Indigenous immersion education

International developments

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This article outlines key developments internationally over the last 40 years in indigenous immersion education. Most notable here has been the establishment of community-based, bottom-up immersion programs, instigated by indigenous communities with the aim of maintaining or revitalizing their indigenous languages. As such, the article addresses a relative lacuna in immersion education literature, which has to date focused primarily on second- and foreign-language contexts. The article first provides a wider sociohistorical and sociopolitical context, focusing on key developments in international law, and in specific national contexts, which have facilitated the establishment of these indigenous immersion programs. The interrelationship between indigenous immersion educational policy and pedagogy is then explored, highlighting, in the process, the various challenges involved in developing, implementing, and maintaining effective indigenous immersion programs. Finally, international exemplars of indigenous education programs are discussed, including, Hawaiian, Navajo, and Cherokee programs in the U.S., and Māori-medium education in Aotearoa/New Zealand.

Additional abstract(s) at end.

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1. Introduction: The problem with disciplinary boundaries

The research literature to date on immersion education has focused primarily on second-language and foreign-language contexts (see, e.g., de Courcy, 2002; Fortune & Tedick, 2008; Johnson & Swain, 1997). This is, in turn, a reflection of its origins in, and subsequent close association with, French immersion programs in Canada, beginning with the French immersion pilot program at St. Lambert,
Quebec in the 1960s, pioneered and championed by Peal and Lambert (1962). The pedagogical focus in research on immersion education has relatedly been on one-way (foreign language) programs for majority language speakers and developmental, maintenance bilingual programs for minority language speakers (Cloud, Genesee, & Hamayan, 2000). More recently, with the expansion of dual language programs, particularly in the U.S., reciprocal two-way immersion programs, where two different language groups of students learn from and with each other in the classroom, have also become a key focus (Cloud et al., 2000; Lindholm-Leary, 2001; Potowski, 2007).

Into this mix can now be added a fourth key strand of immersion education — indigenous immersion programs. While these programs, as we will see shortly, have been established since the early 1980s, they have only recently come to be substantively addressed in the immersion education literature. This is to some extent the result of the hermetic nature of disciplinary boundaries, since academic discussion of indigenous programs has, to date, been largely situated in the sociolinguistic areas of language revitalization, language policy, and language rights, with an allied focus on status language planning and macro sociohistorical and socio-political concerns for indigenous peoples (e.g., Hornberger, 2008; May, 1999; May & Aikman, 2003; McCarty, 2011). These wider historical, contextual and political considerations are fundamental to an appropriate understanding and appreciation of indigenous immersion education initiatives, particularly the community-based, 'bottom-up' language planning approach (Hornberger, 1997) that the majority of such programs adopt. However, the consequence of this wider focus has been their relative invisibility in pedagogical discussions of immersion education, despite the fact that the key exemplars of indigenous language education almost always adopt a total immersion approach as a core pedagogical principle.

The relative invisibility of indigenous immersion education in the wider immersion research literature is belatedly now being addressed. As Tedick, Christian, and Fortune (2011, see also Fortune & Tedick, 2008) observe:

Indigenous language immersion programs are designed to revitalize endangered indigenous cultures and languages and promote their maintenance and development. They typically enroll children with indigenous heritage, though increasingly attract non-heritage learners. These programs are one-way or two-way depending on their student population. (p. 2)

However, a comprehensive discussion of indigenous immersion education has yet to emerge, and it is the beginnings of this wider discussion with which this article is centrally concerned. But first, the wider context of indigenous rights and representation, both in international law and within specific national jurisdictions, needs to be briefly outlined.
2. Indigenous rights and international law

Indigenous peoples number more than 370 million in some 90 countries (United Nations, 2009). The International Labour Organisation’s (ILO) Convention 169, formulated in 1989, describes indigenous peoples thus:

1. tribal peoples in independent countries whose social, cultural and economic conditions distinguish them from other sections of the national community, and whose status is regulated wholly or partially by their own customs or traditions or by special laws or regulations;
2. peoples in independent countries who are regarded as indigenous on account of their descent from the populations which inhabited the country, or a geographical region to which the country belongs, at the time of conquest or colonization or the establishment of present state boundaries and who, irrespective of their legal status, retain some of their own social, economic, cultural and political institutions. (Art 1.1; my emphasis)

Indigenous peoples are also demonstrably the most marginalized of all people groups. They have, in nearly all cases, a long history of colonization across a wide range of nation-states, which has seen such groups faced with systematic disadvantage, marginalization and/or alienation in their own historic territories (Tully, 1995). As a result, they have been undermined economically, culturally, politically, and educationally, with ongoing, often disturbing, consequences for their individual and collective life chances (United Nations, 2009).

Given this historical background of colonization, and the ongoing reticence of many nation-states to recognize its legacy, indigenous groups have become increasingly disaffected with their treatment by national majorities and in recent years have sought specific forms of legal redress as a result. Where nation-states have ignored, or derided, their claims, indigenous peoples have turned instead to supranational organizations, and international law, with surprisingly successful results (Feldman, 2001; Kymlicka, 1999; Stavenhagen & Charters, 2009). Indeed, over the last 40 years, there has been a significant shift in thinking in international law on the status of, and rights attributable to, indigenous peoples (for full reviews see Anaya, 1996; Xanthaki, 2007). This shift includes, centrally, a growing consensus in international law around the notion of indigenous self-determination, or autonomy, which can usefully be described as:

[a] space within which indigenous peoples can freely determine their forms of development, [including] the preservation of their cultures, languages, customs and traditions, in a manner that reinforces their identity and characteristics, in the context and framework of the States in which indigenous peoples live. (Declaración de la Delegación de Chile; cited in Barsh, 1996, p. 797)
The culmination of this principle of indigenous self-determination is reflected in the ratification in 2007 of the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP). Articles 3 and 4 outline the principle clearly:

Indigenous peoples have the right to self-determination. By virtue of that right they freely determine their political status and freely pursue their economic, social and cultural development. (Art. 3)

Indigenous peoples, in exercising their right to self-determination, have the right to autonomy or self-government in matters relating to their internal and local affairs, as well as ways and means for financing their autonomous functions. (Art. 4)

More significantly for our purposes, UNDRIP also highlights, as a central concern of indigenous self-determination, issues of language and education. In this respect, Articles 14 and 15 of the UNDRIP are most pertinent:

 Article 14
 1. Indigenous peoples have the right to establish and control their educational systems and institutions providing education in their own languages, in a manner appropriate to their cultural methods of teaching and learning.
 2. Indigenous individuals, particularly children, have the right to all levels and forms of education of the State without discrimination.
 3. States shall, in conjunction with indigenous peoples, take effective measures, in order for indigenous individuals, particularly children, including those living outside their communities, to have access, when possible, to an education in their own culture and provided in their own language.

 Article 15
 1. Indigenous peoples have the right to the dignity and diversity of their cultures, traditions, histories and aspirations, which shall be appropriately reflected in education and public information.
 2. States shall take effective measures, in consultation and cooperation with the indigenous peoples concerned, to combat prejudice and eliminate discrimination and to promote tolerance, understanding and good relations among indigenous peoples and all other segments of society. (Emphases added)

The significance of UNDRIP articles 14 and 15 is underscored by the fact that, while indigenous peoples represent only four percent of the world’s total population, they speak 60–75% (between 4000 and 5000) of the world’s languages (McCarty & Nicholas, 2012). And yet, colonial histories of cultural and linguistic proscription have been so severe for indigenous peoples that the majority of these languages are now endangered or face extinction (Krauss, 1992). Alongside this loss of indigenous languages over time has been a consistent history of educational failure for indigenous students within state-sponsored education. Invariably, such
education has been monolingual in the majority language and has specifically disavowed and denigrated indigenous languages and cultures (Hornberger, 2008; May, 2012; McCarty, 2011; Shields, Bishop, & Mazawi, 2005).

Given this history, it is thus not surprising that education has now come to be seen as a key arena in which indigenous peoples can reclaim and revalue their languages and cultures and, in so doing, improve the educational success of indigenous students (May, 1999; Smith, 2012); hence, the desire of indigenous peoples for greater linguistic and educational control within education. This emphasis on indigenous language education as a key means of internal decolonization (Wilson, 2005, p. 262) is also increasingly supported by developments in language and educational policy in a variety of national contexts.

As a result of international legal developments such as UNDRIP, and in conjunction with increasing indigenous advocacy and agitation within individual nation-states, usefully described by Tassinari and Cohn (2009, p. 150) as “indigenous protagonism,” national language and education policies in some contexts have recently begun specifically to recognize and/or promote autonomously administered indigenous language education initiatives. This, in turn, often forms part of a broader political realignment within these various nation-states that acknowledges the legitimacy of indigenous rights therein (May, 2012). A number of representative examples may suffice to illustrate these developments.

3. Indigenous education and national language and education policy

In 1988, Norway revised its constitution in order specifically to grant greater autonomy for the indigenous Sámi. This was particularly significant, since the constitutional amendment replaced over a century of stringent Norwegianization (read: assimilationist) policy towards Sámi, their languages and their culture. As the amendment to the Norwegian Constitution stated: “It is incumbent on the governmental authorities to take the necessary steps to enable the Sámi population to safeguard and develop their language, their culture and their social life” (cited in Magga, 1996, p. 76). The effects of this amendment are most apparent in the regional area of Finnmark, in the northernmost part of Norway, where the largest percentage of the Sámi peoples live. The formal recognition accorded to Sámi led to the subsequent establishment of a Sámi Parliament in Finnmark in 1989, while the Sámi Language Act, passed in 1992, recognized Northern Sámi as its official regional language. The Sámi Language Act saw the formal promotion of the language within the Sámi Parliament, the courts of law, and all levels of education (see Corson, 1995; Huss, 1999; Todal, 1999). In addition, a separate Sámi curriculum was introduced in Finnmark in 1997, and in 2000 the Sámi Parliament
took responsibility for some aspects of the Sámi school system, previously controlled by the central Norwegian Government (Todal, 2003). Both these latter developments, along with the passing of the (2005) Finnmark Act, have further entrenched regional autonomy and indigenous control for Sámi in the area (Semb, 2005), particularly with respect to education.

The precedent of regional autonomy for indigenous peoples set by Finnmark has also been evident in Canada over the last decade. For example, in April 1999, the new Arctic province of Nunavut was established, the first formal subdivision of territory in Canada for 50 years. Its establishment was the end result of a 20-year negotiation process with the 22,000 Inuit of the region (out of a total regional population of 25,000). The provincial administration is Inuit-led, and the local Inuit language, Inuktitut, is co-official with English and French in the region, as well as being the first working language of the provincial government (Légaré, 2002).

Comparable developments can be observed in South America, which is home to between 30 and 40 million indigenous language speakers. In the 1970s, Peru, with over six million indigenous language speakers, predominantly of Quechua, was the first Andean nation-state to institute a national bilingual policy in 1972–73 (Hornberger & King, 1999). Ecuador followed Peru’s lead in the 1980s, and Bolivia in the 1990s, with the development of what has since come to be termed a formal policy of intercultural bilingual education (IBE). This approach specifically endorses a maintenance bilingual education model, while emphasizing the notion of normalization of indigenous languages as part of language education policies in these contexts (López & Sichra, 2008).

As part of these developments in Peru, Ecuador, and Bolivia, as well as in Colombia, Guatemala and Mexico, community-based, grass-roots indigenous organizations have also become directly involved in the design and implementation of IBE programs. In Ecuador, the national administration of IBE came under indigenous control in 1988, while in Colombia, a constitutional reform in 1991 granted indigenous peoples the right to design their own educational models (López & Sichra, 2008).

3.1 Translating indigenous language policy into practice

These examples of indigenous language education policy highlight in their genesis the combination of a top-down approach, instigated by nation-states, alongside bottom-up, or grass roots, indigenous movements. The latter have often catalyzed states in the first instance and, subsequently, assume a key role in the development and administration of indigenous language education initiatives. Moreover, while still in many cases small-scale, and while still facing considerable odds, these initiatives are beginning to have a positive effect on the specific educational futures of
indigenous students and, more broadly, the retention of indigenous language and cultures (e.g., Hornberger, 2008; May, 1999; May & Aikman, 2003; McCarty, 2011). In the process, the normalization and valorization of European languages and cultures, and their representation within education, are being actively critiqued and contested. In particular, indigenous language education proponents argue that the long historical dominance of European norms and values in schooling has nothing to do with their greater intrinsic value or use, but rather with the exercise and legitimation of unequal power relations which privilege such languages and cultural practices over all others, indigenous ones in particular (Smith, 2012).

But success in language education policy is one thing, its translation into effective pedagogy and practice quite another. Thus, some indigenous language education programs have at times struggled to meet their wider language revitalization aims, predominantly as a result of adopting pedagogical approaches that do not facilitate the effective acquisition of bilingualism and biliteracy. Even when they have adopted effective additive bilingual approaches, most notably, via immersion models, this has not necessarily been sustained effectively over time. Two brief examples will suffice here.

In South America, King (2000) studied two Ecuadorian indigenous bilingual programs in Quichua (a variant of Quechua). While both programs exhibited local indigenous community control and employed indigenous teachers, this did not necessarily translate into substantial or effective use of Quichua in the schools. Indeed, Quichua was used largely for symbolic and organizational purposes (greetings; teacher instruction, etc.), while rote learning, blackboard copying and dictation constituted the primary means of language pedagogy elsewhere in the classroom. Neither of these pedagogical practices promoted the use of Quichua as a medium of instruction.

Another example is provided by the Rough Rock Demonstration School. Established in 1966 on the Navajo reservation in Arizona, Rough Rock was the first Native American school program in the U.S. to establish indigenous community control and to teach in an indigenous language, adopting broadly an additive bilingual approach, at least initially. Among other initiatives, it also developed a publishing center for Navajo curricula, offered initial literacy instruction in Navajo, and provided summer camps for students, teachers, and elders to share in research, storytelling, dramas, and art projects on local themes (McCarty, 2002). However, during the early period of No Child Left Behind (NCLB, 2001), the still-current U.S. legislation that mandates standardized testing and enacts punitive measures when schools do not meet “adequate yearly progress” goals, the Navajo language aims for the Rough Rock program became significantly attenuated. This resulted in a move away from its foundational additive bilingual aims to ones increasingly focused on (monolingual) English literacy acquisition. Despite Rough
Rock’s groundbreaking role, then, for a time its commitment to promoting Navajo as an ongoing medium of instruction appeared in jeopardy. More recent developments, however, have seen a return at Rough Rock to a focus on Navajo immersion. Under a new Navajo curriculum specialist, a Navajo immersion program was established in 2006, beginning with Grade 1 and adding a grade each subsequent year (Roessel, 2011). Other key programs at Rock Point and Fort Defiance on the Navajo Reservation, and in Puente de Hózhó Trilingual Magnet School in Flagstaff (which has both a Navajo and Spanish immersion program), also continue to promote Navajo immersion and additive bilingualism as core aspects of their educational approach, despite facing similar challenges from NCLB. I discuss the Rock Point and Fort Defiance programs further below.

These difficulties in establishing and/or sustaining effective immersion pedagogies, which potentially face all indigenous language education programs, are exacerbated by a number of key factors. One is a lack of funding. Rough Rock, for example, flourished in the early years on the basis of federal U.S. funding acquired from anti-poverty measures. When this funding atrophied, so, too, did the school’s program and related effectiveness (Fettes, 1999; McCarty, 2002). Two other challenges facing indigenous language education programs worldwide are a lack of qualified bilingual teachers and a related lack of resources, particularly in relation to literacy development in indigenous languages. In combination, they often severely limit the pedagogical effectiveness of indigenous language programs. King and Benson (2004) comment specifically on the lack of qualified bilingual teachers in relation to Ecuadorian and Bolivian indigenous language education programs, for example. While both Ecuador and Bolivia have established intensive, accelerated programs to train indigenous bilingual teachers, they observe that neither country has yet succeeded in cultivating a critical mass of such teachers.

Even when teaching personnel and resources are ostensibly not such a major challenge, the subsequent effectiveness of pedagogy is not necessarily guaranteed. For example, Hamel (2008) observes of Mexican indigenous language education programs that, in 2005, 55,000 teachers instructed over 1.23 million elementary school students (50% of the total school population) who spoke one of the 62 indigenous languages of Mexico. These programs were supported by over 2.5 million primers written in these indigenous languages. And yet, he concludes, “most observers would agree that the indigenous school system [in Mexico] does on the whole not … maintain and foster indigenous languages” (p. 316). This is principally because most such schools attempt to teach Spanish literacy from first grade instead of developing indigenous language literacy first. Consequently, “the attempt to teach literacy in a second language … leads the teachers to under-exploit the [indigenous; L1] communicative potential of the primers, and to return to traditional practices of synthetic methods and structural pattern drill” (p. 317).
4. Theorizing immersion education in indigenous language contexts

This discussion brings us to the question of which theoretical bilingual/immersion frameworks are most useful and/or relevant in relation to framing indigenous language education. Again, the wider research literature on bilingual education has, until recently, not always been that clear or helpful in this regard. In particular, the key distinction regularly employed in the bilingual education literature between maintenance and enrichment bilingual programs does not always easily apply to indigenous language programs.

Maintenance and enrichment programs are both clearly underpinned by the principle of additive bilingualism, with comparable aims of achieving bilingualism and biliteracy for their students (Baker, 2012; García, 2009). However, they are distinguished primarily on the basis of the initial language backgrounds of the students in their programs. Maintenance models of bilingual education are most often associated with minority first language (L1) speakers who are already fluent in their L1. The typical participant in a maintenance bilingual program will thus likely be a member of a nationally minoritized group (for example, Welsh in Britain, Catalan in Spain, French Canadian in Canada, Latinos in the U.S.), whose L1 is already developed to an age-appropriate level (although they do not need to be literate yet in the language). The language of instruction of the program will either be predominantly in the L1 or, if both L1 and L2 are used as mediums of instruction, at least 50% in the L1.

In contrast, enrichment programs, a term first coined by Fishman (1976), are most often associated with teaching relatively privileged majority language L2 speakers through a minority, or target, language. French immersion in Canada, where many of the students come from middle-class L1 English-speaking homes, is perhaps the most often cited example of an enrichment bilingual program (Cummins, 2000). Welsh-medium schools, which also include many middle-class L1 English speakers, are another example (May, 2000). Elite bilingual programs such as the European Schools movement are also widely regarded as enrichment programs (Skutnabb-Kangas, 2000). That said, in more recent years there has been a small but growing diversification in the student composition of enrichment programs, particularly in the U.S. Given the nature of their constituency, in enrichment programs the primary focus is necessarily on developing the L2 target minority language skills of these students, rather than maintaining an already existing age-appropriate language base in the L1, as in maintenance bilingual programs. As such, the language of instruction of the program will either be predominantly in the L2 (total immersion), or if both L1 and L2 are used as mediums of instruction, at least 50% in the L2 (partial immersion).
This broad L1/L2 distinction between maintenance and enrichment approaches is a useful one, or at least a useful form of shorthand, in the research literature on dual language education. However, it does not necessarily help us to identify clearly where indigenous language programs might fit in since, increasingly, such programs comprise a range of student language backgrounds. This lacuna has been addressed by the relatively recent addition of heritage language programs to describe programs most commonly associated with indigenous language revitalization efforts, along with a wide range of other indigenous language education initiatives, although in its wider sense, it can also include other established and immigrant groups (May, 2008). The latter tend to be focused on the reclamation of a heritage language no longer spoken as an L1 — i.e., the students are second-language learners of the heritage language. The former, as already suggested, include a combination of student language backgrounds.

Some indigenous language programs are thus aimed at students who still speak the indigenous language as an L1 (e.g., Navajo and Hualapai in the U.S.; Inuit in Nunavut, Canada; Sámi in Finnmark, Norway) and may therefore be regarded as broadly equivalent to maintenance bilingual programs. But many also cater for students with a mix of L1/L2 speakers of the language (Māori in New Zealand, Hawaiian), and some have only L2 speakers (or, rather, learners) of the language (as in the Master/Apprentice program developed for the now largely moribund indigenous languages of California; see Hinton & Hale, 2001). Even indigenous programs that historically have had a preponderance of L1 speakers are now teaching an increasing percentage of L2 learners of the indigenous language in their programs. For example, in the 1970s, Spolsky (2002) had found over 95% of six-year-old children could speak Navajo on entry to school. Thirty years later, however, McCarty (2003) noted that, in the Navajo heritage language program at Rough Rock in Arizona discussed earlier, only 50% of Navajo could now speak their own language, and their numbers were declining further each year. And in Māori-medium education in New Zealand, while there remains a mix of L1/L2 students, the overwhelming majority of students are L2 (heritage) speakers of Māori (May & Hill, 2008).

The increasing presence of L2 speakers in indigenous language programs — a product of ongoing language shift and loss for indigenous communities — is thus more akin to enrichment immersion programs, at least in terms of student composition/language background. However, the social and educational challenges facing indigenous communities are starkly different, situated as they are in contexts where the ongoing deleterious effects of colonization, disadvantage, marginalization and related delimited social and educational trajectories are still all too apparent. In this sense, the more socially and educationally marginalized status of
students in maintenance bilingual programs is much closer to that of indigenous language programs.

An alternative conceptualization that perhaps better represents these cross-cutting characteristics in indigenous language education programs is the notion of recursive bilingual programs, recently developed by García (2009). She argues that:

A recursive bilingual education theoretical framework supports the possibility of language revitalization through education … acknowledging that language revitalization is not just about going back to a past linguistic state, but about recapturing a lost language and culture in the context of the present and imagining the future…. [It] focuses on the bilingual continuum of students as they come into classrooms [some may have more knowledge/experience of the language than others], see their bilingualism as a right, and … therefore promotes biculturalism. (p. 118; emphasis in original)

García proceeds to observe that, while the central aim of these programs remains language revitalization, they also necessarily reflect the more hybrid language practices that have inevitably emerged as the result of pre-existing language shift and loss. For example, many teachers in these programs may themselves be L2 speakers of the indigenous/heritage language. Similarly, as already discussed, students in these programs may come from both L1 and L2 backgrounds. Indeed, such is the heteroglossic complexity apparent in many indigenous language contexts, that the L1/L2 distinction may itself be increasingly problematic. Rather, García argues, the related notion of emergent bilingual perhaps better captures the range of positions that students in these programs represent on the bilingual continuum on entry to school.

Such a notion also accords with a growing acknowledgement that many indigenous language programs are not solely focused on the traditional indigenous language practices of their group(s) but also engage actively with the often-multilingual language practices of the contexts in which they are situated. As Patrick (2012) observes,

such practices have arisen as dominant (often colonial) languages have entered into competition with Indigenous ones; or where migration, sometimes forced, has led to the interaction of Indigenous and other languages, creating new ways of speaking in new social contexts. (p. 31)

Needless to say, the development of indigenous language programs within these wider historical, social, cultural and language contexts bears closer consideration.
5. Indigenous language immersion programs

The remainder of this article explores a number of key empirical examples of indigenous language education from around the world that broadly exemplify the characteristics of recursive bilingual programs, as outlined by García, along with the students and teachers therein. In so doing, the pedagogical principles underpinning these programs, particularly as they articulate with the principles of immersion education, will also be highlighted. This is important because, to date, the majority of these indigenous language programs have been primarily discussed and/or framed within the wider context of their macro sociolinguistic contribution to language revitalization, rather than in relation to the particular pedagogical and assessment features underpinning them (Hill & May, 2011; May & Hill, 2008; McCarty, 2008a). The following examples will include brief discussion of Navajo, Cherokee, and Hawaiian immersion programs, along with an extended discussion of Māori immersion programs.

5.1 Navajo

The Navajo program at Rough Rock has already been briefly discussed. Two other Navajo indigenous immersion programs that bear comment are those at Rock Point and Fort Defiance. The first, Rock Point Community School in Arizona, is attributed with establishing one of the first modern indigenous literacy programs in the late 1960s and early 1970s (McCarty, 2003). This program built on earlier developments which had seen Navajo achieve literate status, with the acceptance of a particular orthography as the standard (McGroarty, Beck, & Butler, 1995), thus facilitating its potential inclusion in schools. The program was organized in a way that academic language activities alternated among classroom centers, where teachers were assigned teaching time and space in either Navajo or English (Francis & Reyhner, 2002). Subsequently, the school implemented an Applied Literacy Program that involved students actively in community-based research and publishing (McCarty, 2003).

Achievement data from Rock Point demonstrated that monolingual, Navajo-speaking children (still at that time the majority in the school) who developed initial literacy in Navajo outperformed comparable Navajo students in English-only programs. They also surpassed their own previous annual growth rates and those of comparison-group students in Bureau of Indian Affairs (BIA) schools (Rosier & Farella, 1976). As a result, Holm and Holm (1995) reported that standardized test results had shifted the relative standing of Rock Point elementary students from the lowest-scoring BIA school in the lowest-scoring BIA agency to a position broadly comparable with other area schools. Moreover, the margin of advantage
for its students increased with each grade level. Interestingly enough, the change had occurred alongside the transformation of the teaching staff from a predominantly non-indigenous to a predominantly indigenous one. As McCarty (2003) summarizes it:

In a 25-year retrospective analysis of the Rock Point program, program cofounders Agnes Holm and Wayne Holm … describe the “four-fold empowerment” engendered through bilingual education there: of the Navajo school board, who “came to acquire increasing credibility with parents, staff, and students;” of the Navajo staff, whose vision and competence were recognized by outside observers as well as community members; of parents, who for the first time played active roles in their children’s schooling; and of students, who “came to value their Navajo-ness and to see themselves as capable of succeeding because of, not despite that Navajo-ness.” (p. 151)

Developments at Rock Point highlight the central characteristics of educational autonomy and community control that have typified the rationale, development and implementation of many indigenous language education programs worldwide over the last 40 years. These characteristics are also clearly evident in another Navajo immersion program in the reservation border town of Fort Defiance, as are the educational benefits associated with it. However, the context of Fort Defiance was markedly different. Its proximity to the border and, relatedly, the far greater long-term exposure to English-speaking centers and people beyond the Navajo reservation, had already resulted in significant Navajo language loss among the community by the 1980s. When the Navajo immersion program was first established there in 1986, less than one tenth of the school’s five-year-olds were “reasonably competent” Navajo speakers (Arviso & Holm, 2001). One third exhibited passive understanding of Navajo, while a relatively high proportion of the remaining English-dominant students were deemed to be limited English proficient, that is, possessing conversational but not necessarily academic language proficiency in English (Holm & Holm, 1995).

In this context, a Navajo immersion program was thought to “be the only … program with some chance of success” (Arviso & Holm, 2001, p. 205). As Arviso and Holm outline, the curriculum was kept simple: initial reading in Navajo, followed by English and mathematics in both languages, with other subjects included as content for speaking or writing. There was a particular emphasis on language and critical thinking, and on process writing and cooperative learning. In the lower grades, all communication occurred in Navajo. By the second and third grades, the program included a half-day in Navajo and a half-day in English. Fourth graders received at least one hour each day of Navajo instruction. In addition, program leaders insisted that an adult caretaker or relative “spend some time talking
Indeed, wider parental and community involvement was a key feature of the Fort Defiance program, leading Arviso and Holm to conclude “that we had reached a number of those [Navajo] parents who had been ‘bucking the tide’ in trying to give their child(ren) some appreciation of what it meant to be Navajo in the late 20th century” (p. 211).

By the early 1990s, Holm and Holm (1995) outlined how Navajo students were outperforming their peers in English-only classrooms by as early as the third grade. In English writing, both the third- and fourth-grade immersion students outperformed non-immersion students. In mathematics (as tested in English), the Grade 4 immersion students significantly outperformed the non-immersion students, with higher scores of almost 10 percentage points. In English standardized reading tests, the immersion students scored lower than the non-immersion students. However, the gap seemed to be closing between the groups (that is, having started reading in English in Grade 2, they had been behind their monolingual peers but were closer at each succeeding grade). In contrast, non-immersion students were actually going backwards in relation to Navajo literacy, with performances at Grade 4 worse than they were upon entry to school.

Since that time, the program has evolved into a full-immersion primary/intermediate school, and Navajo-immersion students continue to outperform their peers in English-only classrooms (Johnson & Legatz, 2006; McCarty, 2008a). That said, as with Rough Rock, Fort Defiance has also faced its share of challenges along the way. In the early 2000s, for example, at the advent of the NCLB era, the requirement of state-wide testing in standardized English only resulted in immersion students in the initial grades being compared unfavorably with their non-immersion peers. However, this is relatively unsurprising, since standardized English assessments in these initial grades take no account of the fact that initial instruction is predominantly in Navajo. As such, one would expect younger students to perform worse than their mainstream peers initially. Genesee (1987) found this to be the case in Canadian immersion programs when students were examined in the first two to three years, and Cummins (2000) has also extensively discussed the limitations of testing students in this way. What is required, instead, are age-appropriate assessments in the indigenous language, so as to accurately and fairly measure literacy attainment in that language. An example of this development can be found in Cherokee language immersion programs in Oklahoma.

5.2 Cherokee

As with many indigenous languages, Cherokee had already experienced significant language shift and loss, with most young people no longer able to speak the
language. A language survey of 300 Cherokee Nation members in northeastern Oklahoma, conducted in 2002, found that less than 10% claimed to be proficient in Cherokee, almost all of whom were elderly. Seventy percent of the sample claimed to be non-speakers (Cherokee Nation, 2003). Cherokee language classes had been available for decades, based on vocabulary learning and the Cherokee writing system adopted by the Cherokee nation in 1821. However, these classes seldom resulted in Cherokee language proficiency, and certainly did little to arrest the ongoing shift to English in the wider community. As a result, over the last decade, much effort has been focused on establishing an early Cherokee immersion program, itself part of a wider language revitalization strategy. The central aim of this initiative was “for children to acquire the Cherokee language in such a way that it will become an integral part of their lives and their knowledge of the world around them” (Cherokee Nation, 2003, p. 36). As Peter, Sly and Hirata-Edds (2011) outline, the strategy included recruiting and retaining bilingual and biliterate teachers, providing professional development in immersion education, involving parents and community in reinforcing the home-school language nexus and, crucially, developing appropriate Cherokee language assessments.

In developing their immersion program, the program leaders realized the difficulties involved in establishing suitably benchmarked language proficiency assessment measures in Cherokee throughout early childhood and elementary schooling that moved beyond ad hoc, individual teacher-led assessments. As a result, they developed and trialed their own language assessment measures. By way of example, their initial language assessment measure — the Cherokee Preschool Immersion Language Assessment (C-PILA) — was developed specifically for three- to four-year-old children in their preschool immersion program, to be administered at the end of each year. The key question underpinning this and the other subsequent assessments is: “what should children be able to do in Cherokee by the end of the [appropriate] school year?” (Peter et al., 2011, p. 196). While this question is framed definitively within a Cherokee immersion language context, consideration is also given to the kinds of speaking, listening, reading and writing skills expected of students in equivalent mainstream English-medium contexts, as reflected in the local state’s Oklahoma Language Arts assessments. Once expected outcomes in the Cherokee language were agreed by those within the program, in light of both these considerations, the next step was “to create appropriate [test] items to elicit sufficient evidence of the extent to which students had obtained expected outcomes” (p. 197). Peter and colleagues then proceed to describe, by way of example, how the C-PILA (early childhood) assessment measures focused on the extent to which children in the program understood basic classroom commands, as well as the appropriate use of prepositional markers, in Cherokee — both of which were deemed to be age appropriate (Peter et al., 2011, pp. 197–198).
The analysis of the student results from these assessments allowed staff in the program to identify not only the strengths and gaps in students' linguistic repertoires (and, relatedly, their level of bilingual acquisition), but also, importantly, areas where they needed more instructional support. This in turn led to reassessment/readjustment of the program itself. For example, it was found that the rote learning that teachers used for teaching vocabulary and basic expressions was not sufficient for students to then be able to use them in conversation and/or for communicative purposes. Also, staff did not provide sufficient opportunities for students to engage in two-way conversation with teachers or their peers. As a result, Peter et al. (2011) observe, teachers recognized the need for further professional development, particularly in “effective communicative language instruction and immersion-specific teaching techniques; they also needed more language- and age-appropriate storybooks, visual aids and other supplementary materials to enhance communication in the classroom” (p. 200).

These principles have underpinned the development of language assessments at subsequent grade levels. Program leaders and teachers have combined a growing knowledge of immersion education with the particular demands of Cherokee morphology and syntax, while focusing both on extending communicative range and function and attending to linguistic form (Peter et al., 2011, p. 203). The result is that those in the Cherokee immersion program have already achieved greater levels of proficiency in Cherokee than any previously documented educational attempts at so doing, a key outcome in the wider aim of Cherokee language revitalization.

5.3 Hawaiian

Hawaiian indigenous language revitalization is well trailed in the wider literature on language revitalization, particularly in relation to its impact on language planning goals and the subsequent realignment of status language outcomes for Hawaiian. This began in the 1960s with what became known as the “Hawaiian renaissance movement” (Warner, 2001), which advocated the return of Hawaiian to education and the wider civic realm after almost a century of active state proscription. A principal catalyst for the movement was the significant loss of Hawaiian that had already occurred by that time, with ongoing use of the language limited predominantly to the elderly. In 1978, largely as a result of this advocacy, the new constitution designated Hawaiian as an official language of Hawai’i alongside English, and mandated the promotion of Hawaiian language, culture and history in schools (Wilson, 1999; Wilson & Kamanā, 2001; Warner, 2001). As with Māori, discussed in the next section, immersion education has played a central role in this wider revitalization movement. The advent of ‘Aha Pūnana Leo (“language
Hawaiian-medium preschools in 1983, modeled on Te Kōhanga Reo Māori-medium preschools established a year earlier (see below), was the foundation for this wider language revitalization movement. It had led, by 2009, to 11 full-day immersion preschools and 22 elementary immersion programs, serving approximately 2000 students of both Hawaiian and non-Hawaiian ancestry (Wilson & Kamanā, 2011). The majority of these programs provide full Hawaiian immersion until fifth grade, before the introduction of English language arts. A third language is then learnt by children in these programs in intermediate and high school (McCarty, 2008b). This approach differs from typical immersion programs, particularly in the U.S., which introduce English much earlier — usually by Grade 2 or 3 — and allow for up to 50% of subject matter instruction matter in English by Grade 5 or 6 (Genesee, 2008). The emphasis on high and sustained levels of immersion in Hawaiian in these programs is, in turn, driven by the wider revitalization aim to retrovernacularize Hawaiian in the wider community — particularly in those public language domains from which it has been historically excluded (Wilson & Kamanā, 2011).

Even so, the majority of these immersion programs remain strand programs within mainstream English-medium schools. They face ongoing difficulties in terms of maintaining effective immersion learning environments because of the Hawaiian language skills of the (predominantly L2) teachers, along with the limited professional development support in and resourcing for immersion education. Many of these programs also do not extend beyond elementary school. A key exception here is the P-12 Nāwahikalaniʻōpuʻu Laboratory school (known as Nāwahī for short). Named after a nineteenth-century pioneer of Hawaiian-medium education, Nāwahī includes a private, infant/toddler and preschool program (the Pūnana Leo), a K-8 charter school, and a 9–12 program housed in the English-medium public high school. Nāwahī is affiliated with the College of Hawaiian Language at the University of Hawai‘i-Hilo. The elementary school program was first established in 1985 and a preschool program added in 2006. Instruction from preschool to grade 12 is 100% in Hawaiian, with English language arts introduced through the medium of Hawaiian from Grade 5.

As in the strand programs, a majority of the teachers are actually L2 Hawaiian speakers — a successful product of the language revitalization movement of the last 30 years. Students in the program have also historically been L1 English speakers/L2 Hawaiian learners upon entry to the program. However, since the introduction of the preschool program in 2006, an increasing number of the new students are coming from families of Nāwahī graduates, where Hawaiian is now spoken in the home. In 2009, for example, all of the new student intake (11 students) were designated as L1 Hawaiian speakers by the school, compared with 42% (17 of 40) at the Pre-Kindergarten level (Wilson & Kamanā, 2011, p. 45). In light of earlier
discussions, a perhaps more accurate description might be to describe at least some of these new students as emergent bilinguals. Be that as it may, the trend to reinforcing the family–school nexus at Nāwahī, highlighted by the wider notion of recursive bilingual programs also discussed earlier, is unmistakable. Indeed, as Wilson and Kamanā note, the rationale for introducing the preschool program was “to support an upsurge in families deciding to have one or both parents use only Hawaiian with their children from birth” (2011, p. 44). They proceed to observe that the expectation for those who graduate from the program at the end of schooling is also to pass on Hawaiian to their children, a commitment and practice that is clearly already beginning to occur, in line with wider language revitalization aims.

Like the ‘Aha Pūnana Leo preschools, the primary focus of the Nāwahī program is thus on the survival and expansion of Hawaiian culture and language, rather than academic achievement per se (Wilson & Kamanā, 2001, 2011; Wilson, Kamanā, & Rawlins, 2006). However, the subsequent academic outcomes, and bilingualism and biliteracy levels of its students are still impressive. All the more so, given that the majority of the students come from low-socioeconomic and/or disadvantaged backgrounds. In line with other indigenous language immersion programs, throughout the 1990s, the Nāwahī program achieved comparable or better educational outcomes at the end of elementary schooling in standardized state tests in relation to peers in English-only programs (Wilson & Kamanā, 2001). From its first graduating class in 1999 through to 2009, Nāwahī has had a 100% graduation record, with 80% subsequent college attendance for its students (Wilson et al., 2006; Wilson & Kamanā, 2011). The students perform extremely well in the state Hawaiian-medium reading test at early elementary levels, with 100% judged to be proficient in 2009 (Wilson & Kamanā, 2011). Nāwahī also uses its own internal assessment measures to monitor the progress of its students, including oral proficiency measures, first trialed in 2009, which demonstrate high levels of proficiency in Hawaiian. Even in mandated statewide NCLB tests, conducted in English, the school program in 2009 passed with the highest ranking.

Nonetheless, Wilson and Kamanā highlight how the inherently monolingual NCLB standards present ongoing challenges to the program, both in relation to the further development of appropriate testing regimes in Hawaiian for elementary grades, and to entrenched federal obstruction to the extension of Hawaiian-medium testing up to Grade 12. The school program continues to address these challenges internally in line with its broader immersion aims and principles. As students progress, there is an increasing focus on Hawaiian grammar and the development of students’ metalinguistic skills, combining oral/communicative emphases with a focus on language form and contrastive analysis. This is further augmented by the introduction of additional languages, taught through Hawaiian, at
various points in the program. In 2008–2009, Grade 1–6 students studied Japanese, Grade 7–8 students Latin, and Grade 7–12 students Chinese for 90 minutes per week. As Wilson and Kamanā conclude, these developments aim to strengthen Hawaiian further “through structuring the immersion environment and through direct instruction in grammar, vocabulary and culture” (2011, p. 53).

5.4 Māori

The final, extended, example examined here is that of te reo Māori (the Māori language) in Aotearoa/New Zealand, which is widely regarded as the most successful attempt thus far at indigenous language revitalization (Hill & May, 2011; May, 2004; May & Hill, 2008). As with many other indigenous language contexts, the initial catalyst of the revitalization movement was a recognition by Māori activists and educators, in the 1970s, that Māori language use was in rapid decline and might be lost within a generation (Benton, 1979, 1983). While te reo Māori had long been excluded from New Zealand schools — the result of a resolutely colonial and assimilationist education policy throughout the 19th and 20th centuries which privileged a monolingual English language education — it had still been nurtured in rural Māori communities up to the 1940s. Rapid urbanization of Māori people, post-Second World War, was to change all that. Dislocated from their local iwi (tribe/s) and marae (tribal meeting house/s), many Māori parents in these new urban settings chose not to speak te reo Māori to their children, resulting in a generational break in the language. By the 1970s, this generational fissure had become alarming, with fewer and fewer children speaking the language, and fluent Māori speakers increasingly confined to the elderly.

Māori-medium (immersion) education was seen as the key means by which this language shift and loss could not only be avoided but actively remediated. But the significance placed on Māori-medium education in relation to language revitalization is also clearly predicated upon the wider politics of indigenous self-determination. Indeed, Māori activists and educators have been key players on the international stage in securing the advances for indigenous peoples in international law, highlighted earlier in this article — most notably, via the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) in 2007 (May, 2012).

At the national level, the principle of indigenous self-determination enshrined in UNDRIP has been realized via the related notions of tino rangatiratanga (sovereignty; self governance) and biculturalism. Both of these latter principles have formed the basis of significant advances for Māori over the last 40 years within Aotearoa/New Zealand. The result has seen the country’s long-ignored foundational colonial document, the Treaty of Waitangi, once again become a basis for ongoing negotiation (and reparation) between Māori and successive New Zealand
governments (Walker, 2004). On the one hand, it has required the New Zealand state’s *active* commitment to redressing past injustices towards Māori as a result of colonization. On the other hand, it has specifically allowed for the development of autonomous, Māori-controlled, institutional frameworks, most notably within education (May, 2004, 2012).

Two key developments over this period can be highlighted with respect to education. The first occurred in 1985/1986, when a legal decision concerning the recognition and role of Māori as a language of the state concluded that te reo Māori could be regarded as a taonga (treasured possession) and therefore had a *guaranteed* right to protection under the terms of the Treaty of Waitangi (Waitangi Tribunal, 1986). In the ruling, the term *guarantee* was defined as “more than merely leaving Māori people unhindered in their enjoyment of the language and culture” (p. 29). It also required “active steps” to be taken by the guarantor to ensure that Māori have and retain “the full exclusive and undisturbed possession of their language and culture” (Waitangi Tribunal, 1986, p. 29). As a result, in 1987, the Māori Language Act was passed, legitimating for the first time Māori as an official language of Aotearoa/New Zealand.

More significantly still has been the development of whole-school, full-immersion, Māori language schools from the 1980s onwards. This began with the establishment of Te Kōhanga Reo — full immersion Māori language preschool programs, initially run independently by parents. It has since developed to all levels of education and has subsequently been incorporated into the state education system, thus spearheading the beginnings of what Paulston (1993, p. 281) has described as “language reversal,” a process by which “one of the languages of a state begins to move back into more prominent use” (see May, 2004, for an extended discussion).

To gauge the significance and impact of these developments, one only has to look at the growth of kōhanga reo over time. In 1982, the first kōhanga reo was established — by 1993, at its high point, there were 809 kōhanga reo catering for over 14,500 Māori children (New Zealand Ministry of Education 1998). Numbers have declined somewhat since then but continue to remain significant. In 2009, 9,288 children were attending 464 kōhanga reo, a quarter of all Māori children in preschool education (Waitangi Tribunal, 2010).

The kaupapa (philosophy; set of objectives) of Te Kōhanga Reo combines an emphasis on Māori language revitalization with indigenous control of education, consonant with the key principles of UNDRIP. Its key philosophical principles can be summarized as follows:

- total immersion in te reo Māori;
- the imparting of Māori cultural and spiritual values and concepts to the children;
– the teaching and involvement of the children in Tikanga Māori (Māori customs);
– the complete administration of each center by the whānau (extended family; see below); and
– the utilization of many traditional techniques of child care and knowledge acquisition (Sharple, 1988).

From this kaupapa, three aspects can be highlighted as key organizing principles (see Kā’ai, 1990).

1. Te Reo
“He kōrero Māori” (speaking in Māori) is a central organizing principle of Te Kōhanga Reo. An environment where only Māori is spoken is seen as the best means by which language reversal can be achieved. Culturally preferred styles of pedagogy — such as teina/tuakana roles (peer tutoring) and collaborative teaching and learning — also feature prominently in the ethos and practise of kōhanga reo (see Metge, 1990).

2. Whānau
Te Kōhanga Reo has been, from its inception, a parent-driven and resourced initiative based on whānau (extended-family) principles. Kōhanga are staffed by fluent Māori-speaking parents, grandparents and caregivers, often working in a voluntary capacity, and are supported by the wider whānau associated with the preschool. The significance of kaumātua (elders) is also highlighted in the whānau structure. Kaumātua are regarded as active participants in the educational process. They are used in kōhanga reo not just as repositories of knowledge but also as teachers who can model the language, and other forms of cultural practice and behavior, to kōhanga children (Smith, 1989).

3. Mana motuhake (autonomy)
The central involvement of whānau in Te Kōhanga Reo has meant that Māori parents have been able to exert a significant degree of local control over the education of their children. The whānau approach is characterized by collective decision-making and each whānau has autonomy within the kaupapa (philosophy) of the movement (Irwin, 1990). Meaningful choices can thus be made over what children should learn, how they should learn, and who should be involved in the learning (Smith, 1989). Individual whānau are also supported at a national level by the Kōhanga Reo Trust, which was established in the early 1980s to develop a nationally recognized syllabus for the purposes of gaining state funding. This latter objective was achieved in 1990. Prior to this, kōhanga reo had been almost entirely funded by whānau themselves.
Te Kōhanga Reo thus represents a major turning point for Māori perceptions and attitudes about language and education. Its success has also had a domino effect throughout the education system, as kōhanga graduates have worked their way through the school system over the course of the last 25 years. This is particularly evident at the elementary level, with the emergence in the 1980s of full immersion Māori language schools, kura kaupapa Māori (literally: Māori philosophy school). The first kura kaupapa Māori, entirely privately funded, opened in February 1985. Five years of political advocacy by Māori followed before a pilot scheme for six kura kaupapa Māori was approved for state funding in 1990. By the end of that decade, 59 kura kaupapa Māori had been established, serving approximately 4000 students (New Zealand Ministry of Education, 1998). By 2007, the number of kura kaupapa Māori had grown to 73, and 6144 students (New Zealand Ministry of Education, 2007). This includes the establishment of wharekura (Māori language high schools), although their numbers remain small (May & Hill, 2008).

The development of kura kaupapa Māori is largely attributable to the success of kōhanga reo and the increasing demand that it created for Māori-medium education at the elementary level. A principal concern of kōhanga parents was to maintain the Māori language gains made by their children. Kura kaupapa Māori, in adopting the same language and organizational principles as Te Kōhanga Reo, could thus continue to reinforce these language gains within a Māori cultural and language environment. The principles that have since come to characterize kura kaupapa Māori can be summarized as follows (see Bishop & Glynn, 1999; G. Smith, 1997):

1. **Rangatiratanga (relative autonomy principle).** A greater autonomy over key decision-making in schooling has been attained in areas such as administration, curriculum, pedagogy, and Māori aspirations.
2. **Taonga Tuku Iho (cultural aspiration principle).** In kura kaupapa Māori, to be Māori is taken for granted. The legitimacy of Māori language, culture and values is normalized.
3. **Ako Māori (culturally preferred pedagogy).** Culturally preferred forms of pedagogy, such as peer tutoring and collaborative teaching and learning, are employed. These are used in conjunction with general schooling methods where appropriate.
4. **Kia piki ake i ngā Raruraru o te Kainga (mediation of socioeconomic difficulties).** While kura kaupapa Māori (or education more generally) cannot, on their own, redress the socioeconomic circumstances facing Māori, the collective support and involvement provided by the whānau structure can mitigate some of its most debilitating effects.
5. *Whānau (extended-family principle).* The whānau structure provides a support network for individual members and requires a reciprocal obligation on these individuals to support and contribute to the collective aspirations of the group. It has been most successful in involving Māori parents in the administration of their children’s schooling.

6. *Kaupapa (philosophy principle).* Kura kaupapa Māori “is concerned to teach a modern, up to date, relevant curriculum (within the national guidelines set by the state)” (G. Smith, 1990, p. 194). The aim is not the forced choice of one culture and/or language over another but the provision of a distinctively Māori educational environment that is able to promote effectively bilingualism and biculturalism.

A key reason for the successes achieved by these Māori-medium programs has been the consistent adoption of a total immersion approach to te reo Māori. In New Zealand, these programs are designated as Level 1 immersion programs — offering between 81 and 100% immersion in te reo Māori — and it is these programs for which Māori-medium education has become known internationally. Indeed, historically, the majority of these Level 1 programs have operated at 100% immersion or very close to it. The rationale for this total immersion approach was predicated on the initial principle that promoting an educational environment where only Māori was spoken was the best means by which to ensure the survival of, and an ongoing use for, te reo Māori. These views were also influenced at the time of the establishment of these programs in the 1980s by the predominance in second language teaching circles of natural approaches to language learning, exemplified by the arguments of Krashen and Terrell’s Natural Approach (see Richards & Rodgers, 1986). An additional presumption underpinning Level 1 Māori medium programs was that, because English was spoken in all other language domains, and because the majority of students were by now English L1 speakers, the ongoing acquisition of English would occur automatically. In this sense, many Māori-medium programs are not that dissimilar to the Nāwahī program discussed in the previous section.

Over the last 30 years there has also been the expansion of partial immersion programs in Māori-medium education, driven primarily by parental demand. These partial immersion programs are invariably located in English-medium schools and thus differ from the whole-school environment of kōhanga reo and kura kaupapa Māori. That said, there are some total immersion programs situated within English-medium schools, much like the Hawaiian strand programs. In combination, these Level 1 total immersion programs still predominate within Māori-medium education. In 2011, 11,818 students out of a total of 26,994 in Māori-medium education were in Level 1 programs (Education Counts, 2011).
National assessments of students in Level 1 Māori-medium education reinforce the comparability of their educational achievement with their peers in English-medium contexts. For example, The National Education Monitoring Project (NEMP), which assesses and reports on the achievement of New Zealand elementary school students in all the subjects of the school curriculum, directly compared the achievements of Year 8 Māori students involved in Level 1 immersion Māori-medium education with Māori students within mainstream (English-medium) education on 12 reading and speaking tasks (National Educational Assessment Research Unit, 2001). The tasks included reading comprehension, retelling a sequence that was viewed, completing a story, and presenting an advertisement. Two tasks required all students to read Māori words or texts, although the task instructions were given in English for the Māori students in general education settings. The remaining 10 tasks were presented in Māori or English for the Māori-medium and English-medium students respectively.

The results found that in three tasks the Māori-medium students performed at significantly higher levels than their English-medium peers. As one might expect, these included the two tasks that required all students to read Māori words or texts (pronouncing Māori words; oral reading in Māori). In five tasks, Māori students in both settings performed equally well (including presenting a news report; retelling a story from a picture book; completing a story). In four tasks, Māori students in general English-medium settings performed higher (including, reading comprehension and retelling a video story). Overall, the report concludes that in 55% of the tasks, both groups performed similarly. In 14% of tasks, the Māori immersion students performed better, and in 31% of the tasks the general English-medium students performed better (National Educational Assessment Research Unit, 2001).

An earlier NEMP Report on science, art, graphs, tables and maps skills (National Educational Assessment Research Unit, 2000) also found a broad comparability between Māori students in Māori-medium and English-medium settings, with both groups performing similarly in 70% of the tasks. In the remaining tasks, the English-medium students performed moderately better than the students in the Māori-medium programs (National Educational Assessment Research Unit, 2000). While, in this case, the results were broadly similar, one clear advantage for the Māori-medium students was that they were able to perform as well as their English-medium peers, and to do so in their L2.

In another study, Rau (2004) examined and compared the Māori literacy skills of groups of students involved in Level 1 Māori-medium programs over two periods, 1995 and 2002–2003. The purposes of this assessment were to observe the literacy achievement of students in te reo Māori after at least one year of instruction in a total immersion context, to identify those experiencing difficulty, and to
provide information about the classroom programs. As Rau argued, this was particularly important because at that time no other standardized assessments existed in Māori that provided such comprehensive literacy information for students in the first three years of schooling.

Rau used a set of Māori-developed literacy assessments, including those which tested letter identification (Te Taūtu), concepts about print (Ngā Tikanga o Te Tuhi Kōrero), word recognition (Te Whakamātautau kupu), writing vocabulary (Te Tuhi Kupu), hearing and recording the sounds in words (Whakarongo, Tuhia, Ngā Tangi o Roto i ngā Kupu) and text reading (Te Pānui Pukapuka). The participants were 97 students aged 6 to 7 years (the 1995 group), and 100 students aged 6 to 7 years (the 2002–2003 group). The results were as follows:

- Students in the 2002/3 sample scored consistently better than students in 1995 across five of the six tasks.
- Students in the older age bands scored consistently higher than the younger age band on all tasks for both the 1995 sample and the 2002/3 sample.

Rau (2004) argued that the different findings evident in 1995 and 2003 were attributable to a range of factors, including increased support for, and resourcing of Māori-medium programs over time, particularly since 1998. In particular, such resourcing has included:

- The development and promulgation of Ngā Kete Kōrero (New Zealand Ministry of Education 1999) — a Māori language framework for identifying levels of language difficulty in junior reading texts. Teachers potentially are able to make better matches between reading material and learner need/ability as a result.
- The increased quantity and improved quality of reading instructional material available in te reo Māori (although more is needed).
- The increased recognition and development of epistemology and pedagogy for Māori-medium contexts.
- The increased provision of Māori-medium-specific professional development in literacy for teachers, thus addressing the consistent need identified by teachers in Māori-medium programs for such professional development.
- The ongoing commitment and dedication of Māori-medium teachers who continue to strive toward improving curriculum delivery and raising Māori achievement in the face of extreme demands, often overwhelming expectations, and limited resources.

However, Rau also points out that the results may have been better still had it not been for a number of factors which have made the tasks of the Māori-medium teacher even more difficult. These include, in particular:
– the high number of “linguistically challenging” curriculum documents in Māori that have been developed within a relatively short period;
– the high mobility of teachers;
– an increased demand for Māori-medium teachers due to a rapid increase in the number of schools offering Māori-medium programs (see above);
– increasing demands for professional development in Māori-medium-specific literacy, which drains teacher supply; and
– the still piecemeal nature of teacher professional development provision in Māori-medium education, particularly when compared with mainstream English-medium programs. (Rau, 2004, pp. 74–75)

These results reinforce, as with the other indigenous language immersion programs discussed in this article, the considerable achievement of Māori-medium programs in the context of existing language shift and loss, a resulting preponderance of L2 Māori language speakers among both students and teachers, and a relative lack of resourcing and professional development for teachers in indigenous immersion education.

More recently, attention has increasingly been directed in Māori-medium education to the role of English language instruction within Level 1 Māori-medium programs (Berryman & Glynn, 2003; Hill, 2011; Hill & May, 2011; May & Hill, 2008; Rau, 2005). This has arisen because of concerns that the almost de rigueur exclusion of English from these programs since their inception in the 1980s might potentially be limiting the ability of such programs to achieve biliteracy for their students. While the results discussed above suggest that this is not necessarily the case, there is clearly some purchase currently for exploring this issue further in order to enhance the already established efficacy of Māori-medium education. The issue provides a specific pedagogical focus for Māori-medium education rather than, as has been dominant to date, a research analysis that focuses more broadly on its key role in indigenous language revitalization (May, 2005). This change in focus also coincides with the emergence of a more ethnographic research base, as individual Māori-medium education programs are beginning to be explored in more depth from “the ground up.”

One key example of this recent development is the analysis undertaken by Hill and May (2011; see also, Hill, 2011) of Te Wharekura o Rakaumangamanga. Te Wharekura o Rakaumangamanga is situated in the Waikato district, north of Hamilton, in the upper North Island of New Zealand. It is one of the largest and most established Māori-medium schools in the country, having implemented a Māori immersion program since the late 1970s. It is unusual in New Zealand because, unlike most Māori-medium programs, it educates students for the full length of their schooling — from Year 1 (five years old) to Year 13 (18 years).
The Rakaumanga community which the kura serves is predominantly Māori, and students come from poor and working-class backgrounds. Thirty teachers work at Rakaumanga and 352 students attend this school, 230 at elementary and 157 at high-school levels.

Rakaumanga is required to align its programs with the wider New Zealand curriculum. However, their structure, programs, and themes of study are distinctly Māori. The school is governed by a rūnanga (governing board) of 22 members of the school community who oversee the work of the principal and two deputy principals who coordinate the high school (kura tuakana) and elementary school (kura teina). Below this level, senior teachers coordinate smaller clusters of teachers. In this sense, Rakaumanga is two schools in one, although a close working relationship is maintained between each level. In terms of curriculum delivery, Rakaumanga operates similarly to other New Zealand elementary and high schools, with the elementary school classes taught in a homeroom by a Māori immersion teacher, while high-school classes follow a timetable, moving from subject to subject each hour. The National Certificate in Educational Achievement (NCEA), the New Zealand-wide standards-based high school assessment program, is the central assessment at these upper levels. At the high school, all subjects are nonetheless taught through te reo Māori.

When the kura was established in the 1970s, the school experimented with a Māori–English mix, settling on a 100% Māori immersion program in the elementary classes. As discussed above, this total immersion approach was (and remains) common in the majority of Māori-medium programs because of the primacy placed on revitalizing the Māori language and the related presumption that students’ English language proficiency would automatically grow through exposure to English outside the classroom (May & Hill, 2008). Since the 1990s, however, this belief in the automaticity of English language skills transfer has given way at Rakaumanga to a growing awareness of the need to include formal English instruction within the school.

Rakaumanga’s policy stipulates that prior to enrolment, students will have attended kōhanga reo for two years. This ensures that a minimum level of te reo Māori proficiency is attained on students’ arrival at school. Years 1–3 are conducted entirely in te reo Māori. Formal English instruction commences when the students reach Year 4 and continues until they leave school at Year 13. At Year 4, English instruction is introduced for three to four hours per week, alongside Māori-medium instruction, through to the end of elementary school (Year 8). At the kura tuakana (Year 9–13), English classes continue in preparation for NCEA English. English instruction at the school is separated from Māori instruction by time, place, and teacher, with specialist English transition teachers conducting the classes in their own English language rooms. The teaching of English at this school
is divided among four staff (two at the high school and two at the elementary school). The two elementary English transition teachers manage the English language education of the elementary Year 4–8 students (one of them teaches the Year 4–6 students, and the second teaches the Year 7–8 students), and it is this elementary program that I highlight here (see Hill & May, 2011, for an extended discussion).

Rakaumanga’s elementary school English transition program has experienced some changes over the years as teachers experimented with different teaching approaches. For the most part, a reading- and writing-focused curriculum was implemented, using English as the sole medium of instruction (most English transition teachers at the school have been monolingual English speakers). The English language program thus initially resembled an English-as-a-second-language (ESL) pullout program in that it employed separate teachers to teach the English curriculum and housed them in separate classrooms. The current English transition teachers at Rakaumanga, however, have since developed a genre-based program at the elementary-school level. The central features of the program now include the following:

- **Guided/shared reading.** Guided reading is an approach that enables a teacher and a group of students to talk, read, and think through a text, making possible an early introduction to reading silently. Shared reading aims to replicate the early reading experiences of young children within the school setting and provide support to those children with limited literacy experiences prior to school entry. Both are key elements of New Zealand’s elementary school program in both Māori- and English-medium contexts (New Zealand Ministry of Education, 1996, 2003, 2006). These are daily features of the Year 4–6 English transition program at Rakaumanga. The Year 7–8 program also uses guided reading but chooses texts that reflect particular genres.

- **Writing.** The Year 4–6 students are involved in writing stories and invented texts based on their readers. The Year 7–8 students focus on analyzing and writing specific genres, dealing with two genre themes each school term (there are four terms in each year).

- **Spelling.** The students’ knowledge of spelling is extended via daily activities such as researching the meanings of new vocabulary (two days per week), constructing sentences (one day), and the use of letter-manipulation activities to assist in vocabulary development.

The Year 4 English transition program thus commences with a strong reading focus, with an emphasis on gaining knowledge of the English alphabet and extending students’ reading exposure through guided and shared reading. As the children become more proficient readers, the writing component also increases
with the introduction of genre studies. When the children reach Year 7, the central focus is on genre studies (both reading and writing).

In order to assess the efficacy of this program within a Level 1 Māori immersion school environment, Hill and May (2011) outlined an independent assessment protocol, developed by Hill, of student (bi)literacy outcomes. Five literacy assessments were used:

1. English reading (non-fiction texts)
2. English reading (fiction texts)
3. Māori reading (non-fiction texts)
4. English writing
5. Māori writing.

These assessments were delivered to the two Year 8 classes at the school, comprising a total of 29 students. Year 8 was chosen because it constituted the end of students’ elementary school years. The full details of the assessments can be found in Hill and May (2011; see also Hill, 2011) but are presented in summary form here. The New Zealand reading assessment, Probe (Parkin, Parkin, & Pool, 2002), a widely used reading assessment tool in New Zealand, was implemented to assess the Year 8 students’ English reading levels in relation to both non-fiction and fiction texts. It revealed that the mean English reading age of the students was 12.19 years for non-fiction texts and 12.75 years for fiction, compared with the group’s mean age of 13.2 years, a very positive result, given the students had only had four hours of literacy instruction per week in English over the previous five years.

With respect to Māori reading levels, the Māori language framework, Ngā Kete Kōrero (New Zealand Ministry of Education, 1999), discussed previously in relation to Rau’s (2004) research, was used to assess the students, as Māori reading levels are not linked to chronological age. Each broad level is described as a kete, or traditional Māori woven flax bag (each named after a Māori plant). The results found that all 29 students had reached a Māori reading level within range of the third kete (pingao). The next level (miro) is the highest reading level, and was reached by four of the 29 students. These results show that many of the students are close to the highest Māori reading levels in which the texts are written by native Māori language speakers.

English and Māori writing levels, were assessed using another New Zealand assessment protocol, Assessment Tools for Teaching and Learning (asTTle), an online educational resource for assessing literacy and numeracy (in both English and Māori) relative to New Zealand achievement objectives (Hattie et al., 2004). In English, students were required to write a 40-minute narrative on which they were assessed. The subsequent mean level of 3.78 achieved in the asTTle English by the 29 students in the two Year 8 classes was just below level four (of the eight levels in
the New Zealand curriculum guide) — the level most teachers of Year 8 students would expect their students to reach.

To assess Māori writing levels, the students were read aloud the beginning of a picture book translated into Māori. The students’ task was to rewrite the story and then complete it within 45 minutes. The overall mean score for the students, using Māori asTTe, was 3.84 — again, just below the age-appropriate level 4 for Year 8 students.

Overall, then, the combined literacy assessments show that the Year 8 students at Rakaumanga had reached or were close to reaching age-appropriate levels of literacy development in both Māori and English. At this stage, Hill and May (2011) conclude, these Year 8 students are thus well on their way to achieving the goal of bilingualism and biliteracy, a key aim of Level 1 Māori-medium education. Moreover, these in-depth, fine-grained, school-based analyses, which are only now beginning to emerge in the New Zealand context, reinforce the wider attested efficacy of Māori-medium education as a key exemplar of indigenous language immersion internationally.

6. Conclusion

This article has traversed a lot of ground. But so too have the indigenous language immersion programs discussed therein. Within the space of 40 years, they have been instrumental in addressing and, in some cases, actively ameliorating, a long, entrenched history of the active state-sponsored marginalization and diminution of indigenous languages, leading to their extensive language shift and loss. In so doing, research on these programs has focused primarily on their pivotal role in this process of indigenous language revitalization, as well as the wider politics of indigenous self-determination underpinning them.

It has only been in the last few years that the key pedagogical means of achieving their aims — immersion education — has gained attention in the wider immersion education research literature itself. As I have argued here, this is largely the product of the genesis of immersion education literature in second- and foreign-language constituencies generally far removed from indigenous language community contexts. This article aims to consolidate the broadening of the immersion education literature to encompass indigenous language education programs. It demonstrates unequivocally that the combined language development and broader educational benefits of indigenous immersion education accord with those in the immersion education literature more generally. However, it also offers, in turn, specific examples of how indigenous language programs can contribute to, and extend, existing knowledge on the principles, pedagogy, and assessment outcomes of immersion.
education. Hopefully, this important dialectic will continue in the further development of immersion education research, policy and practice in coming years.

References


Whakarāpopototanga

Ko tā tēnei tuhinga he whakatakoto i ngā whanaketanga matua i roto i ngā hōtaka mātauranga rumakanga ā iwi taketake i ngā 40 tau ki muri. Ko te mātāmua o ēnei whanaketanga ko te whakatūnga a te iwi taketake i ngā hōtaka rumakanga i roto i te hāpori hei whakapūmāu, hei whakarauora rānei, i ō rātou reo ā iwi taketake. Nō reira, e tītiro ana tēnei tuhinga ki te āputa kei roto i ngā tuhituhi mātauranga rumakanga, kua arotahi noa ki ngā horopaki reo rua, horopaki reo manene rānei, tae noa mai ki tēnei wā. Ko te tīmatanga o te tuhinga nei he tirohanga whānui ki te horopaki hitoripāpori me te horopaki tōranga-pāpori me te arotahi ki ngā kaunekeneketanga ā roto ā te tūranga ki ngā horopaki ā whenua i whakatūria ai he hōtaka rumakanga ā iwi taketake. Tuarua, ka torotoronga ngā hononga kei waenganui i ngā kaupapa here mātauranga me te pūto i ā e hāngai ana ki ngā hōtaka rumakanga ā iwi taketake, ā, ka mirimira ngā tūmomo mātātaki ka pā ki te whanaketanga, te whakatinanatanga me te whakapūmāutanga o ngā hōtaka rumakanga ā iwi taketake ā whai hua ana. Matapaki ai te wāhanga whakamutunga o te tuhinga nei i etahi tauira o ngā hōtaka rumakanga ā iwi taketake puta noa i te ao, tae atu ki ngā hōtaka a Hawaii, a ngā Navajo, a ngā Cherokee, me ngā hōtaka reo Māori hoki o Aotearoa.

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