Digitalization of Corporate Training at Viettel Group*

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Abstract. Digitalization of training activities is becoming an inevitable trend in Vietnamese companies nowadays. This paper presents the digitalization process of corporate training at Viettel Group, the largest telecommunication company in Vietnam. The learning management system (LMS) of Viettel Group is the key to the digitalization process of training. Four tools of the LMS at Viettel Group are introduced, including individual learning plan (ILP), e-Mentor, e-Coaching, and after-training-management (ATM). Some initial results of the application of the four tools are discussed. We also adopt and adapt the criteria in the study of Petrusevich (2020) to evaluate several aspects of digital training activities such as the capabilities of the system; the digital competence of trainers, learners, supporters; the method used in training; and the resistance to the digitalization process in training. Furthermore, we collect feedback from learners who enrolled in the LMS of Viettel Group in 2020 and 2021 to analyze and evaluate. Our analysis shows that learners have positive feedback on the system's capabilities; the digital competence of trainers and supporters. Two areas for improvement are digital etiquette and the use of gamification in online training. Finally, we highlight the initial achievements of Viettel Group in the digitalization of its training activities and propose some future research directions. The increasing number of LMS registered users and initiatives for after-training applications in learners' jobs are two significant results. Thus, we suggest further quantitative studies to measure the effectiveness of the digitalization process of corporate training at large Vietnamese companies.

Keywords: Digitalization, Digital Training, Corporate Training, Telecommunication Industry, Viettel Group.

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1 Introduction

The knowledge and capabilities of employees are one of the key factors determining the competitive advantage of an enterprise. Any enterprise needs to stimulate work performance and bring the best results to maximize profits for the business. Thus, corporate training is critical to help employees understand the company's values, strategy, product and better understand the market.

The ever-expanding scale of enterprises will increase pressures on personnel training while the traditional training system exposes shortcomings in both quality and training costs. Faced with these problems, online training (e-learning), or digitalization of training content, is becoming a popular method to replace the old system, bringing many benefits and efficiency to businesses.

Electronic learning (e-learning) – an online training system, is a virtual training method through the Internet. Learners can access lectures and documents anywhere, anytime, through Internet-connected devices such as computers, phones, and the like. With this model, the transmission and reception of knowledge are carried out indirectly, between lecturers and learners, without direct face-to-face interaction. However, they can still help the learners achieve the desired outcomes. Thus, the digitalization of corporate training leads to the online system that allows to deliver virtual training courses and manage the learning process in the company.

As a constantly growing trend, digitalization has found its way into numerous areas of life, with its various advantages and opportunities, new structures and use cases in higher education, professional qualification, and on-the-job training. However, the use of digital media in professional qualification contexts is often based on individual decisions in human resource management or strategic management. This usually happens without considering the employees' requirements as future users of the e-learning system. Consequently, the e-learning system might not be efficient and waste money and time for the business. The inefficiency of the e-learning system is not an odd phenomenon.

In this paper, we introduce the case of Viettel Group and highlight some results gained from their digitalization process of corporate training. The paper is structured into four sections. Section 1 introduces the topic and its significance. Section 2 focuses on the theoretical background of digitalization and corporate training. Section 3 presents the current practices of Viettel Group in the digitalization process of corporate training activities. Finally, section 4 discusses the implications and suggests future research directions.

2 Theoretical Background

2.1 Digitalization

Digitization, digitalization and digital transformation are the three most pervasive terms for companies in the Industrial Evolution 4.0 era nowadays. Despite the confusion when being perceived by company managers, the three terms actually describe three phases

of digital transformation process in an organization which starts from digitization to digitalization and then move onto digital transformation [1]. The majority of the research agrees that the first two incremental phases are required to achieve the most pervasive phase of digital transformation [2, 3].

Digitization is the encoding of analog information into a digital format such that computers can store, process, and transmit such information [4, 5]. Research also conceptualized digitization as the integration of IT with existing tasks and, more broadly, as the development or enabler of cost-effective resource configurations using IT [6]. Typically, digitization mainly digitalizes internal and external documentation processes, but does not change value creation activities.

Digitalization is the second phase of the digital transformation process. Digitalization uses digital technologies to change a business model and provide new revenue and value-producing opportunities. Thus, digitalization is the process of employing digital technologies and information to transform business operations. Digitalization describes how IT or digital technologies can be used to alter existing business processes [7], for example, creating new online or mobile communication channels that allow all customers to connect with firms easily and change traditional firm-customer interactions [8]. Such a change often involves new sociotechnical structures with digital artifacts, which were impossible without digital technologies [4]. Thus, in digitalization, IT serves as a critical enabler to seize new business possibilities by changing existing business processes, such as communication [8, 9], distribution [10], or business relationship management [11].

Through digitalization, firms apply digital technologies to optimize existing business processes by allowing more efficient coordination between processes and creating additional customer value by enhancing user experiences [12]. Hence, digitalization focuses on cost savings and includes process improvements that may improve customer experiences. As organizations implement ‘digital technologies’ – which means computers and other information technology – people’s jobs change.

2.2 Digitalization of Corporate Training

For enterprises and thus for corporate training, the ongoing digitalization has both potentials and challenges. On the one side, digitalization changes job profiles and job structures. Therefore, work tasks become more complex and more demanding for employees.

On the other side, digitalization offers new potentials for training in enterprises by enabling new forms of technology-based learning like mobile learning or game-based learning.

The training results directly reflect the enterprise’s personnel training activities, showing whether the enterprise successfully conducts its internal personnel training. In addition to providing standard knowledge, the E-learning system also designs tests to assess learners’ ability after each course, thereby supporting businesses to make appropriate adjustments for each employee’s career roadmap and consider them in different positions based on their capabilities.

3 Case Study of Viettel Group

3.1 The Context

After a journey of 30 years of development, Viettel Group has grown into an international business and the most valuable brand in Vietnam (in 2019). The company is doing business in 11 countries in Asia, America, and Africa, with more than 110 million users. Other than Telecommunications, Viettel Group also has expertise in Hi-tech Research and Manufacturing, Postal Services, Construction, Commerce, Importing and Exporting, IDC, and others.

Viettel Group is a big corporation with more than 70,000 employees in 11 countries. Thus, the need for employee training is high. Since the early years of establishment, employee training has drawn a lot of attention from the Group's Board of Directors (BoD) as a critical activity to build a qualified and capable team to fulfill their tasks and to be ready for higher positions in the future. Viettel employees are required to participate in training courses of professional knowledge and skills for future leadership positions. They are also regularly rotated to new jobs and markets to promote their full potential and capabilities.

Along with the changes of context and the shift in the corporation's orientation in recent years, training activities are changing in terms of scale, diversity in methods, and target audience. Not encapsulated within the scope of "designing and organizing training programs", the leaders of Viettel Academy have set the point of bringing training activities to accompany the development of the Group through several specific tasks is summarized as follows.

Managers at Viettel Group are facing the questions: What values does employee training bring to the company, and how are these values brought into reality? Furthermore, how can the importance of training be controlled for the growth of the company? Consequently, it is a big challenge for the corporation to choose the appropriate system to record and manage the development plan of employees after training. It is also essential for Viettel Group to measure and control the efficiency and effectiveness of employee training.

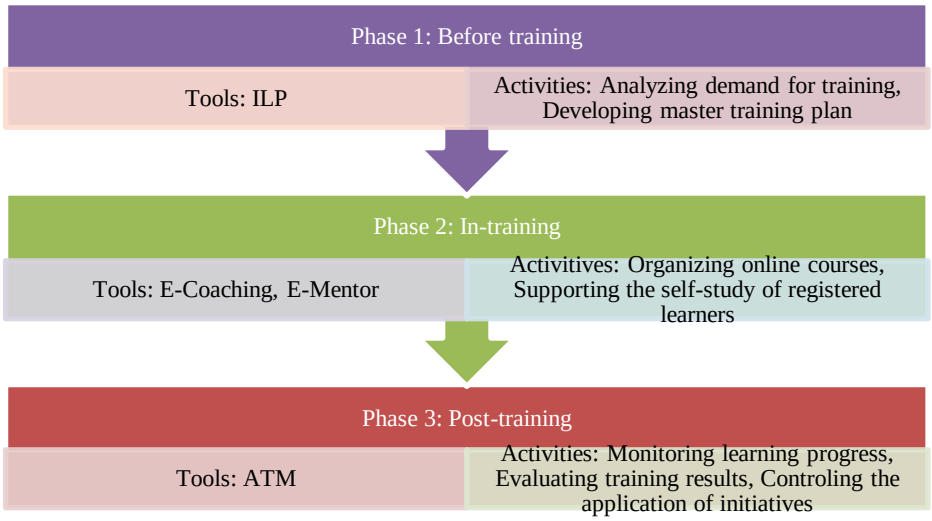
3.2 Digitalization of Training at Viettel Group

Digitalization of training at Viettel Group has been implemented in many ways, from designing the training contents, installing a learning management system (LMS) and its tools, to the approach to measuring after training.

Viettel Group has been building the LMS for several years. Training contents of many courses for employees and managers have been digitalized and designed for learners to access and manage their self-study process. Viettel Academy is the leading unit in Viettel Group that runs the system and provides admin services to help each employee of the Group to register in the system and start their self-study journey. Viettel Academy also controls the e-learning outcomes of learners, extracts the reports on training to submit to the headquarter of the Group and other affiliated companies that send their employees to attend the training courses in the e-learning system. In these two recent years, four tools of the LMS have been implemented, including ILP

(individual learning plan), e-Coaching, and e-Mentor and ATM (after training management). Table 1 below summarizes the tools, activities in the digitalization process of training acitivities at Viettel Group.

Fig. 1. Tools and activities in digitalization process of training at Viettel Group



As shown in Figure 1, the digitalization process of training is undergoing at Viettel Group with the application of tools and the re-arranging activities, which will be described in details in the following two subsections.

3.2.1. Pre-training and In-training Management Tools

Viettel Group has been implementing three tools in the LMS to support and control the pre-training and in-training phases. They are called ILP, e-Coaching, and e-Mentor.

In 2020, the ILP tool was implemented in 6 business units of the Group: Viettel Cyberspace Center, Viettel Post, Viettel Import-Export Limited Company, Viettel Solutions Corporation, and Viettel Networks Corporation, Viettel Academy with 4,970 active registered users who are employees from these companies. This figure increases by 10.4% in comparison with that in 2019. Among the registered users, approximately 60% have completed their required individual learning plan. The ILP tool has received many positive evaluations from the users. This tool helps the individual learners control their learning process better. Meanwhile, this tool also enables business units to monitor and supervise the learning activities of their employees systematically and efficiently.

In addition, Viettel Group has also installed the e-Mentor and e-Coaching tools in the LMS since September 2020. E-Mentor tool has been completed and run with the test-banks of human resources and accounting topics. The e-Coaching tool has been installed in the LMS with the digitalized contents in a series of questions. Consequently,

managers might assign the training contents for their employees. Moreover, it is notable that e-Mentor and e-Coaching are too effective tools that support learners to search for information and provide various knowledge and best practices for learners.

3.2.2. Post-training Management Tools

Viettel Group has been using the after-training management (ATM) tool, a jointly developed platform by Viettel Academy and its partner, to control the training performance in these recent two years. This application helps to smooth the training course registration process, to track and control the progress of actions taken from the accumulated knowledge after employees participated in the training. With the ATM tool, leaders know how their employees extract knowledge into practical actions that promote innovation and improve work efficiency. This application serves three main purposes: (1) Establish requirements to apply after training; (2) Administer (registration, reminder, update) actions of trainees applied after training courses; (3) Report on application status after training of individuals and units. Figure 2 below demonstrates the benefits of the ATM tool.

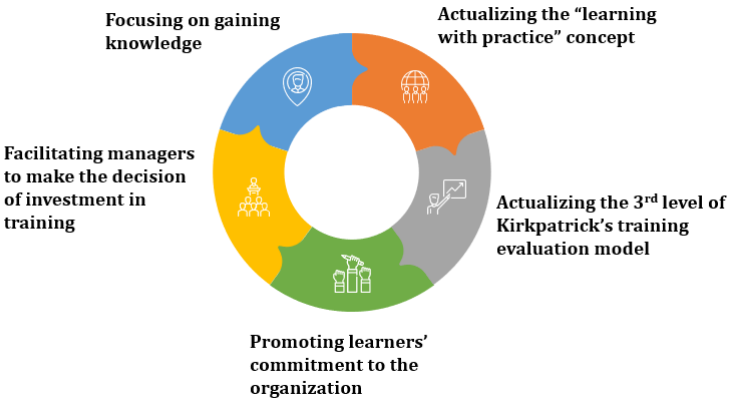


Fig. 2. Benefits of ATM for individual learners and Viettel Group

As shown in Figure 2, the ATM tool has five benefits when applied in a company. Firstly, while participating in training courses, learners are forced to focus on thinking, acquiring new knowledge, and mapping to concretize that knowledge into specific tasks, measured by clear goals and expected results in a certain period of implementation time. In other words, the ATM tool makes the learners focus and continuously think about the applicability of acquired knowledge.

Secondly, the ATM actualizes the "learning with practice" concept in the business context. Ebbinghaus' forgetting curve shows that learning without practice will not change the old habits of learners, and the learning process becomes useless [13]. However, when using the ATM tool, learners are required to practice what they have learned. As a result, the learner will perceive the value of training and memorize the gained knowledge for a longer time.

Thirdly, the ATM tool helps to actualize the third level in Kirkpatrick. According to Kirkpatrick's training evaluation model, the first two levels, reaction, and learning are easy to achieve and evaluate right after training [14]. However, most organizations face the challenge of measuring the third level related to turning learners' knowledge into behaviors. With the ATM tool, each learner must take a specific action displayed on the tool with precise information.

In addition, ATM will increase the commitment of learners with specific action plans after training. Finally, for an organization, ATM also facilitates the managers in deciding to approve the training budget or sign a contract with training partners when they can see the visible potential value of training, which is demonstrated by the number of registered initiatives in the ATM.

At Viettel Group, when ATM is implemented, each employee who participates in training courses must propose innovative ideas in practice. Primarily, employees that participate in short courses must provide specific actions to help avoid the common waste when learners forget the training knowledge after a short time and produce no results after being trained. Their innovative ideas are tracked on the ATM system during the implementation process to evaluate the training efficiency. This action is like a task for learners, a commitment to participating in training courses to accumulate and apply knowledge in practice.

In the past, when there was no digital tool such as ATM used in monitoring the training efficiency, the training department staff at units of Viettel Group had to directly send emails or phone to each individual to collect information to evaluate the application of the trainees after training. As there was no appropriate monitoring system of the after-training activities, many employees do not consider applying learned knowledge after training as a mandatory requirement. As a result, they did not incorporate their gained knowledge into a specific task at work.

It is noteworthy that the training monitoring activities at Viettel Group have changed since the application of ATM. With a friendly and easy-to-use interface, the ATM tool is now well adopted by employees of many units in Viettel Group. It is considered by the training team to be useful in tracking the training results of learners. In 2020, 110 ATM users proposed and implemented 159 initiatives in 7 business units of Viettel Group. Table 1 below shows the details.

Table 1. Number of ATM registered users and initiatives at Viettel Group in 2020

No.	Business unit	Number of initiatives	Number of users
1	Viettel Cyberspace Center	6	4
2	Viettel Construction Corporation	1	1
3	Viettel Digital Services Corporation	5	1
4	Viettel High Technology Industries Corporation	11	7
5	Viettel Academy	61	37
6	Viettel Networks Corporation	5	4
7	Viettel Import-Export Limited Company	70	56
	Total	**159**	**110**

In addition to the number of initiatives proposed, the application of ATM at Viettel Group has achieved the following results.

Firstly, the ATM tool promotes employees to convert learned knowledge into specific actions, with goals, results, implementation time, and controlling mechanism with timely reminders and warnings. Therefore, this tool focuses on acquiring knowledge and outcomes for learners in the form of the organization's requirements, which are incorporated into employees' commitments. Furthermore, the ATM tool also aims to create behavior changes of employees after training which brings more value for the Group.

Secondly, for managers, the ATM tool helps solve the question "How to monitor the application plans of employees after training". This tool provides a mechanism for the managers to remind their employees and export reports of applications at work. Then, the leader can support and guide the employees in time to bring the most value to the unit.

Thirdly, for organizations, the ATM tool helps answer the question, "What value does training bring to the business?" This tool orients the application plan of an employee to match the output standards of each training course so that the value that learners create for the organization will be maximized. The specific actions recorded in the ATM are also the basis for evaluating the practicality of the training content and demonstrate the impact brought from training activities to the organization. With an overview reporting system on learners' application actions after participating in a training course, the training department can explain to leaders a "big picture" of how employees apply their gained knowledge. Thereby, the managers can assess the value brought by training specifically.

3.2.3. Key Results and Objectives

In general, the digitalization of training activities at Viettel Group has achieved some results. The application of LMS with four main tools contributes to the changes in the learning environment at Viettel Group from the traditional to the digital one. To evaluate the achievements of corporate training at Viettel Group, we collected learners' feedback and relatively assessed the features of the LMS. In this study, we adopt and adapt the criteria from the study of [15], with the scale ranging from 1 = low, 2 = average, and 3 = high. We use 15 criteria to evaluate several aspects of digital training activities such as the capabilities of the system; the digital competence of trainers, learners, supporters; the method used in training; and the resistance to the digitalization process in training. Table 2 summarizes the data analysis that we collect from learners who have participated in online training courses in the LMS during 2020 and the first half of 2021.

Table 2. Evaluation of digital training activities at Viettel Group

No.	Criterion	Mean	Evaluation
1	Technical and hardware capabilities	2.7	High
2	Software capabilities	2.6	High
3	Trainer's competence (in training videos in LMS)	2.8	High
4	Learner's competence	2.6	High

No.	Criterion	Mean	Evaluation
5	Supporters' responsibility	2.7	High
6	Digital etiquette of training participants	2.4	Average
7	Learners' requirements for digital contents	2.6	High
8	Use of gamification in training	1.8	Low
9	Use of synchronous communication	2.7	High
10	Personalized training delivery	2.8	High
11	Micro training technology	2.7	High
12	Mobile digital learning resources	2.7	High
13	Taking exams online	2.8	High
14	Engaging open, ready to use contact	2.6	High
15	Resistance to the digitalization process in training	1.5	Low
Note: 1 < Mean value ≤ 2: **Low;** 2 < Mean value ≤ 2.5: **Average;** 2.5 < Mean value ≤ 3: **High**			

As shown in Table 2, learners show positive feedback on the features of LMS. Among the 15 criteria, only three criteria have mean values lower than 2.5 points. The remaining criteria are evaluated to be high. The three best criteria are related to the "trainer's competence", "personalized training delivery," and "taking exams online," with the same mean values of 2.8 points. Notably, the resistance to the digitalization process in training employees is low, but digital etiquette still needs improvement. One more criterion that needs more improvement is the "use of gamification in training". This is a challenging task for online courses due to the lack of real-time two-way communication between trainers and learners.

Currently, the LMS implementation at Viettel Group is still being promoted. However, the Group has set the objectives of increasing the number of users in 2021. Table 3 below shows the details of projected users of LMS tools at Viettel Group.

Table 3. Projected users of LMS tools at Viettel Group in 2021

No.	Tool	Measurement unit	Current registered users (up to 31st May, 2021)	Expected number of users (from June to December, 2021)	Total
1	**ILP tool**				
	User	Person	4,310	1,500	**5,810**
	Plan	Plan	5,239	3,500	**8,739**
2	**ATM tool**				
	User	Person	1,430	700	**2,130**
	Initiative	Action	1,100	1,800	**2,900**
3	**E-Mentor tool**				
	Topics uploaded	Topic	12	18	**30**
	Number of questions	Question	15	185	**200**
4	**E-Coaching tool**				

No.	Tool	Measure-ment unit	Current regis-tered users (up to 31st May, 2021)	Expected number of users (from June to December, 2021)	Total
	New e-coaching lessons up-loaded	Lesson	1	11	**12**

Table 3 shows that Viettel Group sets high targets for the LMS and application of four main tools. It is expected that the LMS will be more prevalent in the Group with more promotion and PR activities of Viettel Academy in the second half of 2021.

4 Implications and future research suggestions

From 2020 through 2025, Viettel Group aims to maintain its position as the country's leading economic corporation that successfully implements the digital transformation strategy. Viettel Group will pioneer the creation of a digital society and is the core of building a high-tech defense industrial group. Thus, investment in human resources will still be the primary solution.

In a competitive and fast-changing environment, Viettel Group expects the leaders to have a different vision, a different way of thinking, a different solution to create new and better products. When the industrial revolution 4.0 becomes more and more popular, automatic machines will replace humans in many jobs. Consequently, the skill requirements of workers will be higher. In such a competitive working environment, it is mandatory to screen the workers and reengineer the organization. Furthermore, it is also critical to equip managers and employees with edge-cutting knowledge and capabilities to perform more challenging tasks. In this regard, the corporate training system should be fully digitalized from the pre-training to the post-training phase.

This paper presents the digitalization of corporate training at Viettel Group as an example in large Vietnamese enterprises. We mainly base on qualitative evaluation to highlight how Viettel Group has been digitalizing their training process and the initial results of their digitalization. Our study shows that the learning management system (LMS) of Viettel Group with four basic tools (ILP, e-Coaching, e-Mentor and ATM) is a successful example of the digitalization process of training. Thus, it is implied that other large companies in Vietnam might learn from the experiences of Viettel Group to speed up the digitalization of training. We suggest that being innovative in designing the LMS is essential and being flexible in implementing the system is a must.

Still, there are many areas for further research in this field. Therefore, we suggest that future direction should use the quantitative approach to measure the digitalization process of companies. In addition, future research may focus on the factors that may hinder or motivate the digitalization process of training at Vietnamese companies in general and the Viettel Group in particular.

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