**Make VET Great Again**

**The Case for Competency Intelligence Based Training (CIBT)**

**Abstract**

This paper reports on an investigation of perspectives of VET practitioners in the application of the Double Heuristic Method (DHM) (Azemikhah, 2013) to the teaching of Units of Competency in Training Packages.  This investigation is the focus of a doctoral thesis and a book, titled, “Create Your Mental GPS with Competency Intelligence, the Secret path to your Dreams” (Azemikhah, 2016).  This book presents a framework to examine ways in which the current problem of low levels of completion rates in VET may be addressed.  Low completions rates in VET have been problematic since the publication of the AVETRA paper in 2009 titled, *“Aiming at Higher Completion Rates in VET.”*

According to recent reports, completion rates in VET have declined to a staggering lowest level in the history of VET in Australia.  The level of 5% is the lowest since 2009 and may be considered by some as a joke.  It is now 2017 and there are still some reports, papers and articles that refer to the low level of completion rates in VET.  This paper aims to review the reports briefly and to propose ways in which the problem may be addressed to “Make VET Great Again”.

The paper highlights how further investigations into the premise of intelligence have revealed new insights and understandings regarding competence and intelligence.  Further, how these new findings may explain the low level of completion rates in VET which not only throw light on this dilemma but also on the solution.

**Introduction**

This research was designed to address the pedagogical confusions in VET delivery, through the use of the DHM, with a view to bringing clarity to VET teaching, assessment, and delivery by capturing teachers’ perspectives of using an alternative model of pedagogy (the DHM) to address their pedagogical challenges in VET.

**Literature Review**

The contextual background of the study explored the typologies of competence. Three typologies have emerged globally, which are the behavioural approach in USA, the functional approach in the UK and the holistic approach in Germany and France. While these typologies were shared by some countries, some other countries have used a hybrid approach, combining some features of these typologies and resulting in various types of VET systems with similarities and differences among them. Australia, for example, pursued a functional typology similar to the UK.

The literature Review was undertaken in three parts: VET delivery internationally, in England and in Australia. Part One started by referring to the Lisbon strategy that was launched by the European Union (EU), in 2000, which set the objective for Europe to become the most competitive knowledge-based economy internationally. The EU realized in 2003 that to achieve this goal it is required that both lifelong learning and competency development should be included in VET delivery programs. The two projects DeSeCo (2002) and Tuning (2000) contributed to this process.

Part Two covered the early1980s. The UK education system was shaken by the ‘Thatcherite revolution’ leading to a plethora of white papers, called “New Vocationalism”. Therefore, in the late 1980s to the early 1990s, competence advanced to all spheres of post-16 education. The White Paper titled, *Employment for the 1990s* (UK Government 1988) set the plan for the decade of the 1990s in which it was recognized that standards of competence for all occupations relevant to employment were to be drawn up by organizations that were industry-led. The two issues that surfaced were: the status of VET in society and synchronization of the world of work to the world of learning. Hence, the success of such profound reconstruction depended on successful offering of National Vocational Qualifications by colleges as well as the parity of esteem between vocational and higher education. To achieve such an outcome, the White paper titled, ‘Education and Training for 21st century’ (1991) was released by the government.

The result of all these reforms did not bear fruit. In 1999, the UK economy was still suffering from relatively low productivity. Moser (1999) looked into the causes of the situation and found that one in five adults in the country was not functionally literate, and far more people had problems with numeracy. The Learning and Skills Act (2000) was endorsed in 2001 to establish the learning and skills councils (LSCs). ‘Success for All’, was launched in November 2002 as the government’s agenda to reform the learning and skills sector and transform local provision of vocational education.

After decades of reforming by 2005, the government realized that the vocational education sector needed reinvigoration as it had not achieved as expected. In the same year, the government, after examining the Foster (2005) report that referred to VET sector as ‘Neglected Middle Child’ issued the ‘FE reform white paper (2005)’ and set the mission for further education for the UK. By 2007 the government realized that to achieve the goals as set by FE reform they need to focus on teacher training. Thus, from September 2007, the government expected that all new staff employed as teachers and trainers in the learning and skills sector (VET) would be trained to a standard that allowed them to achieve Qualified Teacher Learning and Skills status (QTLS) and be licensed to practice by the Institute for Learning (Learning and Skills Sector, 2007). This process did not produce the high expectation predicted and caused the inequities between teachers of academic and vocational education to surface, along with the pernicious effects of this division on the learning experience.

Hence, in 2010, Sir Mike Tomlinson was commissioned to inquire into teacher training, and the fundamental issue of inequity and the impact on learning (Skills Commission – Tomlinson, 2010). The Tomlinson Inquiry (2010) revealed two major areas of neglect in Vocational Education and Training Sector, as follows:

The first area of neglect was that teachers of vocational education have been a neglected group within the teaching profession, even considered to be second best. The second area of neglect has been the neglect of vocational and applied pedagogies and that *there is a clear need to develop a theory of applied learning.*

In Australia, High Level Review established that the ability to work skillfully with the Training Packages is the key quality issue of teaching in the VET sector, which was regarded as the most significant finding of the High-Level Review (Schofield & MacDonald & ANTA, 2004a). It was argued that education of VET teachers to the required level for quality teaching needs a theoretical framework and adoption of models of pedagogy. According to Schofield & MacDonald & ANTA, (2004a), quality teaching requires understanding “how the training Packages work and how to work with them” (Schofield & MacDonald & ANTA, 2004a:4-5). The so-called implementation would only be meaningful if pursued within the parameters of a theoretical framework. Otherwise, practice would be chaotic and merely a collection of isolated cases (Tyler, 1949).

Hence, a theory of applied learning, comprised of a theoretical and pedagogical framework, is required to boost understanding of the two aspects of VET teaching that are prerequisite to skillful work with Training Packages (TP). This understanding will improve the quality of teaching in VET on two fronts, ‘how Training Packages work’ and ‘how to work with them’. This improvement in quality of teaching will produce ‘high-quality’ products and services and lead to higher completion rates in VET. Therefore, working skillfully with Training Packages (Skills Australia, 2011) requires skillful understanding directed at these two dimensions: To understand skillfully how TP’s work and be able to understand how to skillfully work with Training Packages. A theoretical framework that addresses these two aspects for VET teaching needs to be nationally adopted to support quality teaching of VET delivery in order to deliver high-quality products and services.

In 2010, Smith postulated both the pedagogical divide and knowledge displacement as implementation issues. Resolving implementation issues requires pedagogical theoretical framework (Tyler 1949). Improving the products as strategy to solve pedagogical and theoretical problems was not recommended by the HLR (Schofield & MacDonald & ANTA, 2004a:5). Despite the above findings, the National Quality Council (NQC) has undertaken a streamlining project to improve the products (Training Packages). This strategy by the NQC indicates that the HLR (2004) has been overlooked.

As the High Level Review suggested, the pedagogical problems in the Training Packages context are problems in relation to either how the Training Packages work, or how to work with the Training Packages. To skillfully work with them, teachers need to develop their competence in these two dimensions of skillful delivery and be able to differentiate these two dimensions. The differentiation of these two types of understandings, and the issues that are pertinent to them, is crucial to understand the teaching, learning and assessment problems in the VET environment. As the HLR review put it, “This is a key issue that demands attention in order to achieve improvements in the quality of teaching, learning and assessment practice” (Schofield & MacDonald & ANTA, 2004a:5). In other words, understanding how to improve the quality of teaching, learning and assessment in VET depends entirely and solely on these two dimensions (aspects). The VET teachers need to be competent in both dimensions to be able to skillfully work with the Training Packages, and achieving these goals is possible via a theoretical framework.

Therefore, an examination of the interplay of various policies and research projects that were undertaken across Europe, UK and Australia in the delivery of vocational education and training, has revealed that a theory of applied learning is necessary to facilitate pedagogical understanding. To make VET great again the theory can be used in applied vocational learning to transform VET delivery into a workable, teachable and learnable format. To make VET great again, this research proposes the theory of Competencivism as the theory of applied learning for VET. It provides a conceptual tool (the DHM) that embraces the theoretical complexity inherent in VET training, and provides a platform for engaging in a pedagogical approach that centres on the development of competence through pedagogically-sound learning.

**Double Heuristic Method**

The successful delivery of courses in the context of CBT and Training packages requires the DHM pedagogical approach (method). How does the DHM (Figure 2) lead to such a realization? The Model is comprised of two heuristics. It is simple and easy to use. The Second Heuristic frames the First Heuristic. As a pedagogical tool, the two heuristics, together, can deliver training for VET in Australia. The pedagogical significance of the First Heuristic is that it maps the relevant component parts that are necessary in delivery of sessions, assessments and learning activities. The First Heuristic of the DHM represents the pedagogical picture of these inter-related components: concepts, skills and performance criteria. When this picture is completed it needs to be framed. Thus, the function of the Second Heuristic of the DHM is to frame the First Heuristic by teaching strategies, focus statements and attributes.

The process of framing is to be completed through allocation of suitable teaching strategies and focus questions. The process of Double Heuristic is demonstrated in the research by an illustrating example of a session of delivery. The DHM is underpinned by the Applied learning theory of Competencivism that is covered next.

**The Applied Learning Theory of Competencivism**

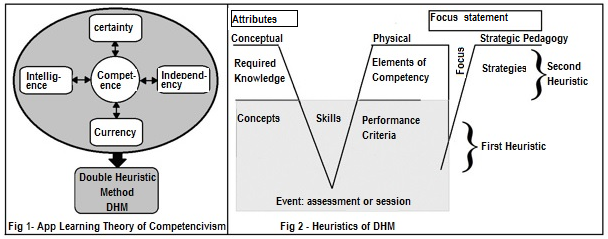
Competencivism (Figure 1) is comprised of four inter-related premises that constitute the facilitative framework of the study. It is now widely recognised that teachers and trainers should become learning facilitators (Cedefop Synthesis, 2009:120). This shift of emphasis in facilitative teaching, as opposed to instructive teaching, suggests that the interplay of the abstract (the Mind) and the concrete (the Hands) in competency development should be facilitated within a teaching framework. The shift from instructive teaching to facilitative teaching in learning theory (Cedefop Synthesis, 2009:120), requires that the new VET pedagogies surrounding the abstract and concrete notions are to be realised in the facilitative framework of Competencivism (Azemikhah, 2008).

The teachers need to continue assisting learners in developing competence in the framework while the learners are applying the required knowledge, skills and attributes. They should continue this until such time as the learners are confident, independent current and competently intelligent. Hence, the learners need to demonstrate that they have achieved the four premises of confidence or certainty (Premise 1), independence or autonomy (Premise 2), currency (Premise 3) and competency intelligence (Premise 4).

**Certainty** – This premise postulates that individuals engage fully in the activities of life and perform according to the specific certainty such that they possess a special quality called competence. There is confidence in the efficacy of their performance (Competency Certainty). Such certainty is both essential and crucial for the competent accomplishment of the desired outcome in activities of life. According to this premise, the learner and the assessor should agree that the competency has been attained.

**Independency** – This premise postulates that to achieve certainty the individual needs to engage in a facilitation process to develop competency and continue on this path until he/she attains independency. According to the second premise of Competencivism the learner through a constant application of knowledge and skills to performance can become independent of his/her facilitator.

**Currency** – This premise postulates that the process of maintaining currency requires the individual to engage in the integration of new knowledge, disintegration of old (obsolete) knowledge, and the reintegration of the existing knowledge to performance, using skills as the integrative agent. Without currency, the knowledge and skills become outdated and obsolete. This premise involves the three functions of *integration*, *disintegration* and *reintegration* of knowledge and skills as a perpetuating process.



**Intelligence** - According to this Premise, the possession of a set of skills, knowledge and attributes is, of itself, of no avail. A competent individual who is expected to demonstrate superior performance (McClelland, 1973), in addition, needs to: possess the intelligence of putting them all together by integrating and coordinating the constituents of competence in unison, and objectively, and with due regard to, and, in congruence with, the timing, the sequence as well as the purpose of the Unit of Competency. The 4th premise of the theory of Competencivism postulates that to remain competent the individual is required to enter into an agreement with the self to develop and apply competency intelligence (CQ) to balance his/her intellectual abilities (IQ) and his/her emotional competences (EQ). Based on the premise of intelligence in Competencivism it is the combination of these three intelligences (ICEQ) that, in fact, contributes to the individual’s superior performance (Azemikhah, 2013:112)

**Research methods -** This study was designed within a qualitative tradition and was carried out within the interpretive paradigm and adopted Symbolic Interactionist (Blumer, 1969) as its theoretical position to formulate a theory from the meanings that the participants attributed to the use of the DHM in delivery of courses to their students. A grounded theory methodology following the methods of semi-structured interviewing (O’Donoghue, 2007:85) was employed in this research for data collection and analysis. A series of semi-structured interviews were conducted with each participant over a two-year period. The first was undertaken after participants in their delivery had implemented the DHM, and the remaining interviews were conducted throughout the delivery of the unit, and after the completion of the sessions and assessments. In the process of data analysis, both code notes and theoretical memos were utilised for transcription of data using open coding, leading to the identification of the initial categories (Strauss & Corbin, 1990). This was followed by axial and selective coding. Axial coding was used to identify the relationships among the initial categories (Strauss, 1987) or concepts, while selective coding was used to identify the core category by integrating categories with a particular reference to a central category (O’Donoghue, 2007).

**Analysis and conclusions -** Emerged concepts from the analysis of teachers’ responses were classified into three main categories, resulting in the emergence of the three propositions listed below.

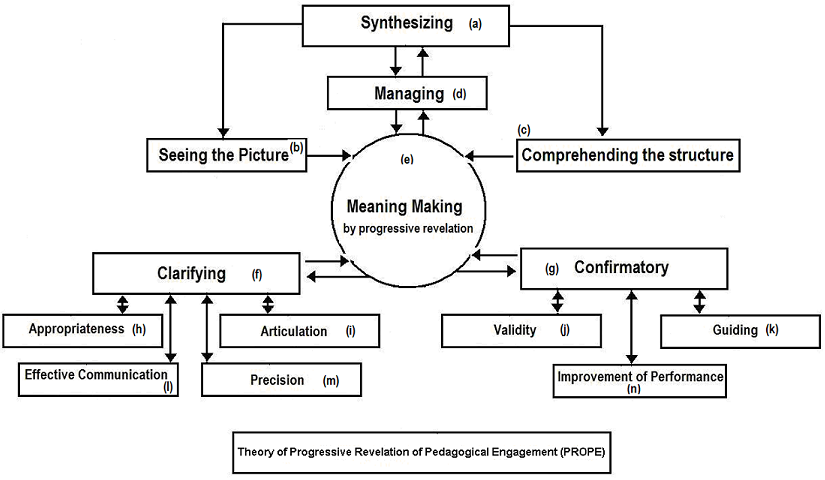
**The first proposition** focuses on the finding that in the context of Training Packages teachers see the Double Heuristic Method (DHM) as a clarifying approach for VET delivery in Australia. The Double Heuristic Method is seen to clarify the multi-faceted relationships among the many and varied components in the delivery of Training Packages. The four key concepts that underpin the proposition are: Appropriateness, Articulation, Effective Communication, and Precision.

**The second proposition** looked at the strong conviction amongst participating teachers that, by using the DHM, they are able to confirm the practices in which they engage. In such a context, they see the DHM approach playing a confirmatory role in strengthening and maintaining their confidence by confirming that what they are doing is right and that they are on the right track to ensuring that the requirements of Training Packages and AQTF are met. Three concepts that underpin this proposition are: Validity, Guiding and Improvement of performance.

**The third proposition** examined the ways that the participating VET teachers saw the Double Heuristic Method (DHM) as a meaning-making apparatus, with a synthesising role for VET delivery in Australia. This gives competency a structure, an approach, and a clear construct, in order to make meaning of the integration. The three concepts that underpin the third propositions are seeing the picture, seeing the structure, and VET delivery planning.

**Theory of Progressive Revelation of Pedagogical Engagement (PROPE)**

The data analysis, shaped by the principles of grounded theory (Strauss and Corbin, 1990, O’Donoghue, 2007), led to the development of the substantive theory: The Theory of Progressive Revelation of Pedagogical Engagement (Figure 3).

Figure 3: Theory of Progressive Revelation of Pedagogical Engagement (PROPE)

The substantive theory was built from the propositions that were elicited throughout the data analysis. Implicit within the theory and the propositions are three key revelations, namely, synthesizing phases, clarifying phases and confirmatory phases of pedagogical planning and delivery that ensure quality learning experiences and pedagogical meaning making for both teachers and students. It is evident that in order to address the pedagogical complexity that underpins the Training Packages, a theoretical and conceptual framework is required. In this case, the DHM (Figure 2) has been mooted as an appropriate scaffold.

The study concluded by describing the substantive theory of Progressive Revelation of Pedagogical Engagement (PROPE). The Theory of Progressive Revelation of Pedagogical Engagement (Figure 3) illustrates how the synthesising, clarifying and confirmatory roles of the DHM contribute to the meaning making process, facilitating the grasping of the meaning of pedagogy for VET delivery by teachers and learners.

**Evidence**

The data collected evidence indicated satisfaction among participating teachers and was reported in three chapters (over 45 pages). A few examples are listed as follows:

Patrick emphasized that, “The DHM framework assists me in my decision-making both theoretically and practically.” He further adds that, “The DHM helps me to choose the right theory that is necessary for the teaching of my subject before I can walk in the classroom and deliver it.” Another participant, Ian, added, “The DHM provides a pathway from theoretical to practical application of VET delivery, a pathway for analyzing and improving an existing application. Being such a path, the DHM connects theory to application.”. Ray shared that, “I think the DHM is very important. I think that is where you work at your delivery methods and strategies, and the need to align whether there is a theory or skill, because each of them is in different framework. So, it is important.”. And Patrick added, “The DHM Model allows me to think about my subject, allows me to be more precise in picking up what I am going to teach in theory and how I am going to do it in practice.”

Gloria elaborated that, “I think the DHM is trying to convey to the practitioners the rich store of knowledge and skills that can be crafted into meaningful experience.” Harry retorted that, “Because the relationships of skills and knowledge to other concepts are meaningfully established in the DHM, I have been able to produce meaningful resources comprised of meaningful learning experiences for my students. I have received feedback from these students that are indicative of such an outcome.” Ian referred to DHM as, “Using the DHM, you got the knowledge and skills, then you are applying these to the real teaching that can be crafted into a meaningful experience … ”

Gloria pointed out that, “The DHM is the framework for explaining.” This view is confirmed by Harry who stated that, “The DHM provides me with a way of explaining how the component parts are linked together. For example, how skills relate to performance, how performance criteria relate to knowledge and to the rest of components, as well as how to develop assessments and sessions succinctly. I am able to better articulate my teaching and to explain all these parts to other teachers and students meaningfully.

**Implications:**

Applying the DHM pedagogical approach, informed by the theory of Applied Learning of Competencivsm and the substantive theory of Progressive Revelations of Pedagogical Engagement (PROPE) imply new practices for the VET sector. These are outlined below:

1. There is a need for a complete pedagogical revision and understanding of the delivery of programs that develop competence based on the theory of Progressive Revelations of Pedagogical Engagement (PROPE)
2. There is a need for developing greater clarity for teachers and students in engaging with the inter-relationships of the components in Units of Competency of the Training Packages, through the use of a pedagogical framework, namely the DHM
3. There is a need for holistic assessments in the Training Packages context where the knowledge, skills and performance criteria are holistically tested and marked. The DHM allows this to happen.
4. Teaching, learning and assessment in the VET sector require a solid theoretical framework and vehicle to equip teachers. The theory of Applied Learning of Competencivism and DHM fulfil this need.

**Recent Reports and New Insights**

In 2013, NCVER published opinion pieces on completion rates. The completion rate was defined as,” *the proportion of people who finish a qualification they started”. In 2010 that* figure was about 27.10% but it was emphasized that, “the real-world picture is more complex than a single number can convey. However, 27.1% does seem rather low”. In 2016, CEDA reported that, “the completion rate for Indigenous students is about 13 per cent”. The CEDA further reported that, “Unsurprisingly, completion rates are very low. Even more alarmingly, the quality of provision in some of these for-profit providers has been so low that regulators have, actually, revoked qualifications.” In 2015, the Training website alarmed Australians that only 7 per cent of online students have completed their courses between 2010 and 2013 compared to nearly 40 per cent completion of students who attend some type of institution or college to complete their course. The *Aiming at Higher Completion Rates* paper concluded (Azemikhah, 2009) that,

“Attributes are the heart intelligence of Competency development and need to be emphasized, not only in the apprenticeship and traineeship programs, but across VET. Without developing the heart intelligence of competency, i. e. , the attributes, by the learners, not only will the completion rates continue to decline but, also, the productivity of the graduates on the job after the completion of studies will be poor.”

It emphasized personal and social skills, life-long learning skills, emotional balance, linking desires to emotions, commitment, motivation, attributes of desiring success, achievement and that the focus needs to be placed on, “personal and social skills which further confirm the significance of personal attributes as the hallmarks of achievement leading to higher completion rates” (Azemikhah, 2009). The CEDA report (2016:10) has further emphasised the importance of creativity, social intelligence, patience, critical thinking and resilience. While patience and resilience may be regarded as a part of emotional competences (EQ) the Creativity and critical thinking are part of intellectual intelligence (IQ). This is necessary to adapt to workforce needs. These references confirm the premise of intelligence in Competencivism (Azemikhah, 2013:111). Utilizing the notion of ICEQ is to blend intellectual abilities (IQ) such as creativity, critical thinking with emotional competences such as social intelligence abilities, patience and resilience (EQ). Hence, the student’s agreement with himself/ herself to develop and apply the competency intelligence (CQ) that connects his/her IQ to his/her EQ is vital.

This paper focuses on new insights and understandings regarding competence and intelligence and how low level of completion rates may be addressed. The *Australian Oxford* *Dictionary* defines intelligence as “the power of learning” and as “gaining knowledge or skills by study or experience or by being taught.” For example, a search on the Internet returned the following meaning for intelligence: the “ability to acquire and apply knowledge and skills.” Who is an eminent person of great intelligence? An Internet search yielded the following: “a person or being with the ability to acquire and apply knowledge and skills”. Compare this finding with the definition of competence provided by the Australian National Quality Council (2009:6) “Competence is the consistent application of knowledge and skills to performance.” The new insight is that competence and intelligence are VET’s pedagogical twins. Hence, the only move forward for VET pedagogy is to synthesize both, i.e., competence and intelligence to boost completion of studies. Their synthesis adds value to VET pedagogy. VET pedagogy must be reformed based on this synthesis to address the low level of completion rates and to achieve higher quality teaching and learning. This view of VET pedagogy is detailed in “*Create Your Mental GPS with Competency Intelligence*”. This is covered next.

**Create your mental GPS to complete your studies**

*Create Your Mental GPS* is based on the findings of the research and was designed to help students to plan and realize their dreams of completion of studies. It also assists the teachers to plan and deliver the units of competency of the Training Packages based on the new pedagogy of competence and intelligence. Its main aim is to stop the process of procrastination, thus encouraging students to achieve their goals and realize their dreams. It is aimed to help the students who tend to quit or drop their courses. It helps the readers to see their goals as destinations in their mind and develop a plan of action based on the DHM to arrive at their destinations by creating a mental GPS. By creating a mental GPS, the students are able to plan and ultimately achieve their completion of studies.

The following is an extract from the preface:

*“Create Your Mental GPS* is written to reverse the process of decline in achievement of goals in life. It follows the 2009 AVETRA paper to not only help students but every human being to realize their dreams. It explains how you can incorporate emotional intelligence and personal attributes in what you intend to achieve. It is a must read for every human being on the planet who intends to reach to their destinations in this life. There are many secret links you will discover as you read. As you discover and apply those secrets, you will be able to rid yourself of the imbalances in the areas of life that may contribute to the following feelings: Hopelessness to complete your studies, lack of concentration and focus, not knowing what to do next, lack of certainty and confidence in life, feeling lost in life, not interested in setting goals, a feeling of Incompetence, feeling emotionally low or feelings of failure to live a fulfilling life.

**Conclusion**

The aim of this research was to investigate how teachers in Vocational Education and Training (VET) in Australia deal with the Double Heuristic Method (DHM) as an alternative model of pedagogy for teaching in the VET Sector. The inquiry was designed within an interpretive paradigm in seeking to capture VET teachers’ perspectives on adopting the DHM as an innovative model of pedagogy and concluded by synthesizing the three emerged propositions into a substantive theory of pedagogy (PROPE) that underpins VET teaching. As the low level of completion was continuously problematic for VET students since 2009, the findings of this research were utilized in writing of a book, entitled, “*Create Your Mental GPS with Competency Intelligence*” to encourage students to achieve their dreams. Given that VET pedagogy needs to be reformed, based on the synthesis of competence and intelligence, to achieve higher quality teaching and learning as well as a higher level of completion rates, it is concluded, here, that Competency Based Training (CBT) as the foundation of VET pedagogy needs to be evolved into Competency Intelligence Based Training (CIBT). To make VET great again, we need a strong VET system erected on the evolving CIBT foundation.

**Bibliography**

Azemikhah, Homi. (2007). *Competency intelligence.* Paper presented at the 10th AVETRA Conference, Evolution, Revolution or Status Quo, The new Context for VET, Victoria University Footscray Park, Melbourne, Victoria, Australia.

Azemikhah, Homi. (2009). *Aiming at the higher completion rates in VET*. Paper presented at the the 12th AVETRA Conference, Crows Nest, NSW, Australia

Azemikhah, H. 2013. *The Double Heuristic Method: Perspectives on How Teachers Deal with an Alternative Model for Teaching in the VET Sector.* Adelaide: University of Adelaide.

Azemikhah, H. 2016. *Create Your Mental GPS with Competency Intelligence, The Secret Path to Your Dreams,* Create Space Independent Publishing Platform, North Charlestone, South Carolina, USA.

Blumer, H., (1969). *Symbolic interactionism, perspective and method*. Englewood Cliffs, NJ: Prentice-Hall, Inc.

CEDA Report (2016), *VET-Securing Skills for Growth, Retrieved from*  , <http://www.ceda.com.au/research-and-policy/research/2016/08/vet-skills-for-growth>,

Cedefop Synthesis. (2009). *Modernising vocational education and training - Fourth report on vocational education and training research: synthesis report*. Retrieved from http://www.cedefop.europa.eu/EN/Files/3043beta\_en.pdf

Foster, A. (2005). *Realising the potential: A review of the future role of further education colleges*, DfES Publications: Sherwood Park, Annesley, Nottinghamshire. Retrieved from [www.dfes.gov.uk/furthereducation](http://www.dfes.gov.uk/furthereducation)

NCVER, (2013). Retrieved from, *What’s a complrtion rate?* , https://www.ncver.edu.au/about/news-and-events/opinion-pieces/whats-in-a-completion-rate

Rychen D. S. (2002). *Key Competencies for the Knowledge Society: A contribution from the OECD Project Definition and Selection of Competencies (DeSeCo).* Paper presented at the Education – Lifelong Learning and the Knowledge Economy, Conference in Stuttgart, October 10-11, 2002, Key Competencies for the Knowledge Society, Stuttgart.

Rychen, D. S. (2003). *Key Competencies for a Successful Life and Well-Functioning Society,* Retrieved from: http://www.oecd.org/innovation/researchandknowledgemanagement/oecdpublicationidentifieskeycompetenciesforpersonalsocialandeconomicwell-being.htm

McClelland, D. (1973), Testing for competence rather than for ‘intelligence’, *American Psychologist*, *28*(1), 1-14.

Moser, C. (1999). *Improving literacy and numeract: a fresh start*. Retrieved from [www.lifelonglearning.co.uk/mosergroup](http://www.lifelonglearning.co.uk/mosergroup)

O’Donoghue, T. (2007). *Planning your qualitative research project*. Trowbridge, Wiltshire, Great Britain, Cromwell Press, .

Schofield, K., McDonald, R. & Australian National Training Authority. (2004a). *Moving on : report of the high level review of training packages, April 2004*. Melbourne, Vic. : Australian National Training Authority, http://www.anta.gov.au/search.asp?qsScope=1&search=go&qsQuery=moving+on&x=22&y=10

Skills Australia. (2011). *Skills for prosperity: A roadmap for vocational education and training (Final Report)*. Retrieved from: http://www.skillsaustralia.gov.au/Publicationa\_and\_Resources/Slikks\_Australia\_Public\_Papers.htm

Smith, E. (2010). *Creating a future direction for Australian vocational education and training, Consultation Questions* [Personal Submission to Skills Australia], Retrieved from <http://www.awpa.gov.au/tertiary-sector-reform/skills-for-prosperity/documents/sub-smithericapersonal.rtf>

Strauss, A. (1987). *Qualitative Analysis of Social Scientists.* New York: Cambridge University Press.

Strauss, A. & Corbin, J. (1990). *Basics of Qualitative Research: Grounded Theory Procedures and Techniques.* Newbury Park, CA, Sage Publications.

Tomlinson. (2010). *Teacher training in vocational education,* Inquiry by the Skills Commission into teacher training in vocational education*.* Retrieved from <http://www.policyconnect.org.uk/sc/skills-commission-inquiry-teacher-training-vocational-education>

Tyler, R. (1949). Trends in professional education. *American Journal of Nursing* 49(1): 50-56.