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# The Path and Enlightenment of Data-Driven Digital Transformation of Organizational Learning: A Case Study of the Practice of China Telecom

Siyuan Xu, Wenhao Yu, Guanghua Jiang

## Asian Adult Education Annual Conference

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# The Path and Enlightenment of Data-Driven Digital Transformation of Organizational Learning: A Case Study of the Practice of China Telecom

**Siyuan Xu[1], Wenhao Yu[1], Guanghua Jiang[2]**
[1]Department of Educational Technology, School of Education, Shanghai Normal University; Shanghai; China
[2]China Telecom; Shanghai; China

**Abstract**

This paper took China Telecom as a case. It has analyzed data-driven digital transformation in organizational learning, and summarized the methods and enlightenments of digital transformation.

*Keywords*: digital transformation; organizational learning; data-driven, China Telecom

This is a time of lifelong learning. There is a need for companies to transform digitally. Organizational learning is a vital part of business development, and its own degree of digitalization and transformation of talent training is considerable. So it is necessary for enterprises which devoted to transforming digitally to implement strategic guidance, build a digital platform, promote the co-construction and sharing of knowledge, and thereby establish a learning environment for the digital enterprise. Through this process, data elements can drive high quality digital transformation of businesses. They can help provide more learning resources, build a learning system for the exchange of information, build a digital learning ecosystem, build a Digital Talent System based on digital coding and so forth. That is to say, data-driven digital transformation allowed companies to effectively improve the traditional organizational structure, enhanced the learning process of digital businesses, optimized business learning in all aspects, and helped businesses grow and change.

## Literature Review

Furthermore, in the process of organizational learning, organizational learning activities should be combined with business strategy. Raymond A. Noe proposed a process model of strategic business formation and development. The model consisted of four steps—Business Strategy, Strategic Training and Development Initiatives, Training and Development Activities, Metrics that Show Value of Training (Noe, 2007). In these steps, we should notice that the objectives of organizational learning must be determined by the organization's mission, vision, values, objectives, and competitiveness; then organization must develop training and learning strategies based on the learning objectives and business needs; and next when we designed specific enterprise learning activities, we should make reference to training needs; finally, we should establish evaluation criteria to measure whether the results of corporate learning truly served the company's business strategy, which aimed to measure the effectiveness of training, in order to facilitate the continuous improvement and optimization of corporate learning activities in the future. In this

model, the overall process of enterprise training and learning was interpreted through the lenses of strategic learning objectives, the development and implementation of learning projects, and the measurement of enterprise learning value, which was worthy of learning and reference. Moreover, with the development of technology, many research showed that digital transformation can improve organizational learning efficiency, cultivate digital talents and build a digital-talents team. And in this digital era, data has emerged as a new kind of factor of production (Ellstrom et al., 2022). Data-driven is thus the key for enterprises to realize digital transformation.

## Methods

This paper adopted the case analysis method. And it took China Telecom's digital transformation in organizational learning as a case. It has analyzed a data-driven digital transformation in organisational learning, and summarized three stages and nine stages in the process of digital transformation from "having data" to "building data" and then to "using data".

China Telecom is a major state-owned telecom key company. And its organizational learning has undergone multiple transformations and upgrades over the last 20 years including traditional online learning, socialized learning, mobile learning and digital learning. So China Telecom is representative in the digital transformation of organizational learning.

### Data-driven Digital Transformation of Organizational learning in China Telecom

For a more systematic understanding of the current state of digital transformation in organizational learning, in this study, we have analyzed the transformation process of China Telecom by investigating the case of the promotion of data-driven enterprise digital training. And also summarized data storage, governance, and application methods and stages of massive data in the transformation process as well as the digital transformation pathway for organizational learning.

### Having data

The first step in data-driven digital transformation of organizational learning is the "having data" step. China Telecom popularized learning applications and promoted co-construction and sharing of learning content at this point in time. And it has also achieved data intensification of training certification, continuously produced training and learning data assets, and provided data protection for organization training.

China Telecom embedded, in detail, self-developed core learning products into key training processes and developed a digital organizational learning system that took certification of training and data aggregation as its mainstay. And it also incorporated standardized internal and external learning products and applications to achieve intensification of learning data. Then China Telecom created the whole process application of talent development and constructed an interconnected digital organizational learning environment.

### Building data

The second step is the "building data" step. China Telecom focused on key

businesses at this stage and continued to exploring scenarios for data applications. Through the refinement and optimization of various data-driven models, it moved from the learning domain to the work domain to help employees learn.

China Telecom has carried out data governance of digital learning including the establishment of a special data governance organization, clarification of the division of labour and governance responsibilities of data governance, the establishment of a data accountability system and associated mechanisms and processes to improve data quality. And it has also examined the talent team and plotted a three-layer data view, which included the global vision layer of training and certification of talent teams, the view layer of key talent team learning projects, and the view layer of key position course learning. Then China Telecom created a profile of the talent team and built a "learning-test-application" data management model to search for the link between training and business, to optimize and adjust training plans and organizational strategies.

**Using data**

Next step is the "using data". At this step, China Telecom produced, precipitated, and collected data through the digital organizational learning platform built and shared jointly. And it also has set rules and standards through data governance that emphasized cultivating key talent teams.

In detail, China Telecom carried out smart learning. Based on the operation of smart learning, it has extracted a CPCPD data-driven smart learning model, which included Customer, Product, Channel, Promotion and Data. And with reference to national standards, China Telecom has been exploring and utilizing data information in the iterative development of digital learning resources, which focused on automatic, data-driven evaluation, and established an iterative optimization evaluation index system of learning resources—the Course Quality Index Model, to continually promote the survival of the best and improve the operational efficiency of the courses. Subsequently, through organizational learning projects, China Telecom has optimized and modernized live broadcast programme models, training programmes and other operations to promote companies' digital transformation.

## Enlightenments

Based on the practical case of China Telecom's Digital transform, this study has summarized these following three enlightenments.

- Organization should play a data-driven role and optimize their learning and training systems.
- Organization should implement the digital phased transformation pathway to promote digital organizational learning.
- Organization should incorporate their views on digital learning and build a digital learning organization.

From these, we have incorporated a new model of digital organizational learning by combining strategic training and development flow diagram, MOV model, and digital transformation path of organizational learning. Under data training, this model showed that the three-step digital transformation path of "having data, building

data, and using data" gradually fostered the process of digital transformation and optimized iteration based on feedback at each step, which can effectively meet changing market competition and learning needs and generate an ongoing driving force for data. Furthermore, in the interplay of managerial driving force (M), operational driving force (O), and value pulling force (V) and data driving force (D), , China Telecom has achieved a circular linkage from learning needs, the implementation of learning projects to the optimization of learning processes. Thus this paper presented a global view of digital organisational learning, which provided a comprehensive perspective for research related to organizational learning.

## Conclusion

Finally, this study used the Talent Development Centre of China Telecom as an example. This paper has analyzed a data-driven digital transformation in organizational learning, and summarized three stages and nine stages in the journey of digital transformation from "having data" to "building data" and then to "using data".

This paper, based on the practical case of digital China Telecom's transformation, also advanced three enlightenments. It pointed out that we should play the full role of data driving, follow the path of transformation with a step-by-step approach, and view from an integrated perspective in the digital transformation process, which was dedicated to building a digital learning organization. In conclusion, we hope to provide a benchmark for research on digital transformation in organizational learning.

**Figure 1**

*The Strategic Training and Development Processes*

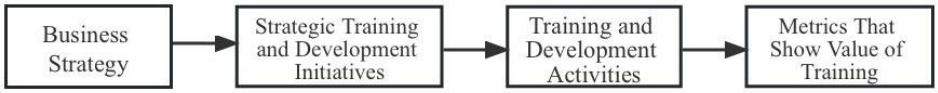
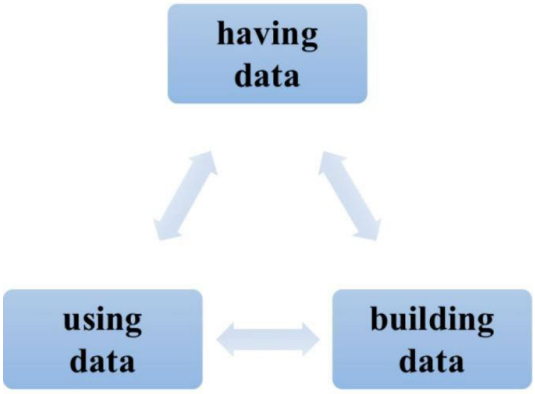



**Figure 2**

*The Path of Data-driven Digital Transformation of Organizational Learning in China Telecom*



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