

TE MAHARA, TE TOHENGA ME TE MAHI WHAKAUMU

Mainstreaming e-Education in an indigenous tertiary context: Conscientisation, resistance and transformative e-Praxis

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Abstract

Āhuetanga Māori is at the forefront of an education students can expect to receive at a Māori tertiary organisation. Mainstreaming e-Education involves normalising electronic modes of teaching and learning into a conventional face-to-face teaching and learning tertiary environment. Conscientisation, resistance and transformative praxis are processes or stages that conventional teachers experience when faced with new electronic modes of course delivery. In a Māori tertiary organisation the conscientisation and resistance processes are amplified as a result of ako, the traditional Māori andragogical and pedagogical concepts of teaching and learning. These processes are imperative for the transformation of conventional praxis to electronic praxis (e-Praxis). The concept of e-Education complementing traditional methods of course delivery is not always readily adopted by traditional kaiako, making the transition from conventional face-to-face course delivery to one of mixed-mode delivery challenging. Resistance manifests as a result of fear of the unknown, fear of failure, of not wanting change, and not feeling confident to try something new. This article offers an insight into the conscientisation, resistance and the transformative e-Praxis processes that occur as a result of the introduction of mixed-mode course delivery with lecturers in a Māori tertiary teaching and learning context.

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Introduction

Resistance to educational change is a normal reaction regardless of the context. Within our Aotearoa educational sectors, teachers, students, parents and caregivers will resist changes if they are not fully informed of the benefits of those changes. The introduction of e-Teaching and e-Learning (e-Education) in tertiary organisations in Aotearoa has resulted in resistance at management levels and amongst the kaiako and ākonga. The term e-Education means teaching and learning via electronic technology in an educational context. Inclusive of these technologies are computer technology, video conferencing and mobile devices (m-Learning). There have been many definitions of e-Education including blended learning and online learning. In the Aotearoa context, Nola Campbell, a former techno-prophet from the University of Waikato, defined e-Education in the following way: “e-education involves e-teaching and e-learning along with the various administrative and strategic measures needed to support teaching and learning in an Internet environment” (Campbell, 2001, p. 2). The term techno-prophet refers to an advocate, a visionary, an e-Teacher, an e-Learner and key driver for the implementation of electronic modes of teaching and learning. Mixed-mode delivery in a *whare wānanga* educational environment is the delivery of educational content via electronic means or e-Teaching and e-Learning, *noho wānanga* (on-campus weekends where students will stay together as a group), video conferencing and self-directed learning (Ferguson, 2012). e-Education is an electronic delivery mode of the Bachelor of Education at Te Whare Wānanga o Awanuiārangi (TWWoA), the indigenous university in Whakatāne, Bay of Plenty, in Aotearoa.

There have been many previous studies that have contributed to the increasing knowledge base about technology resistance within tertiary organisations and universities (Berge, 2000; Campbell, 2003; Kahlil, 2013; Moerschell, 2009; Muilenburg & Berge, 2001; Shelton & Saltsman, 2005; Stephenson, 2001). The literature about resistance to online delivery has not changed dramatically since 2003 and the findings reveal that teachers in tertiary organisations still resist the change. The recurring themes emerging from the previous studies include the lack of organisational support, technical support, lack of knowledge and skills in computer applications and professional development for new e-Pouako (e-Teachers). The literature outlines the type of resistance to e-Education that has occurred, which is predominantly the resistance to the change from conventional face-to-face teaching to the electronic modes. However, as more research comes forth about this topic, the more we understand about the processes teachers undergo when trying to transition from a conventional classroom to an electronic one (Pelet, 2013; Yang & Yang, 2013; Ziccardi, 2012). The research ensures that the mainstreaming of e-Education into the conventional classroom is easier with the understanding of what triggers the resistance. The term “mainstreaming” is used to denote the process of making e-Education a normal part of the education offered at TWWoA.

e-Education—Aotearoa and beyond

Internationally, e-Education is not a new mode of delivery, as it has been around for several years. In comparison to international tertiary organisations who have delivered education using technology since the late 1980s and early 1990s, e-Education is relatively new for tertiary

organisations in Aotearoa. Internationally and historically, the western world led innovations in e-Education (Dyson, Hendriks, & Grant, 2007; Roberts, 2004; Schwere, 2005; Simonson, Smaldino, Albright, & Zvacek, 2003). The United States and the European countries were the pioneers of electronic modes of teaching and learning (Dyson et al., 2007). Internationally, the benefits of technology in the preservation of cultural heritage are numerous. For example, *Desa Maya Budaya Indonesia* is a virtual game depicting an Indonesian village. The virtual game was developed specifically to “introduce Indonesian culture” to children (Hasibuan, Isal, Anggun, Ahmad, & Selviandro, 2011, p. 1). The University of the South Pacific in Fiji has digital preservation projects in progress. According to Robbins (2010), “Students are encouraged to film traditional ceremonies in their home villages while on school holiday, to be uploaded to the University’s Cultural Tradition database” (p. 1). Robbins (2010) suggests that these projects will “prevent the wholesale extinction of indigenous practices” (p. 1). Preventing the extinction of cultural practices justifies the use of e-Education for TWWoA and indeed for all indigenous peoples.

The Aotearoa e-Educational context has followed the examples set by the United States and European countries. Literature from the Ministry of Education’s (2002) New Zealand e-Learning Advisory Group supported the suggestion that Aotearoa was now “a part of the global market place” (Ministry of Education, 2002, p. 12). The need to compete with other countries and keep abreast of the new technological developments that are emerging at a precipitous rate means that our population needs to be skilled in all areas of technology (Ministry of Education, 2002). Keeping abreast of new knowledge and new innovations ensures a place in the new technological knowledge society for Māori. Globally, the indigenous world has progressed into the new knowledge society with many initiatives currently being

implemented to ensure the indigenous world is part of the technological landscape.

In Aotearoa today and within the various education sectors, e-Learning is fast becoming a normal part of classroom learning. For example, since the recommendations made in 2002 by the New Zealand e-Learning Advisory Group, there have been many initiatives implemented in New Zealand schools, including ePortfolios, video conferencing for rural schools, webinars and mobile sensor technology (Fenton, 2008; New Zealand Council for Educational Research, 2011; Ministry of Education, 2013). The rapidly changing e-Education landscape in Aotearoa means that kaiako need to keep abreast in order to stay one step ahead of their students. Particularly important is the technology and e-Education training that student teachers receive during their initial teacher training, as teachers can only teach what they know and understand. If a teacher has very low levels of computer literacy and tries to teach students what they know about computers, students will not be able to move beyond this level until the teacher upskills in this area.

Today, many technological innovations are currently being trialled at TWWoA. However, the concept of electronic delivery is not new to this *whare wānanga* as e-Education has been part of the teaching and learning landscape since the introduction of *Te Tohu Paetahi Mātauranga Māori Bachelor of Māori Education e-Wānanga* in 2002 (Laws, 2008). The degree of teaching online and assessing students in the online environment and for online assignments has changed dramatically since the early years of e-Education at the *wānanga*. The students enrolled in the Bachelor of Education complete assessments online and e-Education is a delivery mode of the degree programme. The online assessments vary and include e-Kanohi (online video conferencing or Big Blue Button) presentations, e-Kōrero (discussion forum), e-Mahara (online journal), wiki and PowerPoint presentations with audio commentaries. The newest development in the

Bachelor of Education is the use of the e-Kanohi function. This enables kaiako to teach synchronously with online video conferencing at times that are mutually acceptable for both kaiako and students. For example, students with young children are given specific times at night to meet with the kaiako on e-Kanohi, making it possible for parents to settle their children and attend to their needs before completing their assessments (Ferguson, 2012). An obvious disadvantage for the kaiako is the extended work hours. It is indeed a commitment by the kaiako to ensure that students are afforded every opportunity to meet course requirements regardless of the time of day or night. This flexibility with hours of work when teaching online has been well documented by many authors (Bischoff, 2000; Campbell, 2003; Ferguson, 2012; Lorenzo & Moore, 2002; Stephenson, 2001; Weller, 2002). Māori education requires this commitment if we are to make a difference in the lives of Māori whānau, hapū and iwi.

Te Horopaki Ako: The educational context

Officially recognised in 1997 as a state-funded whare wānanga, TWWoA is situated in the Bay of Plenty in the North Island of Aotearoa. Mātaatua is the Māori place name for the area in which TWWoA is situated and includes Māori tribal groups who have genealogical links to the Mātaatua ancestral canoe (Ferguson, 2012). The students attending the wānanga are predominantly of Māori descent. Āhutatanga Māori is an important part of students' education at TWWoA (Ferguson, 2012). Āhutatanga Māori is inclusive of the values, principles, beliefs and practices of whānau, hapū and iwi. Mead (2003) states that according to the Education Act 1989, āhutatanga Māori translates to "Māori tradition" (p. 12). Upholding these Māori values, beliefs and andragogical practices and transferring them into the e-Education environment is equally important when Māori institutions move into the digitised world.

The Bachelor of Education is a mixed-mode degree programme at TWWoA. The programme is delivered to three teaching sites. Whakatāne is the main site with one in Tāmaki (Auckland) and the other in Whāngārei. The majority of teaching staff have online components to their paper assessments. The level of online teaching varies between staff with the more confident having a higher percentage of online teaching than others. Overall, the majority of the Bachelor of Education staff have mainstreamed e-Education into the degree programme to the point of being confident and competent with all facets of e-Teaching. Arriving at this point has taken 3–5 years. It must be noted here that some kaiako will transition faster and easier than others depending on their readiness to adopt this mode of teaching and learning. The andragogical teaching and learning principles should be applied when kaiako transition from the conventional to the electronic modes of delivery.

e-Education is a western construct and for the author it has been about indigenising this western construct within the Māori tertiary environment she works in. Ferguson and Werahiko (2009) conducted a study about e-Education and culture for the World Indigenous Conference in Melbourne. The study found that cultural elements do count in an e-Education environment and especially if course content is being delivered in a Māori tertiary environment with Māori students as the majority. The cultural values and beliefs of TWWoA need to be maintained and encouraged in the conventional teaching and learning context and in the e-Education environment. Indigenising e-Education includes the use of the Māori language at every opportunity. For example, the hybridisation of the terms used is one way to indigenise the e-Education for TWWoA. The "e" at the beginning of the word means "electronic" and the Māori word following begins with a capital letter to symbolise the importance and status of te reo Māori as the heritage language of Aotearoa.

Āhuatanga Māori is embedded into programmes at TWWoA. According to the official TWWoA website, “Mātauranga Māori and mātauranga-a-iwi underpin all qualifications, ensuring students have a strong cultural foundation and political literacy on which to build their academic achievement” (TWWoA, n.d., para. 5). Previous concerns of many academics included the impact technology and e-Education would potentially have on this traditional knowledge domain. This concern is not speculative as Māori academics have noted in previous studies (Ferguson, 2010; Ferguson & Werahiko, 2009; Hond, 2004; Laws, Hamilton-Pearce, Werahiko, & Wetini, 2010; Neal & Collier, 2006; Tiakiwai & Tiakiwai, 2010). Indigenous people globally have had the same concern about the impact technology has on traditional ways of teaching and learning. For example, Liu, Liu, Lee, and Magjuka (2010) conducted a study in the United States about cultural differences in online higher education programmes. The study found that e-Teachers:

need to design courses in such a way as to remove potential cultural barriers, including language, communication tool use, plagiarism, time zone differences and a lack of multicultural content, which may affect international students’ learning performances. The study indicates that a culturally inclusive learning environment needs to consider diversity in course design in order to ensure full participation by international students. (p. 177)

The majority of students enrolled in the Bachelor of Education at TWWoA are of Māori descent. Therefore, the potential for cultural barriers in this particular e-Education environment is minimised. The study by Liu et al. (2010) highlights an important issue for indigenous peoples and that is that culture counts and we must ensure that the courses we design for our students are culturally acceptable to enable them to participate fully.

Andragogy

Andragogy is the term used to denote the adult teaching and learning principles, inclusive of the context, the processes and the strategies used. Pedagogy is a term to denote the child teaching and learning principles. Although there are noticeable differences between andragogy and pedagogy, there are many similarities. For example, Māori-preferred ways of teaching and learning underpin both sets of principles within the Māori educational context.

There are many historical theories about adult teaching and learning (Henschke, 1998; Knowles, 1980; Lai, 1995; Merriman & Brockett, 2011). The Knowles (1980) theory of andragogy is one early theory of andragogy. Knowles (1980) suggested there are several characteristics of the adult learner: self-concept, experience, readiness to learn, orientation to learning and the motivation to learn. Isenberg (2007) reiterates the importance of understanding andragogy and how to “integrate theory and practice” in the area of internet learning (p. 8). In a more recent publication by Knowles, Holton and Swanson (2012), the andragogical principles mentioned “apply to all adult learning situations as long [as] they are considered in concert with other factors that are present in the situation” (p. 3). The other factors include culture and the various learning styles of the individual. In an e-Education context, the andragogical principles remain unchanged.

A challenge for Māori kaiako teaching in an online environment is to retain Māori andragogical practices. The Māori andragogical practices in this instance and in the context of a Māori tertiary organisation consist of tikanga Māori and/or kawa. Transforming the way in which we think about course delivery via electronic modes requires a huge mindshift. Ferguson (2012) used the analogy of the urban tangihanga to explain how the only change that should be experienced by kaiako who are transitioning from conventional delivery to e-Education is the context in which delivery

occurs. For example, when Māori whānau have tangihanga within urban areas in Aotearoa, it is not always possible to take the tūpāpaku to a marae to lie in state for three or more days before burial. Instead, the whānau will keep their loved one at home. Tikanga Māori and kawa remain intact in many instances and this does not change. The environment or context is the only change in these circumstances. There is a strong possibility in a case like this that the whānau will still have a kaikaranga, and waiata after the speeches. Therefore, the only change for Māori should be in the context that the procedures, customary practices and protocols occur (Ferguson, 2012).

Overcoming resistance to learning new technology and ways of teaching adults includes understanding the characteristics of the adult learner and how best to adapt teaching strategies to align with the characteristics of the learner for the e-Education context. There should be no difference adapting a teaching style to the e-Education context as adults are all motivated to learn as a result of previous educational experiences, regardless of the context in which they learn. The Knowles (1980) andragogical theory includes the cultural experiences of the adult learner. In a Māori teaching and learning context, ako is the preferred method of teaching and learning.

Ako: Culturally preferred method of teaching and learning

Ako involves reciprocity and the tuakana-teina teaching and learning strategy is a good example of ako in motion. Ferguson (2010) states:

The tuakana/teina strategy or the grouping of older children with younger children is included in the ako pedagogy. Literally, tuakana means older sibling of the same sex, and teina means younger sibling of the same sex. In the educational context, the tuakana/teina strategy involves grouping older students with younger students. (p. 70)

Transferring a cultural andragogy and all of its wholism can be easily achieved with “whaka-pono” or “belief in the process” (Ferguson, 2010, p. 70). If the kaiako believes and practises Māori pedagogy or andragogy, then the transfer of ako need not be difficult. The kaiako or the facilitator plays an important part in the success of students in the e-Education environment. Research studies reiterate the importance of the kaiako being the leader in the e-Education environment and taking responsibility for easing the transition from conventional learning to e-Learning (Campbell, 2003; Kahlil, 2013; Stephenson, 2001). Weller (2002) insists that a pedagogical approach to e-Learning can be influenced by the kaiako depending on the values and beliefs of the kaiako.

The preferred Māori pedagogy of ako is evident within Māori schools and tertiary organisations in Aotearoa today. Ako “encompasses many aspects of āhuatanga Māori or Māori ways of knowing and doing, including wairuatanga or spirituality” (Ferguson, 2010, p. 69). According to the values and beliefs inherent in western philosophy, they accept that learning and development occurs within the hinengaro or mind. However, Māori believe that learning and development occurs through wairua and that hinengaro is only one part of that wairua (Nepe, 1991). The wairua of students is very important and should be cared for in both the conventional and e-Education environment. The kaiako can ensure that the language of instruction that the teacher uses in the online classroom needs to be encouraging and positive. Although the kaiako cannot see their students, it is still possible to “hurt their feelings” through electronic communication (Ferguson, 2012). The author can attest to the power of the word as a result of her own experience as a frequent user of the Learning Management System at TWWoA to conduct student pastoral care. However, it must be noted that positive reinforcement alone does not always settle the wairua of the student (Ferguson, 2012). Methods of settling or comforting the wairua

or whakatau wairua come in many shapes and forms. For example, karakia or prayer is one form of whakatau wairua, as is waiata whakangahau and hīmene (Ferguson, 2010). Depending on who the online kaiako is and their values and beliefs it is possible to continue these customs via video uploads or e-Kanohi, the online video conferencing embedded into the Learning Management System.

Te Mahara, Te Tohenga me Te Mahi Whakaumu: Conscientisation, resistance and transformative praxis

The concept of conscientisation, resistance and transformative praxis was highlighted by Paulo Freire, the Brazilian educationalist, in 1973. The concept has since been developed, critiqued and analysed by other academics (Giroux, 1981, 1988; Giroux & McLaren, 1994; Smith, 1999). A re-configuration by Smith (2003) of these concepts highlighted by Freire (1994) resulted in a non-linear model to align with the Māori worldview and preferred methods for education. These same concepts are used to understand the stages that e-Pouako will go through when they adopt this mode of delivery.

Conscientisation, resistance and transformative praxis have been used here as a means by which to explain the liberation of the conventional teacher who has crossed over to the electronic mode of delivering course content.

However, this model both contradicts and supports the re-configuration by Smith (2003). Contrary to the non-linear model proposed by Smith (2003), Te Mahara, Te Tohenga and Te Mahi Whakaumu follow the linear path as a result of observations and trials conducted by the author. This model is similar to the Poutama model where the learner cannot continue on to the next step until mastery of content has been achieved. The Poutama has been used as a visual metaphor to denote the scaffolding of knowledge by Māori researchers and is used within Māori educational organisations (see Tangaere, 1997). Tangaere (1997) adopted the scaffolding model originated by Vygotsky (1978) to explain Māori learning development. Learners will draw on their previous knowledge to assist in mastery of the next level. Mastery of navigation in an online environment is essential if an e-Pouako is to move beyond this point. Although the Poutama represents the stages of learning for the learner, teaching in a Māori context means that ako is at the forefront of teaching and learning and is reciprocal, which will result in the teacher becoming the learner. In support of Smith's (2003) re-configuration, the processes are repetitive. The difference here is that because technology evolves at such a precipitous rate, the learning involving new technologies is entirely separate from the knowledge the learner has attained previously. For example, learning how to operate a video conferencing unit involves a completely different

Te Ara ki te Mahi Whakaumu

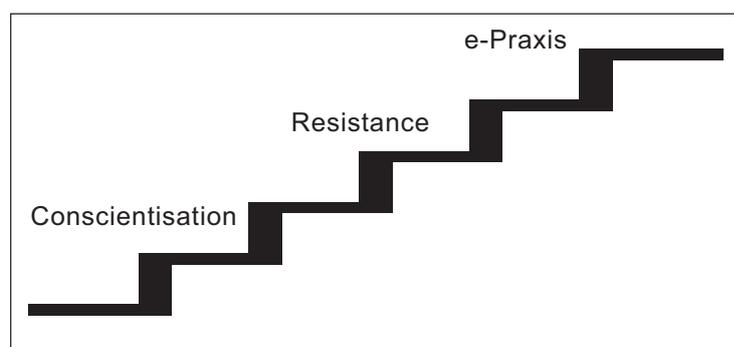


FIGURE 1 Poutama representing the pathway to e-Praxis

set of skills to the skills required for online discussion facilitation. Therefore, the Māori poutama first used by Tangaere (1997) and aptly named “Te Ara ki te Mahi Whakaumu” or “The pathway to e-Praxis” has been used to represent the stages of conscientisation, resistance and e-Praxis for the e-Pouako and can be seen in Figure 1.

The next section redefines conscientisation, resistance and transformative praxis and aligns these concepts to the electronic teaching environment.

Te Mahara: Redefining conscientisation: The unsettling period

The conscientisation period is a necessary component of the e-Education mainstreaming process and can be a very unsettling period for both students and teachers. To conscientise about e-Education is to develop a critical consciousness and an in-depth awareness or a critical awareness of our students’ technological needs, their concerns and their capabilities. Kaiako develop a critical consciousness or awareness about their own capabilities and sometimes this can be quite frightening for them as they come to the conclusion that they have been left behind in the new technological knowledge society, thus disadvantaging the students they teach to a point. For example, the school curriculum in Aotearoa consists of essential learning areas. Technology is one of these essential learning areas and if kaiako cannot understand how to use a computer, then this scenario disadvantages the students. Information Communications Technology is a standard tool used in all curriculum areas today.

Freire (1994) defined conscientisation as a cultivation of critical consciousness and conscience. The author proposes that in an e-Educational context the critical consciousness forms as a result of the realisation that technology evolves faster than humans can keep up with, and kaiako become concerned

about their own capabilities with the technology. For example, a kaiako might spend time completing training to competently connect a computer to a data show. However, this newly found knowledge and the skills the kaiako has gained will be surpassed by smart board technology resulting in the kaiako seeking further professional development to keep abreast of the changing technological landscape. Kaiako will develop a critical awareness of the importance of keeping abreast, thus conscientising e-Education. At this point in time, some kaiako may decide that the mental drain occurring through the learning of this new knowledge is too intense for them, resulting in a resistance to continue to learn more. Personal observations and experience by the author reveal that to pass this conscientisation phase, kaiako need to continue with the new learning regardless of the obvious mental pressures that they may experience. The author insists that perseverance with e-Education is like falling off a horse—if the rider gets straight back onto the horse the fear is minimised. However, if the rider elects to never get on the horse again, the fear remains. Furthermore, kaiako need to have the infrastructure in order to upskill. If a tertiary organisation cannot supply kaiako with the necessary technological tools then the difficulty in transitioning to the electronic environment is more challenging. Smith (1999) states that conscientisation, resistance and transformative praxis are “an on-going dynamic cycle” and that “individuals do not enter the transforming cycle, they are always in it” (p. 39). Therefore, it is fair to conclude that the conscientising of e-Education is a continuous cycle, one that kaiako will experience each time they learn something new in this environment. However, the introduction of new technology and applications for the conventional teacher means more learning and professional development is needed to ensure teachers are confident teaching in online environments.

The emerging younger generation of students who have enrolled to attend TWWoA are

the digitised rangatahi; that is, technology has been part of their learning programme at school and in many instances in the home. However, in higher education, rangatahi will still have to go through the mainstreaming process as they will be learning how to utilise the technology as a tool for teaching as opposed to learning. The social media these student teachers have been using is quite different to the e-Education context. For example, the restrictions on the social media site Facebook are few. In the e-Education context, there is tikanga and students need to realise that they are in a classroom, albeit an electronic classroom where rules and netiquette apply. (Netiquette is online etiquette; see Campbell, 2003.) When e-Teaching is introduced into a higher education programme, there will be many heated discussions about the new mode of delivery and the decision to resist will arise after the conscientisation process.

Te Tohenga: Resistance

Historically, for other tertiary organisations (internationally and nationally), the inclusion of e-Education in programmes has not happened without staff resistance during the transition from conventional to technology-enhanced modes of delivery (Campbell, 2003; Siegel, 2008). The resistance toward the shift from conventional teaching and learning to the e-Education environment is not new, as previous studies suggest (Ministry of Education, 2002; Stephenson, 2001; Toffler, 1991; Weller, 2002). According to Campbell (2003), there are several reasons that tertiary staff resist the change. One such reason for resistance could well be the fact that staff members themselves did not learn via the online classroom (Campbell, 2003; Siegel, 2008; Stephenson, 2001; Toffler, 1991). Berge (2000) suggests that the emphasis in many tertiary organisations has focused on the transfer of knowledge from “expert to novice” (p. 3). The point of difference in an online classroom in a Māori organisation like TWWoA is the horopaki ako or the reciprocal teaching and

learning environment. For example, knowledge is not simply transferred from kaiako (expert) to student (novice). Knowledge is exchanged between the two parties. Kaiako will learn as much from their students as the students will from the kaiako. For example, the e-Kōrero forum is an area where students might complete an assessment that requires them to draw on their previous experiences and link these with relevant literature. Some adult learners will share experiences beyond the knowledge base of the kaiako. This ensures that the kaiako is learning alongside the student and this is what constitutes ako, the reciprocal teaching and learning environment.

Successful transition from conventional to electronic delivery modes will depend on the extent of the staff resistance and the willingness to become a learner as much as a teacher. Barriers to successful teacher transition from conventional modes of teaching to the electronic modes have revealed several issues. The “lack of professional development, lack of access, lack of support, lack of time and process of change” are some of the barriers identified by researchers (Pratt, Lai, & Munroe, 2001, pp. 22–23). The observations conducted by the aforementioned researchers found that teachers changed the way in which they teach when they adopt computer technology. Some of these changes included changes in their “daily schedules” and encouraging the students to work more collaboratively (p. 23). Snart (2010) proposed that “for those academic disciplines whose traditions are grounded in the communication of ideas, or theses, in print, the seeming disruption of that grounding by technology can be unsettling” (p. 2). In this instance, the unsettling period involves the conscientisation of e-Education, the advantages and disadvantages and what might be best for the students and their learning needs.

As previously mentioned, the transition from conventional face-to-face teaching to the e-Education environment can be challenging for teachers. Many teachers have never known

any other method of content delivery other than the face-to-face conventional method. The transition from conventional models of teaching and learning to the e-Education model can be a difficult time for educational organisations and teachers who have to become conversant with this new technological knowledge society (Campbell, 2003). Some of the issues teachers may experience include having to upskill themselves in the technology arena, enabling them to transmit this new skill to their students (Haymes, 2008; Snart, 2010; Stephenson, 2001). An additional problem with transition from conventional to e-Education for teachers is the “need to develop students’ personal professional skills and accommodate more constructivist approaches against a background of traditional attitudes to teaching and learning” (Stephenson, 2001, p. 139). A new skill set is needed by both kaiako and students when transitioning to e-Education. Therefore, conventionally trained or traditional teachers need to relearn in order to guide and facilitate learning in an electronic environment.

The implementation of e-Education into degree programmes is more often than not the responsibility of the team member who has upskilled in this area. The team member within a faculty or school who is trying to implement e-Education into a course programme can often feel isolated. According to Snart (2010), resistance occurs at all organisation levels, “from administration to faculty staff” (p. 31). Furthermore, this resistance is a result of the scepticism by certain staff of the value that technology has for education (Snart, 2010). Echoing the statements of Bower (2001), Palloff and Pratt (2013) suggest that scepticism can be healthy and that “many have simply been disillusioned by the technologies that their institutions adopted without their input and without the ability to assess how the technologies will help them reach and help students learn” (p. 12). The healthy scepticism reaffirms the mainstreaming of e-Education and how it is essential that conventional face-to-face kaiako

go through the conscientisation and resistance processes to transform praxis.

In a Māori context, the cultural norms within the conventional classroom are easily transferred into the online environment (Ferguson, 2012). For example, *karakia* and *mihimihi* are practices that can be videoed and uploaded to the online classroom or conducted via video conferencing. Haymes (2008) insists that the implementer of e-Education needs to “shape users’ behaviour by acknowledging their world view rather than your own as a technology implementer” (p. 1). This acknowledgment of the Māori worldview for Māori e-Learners and e-Pouako is essential if implementing e-Education at a Māori or indigenous university. Transformative e-Praxis for kaiako will eventuate only after the resistance process is complete.

More recently, the topic of resistance to technology in academia has revealed some interesting facts. Kahlil (2013) conducted a study about resistance to technology in academia and found some interesting literature that exposed the reasons for the resistance. Some of these reasons included “the old timers who like things as they are”, “a limited vision of the future”, “deficits in information and communication”, “the individual’s nature to be uncooperative” and “that they do not have the skills to do what the leader is proposing” (p. 153). Observations conducted by the author over a 6-year period with student teachers and kaiako revealed that the age group prone to the most resistance are the ages between 50 and 65. Kaiako below this age group are more likely to have moderate to high levels of computer literacy or have completed initial teacher training during the technology boom of the late 1990s.

Several research studies conclude that computer literacy levels have an impact and are precursors to e-Education success (Campbell, 2001; Ferguson, 2012; Taylor, Geode, & Steyn, 2011; Yang & Yang, 2013). However, there are also other factors that prevent success with e-Education. For example, Muilenburg and

Berge (2001) suggest that there are 10 factors of resistance to technology in academia. These are “administrative structure, organisational change, technical expertise, social interaction and quality, faculty compensation and time, threatened by technology, legal issues, evaluation/effectiveness, access and student support services” (pp. 10–12). Moerschell (2009) maintains that to work through resistance is a challenge and one that requires “not only infrastructure, but expert knowledge, training, a long-term vision, and sufficient utilisation by followers to sustain the change” (p. 1). Although these issues are clearly acknowledged as being relevant reasons for resistance to change, it is important to remember in an adult teaching and learning environment that transformative praxis or e-Praxis will not occur without the conscientisation and resistance processes first being experienced by the kaiako.

Te Mahi Whakaumu: e-Praxis

Confidence, capability and the ongoing battle to keep abreast of the technological changes that kaiako experience is the outcome of the conscientisation and resistance of the e-Education mainstreaming process. Arriving at this point is hard work for the conventional kaiako that has spent many hours upskilling, practising and implementing e-Rautaki (teaching strategies for the online environment). Professional development facilitating, designing an online classroom, and just learning how to navigate around an online classroom take time. Similar to the drip-feed strategy where specialist teachers will only give snippets of information to their students at any one time (Hemara, 2000; Pere, 1994), the e-Praxis is no different. From personal experience, an overload of professional development does not always have benefits for the kaiako who already has a full workload and could result in the kaiako reverting back to the resistance stage.

e-Praxis is a personal journey and although kaiako might receive professional development

to learn how to utilise the technology and navigate around an online classroom, there is still the issue of pedagogical, or in the tertiary teaching environment, andragogical practices. If an organisation cannot provide the infrastructure needed for successful transition to an e-Education environment, frustration will ensue. For example, during the early stages of implementation of e-Education at TWWoA, the functionality available in the online environment was not at a level required to effectively teach online although the system was handy for assignment submission. A further issue experienced at that time was the privacy and confidentiality issue with access. This resulted in huge student dissatisfaction with the online classroom environment. Today, and with the introduction of the Moodle system, the online environment at TWWoA is more conducive to the teaching and learning needs of staff and students.

It is clear that the process of mainstreaming e-Education follows a definite process involving conscientisation, resistance and transformative praxis. The term “electronic praxis”—or in keeping with the stylistics used throughout the author’s publications, “e-Praxis”—is an appropriate term to describe the professional practice of e-Teaching. Effective e-Praxis includes staff members having high levels of navigational literacy, design capabilities and motivational attitudes to in turn transform and exchange knowledge with students in the online classroom. Several identifiable key elements are evident when kaiako attain an acceptable level of e-Praxis. These include the ability to accept new innovations and to trial these with students with the objective of integrating the new innovation into course papers; the ability to provide prompt feedback and feed-forward to students; and most importantly, ensuring they are *kanohi kitea* or visible in the online classroom. Ferguson’s (2012) research found that kaiako visibility was very important for students in an online classroom. Visibility involves the kaiako being present online frequently and

timely responses to student queries. There is no difference in a conventional face-to-face classroom and ignoring a student's questions would undoubtedly result in student dissatisfaction. Arriving at the e-Praxis stage of the cycle has been a challenging journey for the author and team members in the Education Department at TWWoA.

Conclusion and recommendations

Mainstreaming e-Education into a traditional teaching and learning domain is not an easy task as the literature used for this article and the author's observations reveal. e-Praxis within Māori organisations is a new body of knowledge that is growing as fast as the technology changes. This is an area that needs to be continually researched, evaluated and monitored in order to ascertain best e-Praxis for kaiako working within Māori or indigenous tertiary contexts. There are several areas of e-Praxis that need evaluation including the fact that the majority of the observations and evaluations have been completed with mature adult teachers and students in Māori tertiary organisations. The younger student body are more relaxed and confident with technology and new and innovative ways of teaching. However, the voices of all Māori student teachers and e-Pouako in this new technological knowledge society need to be heard and recorded to add to this growing body of knowledge. This article has been written from the author's personal experiences and observations over a 6-year period. It is highly recommended that more research is conducted with e-Pouako and the pathway to e-Praxis model.

Glossary

āhuatanga Māori Māori ways of knowing and doing

ako	traditional Māori concepts of teaching and learning
ākonga	students
Aotearoa	New Zealand
e-Kanohi	online video conferencing
e-Kōrero	online discussion forum
e-Mahara	online journal
e-Pouako	e-Teacher
e-Rautaki	teaching strategies for the online environment
hapū	sub-tribe
hīmene	hymns
hinengaro	mind
horopaki ako	reciprocal teaching and learning environment
iwi	tribe
kaiako	teachers
kaikaranga	elderly woman to call visitors in
kaikōrero	speaker to welcome visitors
kanohi kitea	visible
karakia	prayer
kawa	protocols
marae	tribal meeting place
mihimihi	acknowledgements
noho wānanga	monthly on-campus classes TWWoA students attend for the Bachelor of Education. Students "sleep over" at the noho centre for 3 nights.
poutama	stepped pattern symbolising the various levels of learning and intellectual achievement
rangatahi	youth
tangihanga	the mourning of a deceased person
Te Mahara	conscientisation
Te Mahi	transformative praxis
Whakaumu	resistance
Te Tohenga	younger sibling
teina	customary practice
tikanga	older sibling of the same sex
tuakana	

tūpāpaku	deceased
waiata	social singing
whakangahau	
waiata	songs
wairua	spirit
wairuatanga	spirituality
wānanga	teaching and learning institution/hui/lesson
whakapono	belief
whakatau wairua	calming or soothing of a person's soul
whānau	family
whare wānanga	place of higher learning

References

- Berge, Z. (2000). New roles for learners and teachers in online higher education. In G. Heart (Ed.), *Readings and resources in global online education* (pp. 3–9). Melbourne, Australia: Whirligig Press.
- Bischoff, A. (2000). The elements of effective online teaching: Overcoming the barriers to success. In K. White & B. Weight (Eds.), *The online teaching guide* (pp. 57–72). Needham Heights, MA: Allyn and Bacon.
- Bower, B. L. (2001). Distance education: Facing the faculty challenge. *Online Journal of Distance Learning Administration*, 4(2). Retrieved from <http://www.westga.edu/~distance/ojdla/summer42/bower42.html>
- Campbell, N. (2001). *E-teaching, e-learning and e-education. A paper to inform the development of the ICT Strategy in New Zealand for the Ministry of Education*. Retrieved from <http://cms.steo.govt.nz/NR/rdonlyres/C11315DE-804A-4831-AB75-3D4E77393DD8/0/eteaching.htm>
- Campbell, N. (2003). So you want to teach online? It won't happen overnight but it can happen. *Computers in New Zealand Schools*, 15(1), 11–13 & 25.
- Dyson, L. E., Hendriks, M. A. N., & Grant, S. (2007). *Information technology and indigenous people*. Retrieved from http://books.google.co.nz/books?id=7jFK60pZ7C4C&printsec=frontcover&dq=isbn:1599043009&hl=en&sa=X&ei=ndc4U8DfIMK_IQXP1oD4Bw&ved=0CC4Q6AEwAA#v=onepage&q&f=false
- Fenton, M. (2008). *Authentic learning using mobile sensor technology with reflections on the state of science education in New Zealand. A research project for the New Zealand Ministry of Education*. Retrieved from <http://www.nexusresearchgroup.com/downloads/eLearning-eFellow-Report.pdf>
- Ferguson, S. (2010). Mai i te whenua ki te rangi: Transferring Māori pedagogical practices into cyberspace. *Sites: A Journal of Anthropology and Cultural Studies*, 7(1), 65–77.
- Ferguson, S. (2012). *E-Aorangi: An indigenous model for e-Education* (Unpublished PhD thesis). Te Whare Wānanga o Awanuiārangi, Whakatāne, New Zealand.
- Ferguson, S., & Werahiko, H. (2009). Does culture count in an e-Learning environment? *Journal of Australia Indigenous Issues: Special Issue of World Indigenous Peoples' Conference on Education (WIPCE)*, 12, 7–11.

- Freire, P. (1994). *Education for critical consciousness*. New York, NY: Continuum.
- Giroux, H. A. (1981). *Ideology, culture and the process of schooling*. Philadelphia, PA: Temple University Press.
- Giroux, H. A. (1988). *Teachers as intellectuals: Toward a critical pedagogy of learning*. Westport, CT: Bergin & Garvey.
- Giroux, H. A., & McLaren, P. (1994). *Between borders: Pedagogy and the politics of cultural studies*. New York, NY: Routledge.
- Hasibuan, Z. A., Isal, Y. K., Anggun, N. C., Ahmad, M., & Selviandro, N. (2011). Preservation of cultural heritage and natural history through game based learning. *International Journal of Machine Learning and Computing*, 1(5), 460–465.
- Haymes, T. (2008). *The Three-E Strategy for overcoming resistance to technological change*. Retrieved from <https://net.educause.edu/ir/library/pdf/eqm08411.pdf>
- Hemara, W. (2000). *Maori pedagogies: A view from the literature*. Wellington, New Zealand: New Zealand Council for Educational Research.
- Henschke, J. A. (1998). Modeling the preparation of adult educators. *Adult Learning*, 9(3), 12–14.
- Hond, R. (2004). *A perspective regarding Māori and e-learning*. Retrieved from http://www.steo.govt.nz/static/maori_participation.htm
- Isenberg, S. K. (2007). *Applying andragogical principles to internet learning*. Retrieved from <http://www.cambriapress.com/camber.cfm?bookid=9781934043196&page=1>
- Kahlil, S. M. (2013). From resistance to acceptance and use of technology in academia. *Open Praxis*, 5(2), 151–163.
- Knowles, M. S. (1980). *The modern practice of adult education: From pedagogy to andragogy*. Englewood Cliffs, NJ: Cambridge Adult Education.
- Knowles, M. S., Holton III, E. F., & Swanson, R. A. (2012). *The adult learner. The definitive classic in adult education and human resource development*. Oxford, England: Routledge.
- Lai, J. C. (1995). *Andragogy of the oppressed: Emancipatory education for Christian adults*. A paper written for the Fielding Institute, HOD Program. Retrieved from http://www.lindenwood.edu/education/andragogy/andragogy/2011/Lai_1995.pdf
- Laws, M. (2008). *E-Wānanga—A name, a course, a system and a department. A case study for the Tertiary e-Learning Guidelines*. Retrieved from <http://elg.massey.ac.nz/index.php?title=EW%C4%81nanga>
- Laws, M., Hamilton-Pearce, J., Werahiko, H., & Wetini, T. (2010). *The new role of the Wānanga educator: Te kanohi hou o te Techno-Pouako*. Te Whare Wānanga o Awanuiārangi, Whakatāne, New Zealand. Retrieved from <http://akoaootearoa.ac.nz/download/ng/file/group-3740/n3756-the-new-role-of-the-wananga-educator--laws-hamilton-pearce-werahiko--wetini.pdf>
- Liu, X., Liu, S., Lee, S.-h., & Magjuka, R. J. (2010). Cultural differences in online learning: International student perceptions. *Educational Technology & Society*, 13(3), 177–188.
- Lorenzo, G., & Moore, J. (2002). *The Sloan Consortium report to the nation: Five pillars of quality online education*. Retrieved from <http://sloanconsortium.org/publications/books/qualityframework.pdf>
- Mead, H. M. (2003). *Tikanga Maori: Living by Maori values*. Wellington, New Zealand: Huia.
- Merriam, S. B., & Brockett, R. G. (2011). *The profession and practice of adult education: An introduction*. San Francisco, CA: Jossey Bass.
- Ministry of Education. (2002). *Highways and pathways exploring New Zealand's e-Learning opportunities. The report of the e-Learning Advisory Group*. Wellington, New Zealand: Learning Media.
- Ministry of Education. (2013). *Enabling e-Learning: Technologies community*. Retrieved from <http://www.vln.school.nz/groups/profile/53310/elearning-technology/>
- Moerschell, L. (2009). Resistance to technological change in academia. *Current Issues in Education [Online]*, 11(6). Retrieved from <http://cie.asu.edu/volume11/number6/>
- Muilenburg, L. Y., & Berge, Z. L. (2001). Barriers to distance education: A factor-analytic study. *The American Journal of Distance Education*, 15(2), 7–22.
- Neal, T., & Collier, H. (2006). Weaving kaupapa Maori and e-Learning. *He Puna Korero: Journal of Maori and Pacific Development*, 7(2), 68–73.
- Nepe, T. (1991). *E hao nei tenei reanga, Te toi huarewa tipuna* (Unpublished master's thesis). University of Auckland, Auckland, New Zealand.
- New Zealand Council for Educational Research. (2011). *Critical success factors and effective pedagogy for e-learning in tertiary education*. Retrieved from <http://www.minedu.govt.nz/~media/MinEdu/Files/EducationSectors/TertiaryEducation/NZCERFinalReport.pdf>

- Palloff, R. M., & Pratt, K. (2013). *Lessons from the virtual classroom: The realities of online teaching*. San Francisco, CA: Jossey Bass.
- Pelet, E. J. (2013). *E-Learning 2.0 technologies and web applications in higher education*. Nantes, France: IGI Global.
- Pere, R. (1994). *Ako: Concepts of learning in the Maori tradition*. Wellington, New Zealand: Kōhanga Reo National Trust Board.
- Pratt, K., Lai, K.-W., & Munro, P. (2001). Professional development for ICT using teachers. In K.-W. Lai (Ed.), *E-Learning: Teaching and professional development with the internet* (pp. 21–36). Dunedin, New Zealand: University of Otago Press.
- Robbins, C. (2010). Beyond preservation: New directions for technological innovation through intangible cultural heritage. *International Journal of Education and Development using Information and Communication Technology (IJEDICT)*, 6(2), 115–118.
- Roberts, T. S. (2004). *Online collaborative learning: Theory and practice*. Hershey, PA: Information Science.
- Siegel, D. M. (2008). *Accepting technology and overcoming resistance to change using the motivation and acceptance model*. Retrieved from http://books.google.co.nz/books?id=lxRIFxolJM8C&dq=Accepting+technology+and+overcoming+resistance+to+change+using+the+motivation+and+acceptance+model.&source=gbs_navlinks_s
- Schwartz, R. (2005). *E-development: From excitement to effectiveness*. Retrieved from <https://openknowledge.worldbank.org/bitstream/handle/10986/7274/341470EDevelopment.pdf?sequence=1>
- Shelton, K., & Saltsman, G. (2005). *An administrator's guide to online education*. Charlotte, NC: Information Age.
- Simonson, M., Smaldino, S., Albright, M., & Zvacek, S. (2003). *Teaching and learning at a distance: Foundations of distance education* (2nd ed.). Cranbury, NJ: Pearson Education.
- Smith, G. H. (1999). Paulo Freire: Lessons in transformative praxis. In P. Roberts (Ed.), *Paulo Freire, politics and pedagogy* (pp. 35–41). Palmerston North, New Zealand: Dunmore Press.
- Smith, G. H. (2003). *Indigenous struggle for the transformation of education and schooling*. Keynote address to the Alaskan Federation of Natives (AFN) Convention, Anchorage, Alaska, United States. Retrieved from <http://www.ankn.uaf.edu/curriculum/Articles/GrahamSmith/>
- Snart, J. A. (2010). *Hybrid learning: The perils and promise of blending online and face-to-face*. Retrieved from http://books.google.co.nz/books/about/Hybrid_Learning.html?id=JzeYQeXbwPUC&redir_esc=y
- Stephenson, J. (2001). *Teaching and learning: Online pedagogies for new technologies*. London, England: Stylus.
- Tangaere, A. R. (1997). Māori human development learning theory. In P. Te Whāiti, M. B. McCarthy, & A. Durie, (Eds.), *Mai i Rangiatea: Māori wellbeing and development*. Auckland, New Zealand: Auckland University Press.
- Taylor, E., Goede, R., & Steyn, T. (2011). Reshaping computer literacy teaching in higher education: Identification of critical success factors. *Interactive Technology and Smart Education*, 89(1), 28–38.
- Te Whare Wānanga o Awanuiārangi (TWWoA). (n.d.). *About us—Academic excellence*. Retrieved from <http://www.wananga.ac.nz/about>
- Tiakiwai, S., & Tiakiwai, H. (2010). *A literature review focused on Virtual Learning Environments (VLEs) and e-Learning in the context of te reo Māori and kaupapa Māori education*. Retrieved from <http://www.educationcounts.govt.nz/publications/ict/a-literature-review-focused-on-virtual-learning-environments-vles-and-e-learning-in-the-context-of-te-reo-mori-and-kaupapa-mori-education/kaupapa-mori-and-e-learning>
- Toffler, A. (1991). *Future shock*. New York, NY: Bantam Books.
- Vygotsky, L. (1978). Interaction between learning and development. In M. Cole, V. John-Steiner, S. Scribner, & E. Souberman (Eds.), *Mind in society: The development of higher psychological processes* (pp. 79–91). Cambridge, MA: Harvard University Press.
- Weller, M. (2002). *Delivering learning on the Net: The why, what and how of online education*. London, England: Kogan Page.
- Yang, H. Y., & Yang, Z. (2013). *Transforming K-12 classrooms with digital technology*. Hershey, PA: Information Science.
- Ziccardi, G. (2012). *Resistance, liberation technology and human rights in the digital age*. Dordrecht, The Netherlands: Springer.