Balancing Act – Navigate Innovation to Teach in Schools

Gillian Spicer

Forest Lake State School and Darra State School, Australia

Abstract

The speed of digital innovation development VS policy delays of digital use in schools, due to rapid digital innovations. How does this cycle impact school learning of under 18 year olds in primary and high school classrooms? And, how does it impact the work of teachers? The world our current students are born into now is digitally different than it was only ten years ago which results in unease of how to responsibly engage young students in learning in classrooms in the absence of formulated policies. What makes some practising teachers adapt and achieve successful learning in engaged classrooms while others flounder? To keep pace with innovation, teachers, and therefore educators of teachers, need to be informed by the contemporary needs of both students' and teachers' work. Using digital tools as an educator of children (minors) in classrooms while policies falter needs a teacher mindset of flexibility, sharing and having processes to follow to keep themselves and the students in their care safe and productive learners. Where to find guidelines for teaching with digital tools and how to seek your educational institution's view on a range of digital tools are processes shown here to help manage this balance with peace of mind. Teachers' mindset of flexibility and adaptation takes a collegial team of collaborative work. Practising teachers who share their experience encourage a greater willingness to learn from colleagues. This will benefit society by retaining more teachers, stemming classroom behaviours through student engagement and give teachers the tools and processes needed in the currency of their work. Outcomes are improved learning and teaching practices, happier schools and communities and school data to be proud of.

Keywords: *digital, guidelines, processes, minors, engaged, classrooms*

The pervasive nature of artificial intelligence (AI) and its relentless innovations throughout many societies worldwide augurs teachers to be in front of the knowledge and capabilities necessary for its integration into education and digital technologies, (Ayanwale, 2022). Given the capacity of smart phones as an understanding by the general public in many societies of the acceptance into modern living of AI powered information and responses, the logical step in order to educate our current generation in their capable, ethical and responsible use of the convergence of AI with many and varied existing and emerging technologies is upon educators. Language teaching and learning is shown in a meta-analysis by Lee et al, (2024) to be enhanced by the capabilities of generative AI as an effective and impactful tool to enhance individualised language learning. In primary and high school classrooms educating minors utilising AI, in the absence of firm policies for many teachers, starts with concern which either degenerates into anxiety, or through personal research, networking, joining educator affiliations and reaching out to others enables a mindset that opens to collegial sharing, value adding to the previously juggled differentiation attempts to individualise feedback and progress in the miniscule time allocations for most junior language lessons. When schools are indifferent to or unsupportive of language teachers, time, funding and professional development revolves around literacy of the standard language and numeracy education, and the benefits of learning more than one language are ignored, then language teachers are left to their own devices and often not included in general communication about education or professional development. In Australia, often referred to as, 'the lucky country,' physical classrooms are being taken away or not provided while many language teachers move from classroom to classroom dragging a trolley of resources to teach hundreds of students a week, devaluing those educators' work, an added load on the teachers' mindset, which if not stemmed eventually reflects in both teachers' and their students' outlook toward language learning, disengaging . The above qualitative information, collected while attending language

forums, symposiums on changes in education, state and international conferences, although not formally an empirical study, sheds light on some of the practicalities and lack of processes that impact language teachers' and students' work and mindset and retention as valuable teachers. The issues facing language teachers are multi-facted and need attention. Those of us lucky enough to have supportive schools and have built experience need to step up and share with colleagues near and far.

Beyond teacher AI generated resources and AI powered teacher constructed quizzes, online searches while at school are moderated by education systems' blocking abilities, if your country's government and education system works toward this end. According to UNESCO (2023), only a small number of governments are working this way. "We further know that children and youth are highly susceptible to manipulation, much more susceptible than adults." Giannini, (2023 p6). This article reveals that AI has not been linguistically raised by a family with decent values and so, is not endowed with human integrity, and when its training models are fraught with influencers and entertainment, AI has shown to escape the guardrails put in place by its creators, with inappropriately influential output that children ought not to be exposed to. Also discussed, is the prolonged engagement strategy, prevalent also in social media. This combination tells us that our children need protecting from direct online generative output. In our efforts to keep our teaching current and our students protected, professional development with commonly understood and easily accessible processes to protect teachers' peace of mind and keep students safe is a must. In many primary schools and often in high schools, language teachers are left to themselves and with the sheer number of students taught each week, with an average of upwards of six to seven hundred, and a couple of teachers reporting many more each week, the organisation, curricula planning, preparation, assessment and reporting, not to mention being a jack-in-the-box psychologist, mediator and all-round behaviour guru, to get an engaging curriculum delivered, learnt, enjoyed and built on takes its toll when a school is not supportive. Teachers' work in creating individualised resources is made easier with Large Language Model AI systems, but the know-how to reach that experience is time consuming. Despite this easing of time to create resources for progress in student improvement it, the AI teacher assistant arrives in this era of government cutbacks meaning less teacher aides putting resources preparation, very often solely in the hand s of the teacher. Everyone should not need to 'reinvent their own wheel,' when the more fortunate teachers among us who have support, share our learning and experience can share further, beyond borders. We have the technology to cross the borders of PD needs and close the gap of those teachers in the situation of being without guidance and supoort, and in turn they and the children they educate may have a chance of current survival to deal with the next steps.

The importance of introducing such an educational curricular, to future proof our next generations, is best started from early childhood and continued throughout high school is well established, advising the understanding of each states' policy on AI and the readiness of pre-college students, teachers and policy makers is crucial for the implementation of AI into education systems to be effective, Sanusi et al., (2024). However, humanity is not mechanical and with the juncture of societies' assorted awareness of machine learning and readiness to incorporate AI into education, studies with these three groups of people, considered as major stakeholders in the beneficial implementation of AI into school education, reveal both optimism and apprehension of the process, Uygun (2024) and, "AI perceived as both a bane and boon to educational systems and human intellect." Sangupu (2018). A theme through such studies would indicate that the mindsets of these stakeholders should be considered in the rollout of AI implementation so, to widely disseminate processes to enable these stakeholders to have information, understanding and guidelines on AI education as easily accessible and to update these in a more globally, educationally minded holistic manner, rather than piecemeal, inward looking state-by-state, could greatly reduce these apprehensions for educators beyond borders and steady the balance of rapid change with true readiness to take on this responsibility with integrity in the direction and control of education in such a cyber phenomena that has the ability to exponentially sabotage and run away with our children's chances of appropriately harnessing such an incredible tool. In the sphere of language teaching and learning, the interactive nature of language with chatbots among other individualised language learning innovations raises safety concerns with minors. Overall currency of politic thought frames around AI in education rather than in situ details would be this aim to keep a wider community of educators informed so as to allay anxieties, which in turn will have a positive impact on students and policy makers. In this manner, each region or state could access the global knowledge and adjust to suit their own contexts, but at least, in this age of disruptive technological advances we could rise above borders and politics and develop a more global outlook on the importance of getting this right for our students and educators to future-proof the wisdom and uses of AI and innovations in education and adopt a likewise outlook to professional

development. Currently, a cycle of AI and technology innovation pushes policy development, teacher professional development and student needs at a rate that raises ever evolving concerns, with policy becoming quickly outdated and education in some regions producing guidelines and others not. An example being across a dozen Pacific region states from 2019-2023 only fifty-one percent of primary and fifty-nine percent of secondary schools were connected to the internet, not yet capable of accessing information. Even in well resourced countries like Australia, remote connection to the internet is not always reliable, Global Education Monitoring Report Team, Commonwealth of Learning (COL), 2024). Despite these initiatives and projects by COL, the paper admits greater efforts need to be made for their work to be scalable to needs. Apart from logistics, concerns of student safety, teacher burnout, and human resourcing issues, the balance of benefits of the AI revolution are also being researched. Although based on innovation in industry, The Institute of Ethical AI and Machine Learning produces insights that educators could learn from an example being Awesome Guidlines that show*** cross disciplinary thinking with discretion regarding the parts of usefulness for each party can only enhance our due diligence is we move forward.

As artificial intelligence (AI) develops at an exponential rate, the reach of its abilities with natural language and capacity for reasoning and responding by text or voice makes it an attractive tool for language learners and educators. Owners of new language learning programs, as a business, need to make money and so use other AI business programs to automatise their organisation. It is in this area where third party agreements are made with the need to outsource developers, content writers, marketers, lead generators and others to maximise business efficacy. Teachers of minors need to be aware of this as, the balancing act is seeing the cyclic nature of the production of excellent apps or programs and knowing where to find your education systems' reviews of such products (and what risk assessment rating your department has assigned. Without this knowledge, exposing students to yet departmentally unreviewed online content that may slip through your departments' blocking of those apps deemed high risk if it doesn't yet have a rating. This type of app then should be reserved for the teachers' work, to create resources in record time as a bonus and not have students work directly within the app. Put in a request to your department to review the app if you think it beneficial in the classroom. Third party agreements may include such items as roles, responsibilities, intellectual property, boundaries, data collection and privacy statements and many more. Although legal and binding documents, once companies sign such a third party agreement contract, they need a constant monitoring system to ensure breaches of these contracts do not occur and if found can be dealt with early. This is a risk that education policy writers are reticent to take when any breach may impact a minor. For education departments the rigor of website reviews, examining third party agreement items and transparent third party action plans to minimise damage in the event of a breach while keeping abreast of the burgeoning number of new apps, programs and companies is a feat needing its own ongoing innovations. As yet, it is not mastered for educational policy writers. We are at tipping-point in time of AI, at the stage of 'Narrow AI' (Hintz, 2009), that is reactive and of limited memory with mechanical construction and algorithmic in nature that is being continually refined. Teachers' work in primary and high schools in regards to protecting themselves from legal ramifications and their students from unfortunate online exposure while, intentionally or inadvertently through third party company agreements, not initially obvious, incorporating Open Source AI whether as an educational inquiry tool or language learning enhancement chatbot remains in the grey area of following the guidelines set out by our education departments and hoping that the governing bodies' ability to keep their 'access' or 'access denied' for minors current. Until firm policies can be developed language teachers need to stay current on Digital Technology guidelines (Australian Government – Department of Education, 2023), and work on developmentally appropriate skills to handle technological innovations in line with educational outcomes and not what the technology can do.

Giannini (2023 p. 3) suggests that, with all the promise of AI diversifying our knowledge, that we may be heading in the opposite direction. She may be right in one way, at least. If we forge ahead with rich nations' abilities to understand and master AI use in industry and education and all spheres of life, countries like Papua New Guinea where, during remote learning 72 schools reported that over half of their students did not have electricity at home (Global Education monitoring Report, 2023). With the speed, and reach into our everyday lives and dynamics of the current rate of change in how get things done due to AI, countries such as Papua New Guinea will miss out on their cultural ways, linguistic diversity and society having access to contribute to training the Large Language Models which we are in danger of creating as the go to for knowledge. Diversity in ways of thinking and many intercultural perspectives in creativity and knowledge will be lost.

For the language teacher in schools, context matters. Some, with all the promise of AI language teachers' work in multiple schools with varying degrees of digital capabilities, styles of leadership and school cultures. These teachers may educate over six hundred students per week as their first challenge. The leadership style and surrounding demographic and local influences on their colleagues and students impact language teachers' work in varying degrees in either a positive way or increasing their work load with the need to summon greater energy for a number of work related necessities to succeed as an educator. When pressures from educational departments to supply evidence-based 'improvements' are forced onto school leaders, often confirmation bias toward a particular program and way of working is thrust upon teachers in a school and the professionalism of teacher pedagogical know-how and differentiation is devalued in favour of a micro-managed push to replicate a set of data once achieved in another place and time. While budgets are expended on that pursuit of data collection necessary to satisfy a political drive or career push, budgets and time for the language teacher in such schools become a low priority. Teacher consultation and communication with language teachers in some schools then becomes a low priority. In these circumstances language teachers are left behind in access to class sets of digital devices or to access professional development with digital technologies, spending more time and energy to achieve currency in the area of IT use in language classrooms. Similarly, students in their language classes cannot access digital modes of language learning when they can't be integrated in that subject, despite the affluent nature of the country. Another aspect impacting language teachers' work is the behavioural management in any school which may look good on paper, be data-driven and either supported or unsupported by school leadership teams creating either a wonderful positive school culture or an environment with few consequences and teachers in classrooms managing increasing minor behaviours, working harder on engaging lessons for students, yet spending less time actually teaching due to major or minor classroom infractions that disrupt lesson flow and students' ability to maintain focus.

Remember that over six hundred students per week means that the language teacher needs to deal with all manner of diversity among students, 'multiple learning strategies' (Pashler, McDaniel, Rohrer & Bjork, 2009), which means language teachers need to get to know hundreds of students to impact their learning. (Hattie, 2012). Further to these challenges in language classrooms is the readiness of students' from within the general teaching and learning areas of each school to engage responsibly with technology. With a limited lesson time each week in class, if the students in a school are not educated in digital ethics, responsibility and capability, the language teacher in this position who wishes to use digital technologies in the classroom needs to be vigilant. Even with class monitoring apps that allow teachers to keep an eye on students on line by getting each student to login in to a class pre populated app and then if appropriate lock the entire class into a particular app with the intent of keeping them safe, in moments when the teacher gets busy with a particular student or group, rascals in classes will turn aeroplane mode on and off, be out of their restrictive app and on the web. Muscle cars to Mui Thai sometimes are more exciting to friends than language learning, in spite of all the preparation and interesting activities teachers can create. Teachers wanting students to directly work with the internet need to develop a mindset of positivity, outward perspectives on networking with colleagues and decide to stand on the shoulders of other language teachers who are fortunate to work in schools with positive cultures, outlooks of valuing language teaching and collaborative work ethics who are in a good mindset to share, model and meet in person or online to be advocates for the survival and success for language teachers to thrive in schools in their local areas and then share what works further and further afield. Digital technology has the potential to create widening divides between countries in education and beyond. So, upskilling for the context of people beyond our own border can be made possible with live translation in video by AI such as Sora and others. Well-run schools, enough teachers, and teachers with the requisite conditions, training and salaries that allow them to be successful remain the main ingredients of a sustainable remedy. (Giannini, 2023, p. 7). Simply understanding the difficulties is not adequate, a thoughtful, collaborative effort looking to the big picture of not what happens if we let this phase get out of hand, but slowing our response as (Giannini, 2023) advises but thinking ahead of how learning will be facilitated by educators with incredible tools and students schooled in creativity, critical thinking, problem solving, due diligence and integrity.

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