

Benefits of Authentic Education with Multidisciplinary Perspectives from the Viewpoints of Analytical Psychology

Chandana Watagodakumbura

School of Electrical and Computer Engineering

RMIT University, Melbourne, Australia

chandana.watagodakumbura@rmit.edu.au

ABSTRACT

Authentic education system highlighted in this paper provides a unique learning experience to individual learners, specifically by addressing their psychological and neurological needs; assessment of learners are done through generic attributes that have more validity and relates to intrinsic learner characteristics, lasting throughout the life span. The psychological types or conscious functions defined in analytical psychology provide additional insights into learner classification and identifying appropriate generic attributes. . In the authentic education system described, learners are encouraged to pursue higher-order learning sending them through a complete learning cycle; this engages learners deeply to the task and provides a lasting experience, enabling individuals to reach their full potential. Learners are encouraged to pursue an individuation process as described in analytical psychology towards a higher level of human development; that is the shadow or the inferior functions are directly addressed enabling the path towards the concept of the self. Through authentic education, we get to value human resources much more than related economic aspects, making a significant difference to our current approaches and focus; it has the promise to effect a significant positive social change towards a sustainable development. In this regard, the viewpoints from analytical psychology as a framework of human development provide additional justifications.

Keywords: authentic education, analytical psychology, psychological and neurological learner characteristics, neurodiversity, higher-order learning, human development

INTRODUCTION

In this paper, the author first presents the conceptual view of authentic education system (Watagodakumbura, 2013a, 2013b) briefly. In the subsequent sections the benefits of such an authentic education system to individuals as well as society at large are highlighted from a number of different perspectives. More specifically, the benefits are discussed from the viewpoints of analytical psychology. A brief introduction to the main concepts of analytical psychology is also presented at the beginning. On the whole, an authentic education system is identified as possessing the promise of making a significant positive social change focusing sustainable development, with more validations from the domain of analytical psychology.

Conceptualising Authentic Education

Within an authentic education framework (Watagodakumbura, 2013a, 2013b), learners' individual psychological and neurological characteristics are given consideration and accepted as they are, promoting inclusive practices. For example, emotional and other high sensitivities commonly found in gifted and creative personnel are not considered as constraints, rather they enrich a neurodiverse (Armstrong) society to operate in a more balanced manner. In an authentic education framework, learning preferences of auditory sequential learners as well as visual spatial learners (Silverman, 2002, 1998) are given consideration equally and unbiasedly and these preferences are mapped into to related career paths so that individuals of both

categories enjoy their work more naturally, or intrinsically. Learners with high developmental potential, meaning the inclination towards a highly empathic, satisfied and productive human being, get conducive environments to reach higher levels of development, similar to a self-actualised (Maslow, 1968, 1993) state. An authentic education system sends learners through a lasting deep learning (Biggs and Tang; Entwistle) and critical thinking (Paul and Elder) experience, for which human brains are capable of under conducive teaching-learning environments; human brains are treated as parallel processors that are capable of dealing with multiple inputs and solving complex problems unlike machines, or computers that are good at executing routine steps in reaching specific answers at very high speeds (Beale and Jackson). Following the fundamentals of neuroscience, many physical parts of the brains are incorporated into learning with methodologies similar to Kolb's experiential learning cycle (Kolb; Zull) and constructivist theory of learning (Biggs and Tang); learning has physical meaning in which neurons in the brain grow (Diamond, 1996, 2001) to develop dense communication network indicating deep learning, as opposed to surface, or superficial learning, has taken place. In an authentic educational practice, learner evaluation is done using generic learning attributes that are associated with learners' intrinsic characteristics, instead of an indication of how well a learner has prepared in a specific area of study prior to an assessment; these generic learning attributes carry qualitative values that are valid throughout one's life span as they relate to one's psychological and neurological characteristics very well.

Analytical Psychology: Main Concepts

Analytical psychology is a sub-stream of the main discipline of psychology founded by the Swiss Psychiatrist and psychotherapist Carl Gustav Jung, in the early twentieth century. Consequently, analytical psychology is also known as Jungian psychology. Jung is a student of the famous Austrian neurologist Sigmund Freud, who became known as the founding father of psychoanalysis. In the last 2-3 decades, Jungian psychology is becoming more and more popular among practitioners of psychology, other philosophers and academics due to its versatility in other applications as well. Some basic concepts used in analytical psychology such as conscious/unconscious, psychological types, the shadow, the self and archetypes are introduced below.

Conscious/Unconscious (Hauke, 2006)

Human psyche is divided into conscious and unconscious parts. Consciousness grows out of the unconscious psyche. Ego is the centre of consciousness. Unconscious is divided further into personal unconscious and collective unconscious. Personal unconscious is acquired through lifetime through personal learning and experience. It occurs through repression, forgotten and sense-impressions that never had sufficient intensity to reach consciousness. On the other hand collective unconscious is the general, universal part, derived through aeons of repetitions of human cultural imagery and experience. These contents have never been conscious and owe their existence to a form of heredity. Further, they are identical in all individuals. That is, they are primordial images or records of the psyche of humankind going back to remotest beginnings. The process referred to as individuation integrates the conscious and unconscious psyches helping individuals to reach humanistically to full potential.

Psychological Types (Beebe, 2006)

Four functions of consciousness, namely, thinking, feeling sensing and intuition are introduced. Thinking and feeling are identified as rational functions and are situated at the opposite poles while sensing and intuition are identified as irrational functions that are situated at the opposite poles. Sensing is the conscious function that registers reality as real. Thinking is the

function that defines what we perceive. Feeling is the function that assigns a value to what we have perceived. Intuition is the function that defines the implications and/ or possibilities of the thing that has been perceived empirically. In addition to having an inclination towards one or more of these functions, an individual will also have a more inclined attitude type, so to speak; the two possible attitude types Jung presented are introversion and extroversion. As long as a function is undifferentiated, it cannot be deployed in the conscious manner of a directed mental process. Individuation is the progressive differentiation of the various psychological functions of consciousness.

The Self (Colman, 2006)

The self is the centre of the psyche as well as the totality- sum total of conscious and unconscious contents- of the psyche. Thus, the self represents the psychic wholeness and is the goal towards which the individuation process strives. The individuation process resolves the state of inner conflict and opposition into a union of opposites which brings about wholeness. The self is the supra-ordinate or supra-personal centre of the personality and Jung regards God-images as the symbolic representation of the self.

The Shadow (Casement, 2006)

The shadow is complementary to consciously held attitudes and can be both personal and collective. The personal shadow may be conceived of as the repository of all the aspects of a person that are unacceptable or distasteful (envy, aggression, greed, laziness, jealousy, shame) to them. The individuation process starts off by the individuals becoming conscious of their shadow, which can be painful although there is a gain. That is, to acquire self-knowledge one has to tackle the shadow. It is important to embodying the shadow in consciousness; otherwise, if it is repressed and isolated from consciousness, it remains uncorrected and liable to erupt in a moment of unawareness. Further, the inferior conscious function is equated with the shadow. When the shadow results in neurosis it becomes a necessity for the individual to find a way for the conscious personality and shadow to live together; instead of neurotic dissociation, one needs to struggle with it. Neurosis, according to Jung, is a state of being at war with oneself; what drives individuals to this state is the suspicion of being two people in opposition to each other – the shadow and the ego. Recognition of the shadow leads to humility and genuine fear of what lies in the depths of humanity.

The Archetypes (Stevens, 2006)

Jung maintained that there existed an additional phylogenetic layer (the collective unconscious) which incorporated the entire psychic potential of humankind. That is, human beings are born with the virtual images or archetypes such as parents, wife, children, birth and death etc. as psychic aptitudes. These images lack in solid content, and hence are unconscious.

BENEFITS OF AUTHENTIC EDUCATION FROM ADDITIONAL VIEWPOINTS OF ANALYTICAL PSYCHOLOGY

Gives the General Term of Education a Deeper and Broader Meaning Viewing from Multiple Perspectives, Including that from Analytical Psychology, Resulting Better Educational Outcomes

Within an authentic education system, we have understood the general term of education more deeply and broadly viewing from multiple points of view; it goes beyond the superficial levels of understanding it and promises significant benefits in terms of educational outcomes. When looking at the term education in a contemporary society, we need to have a multidisciplinary perspective; the discipline of pedagogy alone will not define it adequately. We essentially need to integrate perspectives from a number of other disciplines such as humanistic and gifted

psychology, neuroscience and neurology to better define the term education. The additional viewpoint we introduce in this paper is looking at authentic education already defined through the lenses of analytical psychology. It has a considerable significance as analytical psychology is gaining increasing popularity in the recent past as an effective method of psychotherapy as well as a human development theory. Appropriate mappings and deeper understanding of the concepts of authentic education from the theoretical background of analytical psychology will result in giving a more inclusive and sustainable meaning to education, covering wider member communities of our society. Even though very useful facts and findings have emerged from different disciplines in contributing defining the term education, we do not get to see the real picture when they are disintegrated from each other. When looking from an integrated perspective, we are able to understand the possible benefits that are promised. These promises would be as small as having just a better environment for learners to thrive to the extent of effecting a considerable positive social change, as highlighted in the following paragraphs.

Allows Unique Identification of Learners, Through Psychological Types, Embracing Diversity

An authentic education system will identify individual learners uniquely through their psychological and neurological characteristics. For example, learners will be identified whether they are more inclined for auditory sequential learning or visual spatial learning. Further, the learners will be identified whether they demonstrate any overexcitabilities (Dabrowski, 1970, 1972, 1977) such as emotional, imaginal or intellectual. These characteristics are intrinsic to each individual and would span a lifetime. From the point of view of analytical psychology, we can understand which psychological type or types such as sensing, thinking, feeling and intuition individuals have a preference for. In other words, we can have a deeper perspective of auditory sequential learners who predominantly possess sensing and thinking psychological types and the visual spatial learners who demonstrates feeling and intuition psychological types more specifically. Further, as individuals with preference to feeling and intuition psychological types are more likely to tap the unconscious, in Jungian terms, more frequently, we can infer that visual spatial learners are more inclined to bring contents from the unconscious to consciousness. The process of individuation that leads individuals to higher levels of human development enhances the sphere of consciousness by embodying the contents from the unconscious. It explains why we find visual spatial learners or the gifted are more creative in their approach and possess tendency for accelerated humanistic development. As a society, our awareness on individual differences, or diversity, will grow when we assimilate the knowledge base from analytical psychology, accepting each other much more than now. This raised awareness can be applied specifically to understanding the important concept of neurodiversity (Armstrong). We may not define a strict and narrow normal behaviour and label everything outside the band as abnormal; rather we would accept that a wide range of differences that are normal do exist and those wide differences, in fact, enrich our society, similar to different plants that enrich a rainforest. We will be in with a better chance of minimising any misdiagnoses of healthy individuals (Webb, 2005), a concern rose by some prominent healthcare and medical professionals. Raised awareness and acceptance will allow us to minimise having individuals to rely on medication for some psychological differences. For example, we may have to carefully differentiate whether an individual has attention deficit hyperactivity disorder (ADHD) or is it merely psychomotor overexcitability. When the mainstream education system identifies learners' unique psychological and neurological characteristics, it enables us to be inclusive in our practices, getting the due attention to every individual. When every individual get to know about his or her intrinsic nature, he or she would be in a better position to take better decisions, to develop

more tolerant, empathic and content personalities. The concepts from analytical psychology guide us to deepen our understanding on individual psychological differences and how that impacts in education in general. Since we are giving significance to human characteristics, or characteristics pertaining to human nature, we disregard, or go beyond, other cultural or extrinsic bias that constraints positive learning environments.

Allows Learners to Pursue Higher Order Learning Undergoing a Complete Learning Cycle that Includes Addressing Inferior Conscious Functions or the Shadow, Enhancing the Chances of Reaching their Full Potential

The authentic education system defined (Watagodakumbura, 2013a, 2013b) encourages individuals to pursue higher order learning enabling them to reach their full potential. When the assessments target higher end of the Bloom's taxonomy (Biggs; Ramsden), instead of the middle or lower levels, we encourage learners to strive for achieving higher, something they could achieve as human beings, or human nature. Creativity is natural to human species and when we encourage learners to pursue higher order learning, we sharpen their creative instincts, encouraging them to produce creative outputs; unlike robots, or machines, that produce uncreative and routine answers rapidly, we want learners to be creative, producing unique outputs. From an analytical psychology point of view, pursuing higher-order learning indicates focusing more on feeling and intuition psychological types. That is, these psychological types or conscious functions essentially involve in evaluation and synthesis type tasks by definition. Further, these psychological types naturally help individuals to tap the unconscious, in Jungian terms, more often, enhancing the conscious sphere. What this means is that when we target higher-order learning, it directs learners towards the individuation process or higher levels of human development, similar to the process of self-actualisation. Different individuals will pursue this path to higher achievement at different paces and reach higher levels at different times, but there will be no ceilings at lower levels stopping them progressing to higher levels. Individuals will not be competing with each other to reach higher levels, rather, will be striving to self-identify one's natural pace to traverse because that is the best pace for oneself. More the productive time a learner can put in pursuing higher order learning, the higher the level of understanding he or she can achieve, or the level of learning achieved is proportional to the amount of productive time spent; there is probably no a two state switch to decide whether one can or cannot. From the viewpoint of analytical psychology, individuals will essentially have to deal with the shadow or inferior psychological function(s) in order to engage in the individuation process. Consequently, the productive time one spends on effective higher-order learning will also need to address the shadow or inferior function phenomenon. Learners will be going through complete learning cycles as described in Kolb's experiential learning, without being restricted to only some stages of the cycle. From an analytical psychology point of view, individuals will not only focus on the dominant psychological type or conscious function, but also attempt to differentiate, in Jungian terms, the auxiliary and inferior functions as well. Differentiating more conscious functions put individuals on a path to the individuation process. That is, such practices move learners on a ladder to their full potential, or the state of self-actualisation, as Abraham Maslow (1968, 1993) termed. These self-actualising personnel reaching their full potential are identified to be more creative. We have evidence from neuroscience that neural networks can grow denser making new connections throughout one's lifespan, and as we keep on striving on higher order learning, we can reach higher levels of our potential. Further, when higher order learning is the focus, it accommodates the visual spatial, or gifted, learners in the mainstream education system rather than leaving them behind or requiring them special education programs. Put differently, when we identify in pedagogy that higher order learning is the way to go, it applies equally well to both visual spatial learners as well as auditory sequential learners. Every individual will be using the generalised knowledge they gained through education in a wide

range of situation in life, not only in their careers. As individuals, they will be making better, or more educated, decisions, in everyday situations, not merely in a narrow area related to the specific career. This is one of the prime intensions of an authentic education system; that is preparing learners to succeed as a whole, as better human beings, as better judges of overall social situations, not just in a narrow career area.

Provides Opportunities to Map Intrinsic Individual Characteristics Including Psychological Types or Conscious Functions to Related Career Paths

When the mainstream education system identifies a learner's intrinsic individual characteristics, mainly the psychological and neurological ones, it helps individuals and organisations to map them to more suitable career paths. In other words, an individual's intrinsic characteristics can be mapped mainly to visual spatial or auditory sequential type work category, as highlighted before. As part of this categorisation, would be the use of preferred psychological types, namely, sensing, thinking, feeling and intuition as defined in analytical psychology. Further, an individual's degree of inclination towards enhancing his or her conscious sphere will assist the above categorisation. Each work category is given the same level of recognition, or one is not more important than the other, as we essentially need both categories for sustainable social development. When such mappings take place, individuals will find them more at ease and satisfied in their work environments, resulting increased productivity at work place. That is, not only the individuals, but also the organisations will benefit. When the mainstream education system identifies intrinsic learner characteristics over a long period, the organisations do not have to rely on rapidly conducted tests, such as psychometric ones, possibly with much less reliability, to categorise individual candidates. Further, when intrinsic individual characteristics are identified at an early age of the individual, more stressful and demanding, late, significant career changes can be avoided, yielding better career guidance at a relatively early stage. On the whole, we will be able to produce better, or more consistent, career selections for individuals and better career mappings for organisations in our society through an authentic education framework.

Encourages Holistic Personal Development Leading to the Process of Individuation, not Merely Career Development

An authentic education framework signifies the concept of lifelong learning; that is we need to improve as persons, or human beings, throughout our life spans. By improving as a person, or human being, we become more satisfied, empathic and creative individuals. Findings from neuroscience provide evidence that human beings have the capacity to learn throughout their life spans (Diamond, 1996, 2001), contrary to the believes held otherwise, superficially. Education does not end when we start our working careers, and afterwards it is not merely career development we strive at. Within an authentic education framework, we have the opportunity to map our prominent, intrinsic personality characteristics to a career path, but some other weaker characteristics of ours could still be useful in our normal life situations; in continuous personal development we need to improve on those areas that will be useful in ours operation within the society, presently or in future. From an analytical psychology point of view, we will be dealing directly with our shadows or inferior conscious functions in order to enhance our conscious sphere. Without this direct approach of dealing with one's weaker or negative aspects, individuals will not be in a position to engage in the process of individuation or self-actualisation. Ideally, the organisations should provide provisions for their employees to engage in such personal development activities, outside their normal career activities; this could be part of lifelong learning. When we undertake such personal development activities, we will not be simply focusing on a narrow career direction; rather we will be broadening our

understanding and knowledge that would be useful in our personal lives. Such personal development activities prepare us better, or insure us better, for unexpected or emergency social situations such as loss of employment; through our broader personal development, or broader knowledge, we will be in a better position to find other suitable employment, even if it is not directly related to the previous one. More importantly, individuals will be psychologically more prepared to face such emergencies or adverse situations. This positive transition may not be possible if we constrained ourselves to a narrow career paths lacking holistic personal development. An authentic education framework essentially raises the awareness and promotes lifelong learning that enables individuals to prosper continually as persons, or human beings.

Allows a Positive Social Change Valuing Human Resources with Enhanced Conscious Sphere, Ahead of Mere Economic Aspects

An authentic education framework inherently gives prominence to human resources ahead of any other resource including economic aspects. It identifies individuals uniquely, valuing and accepting their unique characteristics and making them more satisfied and content, resulting more productive operation within the society. The society as a whole strives to make their members more productive, satisfied and content, pushing aspects related to economy to a secondary status. When we emphasise on the individuation process of individuals, as described in analytical psychology, it helps individuals to enhance their conscious sphere. When the individuation process continues to the highest possible level the concept of the self emerges – the highest possible level of personality or citizenship. Such evolved individuals will themselves be assets to society, guiding it in the right direction. This is a more positive change from the existing norm of giving prime importance to economic aspects while pushing the rest including human resources to a level of subprime importance. We make use of economic resources to make human beings reaching higher or full potential through the individuation process, rather than making use of, or manipulating, human resources to make better economic status. In an authentic education framework, we are directing the significance to the area where it is deserved. While economic aspects, or economic managements, are important, it is only secondary to how effectively and efficiently human resources are utilised. We have more value in fully functioning human beings with much less waste than a large pile of economic gains. There will be synergy within societies to improve its members' productivity rather than tug of war among groups within societies. An authentic education system essentially raises the awareness of the significance of having more satisfied, empathic, creative and productive human beings ahead of piles of nominal economic gains. Mismanaged human resources could cause years of high economic gains to be vanished in no time.

Allows for Sustainable, More Consistent and Predictable Social Development through Individual Member Individuation

An authentic education framework gives the opportunity for every individual to engage in learning in a unique manner that suits him or her the best. It aims at providing each individual an opportunity to reach his or her full potential. Allowing individuals to reach their full potential results in self-actualising, or psychologically healthy, personnel, as Abraham Maslow referred to. In analytical psychology, the process of human development is referred to as the process of individuation and at the highest possible level one reaches the level defined as the self. These developed individuals will have enhanced sphere of consciousness allowing them to see the reality as is or in a deeper sense. Further, individuals will be engaged in a lifelong personal development, or education, process, resulting positive motivation. The end result is that the society will have more satisfied, content, tolerant and empathic individuals; they will be more productive in their social operations. They will create a positive rippling effect in the society. This essentially yields a more sustainable social development. There will be more

synergy and less competition among individuals and groups as the focus is to make individuals fully functioning to their full potential in unique ways. There will be fewer crimes in our societies as individuals are more satisfied and content. Any tendency of any individual toward committing a crime can be proactively diagnosed within the mainstream education system that focuses on psychological and neurological characteristics of individuals. As a result, we will have more peaceful societies on the whole. There will be fewer individuals with negative psychological disorders (Webb, 2008; Silverman, 2004)) or conditions, firstly as the individuals are more satisfied and content, secondly because we embrace diversity, more specifically neurodiversity, and tend to accept individual differences more broadly and as something that enriches the society rather than restricting it. When the society gives and opportunity to every member of it to self-identify him or her and embark on path to reaching full potential through the mainstream education system, it results a just and fairer society. In a society with fewer man created problems, we have more time and resources to concentrate on real problems, or the unavoidable, such as finding treatment for cancer and better preparing for natural disasters. Individuals solving those problems are more productive, psychologically healthy (Maslow, 1968, 1993) and creative maximising the chances of finding better or ideal solutions. On the whole, there will be more predictability and consistency in our social operations and situations, with fewer unexpected events, or situations.

CONCLUSION

Authentic education allows individuals to develop better or fully, fulfilling their individual requirements. In this paper, additional justifications for using an authentic education framework are provided by introducing the viewpoints from analytical psychology. Aspirations of individual learners will be mapped in to more appropriate career paths. The psychological types or conscious functions defined in the analytical psychology framework are used in this pursuit. As a result, there is the promise of producing more empathic, satisfied, creative and productive human beings. In other words, learners engage in a process of individuation as discussed in analytical psychology, enhancing their conscious sphere. This is the starting point of a significant positive social change; the human resources are given the prominence ahead of mere economic aspects. It provides us with an opportunity to overcome some of the perennial problems such as high crime rates, high number of individuals with psychological problems and lack of productivity in operations and so on and so forth. In essence, an authentic educational framework provides an opportunity to have a sustainable social development. The human development framework defined in analytical psychology provides additional justifications for the above claim.

References

- Armstrong, T. 2011. *The Power of Neurodiversity: Unleashing the Advantages of Your Differently Wired Brain*. Da Capo Lifelong Books.
- Beale, R. and Jackson, T. 1990. *Neural Computing – An Introduction*. Institute of Physics Publishing.
- Beebe, J. (2006). *Psychological Types*. In R. K. Papadopoulos (Ed.) *The Handbook of Jungian Psychology – Theory, Practice and Applications*. Sussex, UK: Routledge.
- Biggs, J. and Tang, C. 2011. *Teaching for Quality Learning at University* (4th ed.). Berkshire: Society for Research into Higher Education and Open University Press.
- Casement, A. (2006). *The Shadow*. In R. K. Papadopoulos (Ed.) *The Handbook of Jungian Psychology – Theory, Practice and Applications*. Sussex, UK: Routledge.
- Colman, W. (2006). *The Self*. In R. K. Papadopoulos (Ed.) *The Handbook of Jungian Psychology – Theory,*

Practice and Applications. Sussex, UK: Routledge.

Dabrowski, K. (with Kawczak A. and Piechowski M. M.). 1970. *Mental Growth through Positive Disintegration*. London: Gryf Publications

Dabrowski, K. 1972. *Psychoneuroses Is Not An Illness*. London: Gryf Publications

Dabrowski, K. 1977. *Theory of Levels of Emotional Development (vol 1) – Multilevelness and Positive Disintegration*. New York: Dabor Science Publications.

Diamond, M. C. (1996) 'The Brain . . . Use It or Lose It', *New Horizons for Learning: School of Education, Johns Hopkins University*. Retrieved from <http://education.jhu.edu/PD/newhorizons/Neurosciences/articles/>

Diamond, M. C. (2001) 'Response of the Brain to Enrichment', *New Horizons for Learning: School of Education, Johns Hopkins University*. Retrieved from <http://education.jhu.edu/PD/newhorizons/Neurosciences/articles/>

Entwistle, N. J. 1998. *Approaches to Learning and Forms of Understanding*. In *Teaching and Learning in Higher Education*, ed. B. Dart and G. Boulton-Lewis, 72–101. Melbourne, Australia: Australian Council for Educational Research

Hauke, C. (2006). *The Unconscious – Personal and collective*. In R. K. Papadopoulos (Ed.) *The Handbook of Jungian Psychology – Theory, Practice and Applications*. Sussex, UK: Routledge.

Kolb, D. 1983. *Experiential Learning: Experience as the Source of Learning and Development*, Prentice Hall.

Maslow, A. 1968. *Toward a Psychology of Being*. New York: Van Nostrand Reinhold.

Maslow, A. 1993. *Farther Reaches of Human Nature*. New York, N.Y., U.S.A.: Arkana.

Paul, R. and Elder, L. 2000. *Critical Thinking - Tools for Taking Charge of Your Learning and Your Life*. Pearson Education.

Ramsden, P. 2003. *Learning to Teach in Higher Education*(2nd ed.). London: RoutledgeFalmer.

Silverman, L.K. 1998. *Personality and Learning Styles of Gifted Children*. In *Excellence In Educating Gifted & Talented Learners* (3rd ed), ed. Van Tassel – Baska, Denver, Colorado, USA: Love Publishing Company.

Silverman, L. K. 2002. *Upside-Down Brilliance: The Visual-Spatial Learner*, Denver: DeLeon Publishing.

Silverman, L. K. 2004. *At- Risk Youth and the Creative Process*. Paper presented at ARTernatives for At-Risk Youth Conference, May 14, Colorado Springs.

Stevens, A. (2006). *The Archetypes*. In R. K. Papadopoulos (Ed.) *The Handbook of Jungian Psychology – Theory, Practice and Applications*. Sussex, UK: Routledge.

Watagodakumbura, C. (2013a). *Authentic education: visualising education in a deeper perspective*. *World Journal of Education*, Sciedu Press, 3(3), 1-10. Retrieved from <http://www.sciedu.ca/journal/index.php/wje/article/view/2725>.

Watagodakumbura, C. (2013b). *Education from a Deeper and Multidisciplinary Perspective – To a Sustainable Development of a Neurodiverse Society – A Futuristic View*, Xlibris

Webb, J.T. (with Amend E. R., Webb N.E., Goerss J., Beljan P, and Olenchak F.R.) 2005. *Misdiagnosis and Dual Diagnoses of Gifted Children and Adults: ADHD, Bipolar, Ocd, Asperger's, Depression, and Other Disorders*. Great Potential Press

Webb, J. T. 2008. *Dabrowski's Theory and Existential Depression in Gifted Children and Adults*. Paper presented at the Eighth International Congress of the Institute for Positive Disintegration in Human Development, August 7-9, Alberta, Canada.

Zull, J. E. 2002. *The Art of Changing the Brain: Enriching the Practice of Teaching by Exploring the Biology of Learning*. Stylus Publishing.