

Skills Training in the Automotive Industry in China: Implications for the Australian Industry



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Skills Victoria International TAFE Fellowship

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Executive Summary

Due to the rapid growth of automotive industries in countries such as China, the objective of these countries is to increase their capability and capacity to improve the quality and number of qualified technicians entering the local workforce. The challenge for the education sector is to recognise and develop training opportunities to assist and support rapidly developing countries to achieve their objective in the most cost effective way possible.

There currently exists a skills shortage in China in relation to the automotive industry and; therefore, the opportunity exists for the Australian education sector to provide training to students studying in Australia who would like to gain future placement or employment within the Chinese automotive industry. As China also displays cutting-edge technology in the automotive industry, a collaborative approach to training between Australia and China would help to inform the Australian automotive industry and allow for an exchange of skills and knowledge.

The automotive industry in Australia has been experiencing skill shortages in both technical and managerial areas. This Fellowship has enabled Tao (George) Yue to bring the advanced technical and management skills that are applicable to the Australian automotive industry back to Australia in order to share these skills with the Australian automotive industry through education and training opportunities.

In 2010, Tao (George) Yue was presented with a 2010 Skills Victoria International TAFE Fellowship to undertake an overseas research program to gain skills and a comprehensive understanding in the field of current Chinese automotive training practice. By researching current training models in place in Chinese vocational institutes, gaining an understanding of the skill deficiencies present in China in relation to automotive training, and researching automotive technician employment requirements, Yue was able to provide insights into the potential for Australian vocational training organisations to expand their current market by servicing the Chinese automotive industry.

Yue went to Sichuan Vocational and Technical College of Communications (SVTCC) located in Chendu, Sichuan, China. SVTCC is a public college and was established in 1952. It is the sole vocational and technical college of communications in Sichuan province covering both land transportation and marine navigation. It is accredited as a model for technical and vocational higher education by the State Ministry of Education, China, and is one of the 100 top vocational colleges in China. The academic part of SVTCC is organised into eight departments, one of which is the Department of Automotive Engineering.¹ The focus of this Fellowship was to study the model of successful training that is used by SVTCC's Department of Automotive Engineering with the view to possible collaborative opportunities for Australia and possible adoption of the training model in the Australian automotive industry.

The graduate employment rate for those students who graduated from SVTCC's Automotive Engineering Department between 2007 and 2010 was 100%. The main reason for this outstanding performance was due to the collaborative approach to training that exists between SVTCC and local car manufacturers and dealerships to fully support the automotive students. SVTCC students and teaching staff have all benefited from this training model.

The findings from this Fellowship will facilitate the development of training resources and strategies, which will cater for the specific training needs of Chinese automotive management personnel. This could, in turn, increase business opportunities for the Australian education sector, and ensure that Australian vocational training is more attractive to the overseas market.

To ignore the Chinese automotive training market will inevitably result in Australian automotive training organisations missing out on a growth opportunity, and may also cause them to lose the competitiveness in the global vocational training market.

Executive Summary

In this report, Yue has provided insights into the potential for Australian vocational training organisations to expand their current market by servicing the Chinese automotive industry. Yue has provided specific recommendations for the Australian Government and automotive industry. These recommendations can be found in the 'Recommendations' Chapter of this report.

The findings of this Fellowship will be shared with representatives from government, education, industry and the general public to assist in the reduction of skill shortages in the Australian automotive training industry and to benefit Victoria's economic development.

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Abbreviations/Acronyms

ACFE	Adult, Community and Further Education
ATV	Automotive Training Victoria
CEO	Chief Executive Officer
DEEWR	Department of Employment, Education and Workplace Relations
DIIRD	Department of Innovation, Industry and Regional Development
FCAI	Federal Chamber of Automotive Industries
ISS Institute	International Specialised Skills Institute
MSA	Manufacturing Skills Australia
NTIS	National Training Information System
RMIT	Royal Melbourne Institute of Technology
SAE–A	Society of Automotive Engineers–Australasia
SVTCC	Sichuan Vocational and Technical College of Communications
SWOT Analysis	Strengths, Weaknesses, Opportunities, Threats Analysis
TAFE	Technical and Further Education
VACC	Victorian Automobile Chamber of Commerce
VCAA	Victoria Curriculum and Assessment Authority
VET	Vocational Education and Training
VRQA	Victorian Registration and Qualifications Authority

Definitions

'Dealership in School'

A cooperative training delivery method present at SVTCC, China. This training model consists of cooperation between car manufacturers and vocational training colleges. The college provides the training and associated facilities for manufacturers on campus, they also source the new students nationally every semester. The car manufacturers provide the training vehicles, spare parts, tools, equipment, training materials and facilitators to assist the college in the training.

Design

Design is problem setting and problem solving. Design is a fundamental economic and business tool. It is embedded in every aspect of commerce and industry and adds high value to any service or product—in business, government, education and training, and the community in general.²

Innovation

Creating and meeting new needs with new technical and design styles. (New realities of lifestyle).³

Light Vehicle Body Repair

One of the four main streams offered by SVTCC's Automotive Engineering Department. It encompasses the repair and restoration of damaged vehicles to pristine condition, normally including motor vehicle panel beating and spray painting in the industry.

Light Vehicle Mechanics

One of the four main streams offered by SVTCC's Automotive Engineering Department. It encompasses the servicing, repair and overhauling of a motor vehicle's mechanical parts, such as the engine, transmission and suspension system.

Skill deficiency

A skill deficiency is where a demand for labour has not been recognised and training is unavailable in Australian education institutions. This arises where skills are acquired on-the-job, gleaned from published material or from working and/or studying overseas.⁴

There may be individuals or individual firms that have these capabilities. However, individuals in the main do not share their capabilities, but rather keep the intellectual property to themselves. Over time these individuals retire and pass away. Firms likewise come and go.

Sustainability

The ISS Institute follows the United Nations for Non-Governmental Organisations' definition on sustainability: *"Sustainable Development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs"*.⁵

Acknowledgements

Tao (George) Yue would like to thank the following individuals and organisations who gave generously of their time and their expertise to assist, advise and guide him throughout the Fellowship program.

Awarding Body – International Specialised Skills Institute (ISS Institute)

The International Specialised Skills Institute Inc is an independent, national organisation that for over two decades has worked with Australian governments, industry and education institutions to enable individuals to gain enhanced skills and experience in traditional trades, professions and leading-edge technologies.

At the heart of the ISS Institute are our Fellows. Under the **Overseas Applied Research Fellowship Program** the Fellows travel overseas. Upon their return, they are required to pass on what they have learnt by:

1. Preparing a detailed report for distribution to government departments, industry and educational institutions.
2. Recommending improvements to accredited educational courses.
3. Delivering training activities including workshops, conferences and forums.

Over 200 Australians have received Fellowships, across many industry sectors. In addition, recognised experts from overseas conduct training activities and events. To date, 22 leaders in their field have shared their expertise in Australia.

According to Skills Australia's 'Australian Workforce Futures: A National Workforce Development Strategy 2010':

Australia requires a highly skilled population to maintain and improve our economic position in the face of increasing global competition, and to have the skills to adapt to the introduction of new technology and rapid change.

International and Australian research indicates we need a deeper level of skills than currently exists in the Australian labour market to lift productivity. We need a workforce in which more people have skills, but also multiple and higher level skills and qualifications. Deepening skills across all occupations is crucial to achieving long-term productivity growth. It also reflects the recent trend for jobs to become more complex and the consequent increased demand for higher level skills. This trend is projected to continue regardless of whether we experience strong or weak economic growth in the future. Future environmental challenges will also create demand for more sustainability related skills across a range of industries and occupations.⁶

In this context, the ISS Institute works with Fellows, industry and government to identify specific skills in Australia that require enhancing, where accredited courses are not available through Australian higher education institutions or other Registered Training Organisations. The Fellows' overseas experience sees them broadening and deepening their own professional practice, which they then share with their peers, industry and government upon their return. This is the focus of the ISS Institute's work.

For further information on our Fellows and our work see <http://www.issinstitute.org.au>.

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Acknowledgements

Fellowship Sponsor

The Victorian Government, Skills Victoria is responsible for the administration and coordination of programs for the provision of training and further education, adult community education and employment services in Victoria and is a valued sponsor of the ISS Institute. The Fellow would like to thank them for providing funding support for this Fellowship.

Supporters

- Bill Rees, Curriculum Maintenance Manager, Engineering Industries – Automotive, Kangan Institute.
- Greg Walsh, Executive Manager, Automotive Training Victoria (ATV).
- Malcolm Macpherson, Director of Centre for Sustainable Technologies, Chisholm Institute.
- Maria Peters, Chief Executive Officer (CEO), Chisholm Institute.

Employer Support

This Fellowship has been supported by the CEO of Chisholm Institute, the Director of the Sustainable Technology Centre, and the Department Manager of Automotive Management, Chisholm Institute. The Fellow would like to thank those at Chisholm Institute for the extra time afforded to him to take part in the Fellowship, including the time taken to travel to China and the time spent in preparing his report.

Organisations Impacted by the Fellowship

Government

- Higher Education and Skills Group (was Skills Victoria)
- Department of Employment, Education and Workplace Relations (DEEWR)
- Department of Innovation, Industry and Regional Development (DIIRD)
- Victoria Curriculum and Assessment Authority (VCAA)
- Victorian Registration and Qualifications Authority (VRQA)

Industry

- Manufacturing Skills Australia (MSA)
- Auto Skills Australia
- The Society of Automotive Engineers-Australasia (SAE-A)
- Federal Chamber of Automotive Industries (FCAI)

Professional Associations

- ATV
- Victorian Automobile Chamber of Commerce (VACC)

Education and Training

- Chisholm Institute
- Automotive Centre of Excellence, Kangan Institute
- Bendigo Regional Institute of TAFE
- Box Hill Institute of TAFE
- Swinburne University TAFE
- Victoria University TAFE

Community

- Adult, Community and Further Education (ACFE) Regional Councils

About the Fellow

Name: Tao Yue (George)

Employment

- Program Coordinator of Automotive International Program, Automotive Technology Department, Chisholm Institute.

Qualifications

- Diploma of Vocational Education and Training Practice, Chisholm Institute of TAFE, 2009.
- Certificate IV of Training and Assessment, Chisholm Institute of TAFE, 2007.
- Diploma of Automotive Management including Certificate III in Vehicle Body Repair, Chisholm Institute of TAFE, 2006.
- Master of Business (International Business), Monash University, 2004.
- Bachelor of Business (International Business), RMIT University, 2003.
- Diploma of Business (International Trade), WUST-RMIT University, 2001.

Brief Biography

Tao (George) Yue came to Australia as an international student studying a Bachelor of International Business at RMIT University in 2011. He finished his Bachelor's Degree in 2003 then achieved his Master's Degree in International Business from Monash University by the end of 2004.

Yue has had a strong interest in motor vehicles since he was a child, he would very much like to be involved directly in the motor vehicle industry one day, allowing him to also utilise his international business background. In 2005, he decided to go to Chisholm Institute to study a panel beating course. Chisholm Institute Automotive Technology Department International Program was recruiting teaching staff due to the rapidly increasing number of overseas students studying in the department in 2007.

Yue started his teaching career in 2007 at Chisholm Institute of TAFE, teaching Marketing and Business Planning units to international students studying the Diploma of Automotive Management course in Chisholm Institute's Automotive International Program.

His diligent work and potential leadership enabled him to be promoted to Chisholm Institute Automotive International Program Coordinator in a short period of time. The Chisholm Institute Automotive International Program has now been recognised as a successful program with a very good reputation among international students.

Aims of the Fellowship Program

The aims of the Fellowship were to:

- Identify the scope of opportunities for Australian vocational training organisations in providing training for Australian students and international students who choose to study in Australia and who then seek career opportunities within the Chinese automotive industry.
- Compare the Australian and Chinese automotive managerial personnel induction programs in order to formulate an induction program for Australian students who may then seek a management career in the Chinese automotive industry.
- Explore and evaluate the key drivers in Chinese automotive technology advances that will influence Australian automotive training delivery to provide the opportunity for technicians in Australia to be appropriately trained in these emergent technologies (to meet the expected set up of dealer networks of Chinese manufacturers).
- Seek opportunities for teacher and student placement programs within Chinese vocational institutes to increase the understanding of the Chinese automotive industry and the training support structures available, with the view to Australia adopting these training support structures in the future.

While Yue was able to gain information on many of the dot points above, the key drivers in automotive technology were not able to be analysed due to the confidential nature of new and emergent technologies that are currently in development in automotive manufacturing organisations in China.

The Australian Context

The Australian Vocational Education and Training (VET) system is one of the most successful training systems in the world because it is client focused and led by industry to define the training outcome. The system is jointly managed by Australian State and Territory Governments and the Federal Government. However, despite the success of the Australian VET system, the automotive industry in Australia has been experiencing skill shortages in both technical and managerial areas. For example, the Australian automotive industry is in need of an increase in both advanced technical and management skills applicable to the automotive industry.

ATV provides authoritative, independent information on training needs and promotes skills development and training to businesses in the automotive industry. The Victorian Government is implementing initiatives, such as Victoria Skills Pledge and Skill for Growth, to help Victorian businesses and residents build on or upgrade their skills. To increase employment opportunities for Victorians, the Victorian Government is not only focusing on the local market but also looking at overseas market opportunities.

The National Training Information System (NTIS) official website provides hundreds of different units of competency that can be selected for training automotive management personnel at different levels. Using the Diploma of Automotive Management qualification as an example, there are 29 units selected from level 3, 4 or 5 to be completed to achieve this qualification. These units vary from Occupational Health and Safety, to Customer Service, to Managing People Performance, to Marketing and Business Planning. By completing this qualification, students will have the skills to manage an automotive workshop or take a management role in an automotive business.

The spectacular growth in automotive manufacture in recent years in China provides opportunities for Australian educational institutions to develop links and partnerships that will benefit both China and Australia. To gain a better understanding of Chinese automotive training products, it is very important for ATV to compare the training products available in Victoria and China to identify the exact requirements of the Chinese and Australian industry and education bodies, and to improve the existing system in Australia.

To serve local and international customers' needs better, the additional skills will need to be recognised as necessary, i.e. training for students who will study in Australia and may then seek career opportunities within the Chinese automotive industry. Furthermore, comparing Australian and Chinese automotive managerial personnel induction programs will help to inform the Australian automotive training sector to formulate an induction program for Australian students who may then seek a management career in the Chinese automotive industry.

To ignore the Chinese automotive training market will inevitably result in Australian automotive training organisations missing out on a growth opportunity, and may also cause them to lose the competitiveness in the global vocational training market.

SWOT Analysis

Strengths

- Existing well-designed Australian automotive management training package that is easily adaptable
- Unique training product on the market
- Expertise/training staff available
- Comprehensive and user-friendly online training resources
- Matured training system for overseas students.

Weaknesses

- Whether the existing training resources can meet the training needs
- Possible lack of recognition of Australian qualifications in China
- Lack of cultural differentiation in the training resources
- Lack of national competency training standard in China
- Lack of access to automotive industry networks in China.

Opportunities

- New training opportunities to meet the rapidly expanding Chinese automotive industry
- Possible new partnerships between Australian and Chinese vocational training organisations, benefitting the Australian automotive industry.
- Improvement of the Australian vocational training system
- Increased employment opportunities for Australian skilled personnel.

Threats

- Restrictions on accessing technology and training resources in China
- Difficulties of translating Australian training resources
- Potential failure to attract students locally or internationally
- Other training providers entering the Chinese automotive industry.

Identifying the Skills Deficiencies

1. Gain an overview of current Chinese automotive training practice in Chinese vocational institutes.

- Analyse and interpret current Chinese automotive training practice.
- Apply this analysis to Australian vocational training courses.

2. Investigate how the Australian vocational training system could assist the Chinese automotive industry by providing training to students studying in Australia who may then wish to gain automotive career opportunities in China.

- Analyse the existing Chinese automotive induction program with the view to formulating an induction program for the Australian automotive industry.

3. Investigate the employment status in the Chinese market for automotive graduates.

- Identify the employment requirements needed by automotive graduates to gain employment within the Chinese automotive industry, e.g. prerequisite skills and knowledge requirements.

4. Gain an understanding of the growth potential of the Chinese automotive industry in relation to Australia.

- Broadly analyse the potential growth and trends in the Chinese automotive industry, in relation to its future expansion into the Australian market.
- Identify the potential for Australian vocational training organisations to expand their current market into servicing the Chinese automotive industry entering the Australian market.

The International Experience

Destination: SVTCC

Location

- Chengdu, Sichuan, China.

Contacts

- Yong Tang, Vice President, SVTCC.
- LinFu Zhou, Department Manager, Department of Automotive Engineering, SVTCC.
- Wen Fang, Vice Department Manager, Department of Automotive Engineering, SVTCC.
- ShouMing Liu, Centre Manager, International Exchange Centre, SVTCC.



The main entrance of SVTCC

Chengdu is the capital city of Sichuan Province in Southwest China. Chengdu is one of the most important economic, political and transportation centres in western China. Chengdu is the city with the third largest number of private vehicle ownerships in China.⁷

Sichuan Vocational and Technical College of Communications (SVTCC) is a public college and was established in 1952. There are 12,000 full-time students studying and living at the college at this time. It is the sole vocational and technical college of communications in Sichuan province covering both land transportation and marine navigation. It is accredited as a model for technical and vocational higher education by the State Ministry of Education, China, and is one of the 100 top vocational colleges in China. The academic part of SVTCC is organised into eight departments, one of which is the Department of Automotive Engineering.⁸ This is the department that the Fellow was collaborating with during the Fellowship.

Objectives

- Analyse current Chinese automotive training practices
- Identify skill deficiencies among automotive teachers in the Chinese vocational training sector
- Identify the key reasons for the SVTCC Automotive Engineering Department's high level of graduate employment status
- Identify the potential opportunities for Australian vocational training organisations to expand our current market by servicing the Chinese automotive industry.

Outcomes

SVTCC's Automotive Engineering Department offers four different main streams, Light Vehicle Mechanics, Light Vehicle Body Repair (Panel Beating and Spray Painting), Motor Vehicle Assessment and Insurance, and Car Sales. The four streams all offer diploma-level certificates and the duration of all courses is three years.

Since 2003, the demand for privately used motor vehicles in China has been increasing dramatically. Car manufacturers are struggling to source their dealership servicing staff from the Chinese labour market and to build new training centres in different cities across China would come with high costs and risks.

Guangzhou Toyota is the pioneer organisation that adapted the 'Dealership in School' model of training in collaboration with SVTCC in China. The 'Dealership in School' model is a cooperative training delivery method between the car manufacturer and SVTCC. The college provides the training and associated facilities for manufacturers on campus; they also source the new students nationally every semester. The car manufacturer provides the training vehicles, spare parts, tools, equipment, training materials and facilitators to assist the college in the training of students. Since 2003, five major car manufacturers have invested resources into SVTCC: Toyota, Peugeot, Citroen, BMW and General Motors.

Yong Tang proudly pointed out that the graduate employment rate for those students who graduated from the Automotive Engineering Department of SVTCC between 2007 and 2010 was 100%.⁹ The main reason for this outstanding performance was due to the collaborative training approach by SVTCC and local car manufacturers and dealerships to fully support the automotive students. SVTCC students and teaching staff have all benefited from this training model.



SVTCC's BMW Training Centre



SVTCC's Citroen Training Centre

One of the main reasons that SVTCC Automotive Engineering Department graduates found employment easily was that after the first two years of study at SVTCC, there is a screened test to select the best performing students to be given opportunities within the affiliated dealerships. Once the students have been selected, they are offered one year of work experience in a particular dealership.

SVTCC found that these students generally chose to return to the dealership after completion of their study. However, all affiliated dealerships also recruited more graduates once the class had completed their study so that all graduating students had the best opportunity for employment at the end of their third year of study.

Evidence gained by Yue of the strong automotive manufacturer alliances between dealerships and a Chinese vocational training provider has provided the following insights into the positive aspects of this new training delivery model:

- Manufactures' training facilities are co-located with public training institutions.
- Staff and students have access to the latest technologies and technical expertise related to specific motor vehicles.
- Manufactures set up their simulated customer service department in the training institution.
- Possible cooperative opportunities between Australian vocational training institutes and those of China.
- Possible ability to adapt the training model in Australia, providing excellent training opportunities to the Australian automotive industry.
- Opportunity to develop long-term cooperative relationships between training institutions in Australia and manufactures in China.

The International Experience



BMW Apprenticeship Recruitment at SVTCC



The BMW dealership human resource managers interviewing SVTCC students

After conversing with SVTCC's Automotive Engineering Department managers, Yue found that the biggest skill deficiency for SVTCC's automotive teaching staff was the lack of knowledge of practical automotive mechanical skills on a real motor vehicle. All SVTCC teaching staff are highly qualified in Automotive Engineering (all have qualifications of Bachelor's Degree level or above), but there were not enough opportunities for them to practise on vehicles back at their employing school. For this reason, SVTCC created a specific office space for their automotive teaching staff.

The International Experience

The offices are shared with training facilitators from the dealerships on campus, encouraging collaboration and exchange of skills. This enabled the SVTCC's teaching staff to learn and share current knowledge and skills with experienced trainers from the automotive industry.

In addition, SVTCC sent groups of teaching staff to the affiliated dealerships during the school term break to improve their practical skills. Due to the fact that all SVTCC's students would be trained by different dealerships during their third year of study, one of the shortcomings of this model is that students have to narrow their future employment pathway to a particular dealership. Therefore, the students' first two years of study, where students gain an understanding of generic mechanic skills, are very important.

The Australian vocational training qualification of Certificate III in Automotive Mechanics from the Automotive Training Package includes all the important knowledge and skills needed to enable students to become a qualified mechanic, providing special emphasis on students' hands-on skills. Yue found that hands-on skills were a weakness of SVTCC's one-year and two-year automotive students. Adopting the positive aspects of the training model used in China and combining these with the positive aspects of the training model currently used in Australia to create a new training model would increase Australian vocational training organisations' ability expand their current market by servicing the Chinese automotive industry. It would also provide students studying in Australia with access to the latest technology and skills and increase Australia's competitive advantage within the global automotive industry.

As a result of the information gained by Yue during the Fellowship, an opportunity currently exists for Australian vocational training organisations to construct a suitable automotive mechanic training course for SVTCC's automotive students by:

- Adopting a new, collaborative approach to training that is inclusive of manufacturers and dealerships.
- Developing online training resources with English-Chinese translation function.
- Increasing practical components in the course to enhance the students' hands-on skills.



Toyota's training staff delivering a panel beating class to the SVTCC third-year students

Concluding Remarks

This Fellowship provided Yue with the valuable opportunity to investigate the Chinese automotive vocational training system. The Fellow found it was a surprise to see how rapidly the Chinese automotive industry has developed, and the corresponding huge demand for automotive service and management personnel in China.

A selection of car manufacturers in China have identified the potential of this vigorous market and have chosen to align themselves with local vocational training organisations to satisfy their own demands, as well as the demands of the colleges, and students themselves. The Chinese Government has also been assisting both enterprises and colleges to make this excellent training delivery model successful.

In relation to industry engagement, it is Yue's opinion that the Chinese automotive training sector can be considered to be in advance of the Australian automotive training sector. The Fellowship has given Yue the opportunity to re-evaluate his perceptions of the Chinese vocational training system and to establish networks within Chinese vocational training institutions, which may eventuate into long-term partnerships being established with Australian vocational training institutions. The Fellow is passionate about sharing the findings and outcomes of this Fellowship with other organisations to assist the transfer the acquired knowledge into real practices in the operation of the automotive training sector.

Knowledge Transfer: Applying the Outcomes

The automotive industry in Australia has been experiencing skill shortages in both technical and managerial areas. On his return from China, Yue brought both advanced technical and management skills applicable to the Australian automotive industry back to Australia.

The findings from this Fellowship will facilitate the development of training resources and strategies, which will cater for the specific training needs of Chinese automotive management personnel. This could increase business opportunities for the Australian education sector, and also ensuring that Australian vocational training is more attractive to the overseas market.

The Fellowship findings will also be shared with ATV to provide useful information on automotive training needs and skill development requirements. This will assist in the reduction of skill shortages in the Australian automotive training industry.

The report will bring an understanding of the advanced management skills being practiced in the Chinese automotive industry to the Australian VET sector to influence and enhance the delivery of local program content.

The skills and training resources identified in China will be used to train local or international students who want to seek job opportunities in the Chinese automotive industry. The key drivers of automotive technology developed in China will be evaluated and, where appropriate, could be embedded into training material and strategies to serve the Australian community, such as environmentally friendly technologies in the automotive industry.

Chisholm Institute are already starting to implement the changes suggested by Yue:

- Chisholm Institute has been engaging with local automotive industrial partners to share resources with them and getting sponsorship from them as well, i.e. Sidchrome Australia invested automotive mechanic tools worth more than AUD\$500,000 into Chisholm Institute's new Automotive & Logistic Centre. The Chisholm Institute Automotive International Program develops online training resources for Sidchrome Australia.
- Chisholm Institute's Automotive International Program has launched a Virtual Business delivery mode for its Diploma of Automotive Management course to give students more real automotive workshop management experiences.
- A Letter of Agreement has been signed by both SVTCC and Chisholm Institute to represent a special relationship between the two institutes for the development of education and projects relating to automotive training and partnership opportunities. The agreement was based upon the participating agencies recognising the importance of education and training in national and international development and could serve to strengthen and broaden cooperation and mutual assistance in the provision of Vocational Education and Training. Yong Tang, Vice President of SVTCC and Shou Ming Liu, Centre Manager of SVTCC International Exchange Centre invited Chisholm Institute's automotive teaching staff and managers to visit STVCC to share valuable knowledge and experience in the future.

After the Fellow's travel in April 2011, an information briefing session was conducted at Chisholm Institute's Automotive International Program coordinators' meeting. Department manager, Paul Hamlett, and six program coordinators (senior educators) attended this meeting. The findings and photos were shared in the meeting and the feedback was good. Everyone was surprised by the rapid development in the Chinese automotive industry and training sectors. An interesting discussion between all attendees followed the briefing session.

Recommendations

Government

- In order to assist Australian vocational institutes to recognise and develop opportunities to support the rapidly growing automotive industry in China, the Australian Government and Chinese Government may need to set up agreements and benchmarks regarding training material, qualification recognition, etc.
- Initiate incentives and encourage enterprises to provide better support to vocational training providers.
- Approach the Chinese Education Department to discuss detailed agreements such as Australian vocational qualification recognition in China.

Industry

- Motor vehicle manufacturers to actively share the latest technology and expertise with vocational training organisations.
- Source automotive technicians by going to vocational institutes and conducting face-to-face interviews with students to give students more opportunities to be employed.
- Invest in or donate equipment and tools to training organisations to assist student learning and to train brand loyalty for future potential customers.

Education and Training

- Australian training providers need to establish local arrangements with manufactures and actively lobby government to encourage manufacturers to better support training delivery in Australia.
- The Fellow is available to liaise with vocational training organisations to develop and implement curriculum by using the automotive training package for overseas demand.
- As an individual, the Fellow needs to improve the knowledge of creative and innovative teaching practice, particularly e-learning platforms. Since online training could be the future delivery method for overseas customers.
- Vocational training providers need to establish mechanisms to encourage automotive vocational training staff to participate in more car manufacturer workshops and tours to maintain their skill currency.
- Vocational training organisations need to develop training material that is on a multilingual platform, increasing convenience for overseas customers and competitive edge in the global market.
- The huge demand in the Chinese automotive market is a good opportunity for other Australian vocational training institutes also providing automotive training, such as Kangan Institute and Swinburne TAFE, to go to China and compare training products and to develop better training resources for both nations.

ISS Institute

- ISS Institute to provide future Fellowships to investigate further opportunities between Australia and overseas countries with rapidly growing automotive industries, such as China and India.

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