

REFERENCES

- Adelman, L. (1984). Real-time computer support for decision analysis in a group setting: Another class of decision support systems. *Interfaces*, 14(2), 75–83.
- Adkins, M., Shearer, R., Nunamaker, J. F., Jr., Romero, J., & Simcox, F. (1998). Experiences using group support systems to improve strategic planning in the Air Force. In *Proceedings of the 31st Hawaii international conference on system sciences*, IEEE Computer Society Press, Los Alamitos, CA (pp. 515–524).
- van Aken, J. E. (2004). Management research based on the paradigm of the design sciences: The quest for field-tested and grounded technological rules. *Journal of Management Studies*, 41(2), 219–246.
- Alavi, M. (1993). An assessment of electronic meeting systems in a corporate setting. *Information & Management*, 25(4), 175–182.
- Axelrod, R., & Cohen, M. D. (2000). *Harnessing complexity: Organizational implications of a scientific frontier*. New York, NY: Free Press.
- Baker, K. A. (2002). *Organizational culture*. Washington, DC: US Department of Energy, Office of Science.

- Baskerville, R. L., & Wood-Harper, A. T. (1996). A critical perspective on action research as a method for information systems research. *Journal of Information Technology*, 11(3), 235–246.
- Beaudouin-Lafon, M., & Mackay, W. E. (2003). Prototyping tools and techniques. In J. A. Jacko & A. Sears (Eds.), *Handbook of human-computer interaction* (pp. 1006–1031). Mahwah, NJ: Lawrence Erlbaum Associates. Retrieved from <https://www.lri.fr/~mackay/pdffiles/Prototype.chapter.pdf>.
- Bersin, J. (2016). The new organisation: Different by design. Retrieved from <https://joshbersin.com/2016/03/the-new-organization-different-by-design/>. Accessed on November 28, 2019.
- Bersin, J., Pelster, B., Schwartz, J., & Van Der Vyver, B. (2017). Rewriting the rules for the digital age. 2017 Deloitte Global Human Capital Trends. Deloitte University Press, United States.
- Bostrom, R. P. (1989). Successful application of communication techniques to improve the systems development process. *Information & Management*, 16(5), 279–295.
- Bostrom, R. P., Anson, R., & Clawson, V. K. (1993). Group facilitation and group support systems. In L. M. Jessup & J. S. Valacich (Eds.), *Group support systems: New perspectives* (pp. 146–168). New York, NY: Macmillan Publishing.
- Bremer, M. (2012). *Organizational culture change: Unleashing your organization's potential in circles of 10*. Overijsse: Kikker Groep.
- Brooks, R. (2018). Netflix company culture. Retrieved from <https://peakon.com/blog/workplace-culture/netflix-company-culture/>. Accessed on November 28, 2019.

Brown, T. (2008). Design thinking. *Harvard Business Review*, 86(6), 84–92. Retrieved from http://www.ideo.com/images/uploads/thoughts/IDEO_HBR_Design_Thinking.pdf.

Buch, K., & Wetzel, D. K. (2001). Analyzing and realigning organizational culture. *Leadership & Organization Development Journal*, 22(1), 40–43.

Camburn, B., Dunlap, B. U., Kuhr, R., Viswanathan, V. K., Linsey, J., Jensen, D. D., & Wood, K. L. (2013). Methods for prototyping strategies in conceptual phases of design: Framework and experimental assessment. In *Proceedings of the ASME 2013 international design engineering technical conferences & computers and information in engineering conference*, American Society of Mechanical Engineers (ASME), New York, NY (pp. V005T06A033–V005T06A033).

Cameron, K. (2008). A process for changing organizational culture. In T. Cummings (Ed.), *The handbook of organizational development* (pp. 429–446). Thousand Oaks, CA: Sage Publications.

Cameron, K., & Freeman, S. (1991). Culture, congruence, strength, and type: Relationship to effectiveness. *Research in Organizational Change and Development*, 5, 23–58.

Cameron, K. S., & Ettington, D. R. (1988). The conceptual framework of organizational culture. *Higher Education: Handbook of Theory and Research*, 6, 356–396.

Cameron, K. S., & Quinn, R. E. (2011). *Diagnosing and changing organizational culture: Based on the competing values framework* (3rd ed.). San Francisco, CA: Jossey-Bass.

Campbell, J. P., Personnel Decisions International, Navy Personnel Research and Development Center, & United States National Technical Information Services. (1974). *The*

- measurement of organizational effectiveness: A review of relevant research and opinion.* San Diego, CA: Navy Personnel Research and Development Center.
- Caouette, M. J., & O'Connor, B. N. (1998). The impact of group support systems on corporate teams' stages of development. *Journal of Organizational Computing & Electronic Commerce*, 8(1), 57–81.
- Checkland, P. (1981). *Systems thinking, systems practice* (1st ed.). Chichester: John Wiley & Sons.
- Chidambaram, L., Bostrom, R. P., & Wynne, B. E. (1990). A longitudinal study of the impact of group decision support systems on group development. *Journal of Management Information Systems*, 7(3), 7–25.
- Chin, J. P., Diehl, V. A., & Norman, K. L. (1988, May). Development of an instrument measuring user satisfaction of the human-computer interface. In *Proceedings of the SIGCHI conference on human factors in computing systems*, ACM, New York, NY (pp. 213–218).
- Christensen, C. M., & Eyring, H. J. (2011). *The innovative university: Changing the DNA of higher education from the inside out.* San Francisco, CA: Jossey-Bass Inc.
- Clarke, A. (2018). Prioritize culture change to accelerate digital transformation. Retrieved from <https://go.forrester.com/blogs/prioritize-culture-change-to-accelerate-digital-transformation/>. Accessed on November 28, 2019.
- Coch, L., & French, J. R. P., Jr. (1948). Overcoming resistance to change. *Human Relations*, 1(4), 512–532. doi: 10.1177/001872674800100408
- Cole, R., Purao, S., Rossi, M., & Sein, M. (2005). Being proactive: Where action research meets design research. In

- ICIS 2005 proceedings*, 27, Association of Information systems, Las Vegas, NV (pp. 325–336).
- Collett, L., & Mora, C. (1996). MOM data analysis. Retrieved from http://www.academia.edu/3589242/MANAGING_CULTURAL_DIVERSITY_INTEGRATION_VALUES_AND_MANAGEMENT_SKILLS. Accessed on November 28, 2019.
- Connors & Smith. (2015). Transforming culture at the speed of light: Go digital. Retrieved from <https://trainingmag.com/transforming-culture-speed-light-go-digital>. Accessed on November 27, 2019
- Coughlan, P., Suri, J. F., & Canales, K. (2007). Prototypes as (design) tools for behavioral and organizational change: A design-based approach to help organizations change work behaviors. *The Journal of Applied Behavioral Science*, 43(1), 1–13. doi:10.1177/0021886306297722
- Cross, N. (2010). *Designerly ways of knowing*. London: Springer-Verlag.
- Dalkey, N., & Helmer, O. (1963). An experimental application of the Delphi method to the use of experts. *Management Science*, 9(3), 458–467.
- Davidson, R., Martinsons, M. G., & Kock, N. (2004). Principles of canonical action research. *Information Systems Journal*, 14(1), 65–86.
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13, 319–340.
- De Smet, A., Lund S., & Schaninger W. (2016). Organizing for the future. *McKinsey Quarterly*, January, pp. 1–16.

- Retrieved from <https://www.mckinsey.com/business-functions/organization/our-insights/organizing-for-the-future>.
- De Vreede, G. J., & Dickson, G. (2000). Using GSS to design organizational processes and information systems: An action research study on collaborative business engineering. *Group Decision and Negotiation*, 9(2), 161–183.
- Denning, S. (2011). How do you change an organizational culture? Retrieved from <http://www.forbes.com/sites/stevedenning/2011/07/23/how-do-you-change-an-organizational-culture/>.
- Dennis, A. R., Heminger, A. R., Nunamaker, J. F., & Vogel, D. R. (1990). Bringing automated support to large groups: The Burr-Brown experience. *Information and Management*, 18(3), 111–121.
- DeSanctis, G., & Gallupe, R. B. (1987). A foundation for the study of group decision support systems. *Management Science*, 33(5), 589–609.
- Elden, M., & Chisholm, R. F. (1993). Emerging varieties of action research: Introduction to the special issue. *Human Relations*, 46(2), 121–142.
- Ewenstein, B., Smith, W., & Sologar, A. (2015). Changing change management. *McKinsey Digital*, July. Retrieved from http://www.mckinsey.com/insights/leading_in_the_21st_century/changing_change_management. Accessed on November 28, 2019.
- Flyvbjerg, B. (2006). Making organization research matter: Power, values, and phronesis. In *The Sage handbook of organization studies* (pp. 370–287). Thousand Oaks, CA: Sage Publications.

- Fralinger, B., & Olson, V. (2011). Organizational culture at the university level: A study using the OCAI instrument. *Journal of College Teaching & Learning*, 4(11), 85–98.
- Goran, J., LaBerge L., Srinivasan R. (2017). Culture for a digital age. *McKinsey Quarterly*, July, pp. 1–6. Retrieved from <https://www.mckinsey.com/business-functions/digital-mckinsey/our-insights/culture-for-a-digital-age>.
- Gregor, S., & Hevner, A. R. (2013). Positioning and presenting design science research for maximum impact. *MIS Quarterly*, 37(2), 337–356.
- Gregor, S., & Jones, D. (2007). The anatomy of a design theory. *Journal of the Association for Information Systems*, 8(5), 312–335.
- Guger, C., Schlögl, A., Neuper, C., Walterspacher, D., Strein, T., & Pfurtscheller, G. (2001). Rapid prototyping of an EEG-based brain-computer interface (BCI). *IEEE Transactions on Neural Systems and Rehabilitation Engineering*, 9(1), 49–58. doi:10.1109/7333.918276
- Gyan, N. (2013). *Talent economics: The fine line between winning and losing the global war for talent*. London: Kogan Page Limited.
- Hackman, J. R., & Kaplan, R. E. (1974). Interventions into group process: An approach to improving the effectiveness of groups. *Decision Sciences*, 5(3), 459–480.
- Hall, J., & Watson, W. H. (1970). The effects of a normative intervention on group decision-making performance. *Human Relations*, 23(4), 299–317.
- Hall, J., & Williams, M. S. (1970). Group dynamics training and improved decision making. *The Journal of Applied Behavioral Science*, 6(1), 39–68.

- Hawksworth, J., Berriman, R., & Goel, S. (2018). *Will robots really steal our jobs? An international analysis of the potential long-term impact of automation*. London: PwC. Retrieved from <https://www.pwc.co.uk/economic-services/assets/international-impact-of-automation-feb-2018.pdf>.
- Hemerling, J., Kilmann, Danoesastro, M., Stutts, L., Ahern, C. It's not a digital transformation without a digital culture. Retrieved from <https://www.bcg.com/publications/2018/not-digital-transformation-without-digital-culture.aspx>. Accessed on November 28, 2019.
- Hevner, A., March, S. T., Park, J., & Ram, S. (2004). Design science research in information systems. *MIS Quarterly*, 28(1), 75–105.
- Hevner, A. R. (2007). A three-cycle view of design science research. *Scandinavian Journal of Information Systems*, 19(2), 87–92.
- Hill, S., & McNulty, D. (1998). Overcoming cultural barriers to change. *Health Manpower Management*, 24(1), 6–12.
- Hirokawa, R. Y., & Pace, R. (1983). A descriptive investigation of the possible communication-based reasons for effective and ineffective group decision making. *Communication Monographs*, 50(4), 363–379.
- Hirokawa, R. Y., & Gouran, D. S. (1989). Facilitation of group communication: A critique of prior research and an agenda for future research. *Management Communication Quarterly*, 3(1), 71–92.
- Hooijberg, R., & Petrock, F. (1993). On cultural change: Using the competing values framework to help leaders execute a transformational strategy. *Human Resource Management*, 32(1), 29–50.

- Hoffman, L. R. (1959). Homogeneity of member personality and its effect on group problem-solving. *Journal of Abnormal and Social Psychology*, 58(1), 27.
- Huber, G. P. (1984). Issues in the design of group decision support systems. *MIS Quarterly*, 8(3), 195–204. doi:10.2307/2486666
- Iivari, J., & Venable, J. R. (2009). Action research and design science research – Seemingly similar but decisively dissimilar. In *ECIS 2009 proceedings* (paper 73). Springer. Retrieved from <http://aisel.aisnet.org/cgi/viewcontent.cgi?article=1025&context=ecis2009>.
- James, J. (2019). How collaboration tools fostered culture change in Optima healthcare solutions. Retrieved from <https://biztechmagazine.com/article/2019/04/how-collaboration-tools-fostered-culture-change-optima-healthcare-solutions>.
- Jayaraman, R. (2019). *Clearing the digital blur: How organisations can transform themselves at the speed of digital*. New Delhi: Wiley India.
- Jones, D., & Gregor, S. (2007). The anatomy of a design theory. *Journal of the Association for Information Systems*, 8(5 (Article 2)), 312–335. Retrieved from <http://aisel.aisnet.org/jais/vol8/iss5/1>.
- Kotter, J. P. (1995). Why transformation efforts fail. *Harvard Business Review*, 73(2), 59–67.
- Kotter, J. P. (1996). *Leading change*. Cambridge, MA: Harvard Business.
- Kotter, J. P., & Heskett, J. L. (1992). *Corporate culture and performance*. New York, NY: The Free Press.
- Kulkarni, D., & Simon, H. A. (1988). The processes of scientific discovery: The strategy of experimentation.

- Cognitive Science*, 12, 139–175. Retrieved from <http://ti.arc.nasa.gov/m/profile/dkulkarn/CogSci.pdf>.
- Kuwada, K. (1998). Strategic learning: The continuous side of discontinuous strategic change. *Organization Science*, 9(6), 719–736.
- LaGuardia, D. (2011). Organizational culture & change. In C. Lafond, N. Probst, & B. Sundhagen (Eds.), *Learn to lead: Civil air patrol cadet programs* (Vol. 4 Strategy, pp. 112–116). Maxwell AFB, AL: Civil Air Patrol. Retrieved from http://www.capmembers.com/media/cms/Volume_4_Web_4028F891F0A14.pdf.
- Leary, E.(2017). Fostering employee engagement via digital workplace tools. Retrieved from <https://www.nojitter.com/fostering-employee-engagement-digital-workplace-tools>. Accessed on November 28, 2019.
- Lee, S. (2006). Hire security. *Human Resources Magazine*, September, pp. 22–25. Retrieved from www.humanresourcesonline.net.
- Lee, U. (2015). S'pore needs more “STEM” grads. *The Business Times*, May, p. 3. Singapore.
- Levin, I., & Gottlieb, J. (2009). Realigning organizational culture for optimal performance. *Organization Development Journal*, 27(4), 31–46.
- Lewis, J. R. (1995). IBM computer usability satisfaction questionnaires: Psychometric evaluation and instructions for use. *International Journal of Human-Computer Interaction*, 7(1), 57–78.
- Lin, H. X., Choong, Y. Y., & Salvendy, G. (1997). A proposed index of usability: A method for comparing the

- relative usability of different software systems. *Behaviour & Information Technology*, 16(4–5), 267–277.
- Lund, A. M. (2001). Measuring usability with the USE questionnaire. *Usability Interface*, 8(2), 3–6.
- Maier, N. R., & Maier, R. A. (1957) An experimental test of the effects of “developmental” vs “free” discussions on the quality of group decisions. *Journal of Applied Psychology*, 41(5), 320.
- March, S. T., & Smith, G. F. (1995). Design and natural science research on information technology. *Decision Support Systems*, 15(4), 251–266.
- McNiff, J. (2013). *Action research for professional development* (4th ed.). Padstow: T.J. International.
- Meador, C. L., Guyote, M. J., & Keen, P. G. W. (1984). Setting priorities for DSS development. *MIS Quarterly*, 8(2), 117–129. Retrieved from <http://www.jstor.org/stable/249348>.
- Nadella, S. (2017). *Hit refresh: The quest to rediscover Microsoft's soul and imagine a better future for everyone*. New York, NY: Harper Collins.
- Nielsen, J. (1993). How to conduct a heuristic evaluation. *Nielsen Norman Group*, 1, 1–8.
- Nunamker, J., Applegate, L. M., & Konsynski, B. (1987). Facilitating group creativity: Experience with a group decision support system. *Journal of Management Information Systems*, 3(4), 5–19.
- Nunamaker, J. F., Briggs, R. O., Mittleman, D. D., Vogel, D. R., & Balthazard, P. A. (1996). Lessons from a dozen years of group support systems research: A discussion of lab and field

- findings. *Journal of Management Information Systems*, 13(3), 163–207.
- Nunamaker, J. F., Dennis, A. R., Valacich, J., Vogel, D. R., & George, J. F. (1991). Electronic meeting systems. *Communications of the ACM*, 34(7), 40–61.
- Ouchi, W. G. (1980). Markets, bureaucracies, and clans. *Administrative Science Quarterly*, 25(1), 129–141.
- O'Reilly, C. A., & Chatman, J. (1986). Organizational commitment and psychological attachment: The effects of compliance, identification, and internalization on prosocial behavior. *Journal of Applied Psychology*, 71(3), 492–499.
- Papalambros, P. Y. (2015). Decision science: Why, what and how. *Decision Sciences*, 1, 1–38. doi:10.1017/dsj.2015.1
- Park, N. K. (2019). The cultural impact of automation: Quality of work and life redefined. In *Transformation of work in Asia Pacific in the 21st century*, (pp. 129–164). Hong Kong: HKUST Business School and APRU.
- Peffer, K., Tuunanen, T., Gengler, C. E., Rossi, M., Hui, W., Virtanen, V., & Bragge, J. (2006, February). The design science research process: A model for producing and presenting information systems research. In *Proceedings of the 1st international conference on design science research in information systems and technology (DESIST 2006)*, Claremont, CA (pp. 83–106).
- Perlman, G. (1997, March). Practical usability evaluation. In *CHI'97 extended abstracts on human factors in computing systems* (pp. 168–169). Atlanta, GA: ACM.
- Quinn, R. E. (1988). *Beyond rational management: Mastering the paradoxes & competing demands of high*

performance. San Francisco, CA: Jossey-Bass, Incorporated Publishers.

Quinn, R. E., & Rohrbaugh, J. (1983). A spatial model of effectiveness criteria: Towards a competing values approach to organizational analysis. *Management Science*, 29(3), 363–377.

Quinn, R. E., & Spreitzer, G. M. (1991). *The psychometrics of the competing values culture instrument and an analysis of the impact of organizational culture on quality of life*. Bingley: Emerald Publishing.

Rapoport, R. N. (1970). Three dilemmas in action research with special reference to the Tavistock experience. *Human Relations*, 23(6), 499–513.

Richardson, D. (2016). What we can learn from Google about collaboration. Retrieved from: <https://www.shrm.org/resourcesandtools/hr-topics/organizational-and-employee-development/pages/viewpoint-what-we-can-learn-from-google-about-collaboration.aspx>. Accessed on November 28, 2019.

Ringman, M. (2019). Why digital and cultural transformation go hand-in-hand. Retrieved from <https://www.forbes.com/sites/forbestechcouncil/2019/05/28/why-digital-a-cultural-transformation-go-hand-in-hand/#11865cf96416>. Accessed on November 28, 2019.

Ryan, B. (2005). The problematic nature of organization culture and a changing control context. *Strategic Change*, 14(8), 431–440. doi:10.1002/jsc.740

Scalzi, C. C., Evans, L. K., Barstow, A., & Hostvedt, K. (2006). Barriers and enablers to changing organizational culture in nursing homes. *Nursing Administration Quarterly*, 30(4), 368–372.

- Schein, E. H. (2004). *Organizational culture and leadership* (3rd ed.). San Francisco, CA: John Wiley & Sons.
- Schein, E. H. (2010). *Organizational culture and leadership* (4th ed.). New York, NY: John Wiley & Sons.
- Schwartz, J., Jones, R., Hatfield, S., & Anderson, S (2019, April) What is the future of work: Redefining work, workforces and workplaces. Retrieved from https://www2.deloitte.com/content/dam/insights/us/articles/4959_fow-framework/4959_FOW-Framework.pdf. Accessed on November 28, 2019.
- Sefelin, R., Tscheligi, M., & Giller, V. (2003). Paper prototyping – What is it good for? A comparison of paper- and computer-based low-fidelity prototyping. In *Conference on human factors in computing systems (CHI 2003)*, ACM Press, New York, NY (pp. 778–779). doi:10.1145/765891.765986
- Sein, M. K., Henfridsson, O., Sandeep, P., Rossi, M., & Lindgren, R. (2011). Action design research. *MIS Quarterly*, 35(1), 37–55.
- Simon, H. (1996). *The sciences of the artificial*. Cambridge, MA: MIT Press.
- SkillsFuture Singapore. (2019). Future Skills in AI, Automation and Technology. Extracted with permission from Skills Future Singapore on October 23, 2019.
- Smith, M. E. (2003). Changing an organisation's culture: Correlates of success and failure. *The Leadership & Organization Development Journal*, 24(5), 249–261.
- Sol, H. G., Cees, A. T., & de Vries Robbé, P. F. (Eds.). (2013). Expert systems and artificial intelligence in decision support

systems. In Proceedings of the second mini euroconference, Lunteren, The Netherlands, 17–20 November 1985. Springer Science & Business Media.

Spicer, D. P. (2011). Changing culture: A case study of a merger using cognitive mapping. *Journal of Change Management*, 11(2), 245–264.

Susman, G. I., & Evered, R. D. (1978). An assessment of the scientific merits of action research. *Administrative Science Quarterly*, 23, 582–603.

Tavakol, M., & Dennick, R. (2011). Making sense of Cronbach's alpha. *International Journal of Medical Education*, 2, 53–55.

Van den Berg, P. T., & Wilderom, C. P. (2004). Defining, measuring, and comparing organisational cultures. *Applied Psychology*, 53(4), 570–582.

Van Hillegersberg, J., & Koenen, S. (2014). Adoption of web-based group decision support systems: Conditions for growth. *Procedia Technology*, 16, 675–683.

Van de Ven, A. H., & Delbecq, A. L. (1974). A task contingent model of work-unit structure. *Administrative Science Quarterly*, 183–197.

Vilet, J. (2013). Why it's so difficult to really change a company culture. Retrieved from <http://www.tlnt.com/2013/11/04/why-its-so-difficult-to-really-change-a-company-culture/>. Accessed on November 28, 2019.

Vitharana, P. (2003). Risks and challenges of component-based software development. *Communications of the ACM*, 46(8), 67–72.

Volkema, R. J. (1983). Problem formulation in planning and design. *Management Science*, 29(6), 639–652.

- Walls, J. G., Widmeyer, G. R., & El Sawy, O. A. (1992). Building an information system design theory for vigilant EIS. *Information Systems Research*, 3(1), 36–59.
- Weeks, J. (2004). *Unpopular culture: The ritual of complaint in a British bank*. Chicago, IL: University of Chicago Press.
- West-Moynes, M. (2012). *A study of organizational culture in Ontario colleges with high student satisfaction*. Doctoral dissertation.
- World Economic Forum Global Agenda Council on Future of Software & Society. (2015, November). *Deep shift: 21 ways software will transform global society*. Survey Report. Geneva: World Economic Forum. Retrieved from http://www3.weforum.org/docs/WEF_GAC15_Deep_Shift_Software_Transform_Society.pdf.
- Zammuto, R. F., & Krakower, J. Y. (1991). Quantitative and qualitative studies of organizational culture. In W. A. Pasmore & R. W. Woodman (Eds.), *Research in organizational change and development: An annual series featuring advances in theory, methodology and research* (pp. 83–114). Greenwich, CT: JAI Press.