

CHAPTER 17

Managing Teams in the Age of Artificial Intelligence and Automation

Vishal Mukeshbhai Prajapati and Ojisha Dhulichand Bhardwaj***

ABSTRACT

Artificial intelligence and automation are transforming how teams are formed, monitored and led. This article examines the expanding role of artificial intelligence in the workplace — from recruitment and performance evaluation to decision support — and considers what these changes mean for the practice of team management. It argues that as machines absorb routine and analytical tasks, the manager's distinctly human contributions of empathy, judgement, ethical oversight and the capacity to build trust become more rather than less important. The article considers the effects of artificial intelligence on team dynamics, including the automation of routine work, the improved information available for decisions, the anxiety generated by perceived threats to job security, the consequences of continuous performance monitoring and the reduction in face-to-face contact. It then examines the changing role of the manager, the management of resistance to adoption, the evaluation of performance using algorithmic tools, and the requirement for continual development of both technical and interpersonal skills. Throughout, the article maintains that artificial intelligence should be treated as a support to managerial judgement rather than a substitute for it, and that questions of transparency, privacy, algorithmic bias and employee morale must be addressed deliberately rather than left to resolve themselves.

Keywords: Artificial intelligence; Automation; Team management; Future of work; Human–AI collaboration.

1.0 Introduction

Organisations have changed rapidly under the influence of technology, and artificial intelligence has had the largest effect to date. It is now applied across recruitment, finance, marketing, customer support, supply chain management and performance evaluation, and this expansion has altered the dynamics of teams considerably.

**Corresponding author; MBA Student, Indukaka Ipcowala Institute of Management, Charotar University of Science and Technology (CHARUSAT), Changa, Gujarat, India
(E-mail: 24mba155@charusat.edu.in)*

***Assistant Professor, Indukaka Ipcowala Institute of Management, Charotar University of Science and Technology (CHARUSAT), Changa, Gujarat, India
(E-mail: ojishabhardwaj.mba@charusat.ac.in)*

Teams were formerly managed by allocating assignments, supervising the people carrying them out and ensuring that deadlines were met. Managers today face a more demanding task. They must understand how artificial intelligence affects the responsibilities of their employees and the way performance is assessed, and equally how it affects the way employees regard their own work. These systems allow tasks to be completed more quickly and with greater accuracy, but they also generate anxiety about job security and about rising expectations of output. Having worked through a number of group assignments, presentations and other academic activities as a management student, I have observed directly that although technology makes tasks easier to perform, success in teamwork depends far more on how well members coordinate, communicate and understand one another than on the tools they use. Difficulty in working together degrades performance regardless of the sophistication of the available technology. The age of artificial intelligence has not displaced the importance of managing people rather than machines, and managers must accordingly learn to balance technological capability against human values.

2.0 The Role of Artificial Intelligence in the Workplace

Artificial intelligence refers to technology that performs, by machine or computer program, tasks ordinarily requiring intelligence: learning from data supplied to it, recognising patterns within that data, solving the problems those patterns reveal and arriving at decisions. Such systems analyse large data sets to identify regularities, which are then used to predict outcomes and to recommend courses of action.

The principal functions of artificial intelligence in the workplace are the automation of repetitive tasks and the provision of information on which managers may base better decisions. Common applications include the screening of applications, the recording of attendance, the forecasting of sales, the management of customer relationships and financial projection. My own experience in an academic setting suggests that digitally supported systems reduce administrative labour appreciably and improve accuracy.

2.1 The limits of artificial intelligence

There are, however, real limitations. These systems perform only within the scope of their programming and the data available to them. They possess neither emotion, nor personal values, nor ethical judgement. They can supply analytically derived solutions, but they cannot fully apprehend what an employee experiences by way of feeling, motivation or workplace conflict. Artificial intelligence should therefore be regarded as a support system rather than a substitute for human agency (Raisch & Krakowski, 2021). Final decisions concerning leadership, motivation and the resolution of conflict should draw on the employee's own account as well as on what the system reports.

3.0 The Impact of Artificial Intelligence on Team Dynamics

3.1 Automation of routine work

The most immediate effect is the capacity to automate the repetitive and time-consuming tasks that occupy much of the working day. Where this is well managed, employees gain time for creative, analytical and strategic work, with corresponding gains in productivity and in satisfaction.

3.2 Improved information for decisions

Artificial intelligence supplies teams with information that can alter how work is planned and executed. Performance analytics, for example, allow a manager to identify where members of a team perform strongly and where support is required.

3.3 Job insecurity and anxiety

A recurring difficulty is the fear that people will be displaced by the technology, and employees report rising anxiety as its use expands (Frey & Osborne, 2017). In conversation with several of my peers, I found a widespread concern that the spread of these tools will intensify competition between colleagues while raising the standard of performance expected of each of them.

3.4 Continuous performance monitoring

Because these systems can report on activity in real time, performance may now be measured continuously. Such monitoring can improve efficiency, but it also generates considerable strain among employees who feel themselves under constant observation (Kellogg et al., 2020). Performance data should not become an instrument of excessive control; used constructively, it allows a manager to create conditions in which employees feel confident about their own work.

3.5 Reduced face-to-face interaction

Digitally mediated communication has reduced direct contact between members of a team. These tools have improved the coordination of work, but the accompanying loss of face-to-face interaction has left fewer occasions on which strong working relationships might form. Since such relationships have traditionally been built through direct contact, managers must attend deliberately to relationship-building and to the cohesion of the group.

4.0 The Changing Role of the Manager

As the pace of work has increased under the influence of artificial intelligence and automation, the managerial role has altered correspondingly. The manager is now

understood as mentor, coach and agent of change rather than as a supervisor who allocates tasks and verifies their completion (Davenport & Kirby, 2016).

An effective manager must be able to explain to each employee why a given system is being introduced and how it benefits both the individual and the organisation. Transparency reduces the fear that accompanies change and with it the resistance that fear produces. Working on a college project, I observed noticeably greater enthusiasm and better performance where members understood clearly what was expected of them and how each contribution fitted into the whole.

Managers must also give priority to the development of human capabilities — communication, creativity, leadership, adaptability and emotional intelligence — since these cannot be delegated to a machine and remain the qualities on which effective team management depends. Insights generated by these systems are of value only when a manager exercises reasoning and experience in deciding what to do with them.

5.0 Artificial Intelligence and Decision-Making in Team Management

Artificial intelligence contributes substantially to decision-making in the management of teams. Such systems can assess numerous variables bearing on an employee's work: volume and quality of output, time expended and progress against project milestones. This allows a manager to decide on an informed basis rather than by intuition or impression alone (Tambe et al., 2019).

A dashboard may, for instance, present the distribution of workload across a team and indicate where capacity remains and where it has been exceeded, enabling work to be allocated more equitably and strain to be reduced. In my own academic group activities I found that the more clearly an assignment was organised and communicated, the more efficiently members coordinated and the less friction arose between them. Data of this kind should not, however, serve as the sole basis of decision. These systems cannot register emotional strain, family obligation or the particular stresses of a workplace, and managers must therefore combine what the data report with what they observe of behaviour and well-being. Sound decision-making in present conditions requires both.

6.0 Managing Resistance to Adoption

Resistance is common wherever these technologies are introduced. Its principal source is the belief that the technology will remove jobs or render existing skills less valuable, and the resulting apprehension depresses motivation, raises stress and produces a generally negative disposition towards change. The most effective response is transparent communication, so that employees understand how the technology will complement their work and contribute to the efficiency of the organisation. People need a clear account of

what their role will become and how they may progress within it. Training is the second requirement. Employees who have been properly trained in the use of these tools feel more confident and more competent. Involving employees in decisions about adoption creates a sense of ownership, and those who have participated in a decision are considerably more receptive to what follows from it.

7.0 Evaluating Team Performance

Artificial intelligence has changed the evaluation of team performance from a subjective and largely manual exercise into one grounded in data captured as work proceeds. Systems that collect and analyse performance data give managers access to information that is accurate, transparent and comparatively free of impression. Measures of productivity, quality and time illustrate how such tools help identify both strengths and areas requiring improvement. A complete evaluation cannot rest on numerical data alone: qualitative considerations such as collaboration, creativity, cooperation and willingness to learn are of equal importance in forming a rounded picture of an employee's contribution. Evaluation that combines algorithmic measurement with qualitative judgement in this way tends to improve both satisfaction and trust, precisely because employees recognise that they are being assessed as more than a set of figures.

8.0 Continual Skills Development and Training

A technologically sophisticated economy places a premium on continual learning. Many conventional forms of employment are becoming obsolete while new analytical and technical skills are in high demand, and organisations must therefore cultivate a culture in which employees are expected and enabled to extend their competence. Training must address technical and interpersonal skills alike. The technical component instructs employees in how the tools work; the interpersonal component equips them to communicate, adapt and collaborate with colleagues and managers in applying what they have learned. As a management student I regard the capacity to work collaboratively as no less critical than facility with technical systems. Management should establish a learning-oriented environment in which employees feel able to attempt unfamiliar things and to learn from what goes wrong.

9.0 Ethical Considerations

The organisational use of artificial intelligence raises substantial ethical questions, particularly concerning data privacy, algorithmic bias and fairness. These systems collect

large quantities of employee data, and organisations bear a corresponding obligation to secure it properly. Bias presents a further concern. A system trained on biased data will reproduce that bias in the decisions it supports, and divisions may open within a team as a result. Managers should establish how they will monitor the fairness of algorithmically supported decisions and should accept responsibility for that oversight rather than treating the system's output as self-evidently neutral.

Nor should managers depend excessively on these tools. Ethical leadership requires that human values be held in balance against technological capability. Technology evolves rapidly, and it would be a mistake to treat it as the foundation of successful teamwork: human relationships remain that foundation. Regular feedback, periodic meetings and consistent recognition of contribution exercise more influence on an employee's working life than any system or software.

10.0 The Future of Managing Teams

Team management will in future depend on human capability and artificial intelligence working in concert, with the technology performing routine tasks while people undertake leadership, creative and innovative responsibilities. As remote and hybrid arrangements become more prevalent, managers will need to extend their own skills continually while building working environments that are ethical, inclusive and supportive, and in which technology is used for the benefit of those who work with it (Daugherty & Wilson, 2018).

11.0 Conclusion

Technology is now among the principal considerations in assessing how a team may be managed successfully. It supports improvements in productivity and in the quality of managerial decisions, but it also introduces difficulties associated with fear, ethics and gaps in skill. Successful team management therefore depends on how well a manager integrates technological capability with values centred on people.

In my view, technology should assist a manager in discharging their responsibilities rather than define how those responsibilities are understood. The successful manager in the present workplace will be the one who understands how people interact with one another rather than merely how machines function, and who deploys technology in ways that do not diminish those who work with it. Organisations that invest in technological and human development together will be the ones that remain competitive over the longer term.

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