

Adult Educators and the Industry Transformation Maps

Session 5.1 – Adult Educators and the Industry Transformation Maps

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INTRODUCTION

In the 2016 Budget session, Singapore announced an S\$4.5b industry transformation programme that aimed to integrate different transformational and restructuring efforts by enhancing partnership among Government, companies, industries, trade associations and labour movement. Subsequently, the Committee on the Future Economy (CFE) co-Chaired by Mr Heng Swee Keat, Minister for Finance and Mr S Iswaran, the then Minister for Trade and Industry (Industry) issued the report on 7 Feb 2017 to pave the ways forward. Industry Transformation Maps (ITMs) have since been developed for 23 industries under 6 clusters. Together, the 23 industries cover over 80% of our GDP.

We are now in the implementation phase of the ITMs.

In this paper, the author will illustrate, with his involvement with companies, industry associations, and IHLs, how Adult Educators (AEs) can seize the opportunities presented by various ITMs to grow as professionals as well as to assist organisations to achieve their visions arising from the ITMs. It is the author's believe that a lot can be achieved with all properly skilled AEs playing their roles in synchronisation with the ITMs.

THE OVERALL LANDSCAPE OF ITM

Since the CFE report, Industry Transformation Maps have been developed for 23 industries from among 6 clusters to address industry specific issues and to deepen partnerships among Government, firms, industries, trade associations and unions.

ITMs are grouped into 6 clusters as follow:

1. Built Environment
2. Essential Domestic Services
3. Lifestyle
4. Manufacturing
5. Modern Services
6. Trade and Connectivity

The 6 clusters are then categorised into 23 industry sectors which collectively account for 80% of our GDP¹ as follow:

¹ Media Factsheet – Industry Transformation Maps, Ministry of Trade and Industry, Sep 2016

1. Built Environment
 - 1) Construction
 - 2) Environmental Services
 - 3) Real Estate
 - 4) Security
2. Essential Domestic Services
 - 1) Education
 - 2) Healthcare
3. Lifestyle
 - 1) Food Manufacturing
 - 2) Food Services
 - 3) Hotel
 - 4) Retail
4. Manufacturing
 - 1) Aerospace
 - 2) Electronics
 - 3) Energy and Chemicals
 - 4) Marine and Offshore
 - 5) Precision Engineering
5. Modern Services
 - 1) ICT & Media
 - 2) Financial Services
 - 3) Professional Services
6. Trade and Connectivity
 - 1) Air Transport
 - 2) Land Transport
 - 3) Sea Transport
 - 4) Logistics
 - 5) Wholesale Trade

I will touch on two ITMs in this presentation. First the Education, or Training and Adult Education ITM which is the transformational road map of an industry that most of you are familiar with. I will then venture to cover the Construction ITM, the transformational road map of an industry with which I am familiar and is currently working with as a Specialist Adult Educator, an appointment that I just took up in July 2018. The purpose of highlighting the two ITMs here is to illustrate to you what AEs like yourself must do to seize the window of opportunities available to you while the other stake holders in this Nation works in tandem to implement the various ITMs.

THE EDUCATION (TRAINING AND ADULT EDUCATION) ITM

On 3 Nov 2016, in the Adult Learning Symposium held at the Marina Bay Sands Expo and Convention Centre², the Minister for Education Mr Ong Ye Kung unveiled the TAE Sector Transformation Plan. A year later, the Education (Training and Adult Education) ITM, in short the TAE ITM, was launched by SkillsFuture Singapore (SSG) in Feb 2018. Building on the

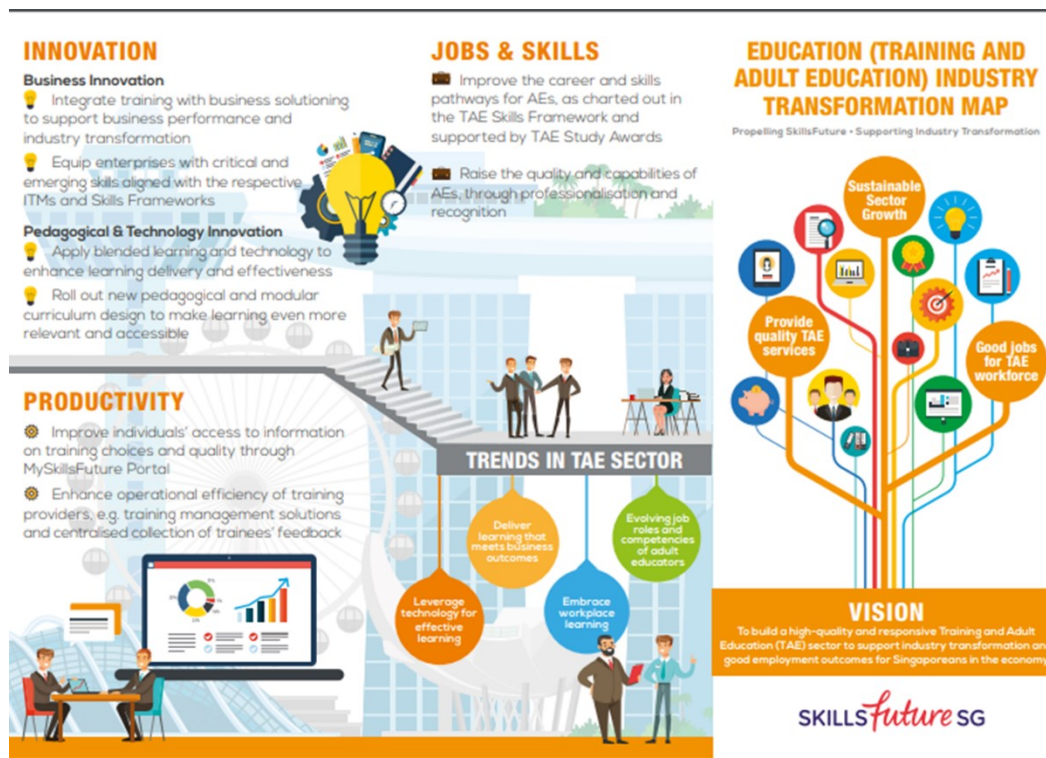
² Transformation plan launched for training and adult education sector, CNA, 3 Nov 2016

Training and Adult Education Sector Transformation Plan, the TAE ITM was developed in collaboration with tripartite partners, i.e. the unions and industry.

Unlike the other industry sector ITMs, the TAE ITM is unique in the sense that it is a critical enabling infrastructure for SkillsFuture, to support industry transformation and to enable Singaporeans to stay relevant and competitive in the economy. PM Lee Hsien Loong, on the May Day Rally in 2017, announced that the Council for Skills, Innovation and Productivity (CSIP) will be renamed the Future Economy Council (FEC). The new FEC has an expanded mandate to include implementation of the Committee on the Future Economy (CFE)'s recommendations, in addition to the development and implementation of the ITMs and SkillsFuture initiatives³.

The TAE ITM is summarised in infographic form as shown in the following diagram.

Figure 1: The Training and Adult Education (TAE) ITM⁴



The TAE ITM aims to raise business performance through upskilling and reskilling of employees with critical and emerging skills needs identified by the various ITMs. There are three key thrusts within the TAE ITM which you as AEs must be aware of:

Thrust 1: Driving Innovation

To support the transformation which is happening across different industries, TAE providers including the AEs must transform. You should examine the ITM that is relevant to you,

³ Future Economy Council (FEC), MTI web site, <https://www.mti.gov.sg/AboutMTI/Pages/FEC.aspx>

⁴ Education (Training And Adult Education) Industry Transformation Map Infographic, <https://goo.gl/K7A8Kv>

upskill, reskill, and reposition yourself so as to provide your services that is closely linked to the visions of the ITMs. I will elaborate more on this subject in the second part of this paper.

The word “innovation” appears in all ITMs. For the construction industry, it is about Green Buildings, Design for Manufacturing and Assembly (DfMA), and Integrated Digital Delivery (IDD). The industry aspires to enable all stake holders to review building design digitally in 5 dimensions before physical construction work begins in future. For the security industry, there is a Security Industry Digital Plan within the Security ITM which talks about automated visitor management system, mobile-enabled patrol and incident management system, and CCTV cameras with video analytics. These are just two examples of how the industry envision the future economy.

How can you as AE deliver your training and services to foster innovation within the industry? Do you want to involve in the skills or knowledge enhancement part of the innovative process of the ITMs? On the other hand, do you innovate to enhance your own service delivery as an AE? These are questions that only you can answer.

Thrust 2: Professionalising Jobs & Deepening Skills

As AEs, you will also need to invest in professionalising yourself and deepening your skills.

Using my own personal experience of more than 30 years as an example. I entered the safety and health profession in 1985 as a Factory Inspector in the then Factory Inspectorate of the Ministry of Labour. There was no professional recognition scheme as such, but there was a legal requirement that mandated certain class of factories to hire Safety Officers. It was because of this mandatory legal requirement that safety and health professionals registered themselves as Safety Officers so as to get themselves hired. It was not until 29 Apr 2008 that the WSH Professionals WSQ scheme was launched during the opening of the National WSH Campaign by PM Lee Hsien Loong. The framework professionalises WSH personnel and provided a career path for aspiring individuals to plan for their future. I was intimately involved in the development of this WSQ framework as I was working in the WSH Council at that time.

Similarly, the question you need to ask here is how should you professionalise yourself? How do you help employees in the industry with which you are working to professionalise themselves with the directions provided by the ITMs?

Thrust 3: Increasing Productivity

Again, productivity features prominently in all the ITMs. As AEs, besides upskilling and reskilling to make yourself more productive, you need to identify the industry that you are familiar with so as to help workforce from that industry to upskill and reskill. For this, you will need to have deep knowledge of the industry as well as the determination to learn new skills continuously in order to be effective.

As AEs, you need to embrace the three trusts in order to be effective in the future economy. Depending of your specific roles as AE, you will need to identify which of the three trusts that you have the strengths needed to help the industry implement its transformation plan.

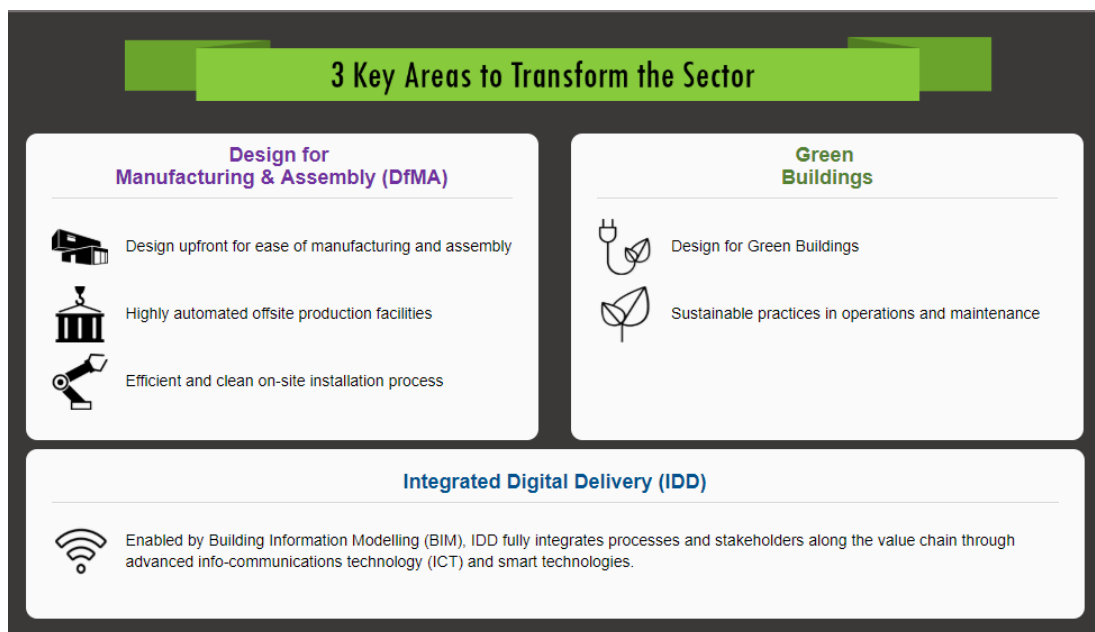
THE CONSTRUCTION INDUSTRY ITM

The Construction Industry ITM was launched by Mr Desmond Lee, Minister for Social and Family Development, and Second Minister in the Ministry of National Development on 24 Oct 2017 at the Singapore Construction Productivity Week 2017.

Construction ITM recognises three key transformational areas for the industry, namely Green Buildings, Design for Manufacturing and Assembly (DfMA), and Integrated Digital Delivery (IDD) in order to address challenges faced by the industry. Do not be intimidated by the terms if you are not from this industry. However, if you are from the construction industry and these terms sound unfamiliar to you, then you have reason to be worried.

The following diagram shows part of the Construction ITM infographic. You might want to refer to the internet for more information on the Construction ITM or other industry ITM to have a better understanding of the vision of our future economy.

Figure 2: Part of the infographic of the Construction ITM⁵



This is where I will stop dwelling on ITMs and start to illustrate how AEs like ourselves can seize the opportunities presented by the various ITMs and the SkillsFuture initiatives.

HOW CAN AEs SEIZE THE OPPORTUNITIES

If you see my career over the last 30 plus years, you will notice that my domain is in workplace safety and health. I became an AE seven years ago after leaving my full time job with the Workplace Safety and Health Council, Ministry of Manpower as Director of Industry Capability Building. In terms of construction industry experience, I was once the General Manager of SC2 (Singapore Construction Safety and Consultancy Pte Ltd), a subsidiary of the Singapore Contractors Association Ltd (SCAL) for more than three years from 1995 to 1999.

⁵ Construction Industry Transformation Map Infographic, <https://www.bca.gov.sg/citm/>

SCAL is the largest contractors Association in Singapore with more than 3,000 members accounted for 75% of our buildings and structure.

My deeper involvement with ITMs started last year in Mar 2017 when I was invited by SCAL Academy, another subsidiary of SCAL to assist them to carry out an Action Planning Workshop. I picked up skills in action planning when I returned to work in MOM in 2005. You will recall that Nicoll Highway collapsed on 20 Apr 2004. In that unfortunate year, Singapore witnessed another three workplace accidents that took away a total of 15 lives⁶. The series of workplace accidents was such a big cause of concern for the Government that it replaced the Factories Act with the Workplace Safety and Health Act in 2006.

The National WSH Strategy, with the aim of halving workplace fatality rate from 4.9 to 2.5 deaths per 100,000 workers, was launched in 2007 after consulted more than 1,500 stakeholders from the relevant professional bodies, trade associations, employer associations and unions. The same action planning process was used to formulate WSH related strategies for the marine, construction, and other industries subsequently. In those years, I had facilitated numerous action planning workshops that it became a skill that I treasure deeply.

The Construction ITM was not launched yet at that time when I did the action planning for SCAL Academy. Based on the directions provided by the Committee on the Future Economy (CFE), we went ahead to formulate the Vision, Strategic Outcomes, Strategies and Initiatives for SCAL Academy. With the subsequent launch of the Construction ITM, we re-visited the strategic plan for SCAL Academy. This is when I became the Specialist Adult Educator for SCAL Academy.

By sharing with you my experience with SCAL and SCAL Academy, I hope you can see the potential within the whole ITM landscape if you as an AE are prepared and are ready to seize the opportunities. In order to do so, you need to:

- Identify your strengths and weaknesses
- Identify your core competency
- Upskill yourself
- Widen your network
- Practice reflective thinking

Identify your strengths and weaknesses

We must admit that all of us have strengths and weaknesses. It is equally important to know your weaknesses as much as knowing your strengths. Your weaknesses will hold you back from achieving many great things. It can be anything ranging from professional to social skills, and only you have the power to turn your weaknesses into your strengths.

⁶ Nicoll Highway collapse, 20 Apr 2004, 4 died. Fusionopolis lattice formwork collapse, 30 Apr 2004, 2 died. Keppel Shipyard tanker fire, 29 May 2004, 7 died. One Raffles Quay formwork collapse, 19 Nov 2004, 2 died.

Successful people are fully aware of their weaknesses and they work towards turning their weaknesses to strengths. On the other hand, most people failed because they can only see their strengths. So start thinking critically about yourself, your strengths and weaknesses. If need be, invite a friend or a few friends to help you do so.

Identify your core competencies

Having ACTA is a good starting point but having it alone is not going to take you far. You must identify where your core competencies are. Are you skilled in Marketing? Human Resource? Information Technology or Workplace Safety and Health?

Even if you have 10 or more years of experience in these areas, you must also know where these areas are heading in the next 5 to 10 years.

For example, a marketing professional with 10 to 15 years of experience will find that his or her skills in marketing is being challenged everyday by new marketing media such as e-Commerce and new marketing platforms. In my last three years of experience in Myanmar, I discover that most companies there do not have a web presence as they rely mainly on Facebook. To be more specific, they rely on Facebook business page to do marketing. My partner in Myanmar promoted an event that they helped me to organise in 2017 and it reached out to more than 100,000 people within a month. Freelancers and SMEs can now plan their own marketing campaigns with a small budget that they could not imagine in the past.

Studying the ITMs that are relevant to you will help shed some lights on where your core competencies are, and where they are heading in the next 5 to 10 years. Take for example in the case of an AE that has core competencies in the construction industry, it is important to note that the construction industry is poised to undergo the following development:

- Green buildings
- Design for manufacturing and assembly (DfMA)
- Integrated digital delivery (IDD)

Upskill yourself

As Jack Ma said “A teacher always expect his students to do better”. Once you have identify your core competencies, strengths and weaknesses, do not be shine to learn from others so as to convert your weaknesses into strengths. You cannot expect your learners to do better if you do not know what’s going to happen in the future. SkillsFuture is one avenue you can rely on to upskill yourself.

The \$500 SkillsFuture Credit in every Singaporean aged 25 and above is just one of the many schemes that SkillsFuture has to offer. There are other initiatives which you can tap to upgrade yourself:

- SkillsFuture Earn and Learn Programme
- SkillsFuture Study Awards

- SkillsFuture Fellowships
- SkillsFuture Series

Another way to upskill yourself as an AE is to join the Adult Education Network (AEN). AEN helps individual AE to connect to the larger AE community for networking and continuous learning purpose. The AEN offers on a regular basis Continuing Professional Development (CPD) Programmes and Events, many of which are offered at no cost at all. There are also Special Interest Groups (SIGs) that allow members to acquire practical insights and exchange ideas in specific AE functional areas.

Joining Adult Education Professionalization (AEP) initiative is another way to upskill yourself. As you can see at the beginning of this paper that my job title with my current employer SCAL Academy is “Specialist Adult Educator”. This one of the three categories of the AEP programme. The other two categories are the Adult Education Fellow and Associate Adult Educator.

As an illustration on how one can tap on the SkillsFuture initiative, following is a list of training, sharing sessions and talks that I have attended over the last two years. I have already used up my \$500 SkillsFuture Credit, but I am telling you that this will not stop me from continuing with the journey of upskilling myself. Believe me, you wake up every day nowadays only to discover that there is a need for you to upskill or reskill.

- Design eBook
- Alibaba CEO Course in Hangzhou by SIRS (Singapore Institute of Retail Studies)
- Facebook Marketing and e-commerce Course
- Entrepreneurship Seminar by Nanyang Polytechnic
- Sharing at AEN Special Interest Group (Learning Technology)
- Present in Adult Learning Symposium 2016 on Using Technology in Learning
- Self-learning: Unity, a game engine that is used to create 2D and 3D game
- Volunteered as a Mentor in Social Innovation Park’s Empower for Good (EFG) programme

Widen your network

This is somewhat connected to the need to upskill yourself. When you attend training courses or sharing sessions to upskill yourself, do take the opportunities to chat with the facilitators and the other learners.

Another way to widen your network is to leverage on technology. What’s App, Facebook, LinkedIn, YouTube Channel ... etc. are social media that facilitate your networking effort. Your starting point of using such social media should be to make friends and express your opinion. If you start using the social media to market yourself or your services, very soon your network will ditch you.

I like to share with you my own experience in networking through social media. Just recently I attended a trade exhibition and met several acquaintances. Two of them were from a WhatsApp Chat Group that I created to network learners from all previous courses that I

taught in a Polytechnic. They came to me and told me that they learned a lot from the sharing in the Group Chats. I told them personally I also learned a lot in that chat group. The moral of this story is that networking, with proper use of social media, is a powerful way for us to teach and learn. As AE you have the added advantage of having a large number of learners to start your network that is not limited by your own social circles.

Practice reflective thinking

Again based on my own personal experience I urge all AEs to master the skill of reflective thinking. In practicing this skill, I often re-visit and cite Dr Stephen D. Brookfield's book on Becoming a Critically Reflective Teacher (Brookfield, 1995) which talks about the 4 lens of reflective thinking.

Lens 1: Our autobiography as a learner.

This is an important source of insight into practice. As we reflect on our own experiences in the past while we learn new things, we will draw important insight and meanings that we were not able to learn previously.

Lens 2: Our learners' eyes. Seeing ourselves through learners' eyes, we may discover that our learners may not interpret our intention the way that we mean them. Often we are surprised by the diversity of meanings people read into our words and actions. A cardinal rule to enable us to seeing ourselves through learners' eyes is to encourage questioning. We have to make learners feel safe when they question us. As a matter of facts, I learn a lot from questions and challenges post by learners over the years.

Lens 3: Our colleagues' experiences. Our colleagues serve as critical mirrors reflecting back to us images of our actions. Talking to colleagues about problems and gaining their perspective increases our chance of finding some information that can help in our work. Your colleagues can be the real persons sitting next to you, or he or she can be the virtual colleagues that you have over the internet.

Lens 4: Theoretical literature. Theories and literature can help us "name" our practice by illuminating the general elements of what we think. It is an effective substitute for a critical friend who will always point to us if we are right or wrong in our thinking or practice.

Reflective practice is like wine that will get better over time. Start practicing it if you have not already done so.

CONCLUSION

Jack Ma, the Founder and Chairman of Alibaba, at the World Economic Forum held in Davos, Switzerland in Jan 2018⁷ gave the following advice for varying age groups:

⁷ Jack Ma career advice: You don't have to be smart to be successful, South China Morning Post, <https://youtu.be/MwixREUJOIQ>, 0:59 to 1:48. Delivered by Jack Ma at the World Economic Forum which was held in Davos, Switzerland in 2018.

- When you are 20 to 30 years old, follow a good boss, join a good company to learn how to do things properly
- When you are 30 to 40 years old, if you want to do something yourself, just do it. You still can afford to lose, to fail
- When you are 40 to 50 years old, you should do things that you are good at
- When you are 50 to 60 years old, spend time training and developing young people, the next generation
- When you are over 60 years old, better stay with your grand children

Jack Ma is serious when he said this. On 20 Sep 2018, he announced that he will hand over his leadership of Alibaba in 2019. One of Jack Ma's plans after stepping down is to return to education and his charitable foundation. Jack Ma was born in 1964 and is 54 years old this year.

I will like to end this paper by stating that there are many opportunities lying within the ITMs and the SkillsFuture initiatives for all AEs to seize. What you need to do is to get yourself ready to seize them. This is regardless of whether you are 20, 30, or 60 years old.