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Educating citizens of the 21st century

The role of schools and their leaders.

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Abstract

There is a fundamental need in the current century to recalibrate the responsibility of schools for student learning and recognize that successful education outcomes are achieved jointly with the support of significant others, particularly parents and the wider community surrounding the students. This argument is underpinned by an exploration of two key constructs that are of central importance to education in the 21st Century: globalization and technology.

Globalization requires citizens to be able to deal with a complex, interconnected and rapidly changing world and create meaningful relationships with others who do not share their same cultural background. The challenge of technology refers both to the way in which learning is understood and the possible positive impact of digital devices on student learning. Educational technologies have the capability to change radically the way in which effective student learning environments are created, sustained and enhanced as we move further into the 21st Century.

The role of teachers may need to change, therefore, from "sage on the stage to guide on the side" (King, 1993) in an era where data is readily available. The onus in such learning environments is for students to not only be able to access such data, but also transform it into valid knowledge and apply it appropriately. Similarly, the capability to understand and enhance student learning is growing rapidly as the constructs of pedagogy, andragogy and heutagogy are better understood and enhanced by research. This will require a range of personal skills to be embedded in any curriculum and reduce the requirement for teachers to be transmitters of knowledge and encourage the development of self-directed and interdependent learners.

Consequently, school leaders need to familiarise themselves with and apply theories of adult and self-directed learning if they are to enhance the capability of their workforce and maximise student learning, which especially in the 21st Century, increasingly needs to be self-managed, intrinsically motivated and collaborative. This will mean school leaders will need to constantly review curricular provision from a perspective of skills enhancement if they are to provide students with the capability to make sense of a rapidly changing world.

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***Educating citizens of the 21st century: The role of schools and their leaders*.**

by

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Introduction

The focus of this presentation has been adjusted from the original invitation - *What kind of schools and leadership will best support 21st century learning?* - to take account of a broader picture of education than just schools. There is a fundamental need in the current century to recalibrate the responsibility of schools for student learning and recognize that successful education outcomes are achieved jointly with the support of significant others, particularly parents and the wider community surrounding the students. This argument is underpinned by an exploration of two key constructs that are of central importance to education in the 21st Century: globalization and technology.

> **Globalization** is one of the greatest challenges of the 21st century with rapid change affecting nations in economic, technological and cultural terms. The concept is commonly seen as requiring countries to recognise "the global interconnectedness of different interests" which makes it difficult for even the most powerful states to maintain the integrity of their borders (Bottery, 2006: 100). In educational terms this means there is an emerging need for students to be able to deal with a complex, interconnected and rapidly changing world and create meaningful relationships with others who do not necessarily share their same cultural background.

> The challenge of **technology** refers both to the way in which learning is understood and the possible positive impact of digital devices on student learning. Notions of pedagogy (child learning), andragogy (adult learning) and heutagogy (self-directed learning) are being developed, leading to the possibility of creating more effective student learning environments. Meanwhile the capability of portable digital devices is becoming ever more sophisticated and fundamentally influencing the way in which knowledge is created and validated.

Both influences have the potential to radically change the way in which effective student learning environments are created sustained and enhanced as we move further into the 21st Century.

Education In the 21st Century

It is now over 20 years since the report of the International Commission on Education for the Twenty-First Century submitted its report to UNESCO which recommended four 'pillars' of knowledge which were:

- Learning to know;
- Learning to do;
- Learning to live together;
- Learning to be.

These ambitions remain relevant and it is a straightforward task to translate those proposals into action for the development of knowledge, skills, socialization and self-actualization of the student body and identify the role schools could play in the achievement of such objectives.

Knowledge

As I have said elsewhere "traditional methods of training and education have tended to be based on the transmission of knowledge from expert to learner" (Male, 2016: 9). In the 21st Century, however, where access to information is so readily available to all through the Internet, anyone with appropriate equipment can now search through open data sources to engage with ideas, theories and discourse over what is 'true' and what is 'real'. In other words, knowledge and its creation, is now potentially in the hands of the learner, rather than being transmitted through an expert source (such as a teacher). The role of teachers may need to change, therefore, from "sage on the stage to guide on the side" (King, 1993: 30) in an era where data is readily available. The onus in such learning environments is for students to not only be able to access such data, but also transform it into valid knowledge and apply it appropriately.

Similarly, processes of globalization have narrowed the prospect of predominant individual national cultures and, with the world's technological capacity to store information having roughly doubled every 40 months since the 1980s (Kitchin, 2014), we no longer have control of knowledge that will be sufficient for life. This is not new understanding as it was recognized in the first part of the last century that knowledge

was no longer permanent and guaranteed to exist beyond the span of a single life time as "today this time-span is considerably shorter than that of human life, and accordingly our training must prepare individuals to face a novelty of conditions." (Whitehead, 1931: 10).

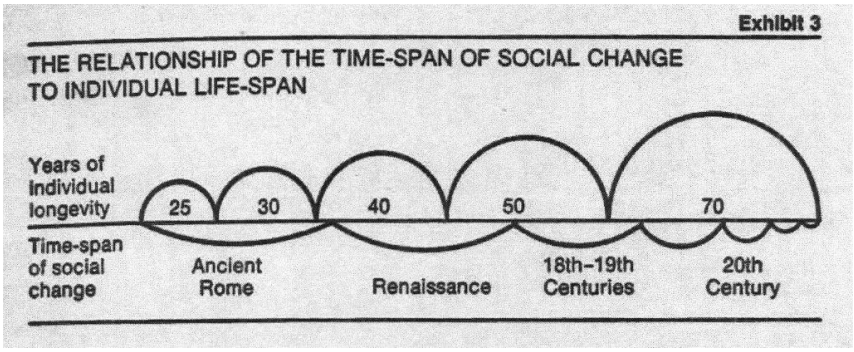

Figure 1: Major cultural changes and the life-span of individuals (Whitehead, 1931)

Skills

The discussion on knowledge above suggests a fundamental change to education during the 21st century, shifting from passive acquisition of someone else's ideas to active learning experiences that empower people to inquire, critique, create, collaborate, problem solve, and create understanding (Dede and Barb, 2009). This is perhaps best summed up by the American Society for Training and Development (2009) which identified the need to incorporate these digital technologies into the workforce of the future:

> The online world has redesigned communication in and outside the workplace; anyone can access almost anything about a topic, so [young people] are now accustomed to accessing multiple open sources of information for solutions. As a result, there are more collaborative technologies that have enabled the learning process to evolve from a fixed series of discrete training events into an informal, ongoing experience. Learning can easily occur anytime, anywhere and in a variety of formats. (p 3)

The emphasis needs to be on helping students to learn how to learn, therefore, and empowering them to "see themselves as knowledge co-constructors rather than passive recipients of information provided" (Aldhafeeri and Male, 2016: 1511). This will require a range of personal skills to be embedded in any curriculum and reduce the requirement

for teachers to be transmitters of knowledge and encourage the development of self-directed learners.

Socialization

A journey back through several centuries would demonstrate that very few of the world's population would have participated in any educational environment outside of their home or local community. It was not until the latter stages of the nineteenth century that universal basic education become available for the population of the more advanced economies, although this ambition became more prevalent globally during the last century. As already hinted at earlier in this paper globalization has become a reality, both in terms of accessibility to other cultures and in economic terms.

Early in 2018 there was a story in TV news in England about a new airline service to Australia that was to be a direct flight of 17 hours at a cost of approximately USD1000. The news report contrasted this with the first flight from Australia in England in 1947 which required stops at seven airports along the way, took four days and cost about USD 35,000 (some USD 400,000 today). Technology has seen the speed of travel effectively make the world a smaller place. Until the mid-19th Century the average speed of travel (horses/ships) was 10 mph; in the period from 1850-1930 the speed of commercial travel had been enhanced by steam driven trains (65 mph) and ships (30 mph) and by the end of the 20th Century airplanes (propeller driven - 300 mph; jets – 500 mph) made most parts of the world physically and financially accessible to most people.

Similarly, we have seen the growth of multi-national organizations, with elements of the production process often being spread across many regions and countries. This makes isolationism very difficult and for those countries wishing to expand their economies there is an emerging need for the internationalization of its workforce. Within the 21st Century the knowledge economy is more important than either natural resources or primary manufacturing, with a contemporary need to educate a future workforce to be able to interact beyond its borders and its national culture.

Self-actualization

The identification of the need to 'learn to be' generates a challenge for educators as it represents a desire to place value on the life style of individuals, rather than as contributors to a wider society. This calls the purpose of formal education into question with views ranging from bringing "people to as full a realization as possible of what it is to be a human being" (Foshay, 1991: 277) through to producing a capable workforce. In most circumstances, however, it seems that ambitions for formal education are most closely linked with national economic aspirations rather than with a neo-liberal approach to learning.

The notion that formalised education primarily has an economic function can be seen in the way that governments seek to emulate the attainment of students in perceived higher achieving nations on internationally recognised standards of success. Typical in this regard is the emphasis on school age student scores on the Programme for International Student Assessment (PISA), Trends in International Mathematics and Science Scores (TIMSS) and Progress in Reading Literacy Study (PIRLS) where government policies link performance on the attainment levels with long term economic advantage. The call from UNESCO for 'learning to be' is thus a plea to allow young people to enjoy life directly, rather than vicariously.

Implications for schools

The 21st Century thus demands schools enhance their capability to support student learning in a world that is fast changing and to place their emphasis on individual capability to not only make sense of emerging environments, but also to take control as suggested by futurist John Schaar:

> The future is not some place we are going, but one we are creating. The paths are not to be found, but made and the activity of making them changes both the maker and the destination.

In this mode the student, as learner, needs to become a partner in the learning process rather than just a participant. In such learning environment students are:

> … guided by curriculum content, pedagogy and assessment, and supported by staff and the learning environment, and […] play an active role in their learning experience – either on their own, or in collaboration with peers. They are supported in their independent learning by learning resources, including libraries, online materials and learning environments, physical learning spaces; and by the development of their academic capacity either through the core curriculum or through additional support services. (Thomas, Jones and Ottaway, 2015: 7)

Education organisations and settings, however, "typically remain organised around spatial and temporal considerations […] which are designed to classify and manage students" (Male and Burden, 2014: 425). Digital technologies, however, offer the potential for different forms of learning and teaching to occur both synchronously and asynchronously. This can afford learners more, and better, time for engagement than traditional learning spaces where responses and feedback are expected more immediately (Zieghan, 2001). Digital technologies thus offer new opportunities as to how learners undertake personal research or inquiry in the face of unprecedented access to information and sources of data (Crook, 2008). The interactivity of digital devices with Internet access thus provides the opportunity to change the way teachers work with their students and encourage *networking, collaborative learning and problem-solving*, skills which are vital in the 21st Century.

What does this mean for school leaders?

The 21st Century thus calls for new learning environments in schools that impact on young people and the adult workforce in a way that creates self-directed learners (the concept of heutagogy). What is needed for such a transition is an enhancement of the pedagogical, andragogical and heutagogical capability of the adult workforce. In previous times the focus has been on pedagogy (leading a child), but during the last century the notion of andragogy emerged. Simply explained, andragogy provides a focus on adult learning which provides a mechanism to enhance the capability of members of the adult workforce as educators. Heutagogy, however, is the concept of a self-directed learner (Hase and Kenyon, 2001) who has the agency (and means) to be successfully engaged in directed independent learning opportunities (Thomas et al, 2015).

In an earlier work of mine this was taken further to propose a model that guided learning beyond self-managed independent learning towards collaborative, interdependent learning (Aldhafeeri and Male, 2016 – see Figure 2). There we argued that student learning potential will not only be enhanced by use of digital technologies that are now readily available, but also suggested the ultimate aim of such education should be the creation of effective learning environments through interdependency, a state often seen as ideal in the world of work where problem solving and creativity are the product of collaboration rather than independent contributions (Helfand, 2013).

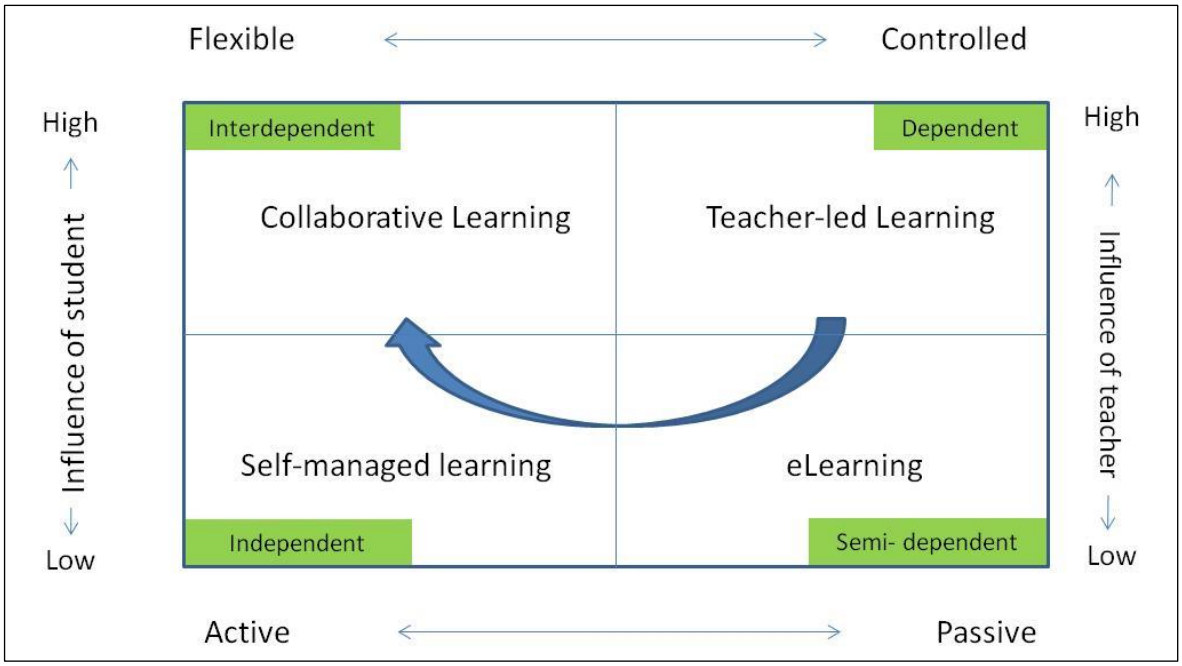

Figure 2 - Learning in a Digital Age
© Aldhafeeri and Male (2012)

School leaders need to familiarise themselves with and apply theories of adult and self-directed learning if they are to enhance the capability of their workforce and maximise student learning, which especially in the 21st Century, increasingly needs to be self-managed and intrinsically motivated. This will mean school leaders will need to constantly review curricular provision from a perspective of skills enhancement if they are to provide students with the capability to make sense of a rapidly changing world. Consideration also needs to be given to the way in which schools relate to external

influences, particularly in their willingness to engage with different approaches to learning emerging from new technologies and to engage with parents and other community members.

Most education organisations and settings typically have not yet managed to have adapt to developments in digital and learning technologies, however, with student learning environments still bearing a worrying correspondence to those used in the previous two centuries of universal basic education. In too many instances schools seek to manage formal learning situations in ways that deny the normal lifestyle of students in this century. One major restraint emanates from the concept of e-Safety, particularly in pre-school settings and compulsory education, which is often manifested through the introduction of firewalls and regulations that prevent or discourage student use of digital technology, especially in the formal face-to-face learning environment, resulting in the notion of 'access denied' (Male and Burden, 2014: 424). Even where there is evidence of willingness to engage with digital technologies, Westberry, McNaughton, Billot and Gaeta (2015: 101) found "teachers can be sceptical of the pedagogical value of technology, using it in limited ways rather than engaging in significant curriculum change [or] to repackage existing pedagogies as teachers use technology to support their existing beliefs and practices". Typically, it seems teachers typically express a view that "integrating new technologies might be felt to diminish classroom control or make it more difficult for staff to assert their authority" (Gilbert, 2015: 52). Consequently, we have seen and continue to witness schools remaining conservative in their style and willingness to change and cause most delay to the use of technologies to transform learning (Aldhafeeri and Male, 2015).

Schools also have often seen themselves to be servants of national policies and separate from the local community in which they are located, whereas research is demonstrating that parental and community engagement is a necessary part of children's learning if they are to transcend their social circumstances (Male and Palaiologou, 2017; Palaiologou and Male, 2016). The latter stages of the previous century saw the emergence of leadership theory that was specific to education in schools with the identification of instructional leadership which, in turn, evolved through learning-centred leadership and learner-centred leadership to pedagogical leadership

with the emphasis on the ecology of the community (Alameen, Male and Palaiologou, 2015).

School leaders in the 21st Century thus will need to be nimble and adept at identifying emerging opportunities to improve the learning environment for the student body they serve. This will mean they need to constantly review curricular provision from a perspective of skills enhancement if they are to provide students with the capability to make sense of a rapidly changing word. Secondly, these leaders will need personal competency in information handling so they can act in strategically effective ways when planning for an unknown future which they should be designing, rather than learning how to adapt to changed circumstances. Finally, such leaders will need greater understanding of contemporary learning theories and be able to apply theories of adult and self-directed learning if they are to enhance the capability of their workforce and maximise student learning, which especially in the 21st Century, increasingly needs to be self-managed, intrinsically motivated and collaborative.

Conclusion

School leaders are the pivotal point of formal education, especially in the 21st Century and require development activities that move them beyond management and into leadership capability in a rapidly changing world. Leaders make decisions, whereas managers implement such decisions effectively and efficiently. Effective school leaders in the 21st century will exhibit the ability to make sense of the unknown and take action before they are forced to change. In other words, they will create the future by being proactive, rather than reactive. Such leaders will thus need enhanced knowledge and understanding of the technologies of education so they can create the most effective learning environments for the student body they serve. The measures of their success, whatever their context, will be the maximisation of student outcomes and enhanced social capital.

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