



Teach the Future Today



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The past decade has witnessed radical changes both technologically and socially. From the rise of social media to the spread of sharing economy, our lifestyles have been reshaped in ways unexpected. 2017 marks the 1st anniversary of Uber entering the market of Macau, which has given a stir in the originally monopolistic local taxi service. Nationally, the success of Taobao's Single's Day – the most popular virtual shopping spree worldwide – allowed the company to complete a maximum of 175,000 transactions per second and bring in \$17.8 billion in just one single day (Cheang 2016)! There are almost 2 billion active Facebook users worldwide, i.e. 1.5

times of China's total population (zephoria.com 2017). These three trendsetters are prime examples of how our social relationships have been redefined and how skills and talents are perceived dissimilarly, and inevitably, education is no exception. Are our students ready for the new challenges? Are we teachers also ready?



Are you ready?

The 21st century is the Creative Age when innovation and technology becomes the driving force that provides conditions for higher efficiency and sustainable development. According to Davies et al. (2011), the skills that employers are looking for in employees now will be considerably different in 2020, which is when most of our current high school graduates finish their university study and join the workforce. Specifically, the 10 future work skills identified are:

- Sense making
- Social intelligence
- Design Mindset
- Cognitive load management
- Computational thinking
- Novel and adaptive thinking
- Cross cultural competency
- New Media Literacy
- Virtual collaboration
- Transdisciplinarity

Davies et al. (2011, p.8-12)

Nonetheless, while the outside world may be expecting new employees to start off on the right foot with the above-mentioned skills, our current education system seems to still largely adhere to the Industrial-age education model that

emphasizes the role of the teacher being the transmitter of knowledge whereas standardization, which usually comes in the form of tests and exams, is still seen as a panacea for identifying the “best” students. In this day and age, educators sometimes cannot deny but question if a straight-A school report card guarantees success. Do these curve-wreckers often perform better than their underachieving counterparts? Not necessarily. At least Bill Gates, Mark Zuckerberg and Jack Ma were not crunched by the ruthless factory model of education. What these multibillionaires demonstrate is not the cliché that “college isn’t for everyone”; instead, education is still the essence in that if it were made right and room for innovation and failure were allowed, there would be more path-makers rather than followers.

A close scrutiny of the proposed future work skills reveals that such skills as (1) novel and adaptive thinking, (2) new media literacy, and (3) transdisciplinarity are largely invisible in the local education system, as far as our observation goes. The following part will enter into a discussion on the significance



of these three skills and why they should be cultivated in the context of Macau.

Novel and adaptive thinking

As frontline teachers, we often have reservations about the use of standardized tests to assess students simply because tests do not promote novel and adaptive thinking. Take the Programme for International Student Assessment (PISA) as an example, which aims to measure whether students aged 15 are ready to “use their knowledge and skills to meet real-life challenges” (OECD). Macau students in general have made considerable progress according to the latest released result (Macau Daily Times 2016). Regarded by many as a high-stakes test, PISA undoubtedly rivets the attention of many local schools and teachers who have put extra effort to prepare their students for the test. What is its washback effect? While some schools may require their students to attend pretesting tutorials, some others even incorporate elements of PISA into their own curriculum. An even more conspicuous example is the Joint Admission Examination. As the number of tests and exams

increases, teachers are left with a more rigid curriculum to follow whereas students are deprived of opportunities to really apply the knowledge they have learned, let alone become creative and adaptive. Novel and adaptive thinking, according to Davies et al. (2011 p.9), is defined as the “proficiency at thinking and coming up with solutions and responses beyond that which is rote or rule-based”. Our education system has been focusing on setting standards through assessments of different forms but is unable to recognize that many of our students will need the ability to face real-life challenges such as negotiating with others instead of taking a paper test; they will need to create their own personal portfolio rather than write a template-based personal statement; most importantly, they will need to get accustomed to constantly changing working environments in a globalized era.



New Media Literacy

Many teachers may agree that they are less confident when it comes to using technologies and social media platforms. As digital immigrants, we may find our students more tech-savvy than we are as they have been growing up in an environment where technology is an organic part of their lives. This may be the reason why we seem to find many teachers reluctant to use technology in their teaching. However, what we are missing is the vision to realize its significance and to embrace the new changes. By the end of this decade, how many of us will still be job-hunting traditionally through sending out CVs? Will the number of people working from home double as predicted? We do not have an absolute answer to these questions, but this is happening and is unavoidable. As educators, what we should do is to think of ways to integrate new-media literacy into our curriculum, cultivate critical netizenship, and encourage school-business collaboration with the technology industry in order to better equip our students with the necessary new media literacy.

Transdisciplinary

STEM(Science,Technology, Engineering and Math) perfectly exemplifies the essence of transdisciplinarity – “literacy in and ability to understand concepts across multiple disciplines” (Davies et al. 2011, p.11). Although STEM has found its way into many secondary schools in neighbouring regions like Hong Kong, Singapore and Mainland China, it is still a comparatively new idea in many local schools. Seldom do we find math and science teachers work collaboratively in order to help their students find the relevance between the two subjects, and the same is also true of humanities subjects like history and geography. But why is transdisciplinarity so important? One major problem all nations are faced with is global warming. Our future generations will definitely be living in a less inhabitable environment with more adverse climatic conditions and fewer resources. The solutions to such problems require beyond the mastery of knowledge in any single subject. Educators nowadays should abandon the old model of subject-based division, but rather



promote interdisciplinary allocation of teaching and learning support.

Some may argue the skills mentioned above may not be as essential as it is suggested and, as time goes by, other new skills will be required. Then, why do we care? Indeed, our sharing above is not a form of conviction of any kind of pedagogical beliefs or practices. What we think will stand the test of time is not what kind of skills we try to nurture in our students, but the mindset that education is always about the future and teachers' job is to prepare, not to repair. 📖

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