

# Driving employee-driven innovation through workplace learning: The story of Singapore SMEs

JUSTINA TAN\*  and JOEL SIM

Centre for Workplace Learning and Performance, Institute for Adult Learning, Singapore University of Social Sciences, Singapore

## THEMATIC ARTICLE

Received: July 29, 2021 • Accepted: December 2, 2021

Published online: May 23, 2022

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### ABSTRACT

This study is part of a larger research study that seeks to understand how employee-driven innovation (EDI) is initiated, enacted and sustained in small and medium enterprises (SMEs) in Singapore. To date, most of the EDI studies are conducted in the Nordic context where management, employees and public authorities work closely with each other. In more hierarchical societies, such as those in Asia, employees may be given less discretion in exercising initiative to improve work processes and conditions. This study seeks to provide insights on factors that support employees initiating, enacting and sustaining innovations in Singapore SMEs through case studies. Besides interviews, data gathering was also undertaken through observations of the employees, supervisors/managers and owners at work and their interactions where possible. It is found that employees' engagement in workplace learning contribute to initiation, enactment and sustenance of EDI in Singapore SMEs. The findings underline the significance of workplace learning in developing and strengthening employees' innovation capacity.

### KEYWORDS

workplace learning, employee-driven innovation, formal and informal learning

## INTRODUCTION

Learning at workplace includes formal learning, non-formal learning, informal or incidental learning and is practice-bound, centered on experience, and is shaped by work tasks and context

\* Corresponding author. E-mail: justinatanpi@ial.edu.sg

in which the learning takes place (Høystrup, 2012; Virtanen, Tynjälä, & Collin, 2009). More concretely put, workplace learning can be learning by observing others or the 'knowledgeables' (Taylor & Evans, 2009), learning through sharing of experience and knowledge with others, learning through mistakes, learning through mentoring and coaching arrangements. It can also be searching independently for know-how and experimenting without supervision. Most workplace learning occurs in the everyday hustle and bustle of work, and in the dynamic interplay between the social practice of the workplace and individuals' agency. The importance of the workplace as a site of learning is underlined in several literature (Coetzer, 2007; Lundkvist & Gustavsson, 2018). Its provision of authentic on-the-job experience facilitates the acquisition of hard skills which sometimes call for practical training and soft skills such as problem solving and conflict management. It is therefore crucial for the workplace to create and afford ample opportunities for learning through the engineering of work tasks, shaping of social interactions and improving of working conditions. In understanding workplace learning, it is also important to appreciate that it is not a mere acquisition of knowledge and skills. The learning involves "complicated patterns of motivation, understanding, meaning, emotions" (Illeris, 2004, p. 435) and is mediated by individuals' personalities, background and experience.

Workplace learning, specifically on-the-job training and provision of in-work learning opportunities, are conceivably strong levers for employee-driven innovation which rests on incentives for employees to learn new things and do tasks in new ways. In the remaking of work tasks and processes, workplace learning is engendered (Høystrup, 2010). Inherently, workplace learning and employee-driven innovation are individual and collective processes of "interacting, participating and inquiring into (work) situations" (Høystrup, 2010, p. 152), ensconced in "everyday critical insight and reflective experiences at work" (p. 152). The aim of this paper is to discuss the factors that support employee learning and innovation in Singapore SMEs. It is organised as follows. First, it examines employee-driven innovation and workplace learning in SMEs. It then describes the methodology and research setting of the two Singapore SMEs that participated in the study. Next, it presents the findings of how workplace learning drives engagement of employee-driven innovation. It then concludes with a discussion on the implications of the findings and limitations of the study.

### Employee-driven innovation and workplace learning

Employee-driven innovation refers to "the generation and implementation of new ideas, products and processes - including the everyday remaking of jobs and organizational practices - originating from interaction of employees" (Høystrup, 2012, p. 8). It can be a process that is not planned or intentional but happened serendipitously, or one that is initiated, developed and implemented by employees; it can also be a process that is initiated by employees and supported by management in implementation, or one that is initiated by management and involved employees in development and implementation (Høystrup, Redien-Collet, & Teglborg, 2018). At the core of employee-driven innovation is the key tenet that all employees, notwithstanding their position or education, have the potential to contribute to the innovation of their organisations (Kristiansen & Bloch-Poulsen, 2010) because of the significant experience-based and context-dependent knowledge acquired over time in and through their work (Høystrup, 2010; Kesting & Ulhøi, 2010). The employees involved in these activities are not employed specifically to perform innovation-related work as in research and development (R&D). Instead, they are 'ordinary' employees holding various positions and from diverse departments.



Work organisation - such as team work, autonomy, task discretion, job rotation – has been singled out as a factor affecting employees' involvement in innovation (Axtell et al., 2000). The other factors that facilitate and/or support employees' participation in innovation include organisational culture and leader support (Hansen, Amundsen, Aasen, & Gressgård, 2012). Smith, Ulhöi and Kesting (2012) identified support from middle managers as especially important since they work closely with employees; they are also in a position to motivate employees to take an active approach in improving their work situation. Smith et al. (2012) further suggested that the influence of leader support varies with the phases of the innovation process. At the idea generation phase, it is more important for leaders to provide a safe environment for employees to communicate their ideas and reward employees for generating new ideas. At the implementation phase, it is more imperative for leaders to ensure employees have access to the resources needed to implement the ideas.

Employees' participation in in-work learning opportunities such as formal training and workplace discussions have also been identified as levers of employee innovation (De Speijlaere, Van Gyes, & Van Hootegem, 2012; Ellstöm, 2010). They develop "practical skills, intra and interpersonal awareness and learning about the organisation" (Ellinger & Cseh, 2007, p. 436), and these could spur them to make improvisations and changes to work processes and practices. Learning at the workplace occurs largely through workplace interactions and everyday practices, and could take many forms such as exploration, peer-to-peer communication, customer interactions, on-the-job training and performing one's job. In their study of factors that enhance and inhibit learning at the workplace Sambrook and Stewart (2000) found that motivation to learn and clarity of one's role facilitate learning at the workplace. According to Sambrook and Stewart (2000), having senior management support also enhances learning at the workplace.

While the involvement of employees in innovation almost certainly leads to some form of workplace learning or knowledge development, the participation of employees in workplace learning may not necessarily result in employee engagement in innovation. How employees perceive risk and uncertainty and ability to accomplish responsibilities associated with their job roles can also exert an influence on their willingness and commitment to innovate (Segarra-Ciprés, Escrig-Tena, & García-Juan, 2019). Beyond the practices and culture that workplaces adopt, an integral part of employees' participation in innovation rests on their willingness to learn and innovate. In their research which explored the practice of employee learning in SMEs in Hong Kong, Tam and Gray (2016) found that workplace learning in SMEs is largely self-initiated, unstructured and job-related, regardless of their life-cycle stages. SMEs generally do not organise formal learning and development for their employees; the employees have to create their own learning. It may be individual, ad-hoc or interpersonal as it depends on what they can gain access to in the workplace. Many of these employees are also engaging in workplace learning when there is a need to, and though their learning may not be varied, they are not unduly concerned as they can always turn to their colleagues who are always prepared to teach them. The basis of learning in SME workplaces is often grounded in just-in-time learning to solve specific problems or perform specific tasks, and the innovations that emerged are often focused on incremental and small improvements rather than radical changes (Voxted, 2018).

## METHODS

There is no one single, unified definition of SMEs, but they are generally defined as non-sub-sidiary, independent firms which employ fewer than a given number of employees and hold



financial assets below a specified ceiling (Ndesaulwa & Kikula, 2016). In the European Union, companies are regarded as small or medium if they have no more than 250 employees and no more than \$50 million Euro turnover. In the US and Canada, SMEs can have up to 500 employees (Katua, 2014). In Singapore, SMEs are defined as companies with at least 30% of local shareholding, group annual sales turnover of not more than S\$100 million or group employment size of not more than 200 employees.

The two Singapore SMEs reported in this paper were involved in a larger study that aims to identify personal and workplace practices that allow employees to initiate, enact, and sustain workplace initiatives. In the larger study, sampled enterprises come from clusters of industries that were deemed as Singapore's key industries as they contribute over 80% to the country's Gross Domestic Product (GDP). The clusters are Manufacturing, Built Environment, Trade and Connectivity, Essential Domestic Services, Modern Services, and Lifestyle.

Within these clusters, the identification of enterprises that are innovative was done with the assistance of agencies with responsibilities to promote innovations in Singaporean enterprises. In addition, desktop research on business awards that includes the presence of innovations as one of their judging criteria was conducted. The referenced list of awards includes but are not limited to: SME 100, Singapore Quality Class, and Emerging Enterprise Awards. In total, the project sampled 7 enterprises, with two from each cluster. The two enterprises reported in this paper are from the Trade and Connectivity and Lifestyle industry. Even though both enterprises come from different industries, they are similar in terms of enterprise characteristics. Both enterprises have been operating for more than 30 years, with similar staff strength. In terms of staff composition, a majority of staff in both enterprises are blue-collar workers, with management forming the minority.

A total of 20 participants were interviewed, 10 from each enterprise. In the first round, they were asked about their understanding of innovation and what innovations they have witnessed at their workplace. The interviews were then audio-recorded and transcribed for analysis. After the analysis was completed, the findings were shared with the participants of the study in a second round of interviews to validate the findings. Both rounds of interviews generally last 45–60 min.

## Context of the study

To maintain the anonymity of both enterprises, they were given the pseudonyms Delight Transport and Comfort Food Manufacturing respectively. Participants were also given pseudonyms to protect their identity.

Delight Transport is a family-owned enterprise from the Trade and Connectivity industry. The enterprise's main business involves providing domestic residential moving, commercial moving, international moving, and storage and disposal services. The enterprise has been operating for almost 40 years, with a staff strength of almost 200. Majority of staff at Delight Transport are movers. The enterprise is a family business run by second-generation owners along with a small team of managers and executives. [Table 1](#) provides an overview of the profile of participants involved in the study.

Similarly, Comfort Food Manufacturing is a family-owned enterprise from the Lifestyle industry. The enterprise has been operating for more than 35 years, with a staff strength of around 60. The enterprise produces and distributes traditional Chinese buns and food products,



Table 1. An overview of participants from delight transport

Name (Pseudonym)	Job title	Years of employment
Aaron	Business Development Manager	8
Claudia	Digital Marketing Manager	2
Glen	Chief Operations Officer	13
Joshua	Strategic Partnership Manager	2
Leah	Assistant Account Manager	4
Abbas	Keyman	7
Hairon	Operations Chief	7
Brandon	Warehouse Manager	5.5
Hafeez	Operations Field Manager	14
Azmin	Storeman	17

such as steamed buns and glutinous rice with chicken to local food centres and supermarkets. Like Delight Transport, majority of their staff are workers in the production line. These workers are involved in the entire production process, beginning with the mixing of ingredients to steaming the buns to packaging. The enterprise also employs drivers to distribute their products island-wide. Unlike Delight Transport, the first and second-generation owners are running the enterprise. However, the first-generation owner is still the one running the enterprise and continues to hold authority of enterprise matters. The second-generation owners are put in charge of various departments within the enterprise, such as Human Resource and Business Development. The various departments in the enterprise are headed by a family member whilst the founder remains as the owner of the enterprise. Table 2 provides an overview of the profile of enterprises involved in the study.

## RESULTS

### Management support

The employees at Delight Transport often have to divide packing materials such as corrugated rolls which usually come in “big, big, rolls” into half but “not every job needs a big roll”.

Table 2. An overview of participants from comfort food manufacturing

Name (Pseudonym)	Job title	Years of employment
Ann	Accountant	5
Jimmy	Assistant Supervisor	9
Shaun	Production Operator	2
Zack	Production Operator	2
Mandy	Business Services Supervisor	19
Sally	Business Services Officer	2
Sofia	Food Packer	9
Tom	Sales and Delivery Supervisor	17
Ben	Assistant Supervisor	16
Kent	Production Operator	5



According to Glen, the process to divide the roll manually was tedious and one of their handyman decided to use the motor from a “massage chair that the customer gave away” to create a contraption that allows employees to turn huge rolls of packing materials into smaller rolls. When the handyman suggested the idea to the management, it supported him and after some trials and errors, he managed to create a winder that was able to turn rolls of corrugated rolls and bubble packs into two smaller rolls at the “press of a button”, and it only requires one employee to operate compared to previously where two employees have to manually divide the materials and they take a longer time to do it.

Employees at Comfort Food have also suggested ideas on how they perform their work better, and their management is similarly supportive. Mandy, for example, suggested to her management that they could “type in all the orders onto the Excel spreadsheet” instead of writing them “on a piece of paper” and attaching them “to the order”. She then had to “manually tabulate the total” before passing them on to the delivery drivers to dispatch the goods. The management backed her idea, and her department has since adopted her suggestion. It made her job easier as she simply has to “download the purchase orders” and “import the data into an Excel format”, and the software can do the calculations for her, resulting in less effort and time on her part to tabulate the total cost of the orders. It also reduces the chances of her making mistakes in the calculations.

### Collegial learning

In the case of Abbas, a keyman at Delight Transport, this took the form of observing how his seniors worked while he was working as a part-timer. He explained that before he started out as “a part-timer” in Delight Transport, he was “learning” but never told his seniors that “he was learning”. Through his observations of senior employees, he was able to discern that certain trucks should be deployed to certain residential areas as these areas have narrower roads that prevent larger trucks from entering the premises. In his current position as keyman, he was able to leverage on this knowledge to ensure that the right trucks are deployed for the job. This allows the trucks to be parked nearer to the job site, which shortens the distance required for them to carry the items over to the trucks. If he had deployed larger trucks, the truck would get stuck and the movers would have to carry the items over a longer distance, making the move less efficient.

For Comfort Food, employees tend to learn from seniors and colleagues when they join another department in production. According to Zack, when employees first start in a new department, “someone will teach” them how to perform the required job tasks and will “point out” and tell the new employee “how to do it correctly” if they make mistakes. This allows new employees to understand how departments along the production line interact with each other. For example, Ben has worked in the steaming department before joining his current department that supervises the mixing of ingredients to prepare the dough to produce buns. Having worked in the steaming department previously, Ben had learned from his seniors and colleagues about the possible factors that can cause buns to break during the steaming process, one of which could be that the dough “was not stirred properly”. Hence, when Ben moved to the department that prepares the dough to produce the buns, he suggested to prolong the stirring time for the dough so that it reduces the chances of buns “breaking during the steaming process”.



## Opportunities to participate in formal learning

While informal learning is prevalent in both enterprises, it is observed that both enterprises also place heavy emphasis on sending their employees on courses to learn and upskill themselves. Delight Transport, for example, often sends big groups of employees for formal classes, and they often form a class on their own, one of which is the bizSAFE course. The bizSAFE course is a nationally recognised capability building programme designed to help companies build workplace safety and health capabilities. The course ranges from bizSAFE 1 to bizSAFE 4. Having a class on their own, according to Bandon, is beneficial for the employees. As they all know each other, they “would not be shy”, he said, “to ask any questions”. The instructor is also able to pace the class according to their level which optimises their learning experience better in the course. According to Azmin, attending safety courses like these resulted in the suggestion of “safety shoes”. This was supported by Glen, who mentioned that one of the movers “put into the suggestion box” that they “should have safety boots for their safety”. Since then, the enterprise has mandated that every mover wear safety boots at work.

Delight Transport also sends some of their employees to a lean management course, where under the guidance of the instructor, they devised a way to reduce parking fees for trucks within the company compound. According to Joshua, it was a known issue that “a lot of vehicles actually clustered in the company compound” as movers had to collect wrapping and packing materials from the warehouse before they commenced their jobs. However, having all the trucks lined up creates a traffic jam within the compound. In addition, trucks will also be charged parking fees while staying in the compound, resulting in an accumulation of parking fees. Joshua and his colleagues came up with the idea of doing it “like a McDonald’s way”, like a “drive through”, whereby materials are prepared in advance and trucks simply have to drive to the warehouse, pick the items up and move to the job site. In implementing this system, the enterprise is able to save on parking fees and trucks can be deployed to job sites in a more efficient manner.

Similarly, Comfort Food has a practice of sending their staff to external courses. Sally, for example, was sent by her management to attend a course offered by the Singapore National Employers Federation (SNEF) where speakers were invited to discuss the latest human resource (HR) trends and whether there are any changes in HR practices. From the course, she learned about the latest HR trends and practices. She then utilised her newly acquired knowledge to identify potential benefits that could be incorporated into the enterprise’s HR policy. Sally mentioned that by attending the course, she became cognisant of the “other entitlements” which other companies have introduced for their staff that Comfort Food can consult. This includes entitlements such as dental claims. Sally suggested this to her management and they are considering to adopt this into their policy, which will provide more benefits to employees in the enterprise.

## Job rotation

Azmin, one of the longest serving employees at Delight Transport, had done operations, warehousing, and some sales. Now, as a storeman, he draws from what he has learned while working in other departments such as operations to identify materials that are often required for moving to be placed in an easily accessible place instead of “putting them behind” deep inside the warehouse. This, he added, makes it “easy” to take the materials out for the movers. In



Comfort Food Manufacturing, employees likewise get to rotate between different departments once they have mastered the skills required for their current position. This usually involves learning how to operate machines in the new department. According to Zack, a production operator in Comfort Food Manufacturing, someone in the new position “will teach [them] how to do it at the beginning and if they did something wrong, it will be pointed out to them and they will be told how to do it correctly” which is akin to learning from others.

Like Delight Transport, job rotations allow Comfort Food employees to gain a better understanding of the entire manufacturing process and how machines function in different departments. This allows them to provide suggestions to improve the quality of products. For example, Kent, another production operator, noticed that the bun skins on buns that came out of machines “get wrinkled at times” and suspected that the “proportion of the flour to the yeast is wrong”. He then consulted Ben, his supervisor, who had experience working in both the steaming department and the department that prepares the dough for the buns. Together, Kent and Ben suggested adding “a little more” or reducing “a little more stuff” in the dough to address the issue. They also proposed the idea of including baking powder into the mix to their boss even though this was initially not a practice, and it worked. Ben was able to draw on his experience working in both the steaming department and the ingredients preparation department to identify the potential causes for the bun’s wrinkled appearance and give suggestions on improving existing processes and products.

In both enterprises, mechanisms are in place that allow employees to be rotated in different departments. In Delight Transport, long serving employees tend to take on various roles, which give them a sense of how different roles function and interact with one another. As a result, they are able to give ideas and suggestions that extend beyond their domains.

## DISCUSSION

Both enterprises have demonstrated that despite their resource constraints and limitations as SMEs, they have managed to be innovative in their attempt to improve their enterprise’s work processes to stay relevant and competitive (Ahedo, 2010). As observed, the employees’ ideas come about as a result of their engagement in workplace learning which occurs in the everyday hustle and bustle of work. The types of learning they engaged in are both informal and formal in nature which includes learning from seniors and colleagues, attending formal learning courses and job rotations, and this echoes what Taylor and Evans (2009) have found.

Management support is evidently integral to employees generating new ideas and implementing them such as digitalising the process of collating customers’ orders and using software to calculate the total cost of orders in the case of Comfort Food Manufacturing which resulted in the department adoption of the idea. It is especially crucial during the process when employees attempt to bring the ideas to fruition as they may not succeed on their first try. In the case of the handyman from Delight Transport for example, he only managed to create the winder after a few experimentations. The learning that he amassed during the trials and errors was pivotal in helping him construct the winder. Without his management support, he might not be able to fulfil what he set out to do. This management support extends to engaging their employees in formal learning.



This is interesting, as studies from other researchers have found that SMEs tend to prefer work-integrated learning or informal and incidental learning (Panagiotakopoulos, 2011; Tam & Gray, 2016) due to the limited resources that SMEs have (Ahedo, 2010; Rosenbusch, Brinckmann, & Bausch, 2011). As SMEs are also concerned about task efficiency and fast results (Hoque & Bacon, 2006), it was expected that the enterprises from this study would exhibit similar behaviour and focus on creating learning opportunities in the workplace as it would be more “economical, practical, relevant and timely” (Tam & Gray, 2016, p. 673) for the enterprises. On the contrary, both enterprises are committed to sending their employees for courses. Delight Transport, for example, has often sent big groups of their employees for courses such as the bizSAFE course and they often form a class which optimises their learning experience. In addition, the lean management course which the employees attended resulted in them implementing several changes to the way operations are run in the enterprise, including the enactment of a policy that mandates every mover to wear safety boots while on the job and creating a ‘drive-through’ system for movers to collect their packing materials.

Similarly, Comfort Food Manufacturing also has a practice of sending employees to courses, albeit on a smaller scale. Sally, one of the employees who was sent to attend a HR course was exposed to the latest trends and practices in the HR industry, which allowed her to identify potential improvements the enterprise can make to their HR policy. It is evident for the two enterprises, management is supportive of their employees’ learning which is an important component of enhancing learning at work (Sambrook & Stewart, 2000). When management is supportive and sends their employees to courses, employees can draw on these external sources of knowledge which they can use as inspiration to generate ideas to improve the enterprise’s work process. Indeed, sending employees to attend formal learning has long been identified as a lever for employee innovation (De Speigelaere et al., 2012; Ellstöm, 2010) as employees can develop “practical skills, intra and interpersonal awareness” (Ellinger & Cseh, 2007, p. 436), which spurs them to make improvisations to work processes and practices.

In both enterprises, it was also observed that participants learn from seniors and colleagues and from their experience working at the enterprise. These methods tend to be unstructured and job-related, and they resonate with past studies on workplace learning in SMEs (e.g. Tam & Gray, 2016). By engaging in these types of informal learning, employees are able to diagnose and come up with solutions to address work-related problems or make improvements to work processes. For example, Abbas was able to learn how to handle problems that may arise from his work by learning from his supervisor, Hairon. By drawing on his supervisor’s knowledge and experience, Abbas learned how to take the appropriate actions to address problems he faced at work. This also supports findings from Voxted (2018) who demonstrated that learning in SMEs often occur to solve specific problems or perform specific tasks.

For Comfort Food, learning from seniors and colleagues often goes hand-in-hand with job rotations as the departments in the production line are closely linked. For example, once the dough for the buns are prepared, it would be sent for steaming before being conveyed to the packing department for delivery to customers. As employees rotate between departments, they are taught by senior employees in the new department on how to operate the machines and any other working methods associated with the department. While this does not contribute to employee ideation directly, this enables employees to have a wider perspective on how the enterprise’s products are manufactured. Hence, when employees notice problems with the



products, they are better able to identify potential causes of the problem and problem-solve more effectively.

Collegial learning also encourages ideation from employees to improve work processes. This can arise even in the absence of problems to solve or the need to learn how to perform a specific task. For example, by speaking to and learning from other colleagues, Aaron was able to provide constructive feedback on a chatbot solutioning project by synthesising different perspectives he heard from his colleagues. In the case of Ann, the knowledge she accumulates through her experience at work contributes to her idea of presenting financial reports in a different format to accommodate the enterprise's expansion even though it was not in relation to problems she is facing at work.

Finally, the study found that job rotations can positively influence the ideation process for employees. This echoes the findings from [Axtell et al. \(2000\)](#), who found that job rotations affect employees' involvement in innovation. As employees rotate to different departments, they are also trained by senior employees in the new department. In the process, they gain a broader perspective of the enterprise's work processes. With the bigger picture in mind, they are in a better position to suggest ideas that extend beyond their work domain as they understand how different departments interact with each other and the implications of their ideas.

This is observed in Delight Transport, where Azmin, who had worked in the operations department, arranges the packing materials in the warehouse such that materials that are often used in moves are stored in places that are easily accessible. He is able to identify these commonly drawn materials due to his experience in the operations department. It is also observed in Comfort Food manufacturing where Ben, who has worked in different departments within the enterprise suggested to his boss to adjust the proportion of ingredients used in the preparation of dough so that the modified dough will have less problems when it is sent for steaming. Through these authentic on-the-job experiences, employees acquire a wider perspective on how work is done in the enterprise and this allows them to problem solve more effectively.

According to [Skule \(2004\)](#), job rotations can "stimulate learning and innovation", as employees have to learn the working methods of their new departments and handle demands from new stakeholders ([Skule, 2004](#), p. 14). By rotating between different departments, this gives them a better understanding of the nature of each department's jobs and could help inform the development of their ideas to improve the enterprise's work processes.

## Implications

One of the implications of the findings is that SMEs may want to consider job rotations. When employees work in different departments, they can better understand how the varied work processes are related to one another. In addition, as they spend more time working in different departments, they gain a deeper level of knowledge on how and why things are done in certain ways. This could encourage them to identify how things can be improved. By offering job rotation to employees, they are cross-trained, and they can help to provide cover when the enterprise experiences shortage of manpower. This is especially crucial for SMEs that are often operating on a lean structure.

The provision of job rotation is best accompanied by a coaching and/or mentoring system in place for employees. For new hires or those who have transferred to another department, they



often have zero or little knowledge of the work that they will be doing. It will expedite their learning process if they have senior colleagues to coach and mentor them on the performance of the work. The coupling of job rotation and coaching and/mentoring system encourages extensive learning which has been found to promote idea generation that helps enterprises to improve their work process and practices. To stay relevant and competitive, SMEs have to continuously learn, not unlike their larger counterparts, as it is the only way to go if they want to stay in the business. While informal and incidental learning are “far more economical, practical, relevant and timely” (Tam & Gray, 2016, p. 673) and meet the learners’ specific needs and helps them to address their job issues, it is equally important that SMEs organise formal learning and development for their employees as they are shown to contribute idea generation. The ones that really benefit from all these learning are in fact the enterprise themselves.

### Limitations

One potential limitation of the study is that it is conducted with only two SMEs. Furthermore, the participants involved in the study are mostly semi-skilled workers. The extent to which the findings can be transferred to other contexts such as those with skilled workers may be limited. Furthermore, the selection of the participants was solely decided by the enterprises. Though they were briefed on the scope of the study, the enterprises might have nominated employees that have a keen interest in learning and putting forward suggestions. It may be instructive to also interview, for example, those that seldom contribute ideas even though they may have attended various formal trainings.

## CONCLUSION

To conclude, this paper has explored how workplace learning opportunities can contribute to innovations by employees. Specifically, it seeks to provide a greater understanding of how employees’ engagement in workplace learning contribute to the initiation, enactment and sustenance of EDI in Singapore SMEs, which is significant because to date, most of the EDI studies are conducted in the Nordic context. It may not have made a dent in workplace learning and EDI scholarship, but it is clearly a step forward in forging our understanding in these aspects.

## ACKNOWLEDGEMENT

The authors declare no conflict of interest and report no financial or other relationship relevant to the subject of this article.

## ABOUT THE AUTHORS

Dr. Justina Tan is the Director of Centre of Workplace Learning and Performance, Institute for Adult Learning, Singapore University of Social Sciences. Her research interests include mentoring and coaching and employee-driven innovation.

Mr. Joel Sim is the Research Executive from Centre of Workplace Learning and Performance, Institute for Adult Learning, Singapore University of Social Sciences.



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