BEST PRACTICES Guide

INCREASE: INnovation Capacity building foR EnhAncing Sustainable growth and Employability

Increase

Erasmus+

Authors

Ewa Kopczynska, Daniela Marta - E&D (Portugal)

Michael Dell, Jasna Kovcin, Riccardo Dell - Warp Innovation (Austria)

Ana-Maria Cozgarea, Constantin Filote – USV (Romania)

Anca-Cornelia Socolovschi, Magda Faraoanu – ADES (Romania)

Aleksandra Staszynska, Carolina Sorribes, Irene Esteve – InnoHub (Spain)

Joanna Bac, Maciej Markowicz – DANMAR (Poland)

Nikhil Phadnis – LUT (Finland)

Table of Contents

1 Introduction

Best Practices Guide consolidates previous experience and knowledge of engaged partners and stakeholders together with state of the art and results of the piloting phase and lessons learned to produce a comprehensive guide on *how to effectively support innovation education of low-skilled adults at the high risk of automation and their engagement in SME innovation*. We provide fourteen such Best practices for education and teaching the target groups identified in INCREASE project.

The guide provides the pilot testing phase experience from the *Innovation Modules* (IO3) - what worked well and what are the points for improvements, "do's" and "dont's" when trying to develop and offer such type of solution in this particular subject and target group, advises and tips, as well as includes external best practices and comparison between the methodologies, outcomes, impact and other relevant factors. It aims to contribute to the exploitation of the outputs at their full potential. The output will allow its users to understand the current state of the developments in the area, the effective innovation provided by the solution and can be easily used as a base for users looking to develop further innovation in the area or apply the state of art in their practice.

The Best Practices Guide includes 2 key areas to achieve its objectives:

1. The recommendations for engagement of stakeholders in innovation processes with a special pressure on interrelations between managers and low-skilled employees for effective continued innovation cooperation. This part focuses on lessons learnt by the partnership on methods, requirements and implications for building inclusive co-innovation methods in SMEs.

Erasmus+ Key Action 2 Strategic Partnerships.
Agreement number: 2019-1-RO01-KA204-063804

Co-funded by the
Erasmus+ Programme
of the European Union

Stakeholder engagement in innovation processes consists of several parts that cover critical topics such as:

❖ Importance of employee engagement in innovation processes

❖ Challenges to involving employees in innovation activities: A Manager-employee interrelations perspective in innovation settings

❖ Prerequisite requirements for fostering employee innovation in companies

❖ Recommended Best practices for companies, SME managers and individuals to promote engagement of stakeholders.

2. Recommendations for adult educators for building innovation competences among low-skilled adults - integrating the state of the art, partnership experience and lessons learnt on how to teach innovation within the target group and what mistakes to avoid. It covers relevant teaching and training guidelines on the topic of innovation education based on the outcomes of our pilot testing and proven global best practices.

Innovation education for low-skilled adults and SMEs

❖ Introduction and State-of-the-Art of Adult Learning and Training activities.

❖ Various challenges and barriers in re-education and re-skilling Adult learners.

❖ Recommendations on Best Practices to train Adult learners on topics related to innovation in SMEs and/or Non-technological sectors.

Erasmus+ Key Action 2 Strategic Partnerships.
Agreement number: 2019-1-RO01-KA204-063804

Co-funded by the
Erasmus+ Programme
of the European Union

2 Stakeholder engagement in innovation processes

2.1 Importance of employee engagement in innovation processes

Employee engagement is primarily about a positive mental state, including a solid cognitive, emotional, and behavioural mindset that inspires employees to do their best to achieve organizational goals. Since employees who considered themselves engaged at work performed well in their working environment, the concept of employee engagement attracted great attention worldwide (Shuck, Reio, and Rocco, 2011). Employee engagement contributes to creating a pleasant and empowering environment, which catalyses increased individual and collective involvement in implementing organizational innovations (Palumbo, 2021).

Today, organizations are turning to creativity and innovation to prosper and develop, while confronting unprecedented sustainability challenges. Creating a competitive advantage requires innovation. If organizations do not innovate, they will fail to create conditions for long-term growth. Therefore, firms should place a high value on innovation if they wish to be prosperous in the long run (Rao, 2016). According to Rao, the most crucial element of innovation success is an organization's human resources. That is because Innovativeness is born from ideas, and employees are the ones who create, hold, adapt, and respond to ideas.

Asserting this, numerous studies, mention a strong link between employee engagement and innovation. In other words, any attempt at innovation is dormant if there is no engagement from employees. Different researchers have analysed the relationship between employee engagement and innovation and claim that employee engagement is one of the significant determinants of innovation (Arshi and Rao, 2019). The importance of employee engagement for innovation processes can be obtained from Aaltonen and Heinonen's (2016) studies which demonstrate that employees who are 'engaged' are much more likely to propose or discover innovative ideas to enhance management or business operations. Therefore, organizations that are habitually inventive are more intentional about enabling individuals to be involved and connect in manners that spark and develop ideas (Arshi and Rao, 2019). These studies all agree

Erasmus+ Key Action 2 Strategic Partnerships.
Agreement number: 2019-1-RO01-KA204-063804

Co-funded by the
Erasmus+ Programme
of the European Union

that one of the most important aspects of managing innovation is establishing the right culture and environment for employees to exchange and build on each other's ideas and insights (Shanker et al., 2017). The results of different studies suggest that providing this opportunity for employees to be innovative is a motivating factor that drives employee engagement - and vice versa. Engaged workers tend to be more creative workers as well (iDashboards Blog, 2017).

Therefore, the INCREASE project has collected data from partner countries to collate the best models of employee engagement practices, curated by SME managers for other SMEs.

2.2 Challenges to involving employees in innovation activities: A Manager-employee interrelations perspective

Innovation comes from integrating existing or newly developed knowledge and technologies for specific objectives, and as already discussed, people create and develop this knowledge and technology. Thus, the significant role of human resources in innovation is emphasized for innovative activities in organizations (Carayannis and Meissner, 2017). However, employee participation in innovation processes may be difficult and causes some challenges.

Lack of Organizational climate: One of the main elements of successful innovation processes is creating an "organizational climate for innovation," which is crucial for developing competitive advantages and enhancing the performance of the human resources engaged with innovation activities (Shanker et al., 2017). Nevertheless, altering the organization's mindset in order to make innovation "alive" in employees' thoughts might be difficult. This may result in misunderstandings about the innovation. Simply put, Employees may be passionate about creating ideas and participating in innovation initiatives, but they may lose sight of the project's overall purpose to utilize the innovation in multiple ways (Carayannis and Meissner, 2017). Managers may not be receptive or open-minded to accept the ideas coming from employees and may act as idea killers, instead of supporting them. Moreover, it also relates to leadership and a healthy managerial mindset to support their employees and allow them the flexibility

Erasmus+ Key Action 2 Strategic Partnerships.
Agreement number: 2019-1-RO01-KA204-063804

Co-funded by the
Erasmus+ Programme
of the European Union

to explore ideas that could improve their internal processes, build better products or increase operational efficiency.

Lack of a formal Innovation process: According to Müller-Krogstrup (2011), another challenge while engaging employees in innovation could be the establishment of a systematic and continuous process for collecting, enhancing, and selecting ideas. When an organization has many employees with different knowledge, backgrounds, and ideas, things can easily get tricky in the case of managing ideas and selecting processes, and managers should consider the situation carefully in order to develop a systematic approach for idea collection and assessment (Porumboiu, 2021).

Being afraid of managers: Research suggests that managers are considered to be formal representatives of top management. Therefore, the employees interacting with managers tend to keep a formal distance leading to a lack of open communication, and engagement, an unsupportive environment resulting in the fear created in the mindset of the employee. The distinct formal boundary created between the manager and the employee may have an opposing effect on innovation activities in the company. An employee contributing to innovation may hesitate and find it challenging to approach the manager due to managerial fear. Partly, this also has to do with the risk of innovation. Most innovations fail, and managers do not want to risk failure however, this mindset is changing and managers must accept that failure is a part of success. Learning by doing approaches without having the fear of failure and being courageous to innovate is the mindset that a leader and manager should adopt to build a creative organisational climate. Additionally, micromanagement of employees also constrains their creative thinking and ability to contribute to innovation practices. Constant constraints not only reduce the innovation competence of the organisation but also kill several business opportunities that could have been commercialised by the SME. Therefore, SME managers must support flexibility of work. This means employees are encouraged to explore new ideas and solutions out of their predefined scope of work to promote innovation across their organization.

Erasmus+ Key Action 2 Strategic Partnerships.
Agreement number: 2019-1-RO01-KA204-063804

Co-funded by the
Erasmus+ Programme
of the European Union

2.3 Conditions for creating innovation-engagement in companies

According to Totterdill and Exton (2014), organizational innovation is fundamentally a social phenomenon. In an innovative organization, success does not depend on following a sequential process of change towards a defined goal, but rather on the capacity to establish innovative and self-sustaining processes of reflection, learning, and change. In order to achieve this, employees must be able to gain knowledge from a variety of sources and be encouraged to experiment. Continuous involvement of employees in organizational dynamics can foster organizational learning (Palumbo, 2021) which can boost organizational innovation through knowledge creation, acquisition, exchange, and adaptation (Alsabbagh, Hamid and Khalil, 2017).

Also, scholars point out that workplace innovation begins with an open dialogue in which employees, unions, managers, and clients are allowed to participate, thereby creating new forms of collaboration and social relations are essential. It leads to building bridges between the leadership's strategic vision, the expertise and tacit knowledge of operational employees, and the organizational design insights of experts. It involves all stakeholders in a discourse where the more compelling argument wins out (Totterdill and Exton, 2014). Affirming this, teamwork, and a good relationship among employees in a team are considered significant drivers for employee engagement according to Anitha (2014).

Another requirement for better employee engagement in innovation is job design. Job design can set an environment for a workplace that allows employees to utilize their skills and be creative. On the other hand, in order to achieve a good quality job design, teamwork is essential and Innovative workplaces are built on empowered, self-organized workgroups. As already mentioned, through sharing knowledge and problems, removing barriers and delimitations, and using insights gained from their day-to-day work experiences, teams generate ideas for improvement, innovation, and growth (Totterdill and Exton, 2014); Therefore, job design may enhance employees' motivation which leads to positive effects on organizational innovation (Arshi and Rao, 2019).

When it comes to organizational structures, it is inevitable that a set of walls and ceilings that divide people into units, classifications, grades, and job titles restricts the way they collaborate, creating separate groups that limit collaboration that will hinder good teamwork. Therefore, It is imperative that the mechanisms that direct decision-making, resource management, performance, and standard operating procedures reflect authorizing and trust rather than bureaucratic micromanagement (Totterdill and Exton, 2014). Palumbo (2021) also claims that when there are supportive interactions between managers and their employees, the working atmosphere can improve and this results in more loyalty, trust, and fairness that can improve employees' innovative behaviour.

It is also possible to boost employee engagement in innovation processes by establishing regular forums in which employees can discuss ideas freely and without regard to their job titles or hierarchies ((Totterdill and Exton, 2014)).

IO2 presents the best practices guide for models of employee involvement in innovation processes, developed with SME managers and provides several frameworks for engaging employees in innovation practices. These practices have been collated and proposed in this guide for SME managers and companies that look to foster an innovation culture, and support employees' engagement, through intrapreneurial and entrepreneurial activities and creating innovation competencies.

Erasmus+ Key Action 2 Strategic Partnerships.
Agreement number: 2019-1-RO01-KA204-063804

Co-funded by the
Erasmus+ Programme
of the European Union

3 Best Practices for stakeholder engagement in innovation practices

This guide consists of best practices utilised in companies and from the partnership experience to engage employees and other stakeholders in the innovation processes of the company. It outlines several individuals and company-related traits, methods and cultures used by industry-leading SMEs that practice innovation management actions to achieve competitive advantages.

1. **Use of platforms as Ideation channels:** Establishing several communication channels to reach the employees is necessary for SMEs to promote innovation and delivery of ideas to the organisation. Therefore, the use of platforms such as Slack, WhatsApp, and other communication platforms have been instrumental to support the idea-collection process from employees. The platforms allow employees to interact, debate and discuss solutions that employees provide convenience and flexibility at any time. Innovative ideas and solutions also require a stimulus, such channels and platforms support creative discussions and act as potential sources of innovation in companies.

2. **Structured formal innovation process:** Several stakeholders can contribute to innovation, and therefore it creates a problem for top management to manage the innovation activities in their company. As a result, it is necessary to create and standardise an innovation process within the company. Typically, it consists of three main stages ideation, evaluation and implementation. The following section summarises practices within each phase of innovation:

   a. **Ideation phase:** In this phase, employees and stakeholders submit ideas to purposefully improve processes, products, or offerings in the company. They suggest changes intended to create a creative culture in their daily work environments. Therefore, several ideation software are deployed in SMEs to

collect information, ideas and create channels for idea management within companies.

b. **Analysis and evaluation:** In large companies, it is quite common to have thousands of ideas submitted each day. Therefore, it is necessary to establish a process of filtration of ideas and prioritise ideas to be implemented systematically using cross-functional teams to estimate their impact and potential carefully for efficient resource allocation.

c. **Implementation:** Post the evaluation phase, the most promising ideas are implemented into the company with a structured plan and tracking the level of improvement promised by the idea for further optimisation.

3. **Recognition of ideas:** The practice of recognising promising ideas and providing merits to the employees to create public recognition. Such initiatives are given in the form of monetary incentives, and awards that attract team admiration and motivate other employees to also get involved. It also creates future leadership skills, new managers and creative personnel to sustain innovation in the long term. Moreover, monetary incentives are just one possible way to recognise ideas. In fact, our research revealed that nonmonetary and immaterial incentives are equally impactful such as assisting and sponsoring training to the employee for personal skills development, allowing the employee to attend conferences or networking events, sometimes even sponsoring a scholarship for their children may help to motivate employees to work creatively and contribute to company innovation.

4. **Recognising failed ideas:** Firstly, managers must accept that failure is a part of innovation and must also be equally recognised as innovation success. For example, in our case studies, we witnessed managers communicating to their employees about idea failures. The intent of such workshops was to promote and improve upon failed ideas. Managers act supportive in situations of failed ideas and retrospect to learn from faliures-. The SME creates special workshops to investigate why an idea failed and helps employees to improve on them. Such practices have a long-term motivating effect and allow for continuous improvement

of ideas implemented in the organisation. Moreover, employees feel encouraged without being disheartened which provides them self-confidence and brings good results eventually.

5. **Flexibility for employees:** Providing enough flexibility in their job design, i.e opportunities for employees to make their own decisions and changes in day-to-day processes has a significant impact on innovation culture. Noone likes micromanaged and demotivated employees. The sense of flexibility allows for self-confidence and provides them with the courage to act independently to organise their task management without being micro monitored. This approach results in the emergence of various innovative forms of accomplishment, and personalisation of tasks therefore managers must not micromanage or oversupervise their employees.

6. **Supporting intrapreneurship and entrepreneurship activities:** In an age of open innovation, managers must capitalise on internal as well as opportunities within the company. An organisation can be as innovative as the entrepreneurial mindset of the employees. Therefore, it is necessary to recognise entrepreneurship or intrapreneurship (a system that allows an employee to act like an entrepreneur within a company or other organization) to support and promote activities. For example, creation of an entrepreneurial living lab infrastructure in a company may allow employees to experiment, design and develop their prototypes. Sometimes, management may decide to invest in the employee's idea to create a spin-off or act as an incubator for promising ideas resulting in new start-ups. Providing infrastructure, machines and technologies to try and test ideas would foster innovation and an entrepreneurial mindset of the employee that creates leaders for the future of the organisation. Moreover, good managerial practices provide the skills and training for their employees that are willing to learn and develop their professional skills. They recognise the lack of knowledge in specific areas and collaborate and train their employees in the necessary innovation competencies.

Erasmus+ Key Action 2 Strategic Partnerships.
Agreement number: 2019-1-RO01-KA204-063804

Co-funded by the
Erasmus+ Programme
of the European Union

Therefore, to motivate employees some main approaches used to support intrapreneurship and entrepreneurship activities are talent training through individualised programs, promoting employees to take on tasks with the greater complexity and more responsibilities, moving from competitive style to collaborative and participatory approaches and stimulating creativity through the creation of extensive cross-functional teams to capitalise on the experience of employees

7. **Awareness of Innovation in SMEs:** Most employees know about innovation but do not know how to practice it. The creation of awareness campaigns to promote and inform employees on the various concepts of innovation through online or offline means could increase accessibility, communication, and collaboration. Communicating innovation concepts through newsletters, broadcasts, and internal competitions helps foster a healthy inclusive creative experience that which employees get interested in those promoting innovation culture. Communicating innovation on aspects such as entrepreneurial and interpersonal thinking at the workplace through posters, events, workshops, debates and discussions allows all stakeholders to innovate, take action and become proactive to accelerate and promote the organisational innovation climate.

These best practices enable stakeholders from different hierarchies to be involved in innovation to achieve sustained growth at all levels of the organisation. It outlines several aspects of the interrelationships between managers and employees and provides techniques and solutions to work around traditional SME tendencies applicable to the non-tech sector. Section 2 of this file elaborates on INCREASE project and provides the best practices for the training of adults on innovation within companies in the non-tech sector and provides methods, tools and activities performed by vocational education and training organisations, SMEs , freelancers and consultants guide to address this target audience.

Erasmus+ Key Action 2 Strategic Partnerships.
Agreement number: 2019-1-RO01-KA204-063804

Co-funded by the
Erasmus+ Programme
of the European Union

4 Innovation education for low-skilled adults

4.1 Introduction and challenges of adult learning in SME's

According to the OECD report, 46% of the workers may lose their jobs or undergo a significant change to their job profile because of automation in the coming decades. It is a known fact that megatrends such as technological changes, ageing population, globalisation, and non-standardised work environments are causing new skill sets to be developed amongst individuals. Such global megatrends are the reason why it is important for adult education and learning to significantly upgrade their skills to keep up with the pace of global changes (OECD,2019).

Before we deep dive into the innovation methods required for adult education purposes, it is necessary to establish the operational definition for this report for „low skilled adults".

OECD, 2019 defines adults with low educational levels as „namely those whose highest qualification is at the lower secondary level (ISCED 0-2), which means they have not completed high-school or equivalent". Additionally, they also mention that low skilled adults are those who can complete, mathematical tasks, arithmetic operations, understand simple percentages et cetera.

However, in this report, we contrast the definition of the low skilled adult and provide our own, since adult education in the innovation area typically needs a prerequisite education higher than those mentioned above. Moreover, it is important and critical to note that, low skill does not mean low experience. Such target segments may have low literacy and numeracy levels, however, may possess a range of other valuable skills such as the ability to drive, and care for customers, that they have gained through years of experience. Lastly, the work experience gained sometimes may or may not relate to the associated formal qualifications of the individual and yet they would not be termed as low skilled adults.
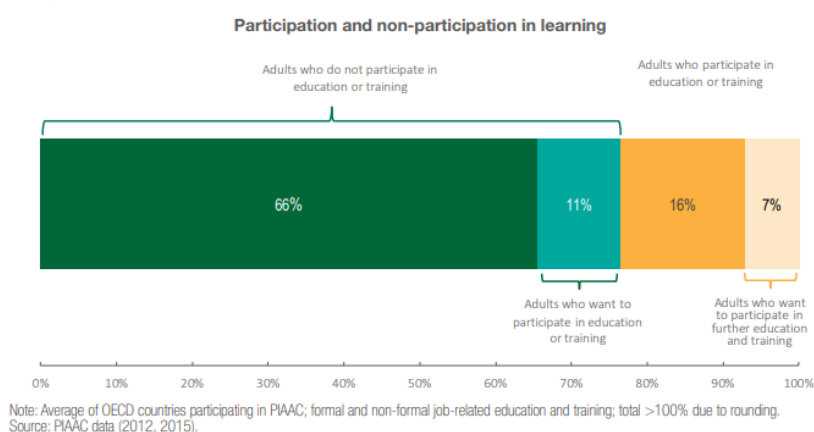
Moreover, because of their lack of academic background or qualifications, low-skilled persons frequently find themselves shifting from job to job (NCAL, 2008; Hilliard, 2011).

Erasmus+ Key Action 2 Strategic Partnerships.
Agreement number: 2019-1-RO01-KA204-063804

Co-funded by the
Erasmus+ Programme
of the European Union

Hochlander et al., 2003; Kirsch et al., 2007; JFF, 2011) found that obtaining a post-secondary degree or vocational training can have a considerable influence on employment security, economic stability, and earning capacity. The minimum wage has not kept pace with inflation and is now significantly below what is considered a family-sustaining pay (NCAL, 2008; Chisman, 2011). Perhaps it was never meant to be a family-supporting income, but amid an increasingly uncertain economic future, many individuals are reconsidering their professional choices.

In this document, Low-skilled include non-R&D staff from low R&D intensive sectors (specifically defined as in high automation risk - manufacturing, service, crafts) - as the main target group of the project, but not limited to agriculture, retail and hospitality sectors (as defined in IO1 and IO2 already).

Previous data suggest that participation in adult education and training is the most difficult challenge that organisations have to face and adults with low skills are less than half likely to participate in adult learning activities as those with higher skills. While awareness campaigns and many innovation programs exist in SMEs and low-tech companies, research suggests that they are not effective enough. It is necessary to find creative and direct ways to improve the participation of lower-skilled adults in training activities(*Getting Skills Right Engaging Low-Skilled Adults in Learning*, 2019).

Figure 1. Significance of participation in low skilled adult education training

Erasmus+ Key Action 2 Strategic Partnerships.
Agreement number: 2019-1-RO01-KA204-063804

Co-funded by the
Erasmus+ Programme
of the European Union

In the INCREASE project, we discuss the best practices that are used by different SMEs and non-tech sector companies to engage employees in innovation practices in their companies along with their effectiveness, managerial mindset and innovation settings needed to attract employees and adults to innovate.
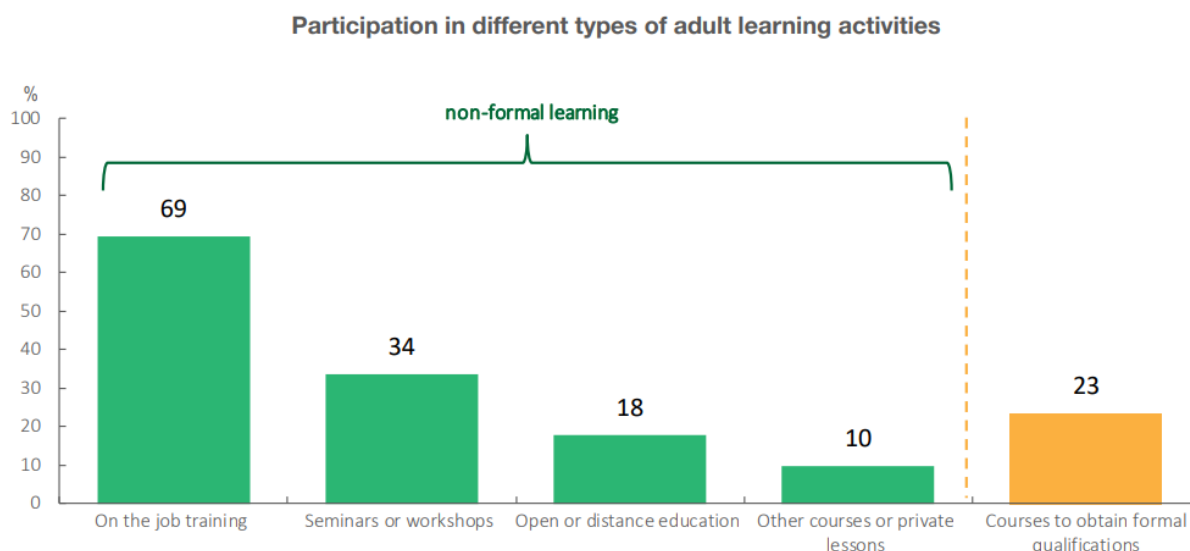
Figure 1, demonstrates low participation in adult education. Research suggests that there are several reasons for low participation levels for adults to re-educate. Some of them are listed below:

1. **Time Management issues:** most low skilled adults are working from 8 to 12 hours, sometimes, including weekends. Therefore, extra training or every education exercise becomes a direct threat to their daily wages and income for their families. Therefore, considering the flexibility of learning becomes a critical aspect of teaching innovation-related competencies.

2. **Financial barriers:** Despite having the ability to learn and the willingness to educate themselves through courses, online learning platforms or VET organisations, adults may lack the financial prowess and hesitate to invest in themselves. Most online courses and platforms that provide skills are expensive, are on a recurring subscription service or do not provide scholarships. Such situations create additional barriers and affect the mindset of the adult despite his willingness to learn.

3. **Mindset and cognitive abilities:** Many low skilled adults have a different mindset and resist new learning after a specific age. Therefore, it is difficult to reach them and encourage them to learn a new skill set. OECD 2019, suggests finding creative ways to reach such crowds through community-based approaches and building bridges between adults with low skills and learning opportunities. Moreover, it was also seen that rather than approaching individuals to participate in re-skilling, it is effective to approach a community of people. The probability of a group of people participating in learning activities is higher than that of an individual.

Erasmus+ Key Action 2 Strategic Partnerships.
Agreement number: 2019-1-RO01-KA204-063804

Co-funded by the
Erasmus+ Programme
of the European Union

4. **Technological barriers**: Many aged low skilled adults have difficulty operating and adapting to the digitalised world we live in. That is, using mobile phones, laptops and digital devices is difficult to adapt to and must be considered when organisations devise their solutions. While the use of digital devices has accelerated the adoption of e-learning platforms, it is also important to think from the target audience's perspective on the interface of the e-learning platform that should be easy, convenient and user-friendly for them, thereby increasing the effectiveness of learning (O'Neill & Thomson, 2013).

5. **Language barriers**: apart from the above barriers, the INCREASE team also noticed language to be a critical factor in their learning experience. Several aged adults do not speak English as their second language. Such a trend was noticed in all partnering countries and was a significant phenomenon in SMEs, remote areas or non-tech sectors. A comfortable medium of communication language must be considered as it affects their learnability, the effectiveness of training and the ability to understand knowledge. If the adult learning activities are tailor-made to their native language, adults were seen to be more receptive and freer from the language anxiety issues to raise questions, reflect on their thinking and communicate more frequently than otherwise (O'Neill & Thomson, 2013).

To encourage learning activities, we must first understand the breakdown of participating adults by types of different learning activities. Figure 2 below shows that the maximum percentage of adults prefer on-the-job training as compared to seminars, open a distant education or other private courses are lessons. Only 23% of learners take part in courses to obtain a formal qualification, while most take part in non-formal learning opportunities.

Erasmus+ Key Action 2 Strategic Partnerships.
Agreement number: 2019-1-RO01-KA204-063804

Co-funded by the
Erasmus+ Programme
of the European Union

Figure 2. Participation of adults in types of learning activities (*Getting Skills Right Engaging Low-Skilled Adults in Learning*, 2019).

This is important to consider during teaching and training activities of innovation since the e-learning platforms that inherently fall under the open or distant education bracket, must be practical and hands-on to provide the on-the-job training experience. The INCREASE project also falls within the open or distant learning platform but incorporates several aspects of the on-the-job training, seminars, and workshops to provide holistic learning experiences and increase the engagement of learners to help them relate their professional experiences to new competencies. INCREASE e-learning platform consists of several localised case studies, interactive elements, and visuals to engage users. Additionally, it also consists of open-ended questions, do's and don'ts when learners are on-the-job, extra self-reading material and practitioner-oriented toolkits that adults can use in their daily lives and contribute to innovation activities.

Erasmus+ Key Action 2 Strategic Partnerships.
Agreement number: 2019-1-RO01-KA204-063804

Co-funded by the
Erasmus+ Programme
of the European Union

5 Recommendations on Best Practices while teaching innovation to adults in non-tech sectors

The Best Practices Guide provides a set of guidelines to assist and encourage adult educators, VET organisations, trainers and SMEs to teach innovation skills and increase the effectiveness of training significantly. It compiles several aspects from the piloting phases consisting of approximately 140 participants that were trained through the increased e-learning platform. Data was collected regarding their experience, learnability, the effectiveness of modules, suggestions and improvements recommended to improve the learning efficacy of adults.

5.1 Practices to consider while teaching innovation in non-tech sectors and SMEs

1. **Visual learning:** INCREASE partnership decided to focus on several visuals and infographics that were built through Canva as an alternative means to provide content. Visual learning and infographics were seen as winners in all of the modules and in all partnership countries. Visual infographics, downloadable elements, clearly explained concepts in summarised formats through diagrammatic representations, illustrations were seen as effective in the learning process. The practice of visual learning supports research which suggests that adults are more perceptive to visual data and understand concepts with better clarity. Therefore, visual learning increases the engagement between the learner and the trainer significantly.

2. **Comic style stories with content**: the partnership utilised online learning tools such as Pixton, to demonstrate local case studies and concepts through a comic book style format. Learners appreciate this format and suggested implementing decision-based comics to support learning. For example, currently, the comics are static in nature wherein the user clicks on the next slide to progress through the story and dialogue. However, many adults wanted to have increased interaction. For example, while teaching business models and innovation, a user must know

and practice the use of different business model patterns. Therefore, it was suggested that having a decision-based storyline wherein the user selects a business model and sees its outcome at the end of the module would allow him to reflect on his own choices and the impact of making wrong decisions simultaneously. Users and adult learners feel engaged and attached to the story as it progresses, which also acts as an evaluation mechanism for making appropriately informed decisions.

3. **Inserting exercises and evaluation mechanisms at regular intervals:** it is necessary for trainers to pace their evaluation mechanisms at regular intervals. It was seen that several adult learners grasp concepts at short intervals. Therefore, it is advised to create presentations, materials which present one or two concepts of innovation and an interactive exercise followed by the concept. This method is preferable as compared to creating an entire slide set and evaluating the participant at the end of the module since it feels like an information overload for them and is difficult to grasp and recollect information learned from the module. Therefore, exercises, quizzes and evaluation mechanisms are preferable to be deployed at short intervals focused on one or two concepts instead of the entire module.

4. **Narration, chatbots and Mobile interfaces:** Digital e-learning platforms are distant learning mechanisms, therefore trainers must find creative ways to keep the level of interaction and engagement with learners for effective knowledge transfer. Smartphones are available to adults at all times with an active Internet connection, therefore it creates an ideal resource for learning new skills. In line with the digital trend, recommendations provided by our participants were the inclusion of narration mechanisms, audio cues, chatbots and mobile apps through which learning can be practised anytime and anywhere. As seen earlier, most adult learners perform 8 to 12 hours of jobs excluding the commute times to job locations. Therefore, in order to provide more flexibility in knowledge transfer and learning at their own pace, it is advisable to create materials that are narration friendly with local language support, wherein slides are in the form of a podcast or an audiobook that they can listen to

Erasmus+ Key Action 2 Strategic Partnerships.
Agreement number: 2019-1-RO01-KA204-063804

Co-funded by the
Erasmus+ Programme
of the European Union

while on the job or during commute. Such tools are not difficult to implement in a digital world and are an easy way to engage with target audiences while increasing accessibility to audiences who are visually impaired. The adult education space also focuses on special cases such as audio-visual impaired people who would like to learn new skills and competencies, therefore the application of narrations, easy Mobile interfaces, and audio podcasts address larger social issues.

5. **Off-line access to materials, content and knowledge:** Considering the digital transformation and availability of smartphones to every individual, it is also necessary to consider remote job locations of adult learners. For example, in Finland and the wood industry is a prominent sector for its growth with several adults working cutting trees within remote forests. Therefore, it is important to consider areas that have limited Internet access and connectivity and solve the problem of online-only learning content. It is recommended to have an off-line feature to the e-learning platforms, mobile apps or materials from the trainer that are fully downloadable, accessible and do not rely on an active Internet connection.

6. **Materials and content contextual to local situations**: participants find it important and appealing to include case study materials that relate to local as well as global contexts. If we neglect the addition of local case studies, they may find it challenging to relate to the concepts and learnings of these case studies, possibly leading to poor effectiveness of teaching. Therefore, all course materials must be contextual to local situations, in local languages. It is necessary to have a balanced mix of global and local case studies for holistic learning experiences. Materials such as case studies must be collected through localised interviews, videos and translated to native/comfortable languages to create maximum effectiveness in teaching innovation competencies. This recommendation applies to the trainer specifically, since it is the trainer's responsibility to create tailor-made content given the geographical region, and context of the target audience and to identify scenarios with which the target audience can relate.

7. **Interactive e-learning platform to support learning:** When the trainer decides to choose an e-learning platform to deliver his content, it is necessary to ensure several aspects are technical and non-technical to deliver the knowledge effectively. The list below summarises and outlines the partnership's experience while piloting and feedback collected from testing the INCREASE e-learning platform and provides practical recommendations on the e-learning experience aspects that adult learners found relevant for efficiency of their learning:

- Providing more compressed but equally comprehensive content,
- Including search function, for adults to find specific keywords,
- Including less text, but more infographics,
- Implementating videos and audio lectures,
- Gamification of content from decision-based stories and comics,
- Providing downloadable content and access to data off-line,
- Including more national and local examples,
- Including self-evaluation mechanisms at regular intervals between learning modules,
- Creating discussion forums, for users to present their ideas and thoughts,
- Eensuring easy to use graphical design of the platform and friendly for end-users' navigation.

References

1. Alsabbagh, M., Hamid, A., & Khalil, A. L. (2017). The Impact of Organizational Learning on Innovativeness (An Empirical Study on the Education Sector in Damascus City). *International Journal of Academic Research in Business and Social Sciences*, *7*(7). https://doi.org/10.6007/IJARBSS/v7-i7/3135

2. Arshi, T., & Rao, V. (2019). Assessing impact of employee engagement on innovation and the mediating role of readiness for innovation Assessing impact of employee engagement on innovation. In *Int. J. Comparative Management* (Vol. 2, Issue 2).

3. Carayannis, E. G., & Meissner, D. (2017). Glocal targeted open innovation: challenges, opportunities and implications for theory, policy and practice. *Journal of Technology Transfer*, *42*(2), 236–252. https://doi.org/10.1007/s10961-016-9497-0

4. *Getting Skills Right Engaging low-skilled adults in learning*. (2019). www.oecd.org/employment/emp/

5. J., A. (2014). Determinants of employee engagement and their impact on employee performance. *International Journal of Productivity and Performance Management*, *63*(3), 308–323. https://doi.org/10.1108/IJPPM-01-2013-0008/FULL/XML

6. O'Neill, S., & Thomson, M. M. (2013). Supporting academic persistence in low-skilled adult learners. *Support for Learning*, *28*(4), 162–172. https://doi.org/10.1111/1467-9604.12038

7. Palumbo, R. (2021). Engaging to innovate: an investigation into the implications of engagement at work on innovative behaviors in healthcare organizations. *Journal of Health Organization and Management*, *35*(8), 1025–1045. https://doi.org/10.1108/JHOM-02-2021-0072

8. Rao, V. (2016). *INNOVATION THROUGH EMPLOYEE ENGAGEMENT*. APCAR. www.apiar.org.au

9. Shanker, R., Bhanugopan, R., van der Heijden, B. I. J. M., & Farrell, M. (2017). Organizational climate for innovation and organizational performance: The mediating effect of innovative work behavior. *Journal of Vocational Behavior*, *100*, 67–77. https://doi.org/10.1016/j.jvb.2017.02.004

10. Shuck, B., Reio, T. G., & Rocco, T. S. (2011). Employee engagement: An examination of antecedent and outcome variables. *Human Resource Development International*, *14*(4), 427–445. https://doi.org/10.1080/13678868.2011.601587

11. *The Link Between Innovation and Engagement | iDashboards Blog*. (n.d.). Retrieved May 3, 2022, from https://www.idashboards.com/blog/2017/11/22/engage-to-innovate-or-innovate-to-engage-which-comes-first/

12. Totterdill, P., & Exton, R. (2014). Defining workplace innovation: The fifth element. In *Strategic Direction* (Vol. 30, Issue 9, pp. 12–16). Emerald Group Holdings Ltd. https://doi.org/10.1108/SD-09-2014-0112