

# Social and Emotional Learning for **VET (In the Australian context)**

Joe Pagnoccolo, 2022



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# 1. Acknowledgments

## 1.1 The Awarding Bodies

The Fellow sincerely thanks The Italian Australian Foundation for providing funding support for the ISS Institute and for this Fellowship.

The ISS Institute plays a pivotal role in creating value and opportunity, encouraging new thinking and early adoption of ideas and practice by investing in individuals. The overarching aim of the ISS Institute is to support the development of a ‘Better Skilled Australia’. The Institute does this via the provision of Fellowships that allow Australians to undertake international skills development and applied research that will positively impact Australian industry and the broader community.

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## 1.2 Sponsor – The Italian Australian Foundation

The Italian Australian Foundation (previously the Italian Services Institute Inc.) is an association dedicated to providing welfare and education services for disadvantaged persons of Italian descent who are a resident of Australia who would not have access to these services.

## 1.3. Personal acknowledgements

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## 2. Executive Summary

The primary goal of the Fellowship was to investigate social and emotional learning (SEL) in vocational education and training (VET) learners for the Australian context, in addition to exploring international best practices in SEL in various settings to learn how they can be applied to VET programmes in Australia. In this Fellowship study, indentured apprentices from traditional trades participated as study participants. In recent years, the Australian vocational workforce has faced the challenges of a rapidly changing economy, including disruptive technologies (the Internet of Things and big data) (Oztemel & Gursev, 2020) and shortages in occupations with specific skill sets (Infrastructure Australia, 2021). However, while future employment will be technologically enabled, it will still rely heavily on human abilities that cannot be replicated by algorithms, according to the Digital Transformation Expert Panel (as cited in Energy and Utilities Industry outlook report, 2022, p. 29).

Apprentices in a work culture adhere to a set of practices and standards illustrated by the sociological theory of symbolic interactionism (Carter & Montes Alvarado, 2019). This theory holds that individuals use meaningful, symbolic communication in face-to-face interactions and small groups to develop and maintain social structures (and the larger society) (Carter & Montes Alvarado, 2019). Support structures, such as the supervising tradesperson developing a strong relationship with the apprentice, are also important for successful apprenticeship outcomes (Stanwick, Ackhurst & Frazer, 2021). Yet, Australia's apprentice completion rate for trade occupations of 55.1% (NCVER, 2021) suggests issues like interpersonal difficulties with employers or colleagues are primary reasons for not completing an apprenticeship (Bednarz, 2014, p35).

SEL includes learning to manage emotions and thus deal with social connections within the framework of the learner's curriculum, as well as preparing students for the challenges of a dynamic workplace (Yoder et al., 2020). SEL is a key component of vocational education and training (VET), which provides people with the knowledge, skills, and/or competencies needed for specific occupations of the labour market (ABS, 2018).

The Fellowship was completed in two stages, from July 2021 to September 2022. The first step was an online survey, followed by phone interviews in Melbourne, Australia. The second stage included a three-week trip to Europe. This included visits to VET and higher education providers in Singapore and Italy, as well as participation in a teacher training workshop and presenting at an education conference. I networked with academics and conducted interviews with stakeholders, teachers, students, and managers. I also observed classroom spaces, and the teaching, learning, and assessment materials.

This Fellowship I have undertaken has allowed me to draw on my previous education research when I completed my Ph.D. on emotional intelligence and generic skills in traditional trades. I have been able to use this learning and apply it to further my interest in human behaviour, particularly the apprentice experience. This has assisted me to see how people learn new concepts, practise social skills, and problem-solve.

The Fellowship was divided into three parts: administering an online survey, conducting in-depth interviews with apprentices from a training college, and conducting research. The overseas field trip included visits to vocational colleges, conference presentations, and participation in a teacher training workshop. The outcomes of this Fellowship will be disseminated to stakeholders via conferences, symposiums, and articles in academic research journals.

I learned new instructional strategies from the networks of people I met at the conference, workshop, employers, and training institutes. I have been able to forge new links with those I have met which has developed into a delegation from Singapore to visit my Institute.

Several main responses are recommended based on the Fellowship research.

- Create new apprentice training practices and learning strategies that incorporate SEL competencies from the syllabus being delivered. For example, using Mentimeter that has collaborative learning in virtual and face-to-face classes (see Appendix 3.1)
- Cluster the SEL competencies in a project-based activity and use the station rotation model (see Appendix 3.2) as a teaching-learning method to engage the student, employer, and teacher for summative assessment.
- Use the student-lead approach to apply innovative learning to the syllabus by using the gamification of practical subjects (see Appendix 3.3) to transform the learning experiences of students.
- Engage students and teachers in the culture of SEL by using a case study to show how it can add value to the skills and knowledge. This can be achieved by inviting employers to talk about their expectations of the SEL competencies in the workplace.
- Create a collective culture like a community of practice for apprentices where they can collaborate with others about their SEL in training. This can be via a chat page at their place of learning (school webpage for apprentices of discipline specific courses) where they can discuss their work experiences.

## 3. Fellowship Background

### 3.1 Introduction

The main aims of this Fellowship were to investigate best practices in social and emotional learning (SEL) in different settings to learn about how they can be applied to vocational education and training (VET) programmes in Australia, to present the conditions necessary for these best practices to be introduced at institute and national levels, to enhance instruction delivery in these programmes so that alternative methods can be used to engage students in the apprenticeship experience and help them develop their skills, to inform the training required for VET teachers to integrate SEL into their teaching delivery and courses, and show the key benefits to make the SEL training viable. Another goal was to disseminate the best practices and Fellowship ideas and present it to local stakeholders in the wider VET sector.

The Fellowship focused on three main activities:

1. Administering an online survey and conducting in-depth interviews with apprentices from a training college.
2. Organisation of an overseas field trip including visiting vocational colleges, presenting at conferences, and participating in a teacher training workshop.
3. Disseminating the outcomes of this Fellowship to stakeholders through conferences, symposiums, and articles in academic research journals.

Apprentices – trainee workers who undertake a contract of training with an employer (Apprentice and trainee outcomes, 2021) combine academic and structured, work-based learning under a mentor or supervisor (Lerman, 2019), will continue to be the backbone of Australia's economy, working in increasingly sophisticated and technology-rich trade environments. This completion rate must improve for widening pathways and careers for young school leavers, upgrade occupational skills, increase the productivity and wages for youth and retain employees (Lerman, 2019).

Support structures, such as the supervising tradesperson developing a strong relationship with the apprentice, are also important for successful apprenticeship outcomes (Stanwick, Ackhurst & Frazer, 2021). Apprentices in a work culture adhere to a set of practices and standards illustrated by the sociological theory of symbolic interactionism (Carter & Montes Alvarado, 2019). This theory holds that individuals use meaningful, symbolic communication in face-to-face interactions and small groups to develop and maintain social structures (and the larger society) (Carter & Montes Alvarado, 2019). It applies particularly to apprentices, who are novices on a job site; they enter an established work culture accompanied by peers and experienced tradespeople who supervise them. Little is known about the poor completion rates and SEL of apprentices hence the paucity of research on this topic.

### 3.1.1 Introduction to the concept of Social and Emotional Learning (SEL)

Social and emotional learning is the process whereby all children and adults attain and apply the knowledge, skills, and attitudes required to develop healthy identities, manage emotions, achieve personal and collective goals, feel, and demonstrate empathy for others, form and maintain supportive relationships, and make responsible and caring decisions (CASEL, 2021).

SEL includes learning to manage emotions and thus deal with social connections within the framework of the learner's curriculum, as well as preparing students for the challenges of a dynamic workplace (Yoder et al., 2020). SEL is an important component of vocational education and training (VET), which provides people with the knowledge, skills, and/or competencies needed for specific occupations of the labour market (ABS, 2018). Social and emotional skills are important for well-being and happiness, as well as for positive educational outcomes, and for achieving Sustainable Development Goals (Hallman, 2016; Hamilton & Schwartz, 2019).

The five interconnected SEL competencies (Bridges, 2021) are:

- self-awareness – the ability to recognise and comprehend one's own emotions, thoughts, and values, as well as how they influence behaviour in various situations;
- self-management – the ability to control one's emotions, thoughts, and behaviours in a variety of situations to achieve one's goals and aspirations;
- social awareness – the ability to recognize and empathize with people of many ethnicities, cultures, and backgrounds;
- relationship skills – the capacity to form and sustain healthy, supportive relationships, as well as navigate environments with a variety of people and groups; and
- responsible decision-making – the ability to make thoughtful and productive decisions about one's own personal, behavioural, and social interactions in a variety of contexts.

Vocational education and training packages for apprentices contain few SEL competencies, and SEL is given insufficient priority when developing educational policy. The World Economic Forum (WEF, 2022) claims that there is a lack of knowledge about SEL and its benefits, an insufficient prioritisation of SEL skills, a lack of consensus about valid and reliable SEL metrics, a lack of SEL financing and resources, and insufficient availability of SEL programmes and products. These barriers hinder the advancement of SEL skills education in VET apprentice teaching.

### 3.1.2 Relevance of SEL in the Apprentice Experience

Because an apprenticeship involves learning and using skills, it provides opportunities to develop the five SEL competencies. Skills such as planning and organising, critical thinking, collaboration and collaborative problem-solving, identifying situational demands and opportunities, and establishing interests with a sense of purpose are integral to most apprentices' training, and all benefit from SEL competence.

Apprenticeship training in Australia presents its own set of challenges, with distinct crafts and a variety of training methods used across various sectors and businesses. Polo et al. (2018) argue that it is critical to identify the presence of specific training subcultures by comparing across trade sectors and within industries. Registered training organisations can identify subcultures and adapt training programmes accordingly. Effective apprenticeship training requires matching training and assessment and ensuring that the on-the-job component reflects what is learned at work (Stanwick et al., 2021). An apprentice's ability to complete an apprenticeship influence by their on-the-job decision-making training.

## 3.2 Fellowship methodology

Since the Fellowship began in March 2020, the research period has been extended due to unforeseen circumstances. A study of people in their settings was conducted to provide a narrative account of their practices in relation to the SEL framework. Desk research and field trips were also conducted. Online Surveys, interviews, observation, and document analyses were used to collect data. Inferential statistics and thematic analyses of the data were used to create a profile of the sample of individuals exposed to SEL pedagogies in their training.



*Figure 1. CASEL Social and Emotional Learning Core Competencies*

### 3.2.1 Mixed methods study

The first stage is divided into two parts: delivering online surveys and conducting interviews conducted as a mixed-methods study. The online surveys were conducted over 60 days in July and August 2021, and interviews were scheduled over three weeks in September 2021 and September 2022, from Monday to Friday after hours.

The mixed-methods study described herein measures the sample of Australian apprentices' social and emotional learning (SEL) in their apprenticeship experience, quantify their social and emotional learning competencies, and analyse apprentices' perspectives on how SEL competencies influenced their training. It also sought to investigate how social and emotional skills affected an apprentice's ability to complete their training.

The study's aims were to obtain a deeper understanding of the apprenticeship experience, focusing on the role of SEL, and to create an authentic account of apprentices' actual training experiences. We pursued these aims by seeking to answer the following research questions:

RQ1: What social and emotional learning competencies do Australian apprentices have?

RQ2: Are high SEL competencies associated with a higher rate of training completion?

RQ3: How do these SEL competencies influence an apprentice's capacity to deal with employment challenges in apprenticeships?

#### Quantitative part

Our quantitative survey assessed the apprentice experience across the five key SEL constructs listed earlier. It also enabled us to determine the participants' competence in each of the five SEL skills. To collect quantitative data, an online social (and emotional competence questionnaire (SECCQ) questionnaire (Zhou & Ee, 2012) with 25 brief statements and five items per scale, was used. Participants used a 5-point Likert-type scale to respond to each item (from strongly disagree to strongly agree).

#### Qualitative part

Thirty-one survey respondents volunteered to participate in the in-depth interviews that followed the quantitative data collection. The aim was to collect detailed data as to how apprentices identified SEL competencies and how these influenced their training experiences. The author conducted interviews after hours, Monday through Friday, for three weeks in September 2021. Interviews lasted an average of 22 minutes (range: 34.84, lowest: 9.23 and highest 44.04). A professional transcription service transcribed the individual audio-recorded interview responses. Coding used pieces of data that fitted into our prescribed categorization frame. Themes emerged from the

interview data showing instances in training where SEL influenced their actions and behaviours, such as identifying and processing emotions and stress, demonstrating resilience, and maintaining relationships with ways to overcome challenges. The goal was to describe the phenomenon using narrative accounts of participants' lived training experiences from the data (Mihas, 2019).

### **3.2.2 Field trips**

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The Fellowship consisted of a series of face-to-face meetings with VET stakeholders and colleges in Singapore and Italy. It also incorporated a conference and a workshop in Barcelona.

#### **ITE Singapore and Institute “De Panfilis - Di Rocco”**

The purpose for visiting ITE Singapore and Institute “De Panfilis - Di Rocco” - Italy was to learn about how they prepare its future workforce of students and adult learners with skills for employability and lifelong learning and to obtain an overview of the Singapore and Italian school system & vocational education. To do this, meetings were held with college administrators and vocational practitioners to discuss how their institutes are preparing its students and adult learners with future skills for employability and lifelong learning. Touring the campus facilities at these institutes saw the different learning contexts and the various courses delivered. Observations were made of trainees in their natural school settings doing their exercise tasks.

To address the research objectives that prompted the investigation, I investigated and discussed their applicability to the Australian VET system, specifically: exploring international approaches that employ innovative practices in social and emotional learning (SEL). The goal was to explore a learning culture that uses aspects of SEL competencies that could be used in Australian VET programs.

### **3.2.3 Conference**

The purpose for attending the Barcelona Conference on Education (IAFOR) was to interact with participants on interdisciplinary discussion, develop an enhanced intercultural awareness and to promote international exchange. Listening to the broad variety of perspectives from academics, industry, and practitioners across various disciplines provided me with strategies and knowledge of how SEL can be incorporated into the teaching and learning delivery of Australian VET programs.

### **3.2.4 Workshop**

The aim of attending the one-week Social and Emotional Learning (SEL) for Successful Schools workshop in Barcelona was to provide me the opportunity to interpret and apply the CASEL integrated framework elements in the classroom. Attending the workshop was specifically designed to achieve a research goal: to generate reliable and valid data about SEL in education.

### 3.3 Fellowship period

This Fellowship occurred during unusual and difficult circumstances when a global epidemic affected society on multiple levels: social, environmental, economic, and political.

- Phase one: Quantitative - online surveys occurred over 60 days between July and August 2021. Qualitative – in-depth interviews took place over three weeks in September 2021.
- Phase two: Field trips, conference, and workshop to Singapore and Europe in September 2022.

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### 3.4 Fellowship Biography

I work as a senior electrical instructor at Holmesglen Institute. I have a long and distinguished career in electrotechnology, having worked in the commercial, industrial, domestic, and scheduled maintenance sectors. I completed an electrical apprenticeship before beginning a career as a VET teacher, where I instructed students studying building construction and electrotechnology. I have also completed formal post graduate qualifications in education and written technical content while working for a skilled service organisation. This included taking post-trade electrotechnology courses as well as undergraduate and post-graduate degrees in business and education. This project I have undertaken has allowed me to draw on my previous educational psychology research when I completed my Ph.D. on emotional intelligence and generic skills in traditional trades. I have been able to use this learning and apply it to further my interest in human behaviour, particularly the apprentice experience. This has assisted me to see how people learn new concepts, practise social skills, and problem-solve.

### 3.5 Abbreviations, acronyms, and definitions

AIS	Australian Industry Standards
ANOVA	Analysis of variance
BCE	Barcelona Conference on Education
CASEL	Collaborative for Academic, Social, and Emotional Learning
DESE	Department of Education, Skills, and Employment
IoT	Internet of Things
ITE	Institute of Technical Education

SEC	Social and Emotional Competency
SECQ	Social and Emotional Competency Questionnaire
SEL	Social and Emotional learning
VET	Vocational Education and Training
WBL	Work-based Learning
WEF	World Economic Forum

# 4. Fellowship Learnings

## 4.1 Fellowship learnings - Online survey and in-depth interviews

This Fellowship applied a mixed-methods technique to collect the data. The quantitative approach included an online survey with 144 apprentices from six trade classifications (see Appendix 4.1). The survey's results used the Qualtrics software version (2021). Thirty-one apprentices volunteered to take part in the qualitative semi-structured in-depth interviews (see Appendix 4.2) and applied thematic analysis to analyse the data.

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The findings showed a connection between self-awareness (SA) and social awareness based on the apprentices' experiences (SoA). Self-Management (SM) identified a gap in the situational training experiences of apprentices. The apprentices' SEL skills had an impact on their training through the strategies they used to interact with others. Apprentices highlight the role of working as a team and communication when working with others. The research implications show that psychometric testing does not appear to explain the situational context of the apprentice experience and the qualitative approach used in this study is not generalizable to a larger population. The practical implications of this study illustrate that it is possible to create new apprentice training practices and learning strategies that incorporate SEL competencies. This will help to inform stakeholders about intervention strategies for this cohort. To date, there is a paucity of research on the influence of SEL on the apprentice experience and its impact on training. This study adds to the body of knowledge about the importance of SEL in apprentice training.

## 4.2 Social and Emotional Learning at the Institute of Technical Education College Singapore

ITE is a post-secondary vocational education institution for school leavers and working adults. ITE has an enrolment of 28,000 students across three colleges - ITE College Central, ITE College East, and ITE College West. Students participating in vocational education can enrol in apprenticeship-based courses as well as fulltime, part-time, and diploma courses. It employs a work-based approach to teaching and learning in its discipline-specific pedagogies. The college collaborates with industry and has many proprietary products donated for students to learn. Its highly developed and successful economy provides students with the motivation



Figure 2. ITE College West

to work with cutting-edge technologies that are being installed in the building environment and used in the services sector.

The SEL Framework (Ministry of Education, 2008), which has been used as the guidelines to facilitate the development of Singaporean students' social and emotional competencies (SECs) (Liem, Chua, Seng, Kamarolzaman, & Cai, 2017, p4). resilience, and harmony represent the building blocks that lead to the development of personal qualities. (Ministry of education, 2014; cited in (Liem, Chua, Seng, Kamarolzaman, & Cai, 2017). Some of the reasons for incorporating SEC competencies and core values in the curriculum in the Singapore education system are to better prepare students for the future and to help them learn independently (Liem, Chua, Seng, Kamarolzaman, & Cai, 2017).

Some of the ways the SECs have been applied at ITE include a focus on a supportive school culture assisted by the teacher-student relationship. This is apparent in the various ways in which the training is delivered to its students through the courses they provide. Meetings with staff and school administrators were held to discuss aspects of the social -emotional competencies (SEC) in course design and student expectations. Rationales were offered for the reasons why strategies for course outcomes were chosen.

#### **4.2.1 Social and emotional learning at ITE College Singapore.**

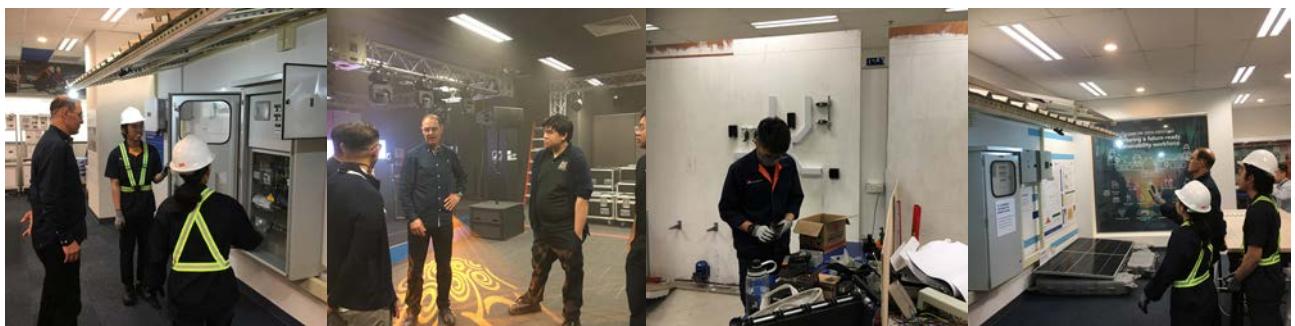
Some of the good SEL practices adopted at ITE were the supportive learning environment it uses to assist students develop their social and emotional competencies. The world skills competition provides students ways to develop their self-management practices and reflect on their cognitive skills when doing the work tasks in a set time frame to complete the work. Another strategy used by ITE is to partner with industry to expose students to simulated examples seen in the dynamic work environment. This gives students real-world problems to solve, which helps them develop their problem-solving abilities.

I noticed one of the key methods ITE worked on students' social and emotional learning was by developing their personal and social competencies. In conversations with teachers and school administrators, I observed how students were learning to take responsibility for themselves and develop their self-awareness through the activities they were doing in their classes. When working on group projects with others, the students' communication skills improved. Due to the collective culture of Singaporean society, students are drawn to cultivating a sense of community among their peers, which fosters a spirit of teamwork in the learning environment.

At ITE, there is no known assessment of the "social learning" concept. However, the continuation of these practices by the teaching staff, along with their integration into the core curriculum, appears to show a recognition of the success of social education in a vocational context.

At ITE Singapore, their values are categorized as integrity, teamwork, excellence, and care. These values appear to be most closely associated with social and emotional learning. The methods for teaching SEL appear to be developed through teaching delivery, which is not directly quantifiable, but rather through multiple observations to understand the interpersonal nature of teachers and students. Meetings were held with teachers and administrators, and they were interviewed about critical incidents and events, as well as how they thought they should be approached or dealt with within the school setting.

The clean energy centre showcased students' work with solar panel applications in the industry, as well as the skills and knowledge they gained through the courses they were enrolled in. Students described their collaborative learning with others and demonstrated the activities and practices they employed in conjunction with what they had learned in their course.



*Figure 3. Left to right – Clean Energy Centre, Sennheiser Sound Academy, World Skills Lab, Students demonstrating the work practices they were applying when working with solar panels*

I observed project-based learning, which students are exposed to through real-world tasks, as teamwork and problem-based learning are used. The WorldSkills lab highlighted students' interdisciplinary skills such as self-management, where they demonstrated self-discipline and self-motivation to complete their project. When preparing for the world skills competitions, students used planning and organisational skills to complete their tasks. They were incorporating the skills they had learned in their courses and adapting them to their own work practices to complete their projects. Students studied lighting and sound at the Sennheiser Sound Academy. Students created concrete experiences in authentic learning situations based on task-based learning by communicating with others and practising leadership skills.



*Figure 4. Figure 4 left to right - Student working on a project in the WorldSkills lab, Students applying their skills in the Sound Academy.*

Instances where ITE is working with industry to use their proprietary products for students to gain skills was seen at the ITE Sembcorp Centre for Sustainable Solutions, the Intelligent Building Systems Lab, and the ITE-Schneider Predictive Maintenance Centre at ITE College East.



Figure 5. left to right - Sembcorp Centre for Sustainable solutions (1) and (2), Schneider predictive Maintenance Centre

The Intelligent Building Systems lab demonstrated students' abilities to apply their knowledge to a deeper understanding of the concepts taught in their classes. Situated learning using cutting-edge technologies for electrical installations aided them in completing a variety of work tasks to gain both technical and generic skills in their work practices. They described how students were writing computer programs and diagnosing faults in the equipment's predictive maintenance requirements. This provided students with the skills that employers seek. Equipment to diagnose faults in electric cars, temperature, vibration, and other conditions in an electric motor to schedule maintenance times to service the equipment, and lighting, power control, and energy consumption in a building installation were among the items students were exposed to.



Figure 6. Student working on a computer program to monitor the temperature, vibration, and power consumption in an electric motor

Staff provided an overview of the School of Engineering's electrical engineering facilities, as well as a brief introduction to the work-study diplomas offered in collaboration with industry partners. They also discussed their discipline-specific pedagogies in the courses they teach, as well as the student-centric activities taught at ITE through the courses they offer, and how these practices could benefit the Australian context. Conversations focused on how to integrate interpersonal skills such as reflective practices, resilience, teamwork, and self-management into teaching delivery. In contexts of how interdisciplinary skills were embedded through students' learning to gain real-world experiences and the ability to progress to certification for one's chosen careers, comparisons were drawn between the education systems of Singapore and Australia



*Figure 7. left to right - ITE College West Summit Conference Room presentations with staff (Mr. Alvin Low, Ms Magdalene Gwee, Mr Enoch Choon, Mrs. Lui-Wong Mei Chien, and Ms Jenn Tan, Staff at ITE College East - Mr Chon Chon Hsien, Ms Winna Chia, Ms Catherine Soh*

#### 4.2.2 Key Fellowship learnings for students seen at ITE College Singapore

- Applying the knowledge for students to learn in a holistic manner.
- Developing activities that are project based and adding value to them by doing extra tasks which will reinforce past learnings and reinforce existing knowledge.
- Create synergies between peers, instructors, and the industry to benchmark greater learning.
- Promote simulated situated learning by emphasising students' ability to personally monitor their learning capacity when doing class activities.



*Figure 8. ITE College East- Singapore*

### 4.3 Social and emotional learning at Institute - “De Panfilis - Di Rocco” and Intituto ‘Instuzione Superiore “E Fermi” – Roccaraso – Abruzzo, Italy

The Institute “De Panfilis - Di Rocco” teaches classes in Food, Wine, and Hospitality. In the Roccaraso area, they also have a primary school and a kindergarten. The Institutes are a catholic religious-based scientific high school and technical institute. Their vision is to support students’ socio-cultural development and to provide opportunities for personal and professional growth at various levels. Consequently, it is unclear to what degree they are successful in educating their students in SEL competencies.

They offer Diploma-level courses with a scientific and technological foundation and courses emphasise the development of employability skills and allow for immediate entry into the workforce. The institutes serve as a gateway to university courses, particularly in the scientific, technological, and economic fields, or to further specialise at higher technical Institutes. These colleges have students who live on campus and study full-time. They travel from all over Italy to attend these courses.



*Figure 10. Staff at Istituto Alberghiero “E. De Panfilis – Simona Valeria la Gatta, Valentina Cozza, Antonio Petrucci, Camilla Struiale, Illaria CasianelliCinzia D’Altorio, Gina Tamburro.*



*Figure 9. Institute “De Panfilis - Di Rocco*

The desktop research conducted to this point has revealed no evidence of the teaching of social and emotional learning in vocational education courses in Italy. There appears to be some work being conducted at the university level to improve understanding of soft skills and identify key areas for soft skill development, including mapping competencies required for industry (Cinque, 2016). Furthermore Sette, Spinrad, & Baumgartner (2013), conducted research on the role of teacher-child relationship quality in relation to socio-emotional competence and peer likability in Italian preschool-aged children.

#### 4.3.1 Social and emotional learning at Institute - “De Panfilis - Di Rocco” and Intituto ‘Instuzione Superiore “E Fermi”

I observed students in hospitality courses learning their trade by immersing themselves in the culture through vocabulary, work practices, and dress codes. I acknowledged how teachers encouraged skill development through coaching, reflection, and exploration.



*Figure 11. Teacher demonstrating the tasks to a hospitality student*

There were steps in carrying out the learning activities, as evidenced by students demonstrating the skills they had learned in their courses.



*Figure 12. left to right - Students (Illaria Casianelli and Antonio Petrucci) showing their skills when performing their tasks, Teacher demonstrating how the equipment aided the students' learning outcomes.*

Teachers described how they taught through practice to develop a stronger understanding of the basic concepts when delivering courses that were technical in nature. They spoke about how they used different applications of learning to show the understanding of the skills to acquire.

### 4.3.2 Key Fellowship learnings for students seen at Institute - “De Panfilis – Di Rocco” and Intituto ‘Instuzione Superiore “E Fermi”

Key aspects learnt on the Italian visit included:

- College students live on campus, study full-time, and receive instruction in simulated practical workplace settings. As a result, the application of social and emotional learning and the vocational concepts enrich the learning process.
- Through their actions in their learning, students engage in critical reflection.
- Through the work practices they develop, students learn to focus on working in a team to achieve specific outcomes.
- Students identify their strengths and attributes such as self-management and interpersonal skills.
- Students holistic learning in work tasks promotes resilience and problem-solving abilities
- Students learn the situational demands of a dynamic work environment by the integration of relevant skills, knowledge, and appropriate professional attributes.

## 4.4 Barcelona Conference on Education (IAFOR)

The aim of attending this conference was to participate in interdisciplinary discussions and to promote intercultural awareness about educational theory and practice. Attending the conference provided a global/European perspective on the academic international exchange of experiences/practices in the educational sector. This assisted in developing and populating a toolbox for the implementation, evaluation, and dissemination of SEL programs, with a particular emphasis on

(preparatory) vocational education.

The conference brought together a diverse group of knowledgeable people from various backgrounds, skills, and experiences, and it left me with a positive impression. Lots of ideas were exchanged with participants across the 4 days. There were theoretical concepts and practical



Figure 13. Participants at the IAFOR Conference in Barcelona

considerations in presentations and lectures at the conference that assisted to understand the situational aspects of SEL for where it can be used in VET courses. Further information about conference presentations seen that aided aspects of the SEL competencies for teaching delivery are in appendix 3 of this report.

#### 4.4.1 Fellowship learnings - Conference

- The presentations provided insights into new ways to integrate SEL competencies in the VET syllabus.
- Networking with other participants provided an understanding of the various approaches they use in delivering content to their students in the educational sectors with which they are affiliated.
- To see how aspects of how the SEL competencies are applied in different educational sectors.

### 4.5 Workshop - Social and emotional learning for successful schools (SEL) (Barcelona)

The primary objective of attending the workshop was to improve the understanding of the CASEL framework and how to incorporate elements of it into my teaching delivery. Some of the workshop's learning outcomes included developing concrete tools and strategies for conflict resolution, stress reduction, and resilience for SEL activities in the classroom, as well as educating other teaching practitioners on the benefits of using the CASEL competencies.

Participants in the workshop helped to create a very open and productive environment by listening to and encouraging one another, as well as being flexible and adaptable. The discussions were lively and thought-provoking. The workshop assisted to develop participants shared vision and goals of SEL by the end of the workshop, which would be taken back to the educational institutions.

#### 4.5.1 Overview of SEL strategies to assist teaching practices

All participants gave a presentation about their school, including information about their students, how the curriculum is delivered, and their country's educational system. The participants, who came from all over Europe, demonstrated how cultural differences influenced their teaching style. The participants discussed the strategies they used to manage class activities and the approaches they used to help their students gain knowledge and skills.

The CASEL framework for introducing SEL was provided, as well as the foundations for establishing an embracing school community. Strategies and practical learning activities reinforced the knowledge gained when the concept of emotional intelligence was first introduced. This was important because it formed an understanding of the first SEL competency: self-awareness. The

information presented on effective communication, collaboration, and relationship skills was incorporated into group SEL activities (the second competency of SEL). To achieve acceptable outcomes in interpersonal relationships, strategies for using SEL with conflict resolution and restorative practices was discussed, and a classroom activity was completed with the participants. Exercises such as the marshmallow challenge, which a team constructs a structure out of spaghetti, masking tape, string, and a marshmallow on top, teach important lessons about the creative product development process and prototyping (Marshmallow challenge, n.d.). The selective attention test helped explain why we miss so much of what is going on around us and have no concept of what we do not see (Chabris, and Simons, no date). This exercise was used to help participants develop communication and teamwork skills. The context and understanding of SEL evolved over the course of the workshops as activities were conducted as participants became acquainted with one another.



Figure 14. Marshmallow activity



Figure 15. The various activities that were conducted in the workshop

#### 4.5.1 Fellowship learnings – Workshop

- Developing, designing, and applying authentic SEL work practices.
- Knowing how to apply workshop frameworks such as SEL competencies in future training situations and curriculum design.
- Providing the basis of how to apply effective communication, mindfulness, and collaboration in my own vocational training sector's teaching delivery.
- Strategies for improving my social and emotional learning.



Figure 16. Participants in the SEL workshop

## 5. Personal, Professional, and Sectoral Impact

### 5.1. Personal

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Until now, there has been a lack of research into social and emotional learning in vocational education, and this Fellowship has enabled me to conduct international research to build capacity in this area. Visiting different countries and participating in educational activities has offered me personal experiences like enhancing my awareness of different intercultural approaches to skill development, along with the opportunity to build a valuable network of educators who specialise in developing future skills for employability.

During this Fellowship, I was able to stay current on educational research developments and maintain contact with key people by networking with all stakeholders in the education sector. This Fellowship helped me maintain my motivation for this area of research by establishing a sense of community with the stakeholders in my field of interest. It has also given me a better understanding of how other people view research. In addition, I learned new instructional strategies from the networks of people I met at the conference, workshop, employers, and training institutes. I have been able to forge new links with those I have met which has developed into a delegation from Singapore to visit my Institute. The Fellowship has given me the opportunity to expand the practice of my ability to converse in the Italian language. I was able to communicate in Italian to school administrators, staff, and students when I was in Italy.

An important benefit of the Fellowship for me has been the opportunity to reaffirm my desire to contribute to the improvement of the Australian VET system. This has been accomplished through research on the application of social and emotional learning competencies, which will help to integrate work practices into teaching and develop new learning activities.

### 5.2 Professional

This Fellowship has significantly enhanced the work in vocational education on a professional level (specifically, engaging students in the study of electrotechnology). Sharing the findings with other educators through networking, paper writing, and conference presentations will help to raise my profile and develop my skill set. The plan is to incorporate aspects of the study tour's social and emotional learning strategies into current teaching and learning practices in Melbourne. The Fellowship will enable me to positively influence the teaching and learning of the electrotechnology curriculum at my institute as a researcher and teaching practitioner, benefiting future students and stakeholders in the electrotechnology sector.

### 5.2.2 Dissemination Activities

Several approaches will be used to disseminate the findings of this Fellowship to stakeholders in Australia's VET sector. I spoke at the 2022 Barcelona education conference, the 2021 October VET symposium, and the 2021 AVETRA conference. Articles summarising the findings of this Fellowship will be submitted to academic research journals. There will be additional opportunities to speak to interested parties about the outcomes of this Fellowship at future conferences and seminars.

## 5.3 Sectoral

The Fellowship's outcomes have the potential to address student engagement and enhance SEL in the teaching and learning of curriculum. The outcomes form a strategy which has been an issue for stakeholders and vocational educators in Australia.

The Fellowship learnings are particularly relevant for enhancing future-ready skills development in the vocational education sector, which has not focused on this form of education to date. This is particularly important given the completion rate in apprenticeships to date stands at 55.1% (NCVER, 2021). The development of SEL competencies in vocational education courses benefits the industry by providing students with work-ready skills for communicating and collaborating with peers and others in a team culture, which is a highly sought-after attribute. Improving students' SEL competencies can help to reduce the situational challenges that confront new employees on the job. The added benefit is that students' interpersonal relationships with their peers improve.

## 6. Considerations and recommendations

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In the countries I visited and cultures I encountered, there is a need for our youth to develop future skills and become self-sufficient learners. Educators today face a challenge in developing ways to improve the skills being taught so that students have the attributes required by industry to be job ready. This Fellowship study has shown that SEL provides a framework to help learners manage various aspects of their lives, such as developing empathy for others and learning problem-solving skills. Given the dynamic nature of the workplace and the concerns expressed by employers and educators, it is an appropriate time to investigate how the SEL can assist in addressing the issues confronting novice learners in the Australian VET system.

The data from the SECQ online survey indicates that there appears to be a link between self-awareness (SA) and social awareness based on the apprentices' experiences. This shows that the training apprentices develops in the situational context with others. Yet, in apprentices' situational training experiences, the Self-Management (SM) competency appears underdeveloped. An examination of the qualitative data revealed that apprentices' SEL competencies influenced their training through the practices they used when working with others. The way apprentices interacted with others influenced how they approached their training. This included the strategies they used to deal with issues and solve problems while performing their work tasks.

Several main responses are recommended based on the Fellowship research;

- Create new apprentice training practices and learning strategies that incorporate SEL competencies from the current syllabus. For example, using Mentimeter that has collaborative learning in virtual and face-to-face classes (see Appendix 3.1)
- Cluster the SEL competencies in a project-based activity and use the station rotation model (see Appendix 3.2) as a teaching-learning method to engage the student, employer, and teacher for summative assessment.
- Use the student-lead approach to apply innovative learning to the syllabus by using the gamification of practical subjects (see Appendix 3.3) to transform the learning experiences of students.
- Engage students and teachers in the culture of SEL by using cases studies to show how it adds value to the skills and knowledge. A strategy is to invite employers to talk about their expectations of the SEL competencies in the workplace.
- Create a collective culture like a community of practice for apprentices where they can collaborate with others about their SEL in training. This can be via a chat page at their place of learning (school webpage for apprentices of discipline specific courses) where they can discuss their work experiences.

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# Appendix

## Appendix 1 - Activities during the Fellowship



*Figure 17. October VET online presentation 2021*



*Figure 18. SEL for successful schools' workshop – Barcelona, Spain 2022*



*Figure 19. Making a presentation about my college at the SEL for successful schools' workshop.*



*Figure 20. Visit to Institute E. Fermi – Roccaraso, Italy*

## Appendix 2 - Additional meetings in Italy

I spoke to thirty Italian students at the college about the Australian vocational system in Italian and showed them a short video of Holmesglen Institute students (the college where I am employed). Students had questions about how Australian students learned, how they were paid while training, and how the apprenticeship system worked. Students at this campus were enrolled full-time and were not subjected to the dynamic work environment that Australian apprentices are exposed to. Students appeared to demonstrate self-discipline and self-motivation when showing what they were learning given that they were living on campus, and they were able to communicate effectively and develop positive relationships with their peers. Students from different regions of Italy had to learn to live with different people's behaviours, which enhanced their employability for the workplace.

Meetings were held with industry professionals to discuss how employees complete tasks using social and emotional learning. According to these employers, newcomers to the industry must



*Figure 21. Doing a presentation to students about the Australian vocational education system*

improve their organisational and planning skills. Punctuality was an issue, and client communication could be improved. They also stated that young people must comprehend the complexities of the workplace, such as meeting deadlines and accommodating customer needs.



*Figure 22. left to right - Industry professionals -Enzo Leon Bruni (Butcher), Ada DeMeis (Pastry cook), Christian D'Annibale (Credit Agricole bank)*

In Sulmona, I met Christian D'Annibale, a Credit Agricole bank lawyer and cyber security expert (Rome). We discussed the future of work and how it will affect occupational skills and training. This included industry strategies for providing students with the knowledge required to promote a safer work environment for our economy. He stated that to be employable in this emerging industry in the future, young people will need to add additional skills to their knowledge base and embrace lifelong learning.

## Appendix 3 - Conference presentations, Aspects of the SEL competencies for teaching delivery

### Appendix 3.1 Enhancing Students Motivation, Autonomy and Achievement using Mentimeter presented by Abdullah Al Abri from the University of applied sciences, Oman.

An underlying intention of the paper presented by Abdullah Al Abri is to create a student response system called the Mentimeter that has collaborative learning in virtual and face-to-face classes. The uses are to provide quizzes in the classroom asking a series of questions alongside the teaching delivery to provide feedback on the instructions given. Using autonomous responses, this system provides real-time feedback and encourages participation from all students. This allows the teacher to receive timely feedback; the interaction can be visually displayed, which improves students' attention and participation in the classroom environment. Abdullah's session demonstrated the application of active student-centred pedagogy that allowed for participation from a diverse audience. The advantages of this system are that it encourages students to actively participate in their learning and increases their motivation for academic skills and employability outcomes. It provides the educator with immediate feedback on the learning outcomes.

To demonstrate its benefits to audience members, a general quiz consisting of ten questions with binary responses was administered. A competitive atmosphere was observed among those who took part, demonstrating how people were engaged with the presentation. The feature of social and emotional learning in this presentation was the student-centred approach to motivating students using the system to complement classroom instruction. This system presented would benefit students in the Australian context in terms of enhancing responsible decision-making skills, such as learning how to make a reasoned judgment after analysing information, data, and facts.



*Figure 23. Abdullah Al Abri presenting his paper at the conference*

### **Appendix 3.2 A New Look at the Station Rotation Model: Interdisciplinary Integration presented by Dr. G. Semo, Dr. D. Harpaz, Dr. L. Raubach from the Levinsky College of Education, Israel**

Dr. Semo presented a paper that discussed a different perspective on the station rotation model, which is defined as a teaching-learning method that occurs concurrently in three different spaces (individual, group, and teacher). The goal of this instructional approach is to distribute the teaching session evenly between a teacher-led approach with targeted instruction, online with individualised practice, and offline with collaborative problem-solving and teamwork activities.

Dr. Semo's research focused on developing skills to promote innovation in teaching-learning and providing an appropriate pedagogical response to the growing impact of technology on education. Her research focused on the use of the Station Rotation Model to create an interdisciplinary teaching approach by combining two or three subjects. Her research questions focused on investigating how trainee teachers perceive the characteristics of teaching-learning in the Station Rotation model and using this method's interdisciplinary approach. Dr. Semo concludes that an interdisciplinary approach is feasible, and that innovation is possible if trainee teachers are trained in the station rotation model and have experienced teachers assisting them. Furthermore, considering pedagogical considerations to integrate interdisciplinary topics helps teachers gain confidence in delivering organised teaching to students.

The competencies of social and emotional learning are presented in this lecture through the teaching delivery method where self-management by the student is illustrated when they work online with individualised instruction. Relationship skills can be seen when they are used offline and when working with others in the classroom on activities that practise teamwork and collaborative problem-solving. This station rotation model for teaching delivery benefits communication skills and the development of positive relationships. When students receive teacher-led instruction, they are experiencing their ability to be disciplined to behave in a way that allows them to listen to achieve a specific outcome. The station rotation method can be used to achieve classroom instruction in Australia; however, it must be teacher-led, and curriculum planning must occur prior to implementation.

Understanding the SEL competencies when integrating with the station rotation model for teachers necessitates training and some level of creativity for students to embrace this in their learning. This system presented would benefit students in the Australian context in terms of enhancing responsible decision-making skills, such as learning how to make a reasoned judgment after analysing information, data, and facts.

### **Appendix 3.3 Teaching Without Borders A Gamification Paradigm for Practical Subjects presented by Marco CANESI - Paolo PISANO - Giacomo PLACENTI - Italy**

Paolo Pisano presented a paper that discussed how the gamification of practical subjects can be used in distance education to transform the learning experiences of students.

An example of how to make a digital interactive movie based on the concept of Dungeons and Dragons was given, in which an adventure party is formed to explore the fantasy world in search of a whodunit. Murder in the Garage was a story about how the learning units to fix a car were rebuilt into a TV series through a story, direction, screenplay, set design, editing, and post-production. Students use language skills, logical skills, and research abilities at each stage. Problem-solving skills are used later in the steps to solve the car problem. Holistic learning is used across disciplines and can be applied to a group of students. The learning occurs in the planning of the story and then in the resolution of the problem to another group of students.

Social and emotional learning in the context of what has been presented demonstrates the relationship skills students are using to collaborate on the content and as a class to solve the problem. To be implemented in the Australian context for the vocational student, it requires a holistic understanding of the content to be used as a problem-solving exercise.

The process of assembling the content necessitates guidance and teacher-led instruction for students to develop their skills and achieve the competency outcomes required for the units being taught. This is a useful method for students in the later years of their course to reflect on their previous learnings, which will aid their holistic learning of the course content.

## **Appendix 4 Demographic characteristics of respondents in the study.**

### **Appendix 4.1 online survey respondents' demographic characteristics.**

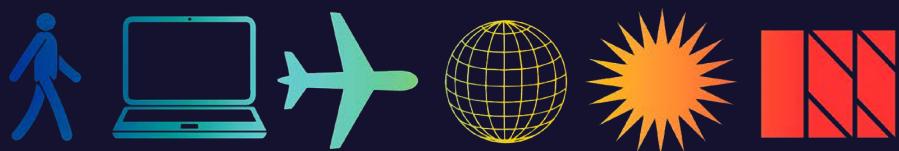
Gender	Number (n)	Percentage (%)
Male	120	83.3
Female	21	14.6
Prefer not to say	3	2.1
<b>Age</b>		
15-19	27	15.6
20-24	58	33.5
25-29	25	14.5
30-34	24	13.9
35-39	14	8.1
40-44	10	5.8
45-49	8	4.6
50-54	3	1.7

55-59	3	1.7
60-64	1	0.6
<b>Year level</b>		
1st Year	50	29.2
2nd Year	33	19.3
3rd Year	48	28.1
4th Year	40	23.4
<b>Campus</b>		
Campus C	67	39.2
Campus S	1	0.6
Campus M	40	23.4
Campus G	31	18.1
Campus N	32	18.7
<b>Trade Course Classification</b>		
Automotive and Engineering Trades	1	0.58
Construction trades	55	32.1
Electrotechnology	67	39.1
Food trades	12	7.02
Horticultural	15	8.77
Other trades	21	12.28

## Appendix 4.2 Interview respondents' demographic characteristics

Interviewee Participant	Trade Classification	Actual trade	Gender	Age	Campus	Year Level
1	Construction trades	plumbing	male	39	C	4th Year
2	Construction trades	Carpentry	female	28	C	1st Year
3	Electrotechnology	electrician	male	41	M	4th Year
4	Electrotechnology	electrician	male	22	N	4th Year
5	Construction trades	carpentry	male	22	C	4th Year
6	Electrotechnology	electrician	male	27	N	1st Year
7	Construction trades	carpentry	male	30	C	4th Year
8	Construction trades	carpentry	male	20	C	4th Year
9	Electrotechnology	electrician	male	24	M	3rd Year
10	Electrotechnology	electrician	male	22	M	2nd Year

Interviewee Participant	Trade Classification	Actual trade	Gender	Age	Campus	Year Level
11	Electrotechnology	electrician	male	31	N	4th Year
12	Electrotechnology	electrician	male	31	N	2nd Year
13	Other trades	plasterer	male	28	C	4th Year
14	Electrotechnology	electrician	male	48	N	3rd Year
15	Horticultural	gardener	male	27	G	4th Year
16	Construction trades	carpentry	male	26	C	3rd Year
17	Construction trades	roofing	male	38	C	3rd Year
18	Construction trades	carpentry	male	30	C	4th Year
19	Electrotechnology	electrician	male	22	N	4th Year
20	Other trades	upholstery	male	34	C	1st Year
21	Electrotechnology	electrician	male	31	M	1st Year
22	Electrotechnology	electrician	male	28	M	3rd Year
23	Electrotechnology	electrical fitting	male	22	N	3rd Year
24	Construction trades	plumbing	male	20	C	2nd Year
25	Electrotechnology	electrician	male	41	M	1st Year
26	Horticultural	gardener	male	56	G	3rd Year
27	Horticultural	gardener	male	20	G	1st Year
28	Construction trades	painting	Female	39	C	3rd Year
29	Electrotechnology	electrician	male	42	N	1st Year
30	Electrotechnology	electrician	Female	27	N	4th Year
31	Other trades	Upholstery	Female	19	C	3rd Year



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