



INTRODUCING THE DIGITAL VERSION OF STRUCTURED ON-THE-JOB TRAINING: Illustrative Case Studies and Reflections on Organisational Change

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Structured on-the-job training (S-OJT), introduced in the late 1980s, aimed to harness the skills and knowledge of an experienced employee in training new hires in the actual work setting, rather than in a classroom away from the workplace. Now, some 40 years later, digital technology steps up to deliver S-OJT's 21st-century incarnation, SiTUATE.

This article introduces SiTUATE, the digital version of structured on-the-job training (S-OJT), and presents two illustrative case studies on how it will be used. Readers may be aware of my founding role in introducing S-OJT nearly forty years ago, as part of a research and development project when serving as a professor at the Ohio State University. Since that time, S-OJT has become one of the most frequently used training approaches in organisations. In one respect, the article shares my own personal journey to develop SiTUATE as a



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necessary next manifestation of S-OJT, which may interest readers curious about advances in training and human resource development. In a broader sense, the article highlights the maxim that innovative thinking for the good often comes from dark and challenging times. Managers would be well advised to keep this fundamental principle in mind as they address today's most challenging issues.

Crisis situations are known paradoxically for also being fertile grounds for innovative thinking, often yielding positive societal benefits alongside tragic human events. For instance, historians often refer to the numerous technologies that emerged from the Second World War, an event of disastrous proportions, but that also resulted in immense societal benefits afterwards. For instance, the Training Within Industry (TWI) project from the US government, established in 1941 within the War Manpower Commission, is often cited as a critical factor for enabling domestic production plants to

respond quickly to the demands of the military effort. In fact, Rosie the Riveter, the iconic picture of the woman in work garb with rolled-up sleeves, presumably learned to pound rivets into steel ship plates through the TWI programme. Many principles originally derived from TWI continue to be used by HR managers today.

More recently, today's everyday use of GPS comes from the more basic concern in the late 1950s of how to accurately track the location of military satellites. It was not until 1978, when the first GPS satellite was launched, that the problem was finally solved in practice. To paraphrase a well-known aphorism, necessity truly seems to be the mother of innovation.

In the same way, the COVID-19 pandemic has accelerated the pace of change in the workplace, advancing in a more concerted way notions such as artificial intelligence, digital talent and digital transformation. The smart-factory concept has emerged in the manufacturing sector globally and is now supported as an imperative by many national economic and workforce development agencies. Amidst all the change come much challenge and uncertainty.

How to cope in today's upended business environment has global managers scrambling to address basic questions that have especially broad consequences: how to carry out the work, while ensuring employee safety; how to meet customer expectations during a time of unreliable supply chains; how to plan and establish strategic goals for even the most limited periods of time.

My own recent discussions with organisation managers about these questions, across the US, Europe, and even in East Africa, suggest a deep sense of uncertainty about which actions might be advisable. In addition, many US companies report that one of their most critical HR issues is how to provide adequate childcare for the children of employees, an issue that would at first seem unrelated to the actual work of the organisation, but still critical nevertheless. Many employees' children receive their schooling at home, and the cost of childcare has become exorbitant. When considering these various questions, often for the first time, managers should allow themselves to consider new perspectives, not to revert to their established ways of thinking and practices only.



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Innovation in Training Practice - SiTUATE

Today, the state of employee training suggests a similar sense of uncertainty, which will hopefully lead to a wave of grounded innovations in practice, as well. To remain competitive, organisations have long recognised that employee training and workplace learning are essential strategic components for performance.¹ Traditionally, employees have attended training sessions away from where they work, whether it's down the hall or travelling to another location for the training. Over time, managers have become increasingly aware of the literal wall these off-the-job training sessions create between what employees learn and what they can actually do afterwards on the job.

For that reason, structured on-the-job training (S-OJT), which was introduced in the late 1980s, continues to attract the attention of managers and government policy makers alike, since it ensures that employees can reliably perform the tasks that are required of them back on the job.² S-OJT features having an experienced employee train a novice employee on a unit of work in the actual work setting. For nearly forty years, my own research and development projects on the topic, working alongside client partners and colleagues, have conclusively documented the increased training efficiency and training effectiveness of S-OJT. These results have been shown consistently across business sectors, workplace settings and types of jobs.³





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Before the pandemic, there was limited need to consider alternative approaches to S-OJT. After all, since its introduction, S-OJT has assumed that trainers and trainees would remain physically in the same location and the work setting would be defined as being within the walls of the organisation. Having experienced individuals conduct the training face-to-face has always been a defining feature of on-the-job training. Until recently, there seemed no compelling reason to challenge any of these basic assumptions.

Today, the workplace environment has changed dramatically, now literally pulling HR managers to reconsider their training practices in ways that might have been inconceivable before the pandemic. In the same way, the changed workplace environment has driven my own reflections about the future of S-OJT. I asked the fundamental question: what changes might be made to S-OJT to respond better to the challenges faced in the workplace today and in the foreseeable future?

Sharing some perspective about organisational change seems in order at this point. Following system theory, change connotes two levels: the current state and the future state, and change may not always necessarily be for the best. Anything that happens in organisations represents some form of change. In terms of planned change for the better, we might use the terms improvement, innovation and transformation to differentiate the nature of the intended change. As shown in table 1, the terms differ in their meanings and goals, based on my own approach to understanding organisational change. Briefly, improvement basically refers to keeping the same goals, but seeking ways to make the outcomes closer to the goals. The seminal work of Gary Rummmler is a prime example of seeking to improve performance.⁴ Innovation differs from improvement, since it refers to undertaking entirely new ways of achieving the same or even somewhat enhanced goals. Innovation is often the most sought-after level of change, since it frequently entails the use of technology to leapfrog bottlenecks and slow cycle times.

Finally, transformation refers to coming up with something entirely new and different. Organisations may undergo a transformation when management undertakes a system-wide reassessment of the company’s reason for existence. In a sense, the organisation decides to start again from the beginning in

considering what purpose it serves. We can point to the leadership of General Motors as undertaking a transformation, as it seeks to move away from carbon-based fuel engines to all electric vehicles.⁵

Given its relatively established place in HR practice, S-OJT would now seem primed for innovation, moving towards a more relevant way of addressing the development needs of employees. Any such change in this way would ultimately involve the use of digital technology. A fundamental question of importance was whether a digital version of S-OJT could include the same features that have ensured its efficiency and effectiveness in the past. And a corollary question was whether other features might be added to make S-OJT even more flexible and easy to use than before.

After some investigation to address these questions, I have now embarked on a second major professional journey related to S-OJT. In retrospect, my first journey was introducing S-OJT nearly forty years ago and engaging in the accompanying efforts to conduct research and disseminate information about it. Now, my second journey, which was quite unplanned, is leading the effort to develop SiTUATE, the digital manifestation of S-OJT.

Table 1. Defining Organisational Change: Improvement, Innovation and Transformation

	Improve	Innovate	Transform
Definition	Make better what is currently being achieved	Rethink what to achieve and how to achieve it	Rethink the entire character, culture, products and services, so that altogether new things can be achieved
Goals	The same goals	The same goals and possibly new ones as well	Never before specified

R. Jacobs (2021)



In general, online learning programmes have never much attracted my attention, simply because I place high importance on the social aspects of learning and the need for trainees to learn in the context of doing, or in situ. In spite of the prevalence of self-paced learning programmes, research has clearly shown the importance of involving another person in the learning process, a trainer or facilitator. Even the most self-directed trainees require another person to help guide their learning. As a senior manager from Motorola once told me, “Nothing can replace the touch from a warm handshake for developing productive relationships.”

My concerns about developing a digital version of S-OJT have been overcome because of advances in software platforms and the sudden widespread use of real-time communications. Everyone now interacts with others through a computer or hand-held device. In my own university, Zoom has

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become an assumed part of delivering our graduate-level courses and meeting with students. In the near future, we will revert to having courses mostly on-campus. But because of our current experience, the use of online delivery of courses will remain an important option, even within research universities that value the fundamental importance of a campus experience.

The end product is called SiTUATE, and it seeks to respond to the dramatic

changes in work and the workplace, making the previous way of using S-OJT nearly impossible to carry out. Workplace learning has been altered immeasurably, affecting training practices for the foreseeable future. In spite of the changes, SiTUATE maintains that the most appropriate location for training to occur, regardless of the job level or nature of the work, remains where the work is actually performed, not in a classroom or receiving the information on a computer screen alone.

Beyond the training location, basic principles of sound training must be maintained. The trainee must be engaged, not passive, and the training must focus on specific job expectations, not general topics of interest. SiTUATE was so named because it seeks to ensure that the training and learning occurs in the most appropriate location – in the context of the work setting, not in a training classroom or through an online screen.

SiTUATE Case Studies

During the past years, I have published numerous case studies illustrating the use of S-OJT. For instance, one of these described the use of S-OJT to train new-hire engineers in the petroleum refineries of Kuwait.⁶ The case study focused on the unique instance of using S-OJT in the context of developing individuals in high-skilled, professional jobs, an application that is not normally considered appropriate for S-OJT. The following case studies illustrate how SiTUATE, as the digital version of S-OJT, can be used, recognising that the adoption of the platform is still in the initial phases.

Recently, a large private-sector bank in Ethiopia, the second most-populous country in Africa, decided to develop a pilot project using SiTUATE. Ethiopia is notoriously underserved in its number of banks, based on its population,



lack the resources alone, especially today, to purchase digital platforms such as SiTUATE. In fact, many SMEs have implemented a learning management system for employees, simply because of the necessity to meet the requirements of the criteria of their customers' quality management systems. Until recently, the SMEs have relied upon vendors, suppliers and customers to provide task-level training for their employees, requiring that the employees attend sessions away from their jobs. Now the same training can be delivered by external providers through SiTUATE.

In practice, the workforce development agency plans to serve as the hub resource, by acquiring the licence to use SiTUATE and then making the platform available to the SMEs on a subscription basis. Having a hub-and-spoke arrangement allows the SMEs to continue to receive training from external sources, but without incurring the additional expense of having trainees away from their jobs while travelling to the external training location. This same arrangement is being considered by some other national workforce development agencies as well.

Both of the case studies presented are just now getting started and the need to document their results upfront remains a critical part of the research and development process. As an academic by nature, I want to know objectively which aspects of SiTUATE require improvement going forward and what the impacts are of the platform on people and organisations. Much of my research in the past has focused on forecasting the financial benefits of S-OJT. We know much about the relationship between training and organisational performance, but many questions remain when using learning systems that feature a digital platform. Today's workers are much more attuned and at ease with using technology, drawn from their personal experiences. It's possible these experiences will carry over and there will be no discernible impact on learning and performance.

SiTUATE is not the panacea for all training issues in today's workplace. SiTUATE works best when the training involves having employees learn tasks that they are required to perform afterwards on the job. In that sense,

over 90 million people, and the services that are provided by those banks. In addition, the banking industry will soon be facing the government plan to open the financial marketplace to institutions outside Ethiopia, such as from South Africa and Kenya, which have well-established customer service operations and access to international bank card systems. Just two years ago, the bank decided to implement S-OJT to train newly promoted branch managers.

In the initial plan, experienced branch managers would travel to the various bank sites throughout the country to conduct the training in person to small groups of management trainees. Now, because of pandemic and cost constraints, that plan has shifted instead towards using SiTUATE, which allows experienced managers to continue to deliver training to management trainees in person, but each of them in a different location. The focus of the training will initially be the critical tasks new branch managers must perform in order to serve their commercial customers.

In another case study example, a publicly funded workforce development agency in the state of Illinois serves manufacturing companies within the state, and decided to use SiTUATE to support the training provided by small and medium-sized enterprises (SMEs) to their front-line employees and supervisors. Most SMEs



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SiTUATE has a ToolKit component which allows HR staff to conduct an array of work analysis techniques – including job and task analysis, skills gap analysis, occupational analysis – and to seamlessly use the information to develop the required training documents.⁷ In this way, the training is grounded to specific job expectations. The platform also has an integrated management component that would track the progress of trainees and archive all documents and reports.

The opportunity to integrate the processes of analysis, design, delivery and evaluation seems like an especially important advancement, along with the ability to develop the S-OJT modules, deliver the training on a real-time basis using prescribed training events, and manage the information that results from the training. How these components address the needs of organisations today and in the future will be interesting to observe.

Final Comment

Recent events have caused much suffering globally. In the US alone, at the time of this writing, nearly 350,000 deaths can be attributed to the pandemic. Yet, from this tragedy has come the welcome development of vaccines in record time, which never existed before this crisis. As a result, economic predictions for 2021 seem relatively optimistic, but the workplace still seems permanently changed and unlikely to spring back in ways identical to before. In this instance, science and technology have triumphed in a time of great need.

The introduction of SiTUATE cannot possibly be viewed as having the same societal implications as a life-saving vaccine. Training may be considered critical, but it seldom involves addressing dire situations, unless a serious safety issue is being addressed. Yet, SiTUATE does represent an example of innovative thinking to address focused, specific problems that have unexpectedly emerged.

Along with many others, I view the next five years as an especially exciting time to observe what is happening in organisations, giving us the opportunity to marvel at the extent to which the changes made today will then become the institutionalised practices of tomorrow.

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