knowledge was the common problem faced equally by both firms. The study demonstrated that the German subsidiary had better working climate compared to its counterpart in Malaysia.

Finally, the German subsidiary was found to be more innovation-active than the Malaysian subsidiary as it introduced more types of innovation, interacted with more types of entity in the external environment and introduced more types of training.

Zhou, C. (2015). How does the hierarchical management system influence the climate of creativity in Chinese university laboratories? In P. O. de Pablos, L. J. Turro, R. D. Tennyson, & J. Zhao (Eds.). *Knowledge management for competitive advantage during economic crisis* (pp. 69-81). Hershey, Pennsylvania: IGI Global

This chapter aims to investigate how the Chinese hierarchical management system influences the climate of creativity in university laboratories. A questionnaire (Creative Climate Questionnaire, CCQ) survey was carried out with 25 laboratories (126 participants) at 7 universities in Northeastern China. The comparative study reveals both the advantages and disadvantages of the hierarchical management system for creativity in university laboratories. To some extent, the hierarchical system stimulates different levels of laboratories to shape different collective objectives and goals, and it increases the synergy of the creative abilities of group members in laboratories. However, the uniform model of "hard resource distribution" regulated by the hierarchical system cannot meet the diverse needs for the development of creativity in university laboratories.

Zhou, C. (2018). A study on creative climate in project-organized groups (POG's) in China and implications for sustainable pedagogy. *Sustainability, 10,* 114-129.

This paper aims to explore a research question: what are the drivers and barriers to fostering a creative climate in POGs in China and how to improve POGs towards a better sustainable pedagogy? Theoretically, this paper bridges studies on creativity, collaborative learning, creative climate, and sustainable pedagogy in one framework. Empirically, mixed methods of quantitative questionnaire survey (n = 126) and qualitative interviews (n = 15) were used to collect data. The findings demonstrate that the drivers to a creative climate include the challenge of the task, openness, trust between peers, experts' help, and group diversity, etc. However, some

group problems, such as poor management, lacking of supervision supports, and students' fear of authority, etc., are barriers to a creative climate. This implies the needs of restructuring the relationships between teachers and students in POGs in order to improve it as a better sustainable pedagogy.

Zhou, C., Rasmussen, P., Chemi, T., & Luo, L. (2017). An investigation of creative climate of university R&D centers and policy implications for innovation in China. In Y. Jing, & S. P. Osborne (Eds.), *Public Service innovations in China* (pp. 185-205). Singapore: Springer.

This chapter focuses on the influences of science and technology (S&T) policies on creative climate of university R&D centers in China that provide policy implications for improving roles of university R&D in innovation system. The empirical data came from two questionnaire surveys with diverse backgrounds of participants in Chinese universities: one is with 126 group members from 25 R&D centers among seven universities; one is with 840 leaders of S&T fund management sectors in universities. The results demonstrate both strengths and weaknesses of creative climate of university R&D centers. This leads to implications such as to improve a more comprehensive innovation measurement system, to build 'creative R&D communities', and to carry out self-evaluation on cultural influences on innovation that provide references to policy makers.

Zhou, C., & Valero, P. (2016). A comparison of creativity in project groups in science and engineering education in Denmark and China. In: G. Corazza & S. Agnoli (Eds.), *Multidisciplinary contributions to the science of creative thinking - Creativity in the Twenty First Century* (pp. 133-151). Singapore: Springer

This study is a comparison between two cases: Problem-Based Learning (PBL) in Denmark and Project-Organized Learning (POL) in China. The empirical resources are based on the results from a Master's study that was carried out with respect to POL in China (2004–2007) and a Ph.D. study that was conducted with respect to PBL in Denmark (2008–2012). The results suggest: (1) there are many diverse influencing

elements in learning environments of creativity in both PBL in Denmark and POL in China, and there are interactions between the different elements that underpin a systematic view of the influences of project contexts on creativity; and (2) supervisors in China and Denmark have different attitudes towards the development of creativity in students, which reveals the differences in the learning cultures and the implications for improvements in the fostering of creativity through project strategies in engineering and science education for the future.

Zubair, A., Bashir, M., Abrar, M., Baig, S. A., & Hassan, S. Y. (2015). Employee's participation in decision-making and manager's encouragement of creativity: The demiating role of climate for creativity and change. *Journal of Service Science and Management, 8,* 306-321.

This paper examined the relationships among employee's participation in decision making (PDM), manager's encouragement of creativity (MEOC) and employee's creativity (CTY) and the role of climate for creativity and change (CLT) as a possible mediator among the relationships. Multi- source data was collected from 206 employees and their managers. The results indicated that employee's participation in decision-making and manager's encouragement of creativity were positively related with employee's creativity. Support was also found for the role of climate for creativity and change as a partial mediator. Findings suggested that employee's creativity was positively related with employee's participation in decision making and manager's encouragement of creativity through climate for creativity and change.

Books and Monographs

Argyris, C. (1965). *Organization and innovation*. Homewood, IL: Richard D. Irwin, Inc., & The Dorsey Press.

The author studies the influence of the interpersonal competence and problem-solving effectiveness of top managers on innovation, willingness to take risks and problem-solving effectiveness within research organizations. He develops a theoretical model relating interpersonal competence and innovation. The findings suggest that low interpersonal competence results in less risk-taking, openness, trust and less innovation.

Ashansky, N., Wileron, C. P., & Peterson, M. F. (Eds.). (2011). *The handbook of organizational culture and climate* (2nd ed.). Los Angeles: Sage.

Thirty-three chapters cover culture, climate and multilevel analysis, positive work cultures and climates, reviews of social-organizational processes and theory, as well as international trends.

Burnett, K., & Moore, Z. (2018). *Creative climate change for innovation producers, facilitators, and stewards* (2nd ed.). Middlesex, England: Conscientia Publishing

When seeking to increase innovation, many organizations find that the surest long-term key to success is to generate a creative climate; an environment which makes room for creativity, values creative outputs, and takes these through to innovative outcomes. The book aims to help managers commission change, or as a consultant to deliver change. Part One of the book introduces the model, and a practical tool for measuring the climate. Part Two offers a range of workable solutions for dimensions or aspects of the climate which could or should be better. It can either be read in one go, or dipped-into as needed; not all sections will be relevant all at once. The results gained from using the tool will guide you to the relevant sections. Part Three aids the user of this book to identify whether, when and how change has happened, and what further steps may be most fruitful in sustaining improvements.

Cooper, C. L., Cartwright, S., & Earley, P. C. (Eds.). (2001). *The international handbook of organizational culture and climate*. New York: Wiley.

Forty-one contributors in 27 chapters provide a comprehensive overview of a variety of issues related to defining, assessing and intervening on both organizational culture and climate. The handbook includes work that is primarily focused on organizational culture.

Ehrhart, M. G., Schneider, B., & Macey, W. H. (2014). Organizational climate and culture: An introduction to theory, research and practice. New York, NY: Routledge.

This book breaks down the barriers between organizational climate and organizational culture to encourage a broader understanding of how an organization's environment affects its functioning and performance. The authors identify the key issues that researchers in each field could learn from each other and provide recommendations for the integration of the two.

Ekvall, G. (1966). *Industrial suggestion schemes: Studies concerning their psychological background*. Stockholm, Sweden: The Swedish Council for Personnel Administration.

Suggestion schemes provide an open and direct channel of communication between the employee and the planning and decision-making levels of the organization. This report includes an examination of the psychological and socio-psychological factors and the use of sociological research methods that were applied during 1959-1963 within three Swedish factories. The guidelines for suggestion systems were regulated by collective agreements with the Trade Union Federation and the Employers' Confederation.

Ekvall, G. (1971). Creativity at the place of work: A study of suggestors and suggestion systems in the Swedish mechanical industry. Stockholm, Sweden: The Swedish Council for Personnel Administration.

This pilot study focused on suggestors and suggestion systems in the Swedish mechanical industry. The investigators' findings generally support the hypotheses that: a) significantly higher averages should be observed for the suggestor groups than the non-suggestors in tests measuring certain divergent-production abilities and the tests measuring certain convergent-production abilities, b) the "big" suggestor group should show significantly higher averages than the "ordinary" suggestor group, and c) there should be no significant differences in averages between the groups in cognitive tests. This study laid the foundation for Ekvall's later work on climate and working atmosphere.

Ekvall, G. (1972). *A study of two creativity tests*. Stockholm, Sweden: Swedish Council for Personnel Administration.

A report that explores and compares two creativity tests designed to measure divergent thinking abilities. The tests were the Brick Uses Test and the Purdue Creativity Test. The report utilizes the tests in a study that provides reliability data. Additional comparisons of these two divergent thinking tests with three other tests designed to measure special intelligence, as well as the 'Plate models' test, the 'Figure rotation' test, and the 'Gottschaldt figures' test and a personality inventory called GW III yielded information related to the validity of the tests.

Ekvall, G. (1983). *Climate, structure and innovativeness of organizations: A theoretical framework and an experiment* (Report 1). Stockholm, Sweden: FArådet - The Swedish Council for Management and Work-Life Issues.

This report focuses on the theory and assessment of organizational climate. Following a review of previous theories centered on the concept of organizational climate, a study is conducted with 49 senior executives and training specialists. These subjects rated the organizations they had worked in on the variables of: 1)

overall climate, 2) structure dimensions, and 3) personnel. Results of the study support the concept of organizational climate as an important variable related to the innovativeness one finds in an organization.

Ekvall, G. (1984). *Kreativitet pa bredden: En bok on förslagsverksamhet* (A broad view of creativity: A book on proposed activities). Svenska Institute för Förslags Verksamet, Sweden.

A book that provides a broad overview on the topic of creativity with numerous suggestions for actions to provide improved levels of organizational creativity. Written in Swedish.

Ekvall, G. (1985). *Organisationsklimat: Teory och forkskning* (Organizational climate: Theories and research). Stockholm: FArådet – The Swedish Council for Management and Work-Life Issues, arbetsrapport (Work Report).

This monograph provides a comprehensive review of the theoretical and empirical literature surrounding organizational climate as a molar and facet-specific construct. Written in Swedish.

Ekvall, G. (1988). *Förnylese och friction: Om organization, kreativitet och innovation* (Renewal and friction: Organizational creativity and innovation). Sättning Fotosättarna, Boräs, Sweden.

A book that provides a detailed discussion of the natural tension between creativity and organizational resistance to change. Written in Swedish.

Ekvall, G. (2004). Creative organizational climate: Validity of the concept and of a measurement tool – the Creative Climate Questionnaire (CCQ). Stockholm, Sweden: Ekvall Organizational Psychology.

A comprehensive summary of the development, validity and reliability of the CCQ provided in preparation for the revised SOQ technical manual.

Ekvall, G., & Arvonen, J. (1984). *Leadership styles and organizational climate for creativity: Some findings in one company* (Report 1). Stockholm, Sweden: FArådet - The Swedish Council for Management and Work-Life Issues.

An investigation of the relations between the leadership styles of 25 managers in a large Swedish company and the climate perceptions of their subordinates is presented. Problem solving, decision-making, and achievement styles were studied. The results indicate strong multiple correlations between the leadership style variables and the different climate scales. It is also suggested that in this company, it is the analytical, cooperative, and non-competitive manager who generates the most creative climate.

Ekvall, G., Arvonen, J., & Nystrom, H. (1985). *Organisation och innovation* (Organization and innovation). Stockholm: FArådet – The Swedish Council for Management and Work-Life Issues, arbetsrapport (Work Report).

This monograph summarizes the collaborative research the deliberately connects the establishment of a climate for creativity and its relationship with innovative performance of organizations. It outlines the innovation audit work of Nystrom and it was applied to 30 international companies that were clearly determined to be innovative, average, and stagnated.

Ekvall, G., Arvonen, J., & Waldenstrom-Lindblad, I. (1983). *Creative organizational climate: Construction and validation of a measuring instrument* (Report 2). Stockholm, Sweden: FArådet - The Swedish Council for Management and Work-Life Issues.

A report focused on the development of a questionnaire designed to measure dimensions of organizational climate that are theorized to be vital to an organization's innovative abilities. The theories that were used to construct the instrument are reviewed, as are the three research projects that utilized the questionnaire as a means to assess and revise the instrument. Statistical analysis of the data obtained from these three projects indicates the Creative Climate

Questionnaire (CCQ) is a reliable instrument and can be used to identify differences between productive and unproductive organizations.

Ekvall, G., & Parnes, S. J. (1989). Creative problem-solving methods in product development: A second experiment. In T. Rickards, & S. Moger (Eds.), *Creativity and Innovation Yearbook 2* (pp. 122-142). Manchester, UK: Manchester Business School.

The authors test the effects of training in a variety of creativity techniques on the problem-solving effectiveness of industrial engineers when real-life criteria are applied. Five groups of Swedish industrial engineers were trained in brainstorming, brainstorming with analogical thinking (Synectics), morphological analysis, creative group leadership (discussion format), and leaderless group discussion. Using each of the techniques, the groups worked on solutions to five technical problems during their three days of training. Solutions were rated on usefulness, originality and elegance. Results show that brainstorming with analogy produced higher total solution scores for all five problems. It was found that brainstorming alone and brainstorming with analogy produced highest scores on usefulness and the combination of usefulness and elegance. The strengths and weaknesses of the study were discussed and the authors offer areas for further study.

Firenze, R. J. (1998). *A study of performance improvement strategies of manufacturing and service organizations*. Indianapolis, IN: The ILMC Center for Manufacturing and Service Excellence.

This monograph reports a study sponsored by the National Center for Manufacturing Sciences, The Chicago Manufacturing Center, The American Production Inventory Control Society, Ball State University, and the Maryland Productivity Center. Data was received from 145 companies, and included a number of important findings about the relationship of climate to productivity, leadership, and company performance. The strongest relationships were found between climate and profitability and between climate and productivity. The weakest linkages are between climate and

the company's ability to meet customer cost requirements and penetrate new markets. Climate was also related to the company's ability to develop and sustain more complex work designs.

Hoßbach, C. (2019). Organizational climate for creativity: Exploring the influence of distinct types of individual differences. Wiesbaden, Germany: Springer Gabler.

Christian's master's thesis was selected as a "best thesis" and is now published in a book or monograph format. See his abstract within the thesis/dissertations section of this document for more information.

Isaksen, S. G., & Akkermans, H. (2007). *Introduction to climate*. Orchard Park, New York: The Creative Problem-Solving Group.

This booklet is designed to introduce people to the importance of the concept of climate and defines the dimensions of the Situational Outlook Questionnaire (SOQ). It also provides a diagnostic to help those who completed the SOQ develop actions and initiatives to help improve their working environment.

Isaksen, S. G., & Ekvall, G., (with contributions from Akkermans, H., Wilson, G. V., & Gaulin, J. P.) (2007). Assessing the context for change: A technical manual for the SOQ – Enhancing performance of organizations, leaders and teams for over 50 years (2nd ed.). Orchard Park, New York: The Creative Problem-Solving Group.

This is the most current technical manual available outlining the historical development of the SOQ. It provides detailed psychometric results for each of the versions of the SOQ, as well as the conceptual and empirical background surrounding the development and application of the SOQ.

Isaksen, S. G., & Lauer, K. J. (1998). *The relationship between cognitive style and individual psychological climate: Reflections on a previous study* (Monograph No. 306). Buffalo, NY: The Creative Problem-Solving Group, Inc.

In an earlier study Isaksen and Kaufmann (1990) conducted an exploratory study into the relationship between cognitive style and individual perceptions of creative climate. Clapp and Kirton (1994) raised questions regarding the theoretical constructs and methodology used in this study. This article reviews the original research, addresses the questions raised by Clapp and Kirton and makes recommendations for future research in understanding the relationship of climate and cognitive style.

Isaksen, S. G., Lauer, K. J., & Ekvall, G. (1998). Perceptions of the best and worst climates for creativity: Preliminary validation evidence for the Situational Outlook Questionnaire® (Monograph #305). Buffalo, NY: The Creative Problem-Solving Group, Inc.

This monograph reports the results of two studies conducted to examine the ability of the Situational Outlook Questionnaire® (SOQ™) to effectively discern climates that either encourage or discourage creativity and the ability to initiate change. The climate for creativity and change is defined and the context for the use of the measure in organizational settings is established through the development of a Model for Organizational Change. The article presents the history of the SOQ's development and gives a description of the SOQ. The methodology and results of both studies, including three groups, are reported. The results of both studies show that when subjects complete the SOQ based on their recollection of a best- and worst-case work experience, the measure is able to consistently and significantly discriminate between the two types of experiences. Conclusions, implications, and areas for future research to examine the validity of the SOQ are explored.

Isaksen, S. G., Lauer, K. J., Murdock, M. C., Dorval, K. B., & Puccio, G. J. (1995). *Situational Outlook Questionnaire®: Understanding the Climate for Creativity and Change (SOQ™) - A Technical Manual.* Buffalo, NY: Creative Problem-Solving Group, Inc.

A certification manual designed to assist individuals attending the Situational Outlook Questionnaire® (SOQ) Part 1 certification program and as a field manual for individuals using the SOQ for interventions. The manual is composed of six chapters. Chapter One focuses on the concept of climate in general. Chapter Two examines the development of the SOQ. Chapter Three explores the reliability of the questionnaire. Chapter Four introduces a number of studies that begin to establish the content and concurrent validity of the SOQ. Designing and using the SOQ in real world applications is the focus of Chapter Five. This chapter also includes descriptions of interventions that have been conducted in the past and used the SOQ as a driver for reorganization, recapitalization, downsizing, goal setting and leadership training. Chapter Six provides a variety of resources for individuals using the SOQ that includes a glossary of terms used in the manual. Presently this is a technical manual and it is not available for distribution beyond qualified SOQ practitioners. Note: this was the first version of the technical manual developed collaboratively by the faculty and staff of the International Center for Studies in Creativity.

Isaksen, S. G., & Tidd, J. (2006). Meeting the innovation challenge: Leadership for transformation and growth. Chichester, UK: Wiley.

This book outlines a systemic approach to creativity, innovation and change. It crosses the boundaries between two relatively independent areas of research and practice: those concerned with creativity and those focused on innovation. The systemic approach includes a focus on methods, results and outcomes, people, and place. The book contains an entire section on the context for change including case studies applying the SOQ.

Isaksen, S. G., Treffinger, D. J., & Dorval, K. B. (2000). *Climate for creativity and innovation: Educational Implications – Idea Capsule Series*. Sarasota, FL: Center for Creative Learning.

This monograph outlines the importance of a creative climate for those involved in education. It defines and describes the environment for creativity and provides a series of practical suggestions to help educators establish a climate that encourages creativity within their classrooms.

Isaksen, S. G., Dorval, K. B., & Treffinger, D. J. (2011). *Creative approaches to problem solving: A framework for innovation and change*. Los Angeles: Sage.

This book includes the most current and comprehensive description of the Creative Problem Solving (CPS) framework, language, guidelines and tools. The CPS framework includes a focus on the context and situational factors that are important to consider when planning your approach. One chapter highlights the elements of context and climate and how they influence CPS.

Kotter, J. P., & Hesker, J. L. (1992). *Corporate culture and performance*. New York: The Free Press.

This book outlines the rationale for the importance of deliberately managing the context. It refers to context as culture, but includes useful information for those concerned about the climate as well.

Litwin, G. H., & Stringer, R. A. (1968). *Motivation and organizational climate*. Boston, MA: Harvard University Press.

One of the earliest books dealing with the concept of climate, this foundational work explains important aspects of the behavior of individuals in organizations in terms of a theory of motivation and climate. The stimulus was a series of studies illustrating the connection between environmental and situational factors in determining motivation.

Ott, J. S. (1989). The essences and functions of organizational culture: The organizational culture perspective. Chicago, IL: Dorsey Press.

This book examines the fundamental aspects of organizational culture. Suggests that culture is expressed at levels of artifacts and behaviors, values and beliefs, and underlying assumptions. Methodologies for culture research are examined.

Prather, C. W., & Gundry, L. K. (1985). Blueprints for innovation: How creative processes can make you and your company more competitive. New York: American Management Association.

The authors of this book explore tools and processes that can help organizations increase their potential for success by promoting creativity, change and innovation. Chapters in the book focus on topics such as: tools and techniques for creativity and problem solving; understanding and establishing a creative climate; personal problem-solving styles; and organizational structures that enhance and sustain innovation. Case examples from the author's experience and practice are used throughout the book to highlight how organizations actually use and benefit from the introduction and sustained use of creativity tools and processes. The book also provides an overview of the creative process, the creative climate based upon the work of Ekvall & Isaksen, and the three arenas of innovative organizations (Education, Application & Environment).

Prather, C. W. (2009). A manager's guide to fostering creativity and innovation in teams. New York: McGraw-Hill.

This practical book, written for managers, shares the author's learning from leading Du Pont's Center for Creativity and Innovation and provides tools and resources to help create innovation through teams. Includes lessons from experience from applying the SOQ.

Schein, E. H. (2010). *Organizational culture and leadership* (4th ed.). San Francisco: Jossey-Bass Publishers.

A book by a leading theorist and practitioner in the field of organizational development. The book reflects on the first five years of study focused on organizational culture. It highlights many of the problems and issues related to the study of organizational culture, and attempts to clarify them. The book also examines how organizational culture and leadership are intertwined. The book suggests that understanding organizational culture can help individuals explain and deal with a variety of organizational phenomena. It is also suggested that leadership is the process by which organizational culture is developed and changed.

Schneider, B. (Ed.). (1990). *Organizational climate and culture*. San Francisco: Jossey-Bass.

A collection of 11 chapters by leading researchers, theorists, and practitioners in the field of organizational climate and culture. The chapters are divided into three sections: 1) Conceptual issues, 2) methodological issues, 3) and applying climate and culture constructs. Section 1 presents an overview of climate and culture research and summarizes thinking about how climate and culture are learned. Section 2 reviews a number of considerations one should use in the collection and analysis of climate and culture data. Section 3 includes a collection of chapters that demonstrate the usefulness of climate and culture as constructs and approaches to understanding organizational behavior. Each section is preceded by an introduction and overview.

Treffinger, D. J., Schoonover, P. F., & Selby, E. C. (2013). *Educating for creativity & innovation.* Waco, TX: Prufrock Press Inc.

This book highlights the importance of being able to think creative, manage change, and solve complex open-ended problems. Educating for creativity and innovation closes the gap between research and practice and is helpful to promote understanding and effective practice relating to creativity and innovation.

Additional Technical Monographs

The following resources are available as free downloads from the SOQ website (SOQonline.net) for anyone who is interested.

Isaksen, S. G., & Ekvall, G. (2015). Conceptual and historical foundations of the Situational Outlook Questionnaire®: A technical resource for the SOQ. Orchard Park, NY: The Creative Problem-Solving Group, Inc.

This technical resource summarizes the early work of Ekvall in creating a conceptual model of climate as an intervening construct and the differentiation of climate from culture. The current conceptual model is detailed and the dimensions of both the CCQ and SOQ are defined.

saksen, S. G., & Ekvall, G. (2015). *Development of the Situational Outlook Questionnaire®: A technical resource for the SOQ*. Orchard Park, NY: The Creative Problem-Solving Group, Inc.

This technical resource details the development of the SOQ as a multi-method assessment – using the nine dimensions of climate, as well as open-ended questions to allow respondents to identify salient aspects of the larger work environment that help or hinder their creativity, as well as actions that could be taken to improve the situation. Further, it includes detailed psychometric data on each of the translation efforts on each of the previous versions of the assessment.

Isaksen, S. G., & Ekvall, G. (2015). Psychometrics of the current version of the Situational Outlook Questionnaire®: A technical resource for the SOQ. Orchard Park, NY: The Creative Problem-Solving Group, Inc.

This technical resource provides detailed psychometric qualities of the current version of the SOQ including: item performance, inter-item correlations, error terms, gender and age differences, internal factor structure, among others.

Isaksen, S. G., & Ekvall, G. (2015). *A summary of evidence for the Situational Outlook Questionnaire®: A technical resource for the SOQ*. Orchard Park, NY: The Creative Problem-Solving Group, Inc.

This technical resource includes a high-level summary of the evidence to support the reliability and validity of the SOQ. It also includes 17 benchmarks developed to demonstrate how the dimensions of the SOQ discriminate a wide variety of strategically important organizational constructs.

Isaksen, S. G., & Ekvall, G. (2015). *Readings and resources on climate for creativity: A technical resource for the SOQ®.* Orchard Park, NY: The Creative Problem-Solving Group, Inc. Now replaced by this current monograph: *Research literature on the CCQ and SOQ: Annotated bibliography: A technical resource for the SOQ.*

This technical resource provides citations and annotations on: theses and dissertations; articles, papers, and chapters; and books and monographs that have applied the CCQ or SOQ. In addition, research support for each of the nine dimensions of the SOQ is included.

Isaksen, S. G., & Ekvall, G. (2015). *A glossary of terms for the Situational Outlook Questionnaire®: A technical resource for the SOQ*. Orchard Park, NY: The Creative Problem-Solving Group, Inc.

This technical resource provides definitions of a variety of specialized terms that are often used in measurement. It can be used to help those who may be unfamiliar with the unique language used by social and behavioral scientists.

Isaksen, S. G., & Ekvall, G. (2015). *Applying the Situational Outlook Questionnaire®: A technical resource for the SOQ.* Orchard Park, NY: The Creative Problem-Solving Group, Inc.

This technical resource outlines the benefits of applying the SOQ at the organizational, team or work-group, and for leadership development. Cases are provided to illustrate how each level of application of the SOQ has worked.

Isaksen, S. G. (2015). Translations of the Situational Outlook Questionnaire®: A technical resource for the SOQ. Orchard Park, NY: The Creative Problem-Solving Group, Inc.

This technical resource summarizes the efforts to validate and apply the SOQ in other languages.

The following resources are only available to Qualified SOQ Practitioners, those pursuing qualification, and those engaged in approved scholarly efforts.

Isaksen, S. G., & Ekvall, G. (2015). *Administering and scoring the Situational Outlook Questionnaire®: A technical resource for the SOQ*. Orchard Park, NY: The Creative Problem-Solving Group, Inc.

This technical resource is only available to those who are qualified to use the SOQ, or to other scholars who are engaged in approved research efforts. It provides detailed instructions to users of the SOQ to ensure its proper application.

Isaksen, S. G., & Ekvall, G. (2015). Analyzing and interpreting the results from the Situational Outlook Questionnaire®: A technical resource for the SOQ. Orchard Park, NY: The Creative Problem-Solving Group, Inc.

This technical resource provides detailed instructions for analyzing and interpreting the quantitative and qualitative results from the SOQ.

Isaksen, S. G. (2015). Analyzing Situational Outlook Questionnaire® narratives – case: A resource for practitioners of the SOQ. Orchard Park, NY: The Creative Problem-Solving Group, Inc.

This technical resource provides a case study of most and least creative teams along with a sampling of the raw narrative data. Participants in the qualification program practice data reduction and compare their results to previously published results.

Isaksen, S. G. (2015). The leadership case study – Fourth and Long for the Situational Outlook Questionnaire®: A resource for practitioners of the SOQ. Orchard Park, NY: The Creative Problem-Solving Group, Inc.

This technical resource contains a detailed case study of the leadership application of the SOQ. Participants in the qualification program are provided the results and are asked to prepare a feedback session to the leader.

Isaksen, S. G. (2015). The organizational case study – Sabre Search – for the Situational Outlook Questionnaire®: A resource for practitioners of the SOQ. Orchard Park, NY: The Creative Problem-Solving Group, Inc.

This technical resource provides a detailed case study of an organizational application of the SOQ. Participants in the qualification program are provided a complete sample data package including both quantitative and qualitative results and are asked to analyze and interpret the results, and develop a plan for communicating and taking the results forward.

Isaksen, S. G. (2015). The team case study – Big Red Engineering – for the Situational Outlook Questionnaire®: A resource for practitioners of the SOQ. Orchard Park, NY: The Creative Problem-Solving Group, Inc.

This technical resource provides a detailed case study of a team-based application of the SOQ. Participants in the qualification program are provided a complete data package with both quantitative and qualitative results and are invited to prepare a plan for communicating the results to the client.

Isaksen, S. G., & Shephard, W. J. (2015). Presenting the results of the Situational Outlook Questionnaire®: Making change happen - A resource for practitioners of the SOQ. Orchard Park, NY: The Creative Problem-LSolving Group, Inc.

This technical resource is a companion to the PowerPoint deck provided to all qualified practitioners. It provides sample outlines for a variety of workshops, as well as helpful hints for communicating about the SOQ.

Support for the SOQ Dimensions

When it comes to content and construct validity (beyond the literature annotated above) the nine dimensions of the SOQ have solid support in the academic literature. Each dimension has been supported as related to, and having impact on, creativity, innovation, and change. Lauer (1994) conducted an extensive review of the literature and found extensive support for each of Ekvall's dimensions of creative climate. Each dimension is defined below, and a selection of literature is cited.

CHALLENGE/INVOLVEMENT

Challenge/Involvement focuses on the extent to which individuals and teams are given opportunities to get involved in the daily operations, long-term goals, and vision of the organization. When there is a high degree of Challenge and Involvement people feel motivated, energized, and committed to making contributions. The climate is dynamic, electric, and inspiring. People find their work to be personally fulfilling and meaningful for themselves, their team, and their organization. In the opposite situation, people are not engaged, and feelings of alienation and apathy are present. People lack direction, team members lack interest in their work, and interpersonal interactions are dull and listless.

Adekanmbi, F. P., & Ukpere, W. I. (2021). Stimulating creative behavior in the work environment: Influences of employee engagement, authentic leadership, and human capital factors on employee creativity. *EUREKA – Social and Humanities, 5,* 24-33.

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FREEDOM

Freedom refers to the degree that people can take initiative or have the liberty to act without constantly referring to higher authorities or 'rule books' for decisions. Individuals and team members exhibit independence in behavior and they are given the autonomy and resources to define much of their work. People are provided the opportunities and take initiatives to acquire and share information about their work. In the opposite climate people work within strict guidelines and are not allowed to take initiative. They carry out their work in prescribed ways with little room to redefine their tasks.

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TRUST/OPENNESS

Trust/Openness refers to the degree of emotional safety in relationships. When there is a high degree of Trust, people are comfortable with one another and feel 'safe' enough to be open and honest with each other, in the spirit of constructive relationships. Individuals and team members are genuinely open and frank with one another, reflecting psychological safety. They count on each other for professional and personal support. People have a sincere respect for one another and give credit where credit is due. Where Trust is missing, people are suspicious of each other, and therefore, they closely guard themselves, their plans, and their ideas. In these situations, people find it extremely difficult to openly communicate with each other and function as a team**.**

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IDEA-TIME

Idea-Time is the time people take to generate new ideas or consider the merits of existing ideas and opportunities. In the high Idea-Time situation, possibilities exist to discuss and test suggestions not included in the given definitions of the task assignment. There also are opportunities to take the time to explore and develop new ideas. Flexible timelines permit people to explore new avenues and alternatives. In the reverse case, every minute is booked and specified. The time pressure makes thinking outside the instructions and planned routines impossible.

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PLAYFULNESS/HUMOR

Playfulness/Humor refers to the amount of spontaneity and levity displayed within the organization. A professional, yet relaxed atmosphere where good-natured jokes and laughter occur often is indicative of this dimension. People can be seen having fun within their teams and at work. The climate is seen as easy-going and light-hearted. The opposite climate is characterized by gravity and seriousness. The atmosphere is stiff, gloomy and cumbrous. Jokes and laughter are regarded as improper and intolerable.

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CONFLICT

Conflict means the presence of personal and emotional tensions. When the level of Conflict is high, people dislike and may even hate each other. The climate can be characterized by "interpersonal war-fare." Plots, traps, and power or territory struggles are usual ingredients of interacting. Personal differences yield gossip and slander. In the opposite case, people behave in a more mature manner; they have psychological insight and control of impulses. People welcome, accept, and deal effectively with diversity. Conflict is the only negative dimension within the SOQ, for which a lower score is generally better.

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IDEA-SUPPORT

Idea-Support refers to the ways new ideas are considered, taken up, or advocated. In the supportive climate, ideas and suggestions are received in an attentive and professional way. People listen to each other and encourage initiatives. Possibilities for trying out new ideas are created. The atmosphere is constructive and positive when considering new ideas. When Idea-Support is low, the automatic "no" is prevailing; faultfinding and obstacle raising are the usual styles of responding to ideas.

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DEBATE

Debate is the occurrence of encounters and disagreements between viewpoints, ideas, and differing experiences and knowledge. Conflict relates to personal tension while Debate is related to idea-tension. In the debating climate, all the voices are heard and people are keen to put forward their ideas for consideration, and their merits are openly debated and resolutions reached. Where Debate is missing, people follow authoritarian patterns and procedures without questioning them or exploring alternatives. Debate is often termed task conflict, as opposed to relationship conflict (which is similar to how we define conflict).

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RISK-TAKING

Risk-Taking refers to the degree to which people can tolerate ambiguity and make decisions and take action when facing uncertainty. People are prepared to live with the potential negative consequences. In the high Risk-Taking case, people take bold initiatives even when the outcomes are unknown. Individuals and team members feel as though they can "take a gamble" on ideas. They will often "go out on a limb" to put an idea forward. In a risk-avoiding climate there is a cautious, hesitant mentality. People will lack decisiveness, try to be on the "safe side" and often "sleep on the matter." They may set up committees, defer decisions to other teams, and cover themselves in many ways.

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