

Introduction

'Singapore born Chinese, Malays, Indians and Eurasians are one people of Singapore. Foreigners will always be outsiders!' (Vera, 2012, July 24). This is an increasingly common sentiment amongst many Singaporeans noticeable on social media platforms and sparking a media frenzy. Prominent members of society such as parliamentarians fear some Singaporeans could very well be standing on the edge of xenophobia. This has prompted a slew of appeals asking for native Singaporeans and foreigners in Singapore to integrate (Huang, 2012). The fact is, integration and assimilation are simply two sides of the same coin. The world is mixing and accompanying globalisation's rapid sweep across borders are several changes, both positive and negative. It brings together diverse persons, resulting in the sharing and extension of heritage. Using Singapore as a case study, this paper will review the contextual background and current state of Singapore's racial harmony. The concept of racial harmony, being heavily emphasised in the education sector then warrants an analysis of prominent governmental education policies that impact the sociological landscape of Singapore. Finally, the paper will highlight the early stages of my research that aims to preserve heritage and cultures at the preschool level through the use of design and technology.

Linguistic Evolution In Singapore

After Singapore's independence, its government recognised the importance of English for economic growth and sought to use it as a common language to bridge the different ethnic groups. However, they did not want Singaporeans to forget their own cultural roots that they thought would help mould them into responsible citizens (Lee, Goh, Fredriksen and Tan, 2008). This birthed the policy for bilingualism in Singapore schools (Kwan-Terry, 2000). However, unlike Malay and Indian communities who had a common language, the Chinese community was made up of various regional and dialect groups (Wong, 2003). To simplify and enhance communication between them, the government launched the 'Speak Mandarin Campaign' (SMC) in 1979 (Speak Mandarin Campaign, 2010). Initially aimed at Chinese Singaporeans in the general population, through the use of slogans, the SMC encouraged them to use Mandarin as their mother tongue language. After the initial ten years, the campaign adopted a change in focus, possibly as a result of the success of the English language acquisition. The campaign has recently again changed course to target Singapore's youth to remind them of their cultural background. Today, the success of the SMC is encompassed in what seemed to be an eerily accurate prophesy of the future in its 1983 slogan of 'Mandarin's in. Dialect's out.' (Teo, 2005, p.129).

Assimilation: Freeing Or Fettering?

Singapore realised that the loss of dialects were accompanied by detrimental effects during the Severe Acute Respiratory Syndrome crisis in 2003 (Sudderuddin, 2004). Besides the degradation of Chinese culture, the older generation were not afforded proper and timely treatment due to a

lapse in communication. In addressing this issue, the government eased its restrictions over dialect use in broadcast media.

With a prevalent common language due to the resounding success of the SMC, dialects no longer pose a threat like they did in the 1960s. Conversely, it has become a need for dialects to be allowed so that the younger generation of Singaporeans can communicate effectively with the elderly before opportunities are lost. But more importantly, that young Singaporeans will learn to appreciate their heritage and the values that come with it, that dialects do not die and that cultures do not die.

The need for continued survival and expansion of culture stems from the need to nurture students in ways that afford them the opportunity to learn an array of skills that will help them excel in life. Values shared in communities across the world today have been developed over the years by beliefs and values of those before us. While some are lost along the way, those that have withstood the test of time were likely to be considered important and held in high regard. Through the imparting of values and cultures, a person's character is developed. Such is the unbreakable bond forged by the interweaving of values, character and culture.

Holistic Beginnings

Recently, the government has recognised the need for character building through holistic education. As part of its new approach, the Ministry of Education introduced a range of award incentives aimed at encouraging students and schools to engage in holistic learning. (Channel News Asia, 2012). In a speech by Singapore's Minister for Education, holistic education was described as education that enables a child to tell right from wrong, think critically, communicate effectively and contribute to society civically (Ministry of Education Singapore, 2012).

Earlier, Miller (1996) provided further elements to aid holistic education - balance, inclusion and connection. It was noted that educators had to be mindful of different aspects of a child's development by balancing group collaboration and individual work and the linking of knowledge and imagination to aid understanding. The next element of inclusion suggested that education systems should ideally use three varying orientations in helping students acquire knowledge. Transmission is when a student learns through reading texts or listening. It is a traditional form of education and comparable on some levels to mimicry. The next orientation, transactional, is when students are taught to solve problems rationally and inquisitively. This takes on a more interactive approach in education and encourages active participation. Finally, the transformation orientation. Here, students are encouraged to solve prescribed problems with creative but relevant knowledge

so that learning becomes a personal and socially meaningful process. With a combination of the above three, students are engaged in well-rounded curricula.

The final element put forward by Miller is that of connection. Students can identify themselves as part of a larger society and understand their place in the world. It is when these three elements are practised that institutions will be able to educate holistically. Ravitch (2007) adds that emotional intelligence forms an imperative factor in the equation of successful education. Research has shown that emotional and social development are important in children early on. Through nurturing a child's knowledge of culture, he or she can be taught early on, the concepts of resilience and empathy aiding interaction with others creating social cohesion (Abdullah, 2009). Lynch and Hanson (1998) noted that, by the age of five, children begin to understand culture and gain the ability to learn cultural patterns swiftly. This is in line with Connecting Dots.

Change Through Designed Changes

Adults should carefully safeguard the physical and psychological environment of children so that they are provided with the optimum opportunity to develop. A child's development is influenced by varying factors such as their genetic makeup, and social and cultural relationships. Through interactions with their family, children can learn to form relationships and find individuality at a comfortable pace (Berk, 2001). Through Connecting Dots' interactive activities, families will be provided with the means to actively participate in their child's academic learning and psychological well being through the strengthening of relationships (Dowling, 2010; Shonkoff & Phillips, 2000). It will also challenge and encourage families to explore and construct alternative ways of being and doing.

Centered on helping children construct their own knowledge for meaningful learning, Connecting Dots will be presented as a trial interactive educational website portraying a series of webisodes. Varying in length and using the Internet as a medium, these are a new form of media and differ from traditional television episodes (The Computer Language Company Inc., 2012). Each webisode will feature stories using medleys of live actions, songs and animation based on specific themes that support the objectives of instilling in preschoolers holistic values. Building on a foundation of traditional education pedagogies such as learning styles, teaching strategies and interaction design principles, Connecting Dots will include elements that embody holistic education to achieve its objectives. Its activities will engage with a repertoire of teaching strategies such as acknowledgement where parents can observe and recognise a child's behaviour and efforts; co-constructing where the parent is involved in activities; and critical thinking by engaging in conversation that encourages children to examine interconnections in what is being presented and their own reality (Arthur, et al, 2005; MacNaughton & Williams, 2008). Through the research and

construction of Connecting Dots, personalised interaction effect on the design and framework of online learning platforms will also be determined. Personalised interactive experience in Connecting Dots will allow users to create their own unique pieces of craft and artwork that can then be integrated as elements in the multimedia experience.

By engaging Fleming's (2006) Visual, Aural, Read / Write and Kinesthetic (VARK) model of learning theory, Connecting Dots caters to differing individual preferences in communicating and receiving information. Visual images and aural stimulants can leave indelible impressions affecting memory retention (Walma van der Molen & Van der Voort, 2000). Because multimedia mediums conventionally contain visual and aural content, the inclusion of interactivity will increase the potential for kinesthetic learners. Through a child's involvement in the creation of artwork that supports or advances the story being told, the hands-on multi-sensory experience will provide preschoolers with memorable moments that encapsulate the lessons and themes of Connecting Dots.

The website will also be guided by Mayer's multimedia design principles serving as a practical guide for the design and construction of a multi-modal experience (Mayer, 2002). The five principles are multiple representation principle; contiguity principle; split-attention principle; individual difference principle and coherence principle. In the multiple representation principle, Mayer believes that information presented in various methods better accommodate users. This principle supports Fleming's VARK model and is also the foundation on which print and mass media are created. The contiguity principle asserts that corresponding information should be exhibited simultaneously and in close proximity so that users can link information and explore their own understanding. The split-attention principle and coherence principle affects instructional design in a significant manner. Influencing visual and aural materials presented in instructional designs, data should be carefully and concisely presented so that extraneous information will not cause information overload that can hinder a user's learning. The design of the site will also consider the individual difference principle by ensuring that the amount and approach of guidance throughout the site will accommodate for the varying types of learners. By selecting, organising and allowing individuals to link verbal and visual information, effective learning and deeper understanding can be achieved through Connecting Dots.

Programmed to recognise patterns and latch onto sequences, the human brain is a remarkable processor that gives human beings the innate ability to create, contribute and respond to stories. Using stories, children can be taught how to process and manage powerful emotions, life experiences, values and complex concepts such as coping with social rejection and sibling rivalry for long-term memory retention. The stories will also introduce preschoolers to the various cultures

of Singapore and teach them multicultural tolerance and acceptance through presenting parts of the story in Singapore's mainstream languages and major dialects such as Kristang; Punjabi; Hindi; Cantonese; Hokkien; and Teochew, At the same time, pre-schoolers can be acquainted with their ethnic roots and dialect as a way of preserving language and culture in Singapore. By giving families the chance to learn more than their own dialects, children are further exposed to social, cultural, cognitive and linguistic benefits (Corson, 1998).

Connecting Dots will feature seven interconnected webpages aimed to collectively fulfill the objectives of the project. The first page includes a video animation that guides audiences through the product's functions. The second presents materials that support craft activities required for preschoolers to take part in having a personalised interactive experience. One such example is to create popsicle stick flowers as a prop used in the story. Along with text instructions, video tutorials will give preschoolers and their parents step-by-step instructions on how to complete craft activities to further develop imagination, creativity and fine motor skills. The third page is a main feature and highlights Connecting Dot's webisodes through a video viewer with universal playback controls for intuitive user control. Here, parents can upload images of the craft work created with their child. By allowing personalisation of elements in the video, a child's attention is better engaged due to a sense of familiarity and achievement in having their work displayed.

Presenting standalone animations from webisodes, the fourth page allows users to choose between the language options available. Keywords from the story in the various languages will also be displayed and once selected, pop up as flashcards, capturing a user's attention, aiding their mental process of recall and providing preschoolers with yet another element of familiarity (Stuart, Masterson and Dixon, 2002). The fifth page will showcase biographies of characters from Connecting Dots in simple and easy to read formats to aid comprehension. In addition, parents can choose to find out more in-depth information about the characters, their backgrounds and values. A gallery page will also include bonus materials to give its viewers a better understanding of themes in the webisode and build rapport and empathy for characters. The final page of Connecting Dots will allow children to write letters and stories to share with characters, thus allowing them to relate better to characters on a personal level.

Through Connecting Dots, preschoolers will be introduced to holistic values that instill social consciousness and emotional intelligence. Additionally, it aims to encourage meaningful parent-child interaction and collaboration to help families discover and develop unique talents and interests of their young.

Conclusion

History is but a tool for change and improvement. Having identified that the loss of culture is detrimental to society in the long run, the time for change is now! Compared to past generations, the new breed of Singaporeans face different challenges. While there was a need for their predecessors to master either academic or vocational skills, it is important for students today to receive education that will produce a well-rounded society ready to tackle future challenges. It is no secret that the process of education takes up a large portion of a person's life. Therefore, balance should be struck in the responsibilities of holistically moulding a child both at home and at school and not left to either one. Learning is and should be an enjoyable experience and the appreciation of its value can be cultivated early on in a person's life. This is not a situation unique to Singapore but the whole world and positive action has to be taken in embracing the future but not at the risk of losing the past.

Bibliography

- ABDULLAH, A. C. (2009) Multicultural education in early childhood, *Journal of International Cooperation in Education*, 12(1): 159-175. <http://home.hiroshima-u.ac.jp/cice/12-1Anna.pdf>
- ARTHUR, L., BEECHER, B., DEATH, E., DOCKETT, S., & FARMER, S. (2005) *Programming And Planning In Early Childhood Settings* (3rd ed.), South Melbourne, Australia: Thomson.
- BERK, L.E. (2001) *Awakening children's minds: How parents and teachers can make a difference*, Oxford: Oxford University Press.
- CHANNEL NEWS ASIA (2012, March 8) Minister outlines MOE's plans for holistic education, <http://www.channelnewsasia.com>
- CORSON, D. (1998) *Changing Education For Diversity*, London: Open University Press.
- DOWLING, M. (2010) *Young Children's Personal, Social And Emotional Development* (3rd ed.), London : Sage Publications.
- FLEMING, N., & BAUME, D. (2006) Learning styles again: VARKing up the right tree!, *Educational Developments*, 7(4): 4-7. <http://www.vark-learn.com> [accessed March 15, 2012]
- HUANG, C. (2012, July 21) PM Lee warns of new fault lines between new citizens, native Singaporeans, Channel News Asia. <http://www.channelnewsasia.com>
- KWAN-TERRY, A. (2000) Language shift, mother tongue and identity in Singapore, *International Journal of the Sociology of Language*, 143(1): 85-106.
- LEE, S. K., GOH, C. B., FREDRIKSEN B., & TAN, J. E. (2008) *Toward A Better Future*, Singapore: National Institute of Education. <http://site.ebrary.com.ezproxy.ecu.edu.au>
- LYNCH, E. & HANSON, M. (eds.) (1998) *Developing Cross-Cultural Competence: A Guide For Working With Children And Their Families* (2nd ed.), Baltimore: Paul H. Brookes.
- MACNAUGHTON, G. & WILLIAMS, G. (2009) *Techniques For Teaching Young Children: Choices For Theory And Practice* (3rd ed.), Sydney: Pearson Education Australia.
- MAYER, R. E. (2002) Cognitive Theory and the Design of Multimedia Instruction: An Example of the Two-Way Street Between Cognition and Instruction, *New Directions for Teaching and Learning*, 2002(89): 55-71.
- MILLER, J. P. (1996) *The Holistic Curriculum*, Toronto: OISE Press.
- MINISTRY OF EDUCATION SINGAPORE (2012) *Signaling Importance of Holistic Education: Changes to Edusave Awards*. <http://www.moe.gov.sg/media/press/2012/03/signalling-importance-of-holistic-education.php> [accessed June 8, 2012]
- RAVITCH, D. (2007) *EdSpeak: A Glossary of Education Terms, Phrases, Buzzwords and Jargon*, Alexandria: Virginia. <http://site.ebrary.com.ezproxy.ecu.edu.au>
- SHONKOFF, J. & PHILLIPS, D. (eds.) (2000) *From Neurons To Neighborhoods: The Science Of Early Childhood Development*, Washington: National Academy Press.

SPEAK MANDARIN CAMPAIGN (2010), *History and Background*.

<http://www.mandarin.org.sg/?p=7>

STUART, M., MASTERSON, J., & DIXON, M. (2002) Spongelike Acquisition of Sight Vocabulary in Beginning Readers?, *Journal of Research in Reading*, 23(1): 12-27.

SUDDERUDDIN, K. (2004) *Communication Strategies for SARS outbreak in Singapore*.

http://www.hpb.gov.sg/gateway_event/Dr%20Sudderuddin.pdf

TEO, P. (2005) Mandarinising Singapore, *Critical Discourse Studies*, 2(2): 129.

THE COMPUTER LANGUAGE COMPANY INC. (2012) *Webisode Definition*.

http://www.pcmag.com/encyclopedia_term/0,1237,t=Webisode&i=54381,00.asp

VERA (2012, July 24). Re: Long way to go before we embrace racial, cultural diversity [Web

comment]. <http://sg.news.yahoo.com/%E2%80%98long-way-to-go-before-we-embrace-racial--cultural-diversity%E2%80%99.html>

WALMA VAN DER MOLEN, J., & VAN DER VOORT, T. (2000) The impact of television, print, and audio on children's recall of the news, *Human Communication Research*, 26(1): 3-26.

WONG, T.H. (2003) Education and State Formation Reconsidered: Chinese School Identity in Postwar Singapore, *Journal of Historical Sociology*, 16(2): 237-265.