

## AN INTEGRATED TEACHING-LEARNING FRAMEWORK FOR SPECIAL EDUCATION IN SINGAPORE

Noel Kok Hwee Chia<sup>1</sup>, Norman Kiak Nam Kee<sup>2</sup>

<sup>1,2</sup>National Institute of Education, Nanyang Technological University,  
SINGAPORE.

<sup>1</sup>[kokhwee.chia@nie.edu.sg](mailto:kokhwee.chia@nie.edu.sg), <sup>2</sup>[kiaknam.kee@nie.edu.sg](mailto:kiaknam.kee@nie.edu.sg)

### ABSTRACT

*Teaching in special education (SPED) schools has never been easy, and learning for students with disabilities can be equally challenging. SPED is defined as a set of services put into place following diagnostic reviews, parental concerns, and/or teacher concerns. Moreover, it is also a set of guidelines that teachers, parents and students can follow so that each individual with disability has a specific educational plan in place. In the early years, SPED catered to individuals with moderate or severe disabilities, but more recently it has been opened to anyone who has experienced learning and/or behavioral challenges. In this paper, the authors have conceptualized and introduced an integrated teaching-learning framework for SPED in Singapore.*

**Keywords:** Disabilities, Learning, Special Education, Teaching

### INTRODUCTION

Education is a broad term that refers to the process of learning and acquiring content knowledge and skills. According to Dewey (1916), education refers to a form of learning that transfers knowledge, skills and habits of a group of individuals from one generation to the next through teaching (pedagogy), training (andragogy), research, or self-directed learning (auto-didacticism). It can take place through any form of experience that a formative effect on the way an individual thinks, feels, or acts.

The European Center for the Development of Vocational Training (2004) and Chia (2011) have identified three primary forms of education: formal, non-formal and informal. Formal education refers to intentional learning that “involves a structured program in terms of learning objectives, duration and support provided by an educational institution or training center and it leads learners to some form of certification” (Chia, 2011, p.31). Unlike formal education, non-formal education though “involves a structured program or as part of an organized activity takes place within a workplace or community, but it does not lead to certification or qualification for the learners” (Chia, 2011, p.31). Unlike the two forms of education mentioned earlier, informal education “may be intentional or non-intentional and it involves daily life activities related to real life situations such as school activities, family events and leisure time. Without a structured program, this form of education does not result in any form of certification for the learners” (Chia, 2011, p.31).

In a summary, education for any individual can be formal, non-formal and informal and it involves learning and teaching processes during which the individual acquires content knowledge and skills that are woven into his/her tapestry of experience throughout his/her lifespan development from birth to old age.

### Developmental Process of Teaching and Learning (T&L)

Education involves both teaching and learning (T&L). The former process is delivered by the teachers while the latter process is acquired by the learners (students). According to Chia

(2011), teaching-learning process should be seen “as a continuous development that grows and changes throughout an individual’s lifetime” (see Figure 1) from birth to old age, and this individual can be a teacher or student. Each of these developmental T&L phases will be described briefly below.

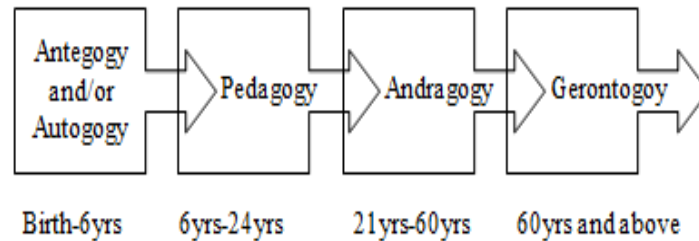


Figure 1. Developmental process of continuous teaching and learning (Chia, 2011)

The initial T&L phase of *antegogy* is derived from two Greek words *ante* means “before” and *gogy* means “to lead”; literally the term means “before leading” or before formal learning starts to occur” (Chia, 2011, p.32). A lot of intuitive learning takes place during the period from birth to six years of age. Learning during this phase is spontaneous and it is often described as “being caught”, i.e., *real* teaching has not begun yet.

According to Santrock (1995), during the sensitive period (2-5 years of age), young children can learn very quickly and their brain functions like a sponge that can absorb a lot of water. Montessori (1967) has used the term “the absorbent mind” to describe how these young children, who by nature learn instinctively and experientially through their daily contacts with their environment. They play both the learner’s and teacher’s roles and learning is unconscious and automatic. This T&L phase is termed as *autogogy* where *auto* means “self” and the term literally means to lead by self” (Chia, 2011).

Pedagogy, where *peda* means “child” and the term means “to lead the child”, is the next T&L phase (6-24 years of age) that formal learning comes into play. It involves formal teaching beginning from primary school (normally in a classroom) to post-secondary and tertiary institutions (involving lectures and tutorial sessions).

As a learner matures from adolescence to adulthood, learning becomes more problem-centered than subject-centered and the learner’s perspective also changes and matures from future application of knowledge to immediacy of application (Knowles, 1980). This T&L phase is known as *andragogy*, literally means “to lead the adult” and is defined as “the art and science of helping adults learn” (McClusky et al., 2007, p.84).

Finally, as the learner grows older, especially beyond 60 years of age, learning becomes a reverse process, i.e., an older worker has a younger mentor to help him/her to integrate into the ever-changing workplace (Hong, 2008). Moreover, learning beyond 60’s also includes recreational activities and voluntary work to makes lives of these senior learners meaningful and beneficial to the community as a whole.

### SPECIAL EDUCATION (SPED)

Besides the three primary forms of education, there is also a fourth one known as alternative education. Also known as non-traditional or unconventional education, this broad term refers to all forms of education designed for individuals with special needs as a result of situational challenges, e.g., living in a remote place far away from city such that it is impossible to attend school, or social challenges ranging from teenage pregnancy, racial bias or religious

prohibition to intellectual challenges. It may include auto-didacticism, home-schooling distance learning and independent schools.

Closer to alternative education is another form of education known as special education (SPED), which caters to individuals with disabilities, but may also include those with significantly high abilities. A highly specialized form of special education known as gifted education is specifically designed to cater to the needs of the talented latter. Special education can be formal, non-formal or informal. SPED is formal if mandated by the federal or state legislation or non-formal/informal if there is no authority to govern or law to dictate what content knowledge and skills are being taught, where the lessons are conducted and by whom.

### **The History of SPED**

Nobody knows exactly when SPED first began. Recent archaeological finds (e.g., Hublin, 2009; Keltner et al., 2010; Tilley & Oxenham, 2011) have uncovered how prehistoric people “under some conditions life 7,500 years ago included an ability and willingness to help and sustain the chronically ill and handicapped” (Gorman, 2013, p.D7).

In the more recent past, individuals with disabilities were often not eligible for public education and they often ended up being housed in asylum, neglected and forgotten. These individuals, if they were fortunate enough, could be educated by special tutors or physicians, such as Jean Itard (b.1774-d.1838), Thomas H. Gallaudet (b.1787-d.1852), Samuel G. Howe (b.1801-d.1876) and Édouard Séguin (b.1812-d.1880), who are regarded as pioneers in this field of education. These early physicians, whose focus was on individualized instruction and functional skills, had laid the foundation for SPED today. In those days, SPED was only provided to individuals with moderate or severe disabilities in its early years, but more recently it has been opened to anyone who has experienced learning and/or behavioral challenges. The focus of this paper is on SPED.

The history of SPED – also known as special needs education in countries like Singapore and the United Kingdom – can be traced back to the establishment of the first SPED schools in the late 18th century. One of such schools was Braidwood’s Academy for the Deaf and Dumb established by Thomas Braidwood (b.1715-d.1806) for the hearing impaired individuals in England in 1767. Another good example is the Institut National des Jeunes Aveugles established by Valentin Haüy (b.1745-d.1822) in 1784 in Paris, France, to teach students with visual impairment.

In the early 1900’s, individuals with disabilities were housed together with others with mental illness in institutions with inhumane conditions. Although these individuals with disabilities were supposed to be cared and educated, in reality, very little if any education actually took place (McCuen, 1997). One of the reasons is that they were often regarded to be uneducable, and in those days, most educators believed very little could be achieved even if there was any attempt to teach them. Such an instructional approach, if it were ever considered as instructional, or more correctly, to be regarded as an instructional attitude, is termed as *apistogogy* – literally means “to lead with unbelief” – derived from two Greek words *apisto* (“unbelief”) and *-gogy* (“to lead”). This approach is a big contrast to pedagogy – the science and art of education involving teaching and learning to develop a person to his/her fullest potential.

As a result, there were outcries for reforms in Europe to bring about better living conditions for individuals with disabilities and the movement eventually spread to the United States, where the educational reform catering to the needs of such individuals was slower (McCuen, 1997). Throughout the mid-20th century, more SPED schools were built, staffed and

resourced to provide appropriate specialized services were set up to meet those with severe learning difficulties, physical disabilities and challenging behaviors. For instance, in the United Kingdom, there was a shortage of SPED schools for most categories of handicap after World War II. According to the UK Ministry of Education (1961), between January 1946 and January 1955, “the number of SPED schools increased from 528 to 743, the number of pupils attending these schools from 38,499 to 58,034, and the number of full-time SPED teachers from 2,434 to 4,381, increases of 41, 51 and 80 per cent respectively” (p.3).

In the last decades towards the close of 20th century, the number of students with disabilities attending SPED schools was on the decline with more parents opting to put their children in mainstream schools. One possible explanation is the stigma that is often associated with SPED schools and many parents are not happy to have a negative label attached to their children with disabilities. For example, in Singapore, the Association for Educationally Subnormal Children (AESN), inaugurated in 1976, was officially renamed the Association for Persons with Special Needs (APSN) in May 2000 in order to remove the derogatory term *educationally subnormal* from its name.

In the United States, the Education for All Handicapped Children Act (EAHCA or Public Law PL94-142), which was enacted in 1975, required all public schools to provide equal access to education and one free meal a day for children with physical and mental challenges. These public schools, which received federal funds, were required to evaluate students with disabilities and provide an educational plan with parental input that had to emulate as closely as possible the educational experience of their non-disabled peers.

In 1990, the US Senate passed the Individuals with Disabilities Act (IDEA) to replace the EHA. The new Act governs how states and public agencies should provide early intervention, special education, and related services to children with disabilities from birth to age 18 or 21 in cases that involve 14 specified categories of disability.

Amendments to the IDEA were introduced in 1997. The amended Act helped to strengthen academic expectations and accountability of public schools for students with disabilities and aimed to close the gap between what students with disabilities learned and what was required in regular curriculum. These students with moderate/severe special needs were gradually integrated into the mainstream school system. This changed the form and function of SPED services in many school districts. As a result, the SPED schools had also begun to see a steady decrease in enrollment as districts weighed the cost per student. It also posed general funding dilemmas to certain local schools and districts, changed how schools view assessments, and formally introduced the concept of inclusion to many educators, students and parents. The IDEA was reauthorized and amended several times, most recently in December 2004. Known as IDEA Improvement Act 2004, it helps children with disabilities to learn better by promoting accountability for results, enhancing parental involvement, using evidence-based practices and appropriate materials, providing more flexibility, and reducing paperwork loads for teachers, local school districts and states (NYSED, 2012).

### **Definition of SPED**

Children with disabilities are individuals with special needs who require a customized program that can offer a continuum of specialized services to address their unique learning and behavioral needs in varying degrees. In other words, this customized program has to be individualized so as to address the unique combination of needs in a student with disability (Goodman, 1990). Known as an individualized education program or plan (IEP), the student's present level of academic achievement and functional performance is evaluated to determine his/her specific strengths and weaknesses. In addition, the IEP also includes annual

goals, short-term objectives and learning benchmarks, progress report, transportation service, regular education participation, placement considerations and decision as determined on the basis of the student's needs. Special accommodations and further modifications to the regular program as well as adaptations to be made to the regular curriculum and physical environment form also parts of the IEP so that the student's potential can be developed to the fullest extent possible.

The set of services and special provisions described above to be put in place for students with disabilities can be termed as special education (SPED). In other words, SPED is "a set of services that are put into place following diagnostic reviews, parental concerns, and/or teacher concerns. It is also a set of guidelines that teachers, parents and students follow so that each individual with disability has a specific educational plan in place" (Special Education News, 2013, p.1).

According to IDEA 2004, SPED is defined as specially designed instruction, at no cost to parents, to meet the unique needs of a child with disability in what is known as the least restrictive environment (Turnbull, 2002). Its aim is to provide additional services, support, programs, specialized placements or environments to ensure that all students' educational needs are provided for. The Act also includes provisions to ensure that individuals with special needs are educated with their non-special needs peers to the maximum extent appropriate (Jorgensen, 1998).

### ***SPED Services***

There are seven types of SPED services: deferment, exclusion, inclusion, integration, mainstreaming, retention, and segregation. They are briefly described below.

#### *Deferment*

In Singapore, for children with more serious disabilities, parents may request relevant education and health authorities for an official deferment of 1-2 years from admission into compulsory primary education when their children are of age. It allows these children more time to undergo more intensive early intervention program so as to get them ready for primary education.

#### *Exclusion*

Often students with severe/profound disabilities attend SPED schools, hospital schools or stay at home to undergo home-based therapy or being home-schooled instead of mainstream schools as the regular curriculum would not be appropriate to meet their challenging needs. In Singapore, more and more parents prefer home therapy to SPED school, especially for young children with severe autism spectrum disorders (Gan, 2013). The main reason is that more attention and time can be given to such a child who needs an intensive intervention. This SPED service is also catered to a special group of students with disabilities who are detained by the criminal justice system for some offences they have unintentionally or intentionally committed to be put in a gazette home or reformatory training center.

#### *Inclusion*

Students with mild/moderate disabilities attend regular schools where they can interact with their non-disabled peers of their age. The mainstream curriculum is adapted to cater to their learning and behavioral needs. Differentiated worksheets are also specially prepared for these students to complete in class while their non-disabled peers continue to do the regular worksheets. Moreover, these students with disabilities are at times withdrawn from their regular classes during certain curricular hours to attend more intensive instructional sessions conducted by a specialist/resource teacher in a resource room. In Singapore, such students

attend what is known as a withdrawal session conducted by a qualified allied educator for learning and behavior support in a separate room for at least half an hour.

### *Integration*

The term integration emerged in the 1980's. In integration, a setting is created where everyone is an integral part of the program. Students with disabilities can study together with their non-disabled peers. "This means that if the routine, environment, or activity is not working for even one child, modifications will be made ... to address the needs of children with disabilities the way we know best" (CC+CIEC, 2000, p.1). In this way, students with disabilities can acquire age-appropriate social skills and learn to be more independent by imitating their non-disabled peers. Moreover, they may establish friendships and develop a more positive self-image by having the opportunity to perform what other non-disabled students do.

### *Mainstreaming*

Mainstreaming means "bringing a child with a disability into the mainstream of society" (CC+CIEC, 2000, p.1). Introduced in the 1970's, mainstreaming has become an important milestone in SPED because it reflects the belief that children with disabilities have the same needs as their non-disabled peers. It aims to ensure that students with disabilities – depending on their skills and abilities – are given fair opportunity to participate in activities and educational experiences with their non-disabled peers in regular schools. However, they also attend separate classes exclusively for them during curricular hours.

### *Retention*

Students with disabilities, who fail to perform to the academic expectations for their age level, may be retained by the school for another year so that they can repeat their studies again at that same level. The rationale behind this SPED service is that given more time, these students can catch up with their studies. However, this may not be true for those students with global developmental delay or severe mental challenges as they will continue to lag behind their peers of the same age.

### *Segregation*

There are those students with disabilities who continue to attend lessons in a separate classroom though they go to a regular school instead of a SPED school. They do not spend time in regular classes with their non-disabled peers as they will not be able to cope with the academic rigor. However, they can still mingle with other non-disabled peers outside regular curricular hours such as during recess or co-curricular activities.

## **T&L IN SPED**

The T&L in SPED are different from that in the mainstream education. Whichever level of intervention that is most appropriate to students with disabilities, it is essential for SPED teachers to know or be aware that the regular pedagogy will not be suitable for these learners. An alternative approach – be it corrective, remedial, assistive or compensatory – is needed to help these students with special needs. Chia and Kee (2012a) use the term *psychogogy*, which is a cross-mix between *psychology* (study of mind) and *pedagogy* (art or science of teaching), to describe this approach. According to Chia and Ng (2011), psychogogy is an "instructive theory that includes psychological influence on a learner's mind in terms of his/her learning and thinking abilities (cognition), feelings (affect) and will (conation) to perform or act and whose behavioral traits interlinked by various senses through different sensory processes (sensation) in order to establish his/her own perception and belief through interaction with others within a given socio-cultural context" (p.2). Psychogogy cuts through all the T&L

phases, beginning at birth through childhood and adolescence to adulthood at ripe old age” (Chia, 2011, p.36).

### Triple-T Model of Learning in SPED

The goal of learning within the SPED field focuses on the functional mastery of the essential content knowledge and skills needed for independent living and survival of an individual with a disability. We have identified three key T-components in the SPED model of learning: (1) *epistēmē* (“what” of learning); (2) *Techné* (“how” of learning); and (3) *Telos* (“why” of learning). Together, they are triangulated to form the Triple-T model of learning (see Figure 2).

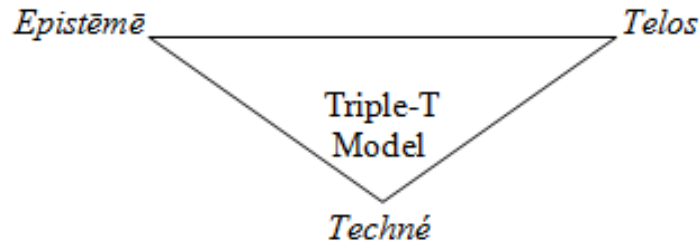


Figure 2. Triple-T model of learning

### *Techné*

The learning process is termed as *techné*, a Greek derivative, referring to how an object or objective in learning is accomplished. It also refers to the “how of learning” or teaching strategies used in special education. In choosing the appropriate teaching strategies to work with students with special needs, there are two factors to consider: the type of disability and its degree of severity. All teaching strategies in SPED can be classified under two main categories: accommodations and modifications. Students with disabilities may receive both accommodations and modifications.

### *Accommodations*

An accommodation involves making an appropriate adjustment to the teaching resources used during lesson so as to make learning accessible to students with disabilities. It can be further sub-categorized into presentation, response, scheduling and setting (see Pepper, 2007). For instance, a student with hearing impairment is provided a hearing aid while a student with visual impairment is provided a large-print textbook to accommodate their respective special needs during a listening/reading comprehension lesson. Underlying this category of teaching strategies are the seven fundamental principles of the Universal Design for Instruction (UDI), which is beyond the scope of this paper.

### *Modifications*

A modification changes or adapts teaching materials to make them simpler, but it needs to consider the following questions: What is to be taught or learned? How difficult is the material? What is the student’s expected level of mastery in terms of the specific content knowledge and/or selected skill? How is the student to be assessed? For instance, a reading text is simplified by paraphrasing it into a shorter passage with higher reading ease index for a student with dyslexia.

### *Epistēmē*

This Greek derivative for knowledge or “to know” is distinguished from *techné*. It refers to the “what of learning” or the content knowledge and skills needed to be taught to or learnt by

students in SPED schools. It resembles *techné* in the implication of knowledge of principles, although *techné* differs from *epistēmē* in that its intent is making or doing, as opposed to "disinterested understanding."

### **Telos**

The third and last T-component Greek derivative refers to the end term of a goal-directed learning process or the final cause. It is the "why of learning" or the rationale or reasons behind the choice of content knowledge and skills selected to be included in the design of SPED curriculum.

### **Triple-D Model of Teaching in SPED**

According to Chia and Kee (2012b), the Triple-D model of teaching in SPED (see Figure 3) involves three D-components, namely as follow:

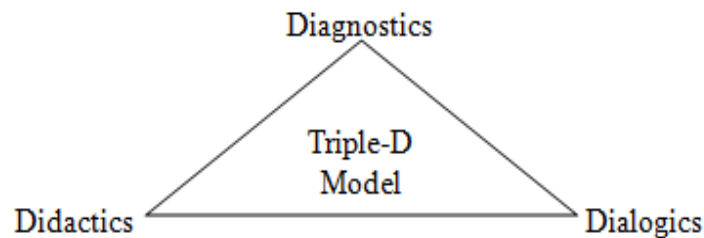


Figure 3. *Triple-D model of teaching*

### **Diagnostics**

Also known as educational diagnostics, it refers to evidence-based psycho-educational assessment, evaluation and profiling of a student suspected to have learning and/or behavioral challenges. Diagnostics adopts a trans-disciplinary approach that requires a SPED teacher to know and understand different levels and types of assessment (formal and/or informal) in order to evaluate and profile the students with disabilities that he/she is working or going to work with (NCPSE, 2008).

### **Dialogics**

We have defined the term *dialogics* as the process whereby communicating parties mutually reaches agreement of the intended communication with verification of each other perceived perspective and contextual understanding, perceived use and relationship of communicated concepts and perceived meanings (Todorov, 1984).

### **Didactics**

The term *didactics* means to teach, to educate, but it can also mean "having the ability to teach, the people who have the ability to teach, the content taught, teaching aids, including methods and media, the school and the classroom where learning takes place, and learning as the main activity of pupils" (Gundem, 1998, p.19-24). It is also defined as a SPED teacher's reflection of practice that concerns how he/she can realize his/her educational objective. This must not be confused with pedagogy – "the theory of second order educational reflection – that concerns the unity of education and reflection of education. The subject of didactics is educational methodology, while the subject of pedagogy is educational theory" (Qvortrup, 2007, para.3).



## INTEGRATION OF TRIPLE-T LEARNING AND TRIPLE-D TEACHING MODELS

For SPED teachers to be effective *psychogogists* (we have coined this term to refer to educators who lead the mind of their students with disabilities), we believe it would be better for the Triple-T model of learning and the Triple-D model of teaching to be integrated into one holistic teaching-learning framework (see Figure 4) for SPED in Singapore as proposed here.

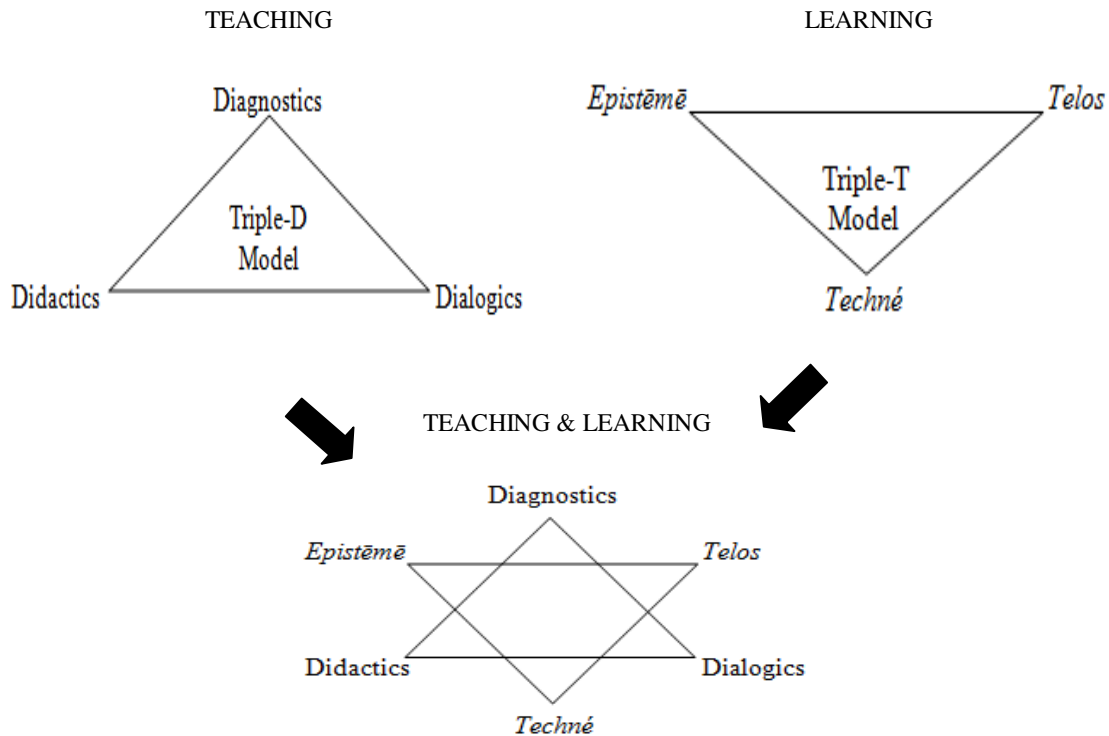


Figure 4. Integration of Triple-D teaching and Triple-T learning models

### Three Key Points: Why Integrated T&L Framework is Important in SPED

Theoretically speaking, the proposed integrated T&L framework clearly illustrates three key important factors we firmly believe will empower the SPED teachers' multiple roles more effectively as professionals. These points are briefly discussed below.

#### *First Factor*

Firstly, beginning with the *Diagnostics* phase, the SPED teachers administer the necessary psycho-educational assessments to establish the current profiles of their students with disabilities. With the assessment results, they move over to the *Epistēmē* phase to plan and decide what to teach in terms of the content knowledge and skills that are most essential and functional to meet their students' needs. At the same time, they will be able to rationalize why they have chosen to cover those selected content knowledge and skills at the *Telos* phase as they devise their SPED program (or IEP) or curriculum for their students.

#### *Second Factor*

Secondly, in order to ensure a successful implementation of the SPED program/curriculum, it is important for SPED teachers to consult parents, their fellow colleagues, other professionals (e.g., psychologists, therapists and counselors) and significant others on issues relating to the current psycho-educational profiles of the students. This is the *Dialogics* phase which offers

everyone an opportunity to discuss as well as to offer constructive suggestions to issues that will affect the students. It is also during this phase that SPED teachers will need to find out two important things: (1) what resources are already available in their school or new resources they need to purchase for use in their teaching; and (2) the appropriate teaching strategies – accommodations or modifications – that best suit the learning and behavioral needs of their students. This is the *Techné* phase.

### **Third Factor**

Finally, once the design of the SPED program/curriculum is completed, the next phase is *Didactics*. This is the moment when SPED teachers put into practice what they have planned and prepared for their lessons. This is not the end of the integrated T&L framework. There is a need for a series of consistent formative evaluations throughout the Triple-D and Triple-T processes as well as a summative evaluation at the end of the program/curriculum. In this way, the SPED teachers will know if the program has indeed succeeded in attaining its T&L goals, to reflect on the evaluation results, and to consult everyone involved in the process to improve the quality of their T&L delivery.

### **REFERENCES**

- Chia, N. K. H. (2011). A Brief Theoretical Examination of the Developmental Process of Continuous Learning and Teaching: From Antegogy to Gerontology. *International Journal of Theoretical Educational Practice*, 1, 30-43.
- Chia, N. K. H. & Kee, N. K. N. (2012a). *Psychogogy/Salutogenesis*. Singapore: Pearson/Prentice-Hall.
- Chia, N. K. H. & Kee, N. K. N. (2012b). The Triple-D Framework (Diagnostics, Dialogics and Didactics) for Training of Special Education Professionals in Singapore. *Unlimited Human!* Summer issue, 36-46.
- Chia, N. K. H. & Ng, A. G. T. (2011). Psychogogy: Redesigning Pedagogy for Special and Allied Educators. Retrieved from <http://www.lsesnet.com/blog/>
- Child Care Plus+ Center on Inclusion in Early Childhood (CC+CIEC) (2000, September). *Mainstreaming, Integration, Inclusion: Our Future. Tip Sheet #2*. Missoula, MT: The Author.
- Dewey, J. (1916). *Democracy and Education*. Glencoe, IL: The Free Press.
- European Center for the development of Vocational Training (2004). *Terminology of Vocational Training Policy: A Multilingual Glossary for an Enlarged Europe*. Retrieved from <http://www.cedefop.europa.eu/EN/about-cedefop/projects/validation-of-non-formal-and-informal-learning/european-inventory-glossary.aspx>
- Gan, E. (2013). Can home therapy help autistic kids? *Today* [Health], p. 26.
- Goodman, L. (1990). *Time and Learning in the Special Education Classroom*. Albany, NY: SUNY Press.
- Gorman, J. (2013). Ancient bones tell a story of compassion: Archaeology of health care reveals care for sick, disabled in prehistoric age. *The Straits Times*, p. D7.
- Gundem, B. B. (1998). *Understanding European Didactics: An Overview on Didactics. Institute for Educational Research Report No.4*. Oslo, Norway: University of Oslo.
- Hong, L. (2008). US Experts say Graying Workforce adds Value to Manpower. Retrieved from <http://www.channelnewsasia.com/stories/singaporelocalnews/view/320998/1/.html>
- Hublin, J. J. (2009). The prehistory of compassion. *Proceedings of the National Academy of Sciences*, 106, 6429-6430.

- Jorgensen, C. M. (1998). *Restructuring High School for All Students: Taking Inclusion to the Next Level*. Baltimore, MD: Paul H. Brooks Publishing.
- Keltner et al., (Eds.) (2010). *The compassionate instinct: The science of human goodness*. New York, NY: W.W. Norton.
- Knowles, M. S. (1980). *The Modern Practice of Adult Education: From Pedagogy to Andragogy* (2nd ed.). New York, NY: Cambridge Books.
- McClusky et al., (2007). Knowles's Andragogy, and Models of Adult Learning. In S. B. Merriam et al. (Eds.), *Learning in Adulthood: A Comprehensive Guide* (3rd ed.) (p. 83-104). San Francisco, CA: John Wiley and Sons.
- McCuen, S. (1997). Inventing the Feeble Mind: A History of Mental Retardation in the United States. *Journal of Health Politics, Policy and Law*, 22(1), 1-3.
- Ministry of Education (1961). *Education of the Handicapped Pupil: 1945-1955*. London, UK: Her Majesty's Stationery Office.
- Montessori, M. (1967). *The Absorbent Mind*. New York, NY: Holt, Rinehart and Winston.
- National Clearinghouse for Professions in Special Education (NCPSE) (2008). *Educational Diagnostician: Making a Difference in the Lives of Students with Special Needs*. Airlington, VI: The Author.
- New York State Education Department (NYSED) (2012). *Individuals with Disabilities Education Improvement Act 2004*. Retrieved from <http://www.p12.nysed.gov/specialed/idea/>
- Pepper, D. (2007). *Assessment for disabled students: An international comparison. Qualifications and Curriculum Authority: QCA Briefing Document*. Coventry, UK: OFQUAL Qualifications and Curriculum Authority, Regulation and Standards Division.
- Qvortrup, L. (2007). Media Pedagogy, media Education. Media Socialization and Educational Media. *Seminar.net: International Journal of media, Technology and Lifelong Learning*, 3(2), 1-20.
- Santrock, J. W. (1995). *Life-Span Development* (5th ed.). Madison, WI: WCB Brown and Benchmark.
- Todorov, T. (1984). *Mikhail Bakhtin: The Dialogical Principle* (W. Godzich, Trans). Minneapolis, MN: University of Minnesota.
- Tilley, L. & Oxenham, M. F. (2011). Survival against the odds: Modeling the social implications of care provision to seriously disabled individuals. *International Journal of Paleopathology*, 1, 35-42.
- Turnbull, R. (2002). *Exceptional Lives: Special Education in Today's Schools* (3rd ed.). NJ: Merrill Prentice Hall.
- What is Special Education? (2013, January 30). *Special Education News: Newspaper about Special Education*, 1.