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Contents

ARTICLES

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AGENCY FROM AN ADULT REFUGEE'S PERSPECTIVE

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Abstract

This study investigates a refugee's journey of integration and acts of agency by documenting his efforts to learn English, resolve conflicts that arose in service encounters, and come to grips with his evolving sense of identity. Using excerpts from tape-recorded conversations and field notes over a period of eighteen months, an ethnographic case study approach was used to uncover an understanding of internally- and externally- driven influences on his capacity to act. The findings of this study suggest that migrants' everyday interactions with others function as gatekeeping experiences that afford and constrain access to linguistic, social, and other forms of capital. These experiences shape migrants' self-perceptions of who they are and their understandings of the community in which they reside in.

Keywords: agency, refugees, language learning, social conflict, identity, social space

Migrant integration, social space and agency

Communities, institutions and countries have become "superdiverse" as a result of globalisation (Vertovec, 2007). As societies experience a period of rapid change, migrant populations continue to grow and become more diversified. Migrants are no longer restricted to regular face-to-face interactions with the host society but are negotiating their encounters with other members of the community using their "linguistic repertoires" (Blommaert & Backus, 2011). The notion of a stable "speech community" (Rampton, 2010) has been supplanted by concepts such as "networks" (Jewson, 2007; Milroy, 2002;) and "communities of practice" (Lave & Wenger, 1991; Wenger, 1998). For newcomers to a country that have a vastly different set of cultural norms and expectations, the formation of networks or participation within various communities of practice raises the complex issue of integration. Blommaert (2013, p. 194) argues that,

> Being integrated… means being capable of making oneself understood in a wide variety of social environments… not just the "dominant" culture but also various subcultures. Immigrants need to "integrate" in the many niches… not just those of their "host societies" but also those of émigré communities in a diaspora, of their "home" cultures,

> of gender, age, social class, profession, workplace, religion, consumption, hobby, media, and so forth niches.

One of the implications of Blommaert's comment above is the need to further understand how migrants integrate into their social environments. Language is a local practice (Pennycook, 2010) where specific contexts lend themselves to particular activities, behaviours, and linguistic exchanges. Researchers from various ideological backgrounds have embraced the view that spaces are semiotic and multimodal (Gee, 2005; Scollon & Scollon, 2003), consist of perceived, lived and physical spaces (Lefebvre, 1991), are third spaces where enunciation, or the act of expressing culture, occurs (Bhaba, 1994) and are polycentric environments where individuals must position themselves accordingly along scaled norms of behaviour (Blommaert, Collins & Slembrouck, 2005). Individuals not only bring forth their previous experiences and expectations to a space but must simultaneously negotiate their social behaviour in relation to old-timers, persons of authority, and with the written or unwritten rules of the situated activity. Social spaces thus act as sites of engagement between the individual agent and externally-driven structures (see Figure 1 below).

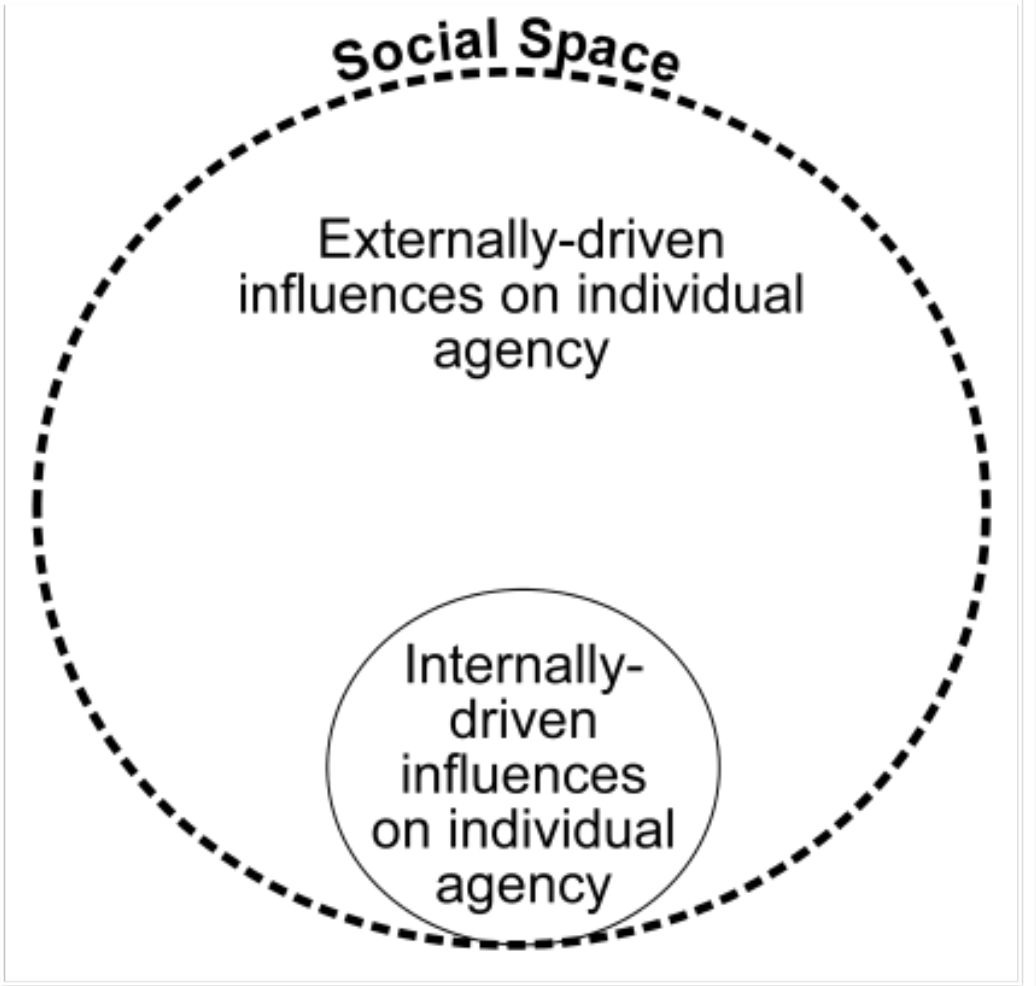

Figure 1: **Agency and social space**

Agency is an equivocal concept for which scholars have endeavoured to find a definition (Ahearn, 2011; Block, 2012; Duranti, 2004; van Lier, 2008; Vitanova, Miller, Gao & Peters, 2015). Ahearn's (2011, p.278) oft-cited definition of agency as a "socioculturally mediated capacity to act" draws a conceptual line between action and the capacity to act. An individual's capacity to act is socioculturally mediated by internal (e.g., fears, expectations) and external influences (e.g., contact with others). Considering there is a challenge with identifying an individual's capacity to act, researchers must look more closely at the level of individual action. How individuals exercise their agency or respond to internal and external influences varies according to each person and context. Actions or behaviours, whether they are linguistic or non-linguistic, thus provide a window into individual agency. Not all actions are observable, as changes in perception also constitute a form of action (van Lier, 2008). Agency in itself may not be easily identifiable; however, a closer examination of how individuals exercise their agency through their actions and behaviours provides a clearer insight into their socioculturally mediated capacity to act.

How migrants exercise their agency in response to internally or externally mediated influences interests researchers. When migrants encounter others with similar or divergent norms of interaction, they are faced with choices or decisions in relation to their capacity to act. What do I perceive is happening? How should I act? What should I say? This study reports a case study participant's expression of agency by documenting his experiences with language learning and integration. In the next few sections, I review the literature on how refugees differ from other migrants, how migrants' day-to-day experiences influence identity formation, and how these daily encounters may highlight issues of power and legitimacy.

Refugees

New migrants may settle in ethnically similar communities to obtain help with finding accommodation, securing employment, and facilitating social cohesion with an existing diaspora (e.g., through a church). Refugees are different from other migrants for several reasons. One of the main differences between migrants and refugees is the former's desire to immigrate to a particular country and the latter's desire to leave their homeland. Migrants tend to have a strong sense of purposeful immigration (Maydell-Stevens, Masggoret & Ward, 2007) where immigration is a conscious decision to re-unite with family members, provide better health and economic conditions, or dream of future opportunities for their children. Refugees, on the other hand, are accepted on humanitarian grounds, such as in cases where individuals fear persecution and become asylum-seekers, are victims of physical abuse and trauma, represent women and children at risk, or require medical attention not available in the country of origin (Altinkaya & Omundsen, 1999; Butcher, Spoonley and Trlin, 2006). The sudden relocation to a host country may leave refugees with no immediate relatives, little or no knowledge of the dominant language, and less skills or education (Hou & Beiser, 2006). Refugees tend to be less

able to rely on existing family and community networks to find suitable employment. Studies on refugees' experiences situated in the New Zealand context (e.g., Altinkaya & Omundsen, 1999; Butcher et al., 2006; Smith, 1996) are few in number. Further research is needed to uncover refugee's experiences of integration in New Zealand.

Migrants' roles and identities

Various studies on migrant experiences have been conducted in the New Zealand context, examining particular immigrant groups and their experiences of adjustment and maladjustment. These studies have investigated South African women's home-making experiences (Philipp & Ho, 2010), Afrikaans parents' perceptions of their children's language use preferences (Barkhuizen, 2006), Dutch migrant's social networks and language use (Hulsen, de Bot, & Weltens, 2002), Russian migrants experiences of acculturation (Maydell-Stevens et al., 2007), transnational Chinese families (Ho, 2002), Indian women's working lives (Pio, 2005), and migrants' experiences of discrimination (Butcher et al., 2006). The above mentioned studies have widely different research foci; however, two key themes can be identified. Social networks and employment play a vital role in helping migrants form an identity in their adopted country of residence. These two elements provide migrants with a greater sense of belonging and heightened feelings of self-worth as valued members of a community. Identity formation is inherently a social process and is dynamically constructed through interaction and discourse (Block, 2012; Taylor & Spencer, 2004). In the case of some refugees, the absence of a supportive social network and meaningful work opportunities presents a formidable challenge. Irregular, fleeting or fragmented day-to-day contact with others turns into significant pathways that critically shape and reshape their identities as they begin to understand who they are and how society perceives them.

Blommaert and Rampton (2011; p. 14) comment that "the language and literacy socialization of individuals in superdiversity requires a lot more research, both in- and outside formal education." Research has documented the challenges migrants face in succeeding in academia (e.g., Kanno & Vargehese, 2010; McBrien, 2005; Rowe, Martin, Knox & Mabingo, 2016) and beyond the classroom (e.g., Block, 2012; Deters, 2013; Miller, 2014; Norton, 2000; Norton & Toohey, 2001; Pavlenko & Norton, 2007), uncovering migrants' understanding of their own agency in specific contexts. These studies have recognised that the day-to-day activities of migrants become important sites of language and identity development. Asking the bus driver for directions, going to the doctor's office, or interacting with teachers all involve an awareness of what, how, and when to speak. In Etienne Wenger's (1998) discussion of the Community of Practice theory, he explains how these daily experiences impact identity formation. In the excerpt below, he uses the pronouns "we", "us", and "our" to refer to the general concept of individuals, people or members of a community. Wenger (1998; p.164) says that,

> we define ourselves in a small but insignificant way by our regular contacts with various professionals from whom we receive services. Though we remain mostly non-participants, our service encounters often let us know just enough about their practices to gain some sense of what is we are not, what we wish we were, what we would not dream of being, or what we are glad not to be.

Wenger differentiates between participants and non-participants, suggesting that identities are formed through the roles that individuals occupy. For migrants who engage in daily interaction with others, these encounters raise their awareness of their identities and their capacity to negotiate their roles as non-participants.

Power and inequality

When migrant identity is constructed through interaction and negotiation with others, cultural and linguistic differences highlight issues of power and inequality. Immigrants soon realise, in their contact with others, how others "identify" them and how much "power" they have in exerting their agency. This change in perception exemplifies van Lier's (2008) comment that perceiving is a form of action and an expression of agency. A perception that unequal power relations exist may also be attributed to Blommaert et al.'s (2005) reference to their roles as owners or users of spaces. They state (p. 209, emphasis added) that,

> important distinctions can be drawn between, on the one hand, those who regularly inhabit spaces and who can be said in some sort of way to *'own'* them in that they also can exercise more control over frames and framing activity, and on the other hand, '*users'* whose presence in a space is tied to cycles of clienthood.

Blommaert et al. (2005; p. 200) refer to individuals' need to "always have to orient to multiple centers of indexicality (authoritative individuals or institutions; schools, governments, the church, etc.)." In day-to-day activities, migrants must be adept at negotiating stratified layers of authority, from speaking appropriately to the person in front of them, to respecting the social norms of the immediate space, and to acknowledging their rights as a "citizen". Negotiation is an integral part of communicating effectively with others but when negotiating a disagreement, issues of unequal power come to the fore. From a community of practice perspective, Harris and Shelswell (2005) use the term, "legitimation conflicts" (p.168) to describe instances where,

> the legitimacy of the participant – whether central or peripheral – is brought into question by other community members. If the person in question is sufficiently peripheral to the practice, he may be rendered

> increasingly marginal by other group members or make himself so by consciously withdrawing contact with the group.

Although Harris and Shelswell's (2005) study was situated in an adult literacy skills classroom and was based on regular meetings amongst members of a "community", the concepts of legitimacy (Bourdieu, 1991) and peripherality (Lave & Wenger, 1991; Wenger, 1998) parallel the experiences of migrants. In Bourdieu's (1991; p. 167) words,

> [the dominant culture] contributes to the legitimation of the established order by establishing distinctions (hierarchies) and legitimating these distinctions… forcing all other cultures (designated as sub-cultures) to define themselves by their distance from the dominant culture.

Individuals in the centre (i.e., the dominant person, authority, or cultural groups) legitimise certain practices, norms of behaviour, and language use. Individuals on the periphery (newcomers, migrants, outsiders) must show alignment towards the centre or face being ignored, marginalised or excluded.

Migrant's daily contact with others reveals how much or how little power they possess in negotiating the outcomes of their interaction. Not all of these social encounters expose underlying power struggles. This regular or irregular contact with others provides occasions for linguistic development and positive identity affirmation. The day-to-day experiences of migrants act as opportunities and constraints that influence their awareness of their agentive self.

The aim of this paper is to understand the various ways in which migrants express their agency through engagement in everyday practices. In other words, this study's primary research question is, "How is agency instantiated in migrants' day-to-day experiences?" This study investigates how agency is manifested in a refugee's efforts to learn the language of the dominant culture, how agency becomes visible in legitimation conflicts, and how agency is documented in a migrant's evolving sense of identity. This paper is thus divided into three sections: agency in language learning, agency in social conflict and agency in identity formation.

Research context and methodology

According to the last national census in 2013, New Zealand has more ethnicities than there are countries in the world (Statistics New Zealand, 2013). The growing diversity can be attributed to various changes in immigration policies over the last few decades that have opened the doors to the international community (Spoonley, 2015). New Zealand is currently experiencing an annual net gain (more arrivals than departures) of approximately 70,000 migrants (Statistics New Zealand, 2016). At the time of the data collection, the annual refugee quota was 750, but the New Zealand government has recently increased this number to 800 (Immigration NZ, 2017). Not

all refugee cases are accepted as New Zealand immigration follows a careful screening process (Butcher et al., 2006). The refugees that arrive for compassionate reasons settle in refugee-receiving communities throughout the country, which include Auckland with its population of 1.4 million people. Auckland has become a superdiverse city with 39.1% of its residents born overseas (Statistics NZ, 2014). To assist with settlement, Immigration New Zealand has partnerships with local social and employment agencies, community groups and not-for-profit organisations to assist refugees with resettlement in the areas of health and well-being, housing, employment, education and training, and the English language.

My research participant, George (not his real name), who is in his mid-thirties, was a former student of mine in a tertiary-level course. He was a fluent speaker, albeit with some lexical and grammatical errors, and spoke with much confidence. When I learned that George had fled Iran six years ago to start a new life in New Zealand with basically no knowledge of English, I became intrigued to know how he had developed his language skills. Several months after the semester had finished, I asked George if he would be willing to be a participant in my research study.

Prior to my meeting George, he had enrolled in a few tertiary institutions to acquire IT and language skills. He found a Chinese-Malaysian partner named Amy (not her real name), who was also in her mid-thirties. Over a period of eighteen months, I met George on average twice a month, to discuss his experiences of integration, language learning, and any other aspects of daily life that he viewed as important.

This study uses an ethnographic case study approach (e.g., Duff, 1995) that combines elements from both ethnography (Bronson & Watson-Gegeo, 2008) and case studies (Duff, 2008) to observe phenomena (texts, activities, values, social structures) from a singular entity (a person, a school, a community). This approach emphasises the importance of context and the gathering of data from multiple sources for triangulation and interpretation. Denzin and Lincoln (2005, p.4) state that qualitative research,

> involves the studied use and collection of a variety of empirical materials – case study; personal experience, introspection; life story, interviews; artifacts; cultural texts and productions; observational, historical, and visual texts – that describe routine and problematic moments and meanings in individuals' lives.

The last statement in Denzin and Lincoln's quote above resonates with the current study's focus on agency and how it is expressed in everyday experiences. Detached objectivity is one of the goals of collecting and interpreting data. Although I share with the participant some subjective experiences of being a migrant of visible minority, I was not a member of the participant's cultural community and was unfamiliar with the experiences of integration from a refugee perspective. As a

participant researcher, I became privy to George's world. I heard stories of success and failure, hope and fear, and fun and laughter. I tape-recorded conversations, wherever possible, trying to gain an insight into how his past lives formed a trajectory into the present and future. I asked questions to delve a little deeper into his perceptions of himself and others. I also took observation notes when recording was too difficult (e.g., in loud public spaces, while walking) to record my interpretations of what I had just seen and heard. I transcribed segments of the audio-recordings and later checked with my participant to confirm or further elaborate on the details of our discussions.

The data for this study were analysed using grounded theory (Glaser & Strauss, 1967), in which thematic patterns emerge as the corpus of data is inductively categorised and compared across time. Repeated mentions of a topic or phenomena from the participant's tape-recorded data and researchers' observation notes were used for triangulation purposes. The longitudinal nature of this nature afforded the opportunity to identify changes (increases, descreases, cessation), turning points (critical incidents), idiosyncratic events, cumulative practices, or noticeably absent observations (Saldaña, 2013). Major and minor themes related to agency were then identified to draw up conclusions about the interpreted data. In the following sections, I will show excerpts from recorded data starting from George's sixth year of living in New Zealand. What follows is an interpretation of George's agency in relation to the major themes identified in the study, which were his efforts to learn English, his conflicts with others, and his sense of identity.

Agency in language learning

Goals for learning English

When George first arrived in New Zealand, he was determined to master the English language; however, it became apparent to him the reality of achieving his goal.

> I didn't know it was this much hard. So first time I was planning I had a procedure I had a plan to learn … something I can achieve in few years … as much I spent time to learn English I realise that it's really difficult even if I spent all my life I wouldn't be a native speaker. (George, first month of the research period)

I inquired into George's thoughts about why he continued to learn English even though he admitted that he no longer expected to be a "native speaker". George responded with,

> One things is you … have to and the other things is interest … but sometimes I have to … I have to explain something about politics … or what I want … it's kind of because I have to be interested in that things … then I wanna pick it up and think about it. (George, first month of the research period)

George focussed on a localised need to communicate with others. After fourteen months, George still maintained his focus on learning English to be able to communicate with his partner Amy and with people from other cultures.

> When we different we cannot communicate … so for me I use English when I need to communicate with you … with an English speaker … I have to speak English … this is where I need to speak English … I wanna tell her [Amy] something … so this is where I'm thinking about pick up the new vocabulary how to say this in English. (George, fourteenth month of the research period)

After seven years, his imagined and ideal self as an expert user of English shifted towards viewing language as a "hobby".

> I'm not planning anymore because I realise it's too it's huge … you plan for something that you can make … but something that you cannot make then you give up … so basically [learning English] just becomes like a … a hobby (George, fourteenth month of the research period)

Learning English represented George's need to communicate with others and his "investment" into his future (Darvin & Norton, 2015; Norton Pierce, 1995). This was reflected in his comment on the need for him to stay in New Zealand for three more years to apply for citizenship (observation notes, eleventh month of the research period). English was a pathway for obtaining a passport that enabled him and Amy to go to Malaysia or other countries. The next section shows excerpts from George's acquisition of new words and their relationship to his goals for learning English.

Vocabulary and goals

When I first met George, he often talked about the differences between Iran and New Zealand. I could tell that he wanted to explain what his daily life was like in the country where he spent his formative years.

> In Iran … when you're born you're born with politics … and you die with politics … politics is everything … is not like here. (George, first month of the research period)

During our meetings, I noticed that George would not only take an interest in learning English but also made an ongoing effort to learn new words.

> George often used his cellphone to go over the words that he was exposed to recently. He mentioned whether the word was interesting for him and then made up his mind whether he was going to use it,

> deleting unnecessary words from his cellphone. (observation notes, ninth month of the research period)

Conversations with George showed his need to learn English to help him discuss events related to the political environment in Iran. According to George, his Iranian culture values politics as a topic for daily discussion.

How did he achieve his goals of discussing politics in English? In part by watching the 6 o'clock news on TV and from the internet, he acquired an extensive vocabulary (e.g., *hypocrisy, sanctions, revolution, corruption, bribery, money laundering, letter of credit, smuggling, extortion, provoke*) that helped him explain the political situations in Iran and its relations with neighbouring countries. It seems evident that learning English was more than just a "hobby" for George. George wanted to understand not just the words, but the thinking or culture behind the words. He saw language as a reflection of how a "developed" and "Western" culture views the world (observation notes, sixteenth month of the research period). George explained to me how he learns new words that he hears and sees. He said that he is not translating English into Persian but trying to understand the thinking behind the words.

> The way that you look at things, the way that you absorb things, seeing things, hear things is different to the things that we see, maybe the things that we see you don't see, the way that we look at things you never look at things… the way you look at the simple cup is different to the way we look at this cup, so in fact I'm changing my way, to your way, to look at things, and thinking about things …that's why the things that you understand from the same reality is different from the things we understand from the same reality, and you get different conclusion. (George, eighteenth month of the research period)

The point here is that George looked beyond language as a tool for communication or as an object of study, but also as a window into the thinking behind people's words and behaviours. Although this study was not able to record the first six years of George's time in New Zealand, his original plan to master English shifted to learning English that would help him satisfy his communicative needs and integrate his politically-focussed agentive self into his day-to-day life experiences.

Linguistic repertoires

Blommaert's and Backus' (2011) concept of "linguistic repertoires" aptly describes how language is used in varying levels of proficiency with specific persons in particular social spaces. It also explains how George used code-switching or "Malaysian Persian English" (George's term, seventh month of the research period) with his partner.

> So this is how we mix Iranian … is more fun … because if I speak English I won't feel good … if I speak Persian … she doesn't understand … if she speak her language I don't understand … but a mixture of all of them makes it more interesting. (George, seventh month of the research period)

Earlier on in our meetings, George described how some of the linguistic exchanges involved explicit teaching (e.g., English words related to politics) as well as the implicit learning of words and phrases (e.g., scolding words in Malaysian Hokkien, Persian proverbs).

> Yeah sometimes she doesn't know something … I bring it in English and … teach it to her as well … the word that she never been faced with … she didn't use it because she didn't need to. (George, fifth month of the research period)

George also became increasingly aware of how their negotiated form of English differed from "proper" English.

> Since I'm talking to her … my English fluency dropped. (George)

As the couple spent more time together, they began to influence each other's use of and level of understanding of each other's languages.

> I noticed Amy was able to spontaneously recite song-like Persian proverbs. She said she had picked them up since George frequently repeated them. (observation notes, sixteenth month of the research period)

George increased his language proficiency in communicating Malaysian Persian English with each other at the expense of developing their fluency in "proper" English. Given that their daily social contact was primarily focussed on each other, it is not surprising that their agency to learn and use English was dependent and limited by externally-driven conditions.

Participant researcher

When we first started our meetings, I became George's English language communication partner. He inquired into New Zealand culture and ways of interacting with others. He also paid close attention to the words I used, their meanings, and my accent.

> I'm trying to pick up his accent … by saying car … something like this [mimics my pronunciation of "car"] … it's interesting for me. (George, first month of the research period)

As the months passed, George increasingly began to use more and more Farsi in his conversations with me. As a native speaker of English, I had no knowledge of Farsi; however, it was clear that he wanted to speak his own language and not just use our meetings as a chance to learn English.

> Before heading to their apartment, he said, *berim,* meaning "come on let's go" in Farsi directly to me. This indicates how comfortable he is with using his first language with me, his desire to teach me his language, or how automatic this phrase comes to his mind in this particular situation. (observation notes, seventeenth month of the research period)

George's agency evolved from being a participant in my research study to perceiving our roles as equal participants. This influenced his communicative focus that was initially English language dominant to an incremental use of Farsi in our discussions.

Social networks

George was also not working at the start of the research period but later found a part-time job at a fast food shop. His social contact with other English-speakers was limited which resulted in fewer opportunities to develop the language of the dominant community. Although the television, internet, and other cultural artefacts afforded opportunities to learn the English language, George often relied on his partner and dictionaries to teach themselves the meanings of words. When I asked about this, George replied,

> We have no option … what option do we have. (George, first month of the research period)

One of the initial plans for the research project involved employing a "snowball" strategy of asking participants if other known contacts would be interested in joining the study. In the case of refugees, past fears of persecution in their country of origin may still remain as present and future fears in the host country. George's aversion to include other Persians in the study impacted his integration into his own community of first language speakers.

> When I asked George about interviewing other Persian immigrants, he was very reluctant due to his fears of being reported by pro-Iranian government supporters. This significantly reduced his social network and opportunities for linguistic contact with others. (observation notes, first month of the research period)

The challenge of creating social bonds with other English speakers forced George and Amy to rely on dictionaries to further their understanding of the English language.

> The things is there are many things I wanna say in English … but even when I search in my … Farsi dictionary it convert to English. (George, thirteenth month of the research period)

The previous excerpts reveal aspects of George's linguistic integration and non-integration into the dominant community of English speakers. George experiences with learning English reveal a multifaceted picture of deciding which languages to use, for what purposes, and when and how to use them. In the various social spaces that he inhabited, he used English only in public transactional encounters (e.g., while shopping, while working at the fast food shop), Farsi or Mandarin in his social contacts with others and a unique Malaysian, Persian English way of talking with his partner. These linguistic repertoires were reflections of his agency, of both internal and external influences, and situated in particular social spaces.

Integration is more than just learning the language of the dominant society. Immigration policies state expectations for migrants to become contributing members of society by finding employment and integrating into community networks. I wanted to find out more about George's experiences of their engagement with others in the wider community. In the next section, I provide some accounts of their agency in their day-to-day contact with others.

Agency in social conflict

George's contact with English-speakers was primarily in the form of transactional and small talk exchanges at the fast food shop where George worked, and in day-to-day activities at the supermarket, shopping mall, restaurant or movie theatre. Aside from the language issues of learning how to express himself in Malaysian Persian English with Amy, George reported occasional social conflicts with individuals in the community (e.g., a dispute over the cost of fixing his car). Fortunately, George was more than willing to describe these experiences with me, in part because he wanted to learn what he could have said or done in those circumstances. I will now turn to two experiences, one at a medical clinic and another at a clothing shop, where George had to negotiate disagreements with staff members.

One of the disputes arose over the issue of not receiving a refund at a medical clinic. George paid for the results of a medical procedure but never received them. After George and Amy decided to request a refund, the receptionist asked them to fill out a form and told them the funds would be deposited into their back account. They noticed that the funds had not been credited to their account and called a contact number at which point they were told they that the clinic had never received the form for reimbursement. This prompted them to go back to the clinic and attempt to argue their case. George told me in lengthy detail how he demanded that they receive his medical results or a refund. The receptionist repeatedly told them that "it's not our

problem", "see your doctor", "in our administration". In a recall of these events George said,

> How do you learn English when you want to fight? (laughs) … and I said to her [the receptionist], I'm gonna get my money back and I will … because I don't … I cannot speak English … maybe I cannot speak … I'm not stupid I just can't communicate in English very well. (George, ninth month of the research period)

George's failure to receive a refund made him question his language ability or his understanding of "Kiwi" ways of argumentation.

> This is regarding English … I don't know how to fight in Kiwi … I don't how to argue in Kiwi ways … this is the way I have to switch to the Iranian way (George, ninth month of the research period)

Another incident involved the need for George to return a pair of shoes to a shop because part of the sole peeled off soon after its purchase. George was told that he would receive a phone call to say when he could pick up his shoes. He never got the phone call. He went into the shop and heard several excuses (the shoes are on the way, someone will call you in 30 min, already called you). In the end, he finally received his replacement shoes but made a few interesting comments upon reflection.

> Another argument … I've been so busy these days (laughs) … good practice for my English. (George, tenth month of the research period)

Social conflicts, such as the ones George encountered at the medical clinic and shoe shop, can be regarded as sites of language acquisition since they push George to understand opposing viewpoints and to search for linguistic expressions that enable him to better express himself in his service encounters. George's challenge is his fixation on his rights as a resident.

> Before I thought maybe in developed country … you can get your rights … everything is in the right place … okay maybe here is better than Iran but now I believe anywhere you go … right is something to get … is not something to given … is not something given … yeah is not something given … is something you have to get … this is what I believe. (George, tenth month of the research period)

George was still mystified about the "Kiwi way" of arguing one's position. Reflecting on his recent experiences, he was uncertain whether negotiation would lead to any resolution: "How do you negotiate with someone … who doesn't

negotiate back?" (observation notes, tenth month of the research period). These two experiences show the presence of stratified layers of power, or to what Blommaert et al. (2005) refers to as the existence of polycentric rules of engagement. Migrants may wish to resolve their disputes with front-line staff but feel powerless in their attempt to negotiate an agreement. It would be difficult to argue one's case to a person who is located off-site or argue against a set of rules and procedures outlined in a written document. Learning how to negotiate over a disagreement may be particularly difficult for migrants who do not feel confident about their language skills. Since these conflicts may occur with regularity, frustration and self-questioning could lead to a maladaptive coping strategy (Maydell-Stevens et al., 2007) of avoiding interaction with others. Other migrants may not exhibit their agency in the same way as George did, who fortunately regarded these negotiations as opportunities to practice his English.

Agency and identity

George transformed his thinking about his own identity through his interactions with others after immigrating to New Zealand. George remembered instances where other people would ask where he was from and recalled how they didn't seem too "happy" when he told them he was from Iran. He told me that he couldn't say he was Italian because he said, what if the other person spoke Italian. It would then soon become obvious that he was lying. George began to tell people that he was from Armenia, which he said, brought up some confusion, since they didn't really know where that was, but it was less problematic than saying he was from Iran.

The constant questions by others about George's origins influenced his perceptions about his own identity. George's physical appearance was like a book cover that was open to judgement by others, but from George's point of view it was only the tip of the iceberg, since there was much more to him than what people saw. Over time, George gradually wore a different "mask" (Edwards, 2009; Omoniyi, 2006) by wearing casual clothes, using colloquial phrases with a Kiwi accent, and blending in with the local culture; however, he did this not in part, because he felt compelled to, but because he wanted to. His interactions with others and his time in New Zealand led him to transform his beliefs about who he is and who he wanted to be. He felt comfortable being a "global person" and even spoke of being neither Kiwi nor Persian anymore but a person of many cultures. When I asked about how he feels about who he is now, he replied:

> I cannot say who I am … I'm a global person … because I pick up something from Kiwi something from Malaysian something from … so from different culture … and this makes me rich … so I won't have that nationalism … I wanna be Kiwi or let's be Kiwi or let's be Iranian or whatever not anymore … maybe used to be at

> the beginning I was really interested about NZ and culture … 6 years ago I wanted to be a Kiwi … but not anymore. (George, sixth month of the research period)

Migrants may develop a transnational identity (Philipp & Ho, 2010), where perceptions of who they are represent a blend of past and present places of residence.

> You cannot be Western and you don't wanna be your own culture anymore … you gonna be something in between … like even now … I don't wanna be exactly an Iranian … like people who are in Iran … and I don't wanna be exactly like Western people. (George, sixth month of the research period)

I also asked him about the events in his life that changed his perceptions about himself. He spoke of his positive experiences at a language school where he felt supported by the instructor and part of a community of learners (observation notes, eighth month of the research period). However, his transition to university in order to obtain skills or qualifications for a future career path was less than gratifying. George struggled with the focus on independent study and felt isolated or marginalised, especially during his interactions with his classmates.

> Very bad experience over there … that was where I got the most close to Kiwi culture as I … I realising … I'm on the border … and … it is not they are bad I'm good I'm bad they are good … of course there are some many things that happen bad experience I had … whatever … maybe they had the right because I was too different. (George, eighth month of the research period)

George experienced considerable difficulty with completing his assignments, had little contact with a community (co-ethnic or not) for support, and consequently dropped out.

> When you cannot see yourself part of society … you become isolated … and slowly you become … disappear, separated … isolated … so when you go to the edges slowly you become disappear. (George, ninth month of the research period)

George's agency is reflected in his response to both internally-driven beliefs about what it means to be a university student and externally-driven conditions, eventuating in self-exclusion.

George's subsequent search for a full-time job led to meeting a former Iranian refugee and owner of a takeaway food shop (observation notes, fifteenth month of the research period). Using a community of practice term (Wenger, 1998), his boss acted as an "old-timer" that enabled George to feel comfortable with his newly adopted

"global" identity and to see himself as a member of society. George perceived that learning English and acquiring skills through a university were pathways towards becoming part of a larger community of practice. His investment never paid off. George wanted more than a job at takeaway food shop that he regarded as temporary. In the end, after applying for numerous other jobs with little success, George and Amy decided to move to another country to pursue their goals of a better career and lifestyle.

Conclusion

Agency is a multifaceted concept that refers to an individual's capacity to act according to internal and external influences. This may be expressed in various ways including responding to external events or triggers, acting on inner fears and expectations, and changing perceptions about one's own identity. The excerpts that appear in this paper show how acts of agency can be observed in George's efforts to learn English, his response to social conflict, and the evolution of his identity.

One of the aims of this paper was to show how aspects of agency could be documented through the eyes and ears of a migrant language learner. A limitation of this investigation is its reliance on a single migrant's voice. George's reluctance to have other Farsi speakers become aware of his existence as a refugee limited the sample size; nevertheless, a positive outcome resulted from the increased contact with the study participant over the eighteen-month period. This study provides an insight into the experiences of a refugee language learner with very few social ties, thus providing a complement to other studies that have documented the relationship between language learning and close family and friend networks (e.g., Palfreyman, 2011).

It is noteworthy to mention that social spaces, in which migrants encounter others, are never neutral. George's feelings of being on the edge or periphery are a conscious reflection of his interaction with his classmates, service staff and the general public. Gatekeeping may be regarded as a process where access to employment or education is denied where people in positions of authority (e.g., recruitment consultants) or instruments (e.g., standardised tests) act as gatekeepers. For language learners, I suggest that everyday people appear to occupy a gatekeeper role since they afford or limit access to other forms of capital (e.g., linguistic, cultural, social). The day-to-day experiences of migrant learners simultaneously offer both affordances and constraints. In George's case, his experiences with conflict with service staff provided opportunities to practice his argumentation skills but also excluded him from fully negotiating his position. George made a considerable investment into learning English and becoming part of society; however, his encounters with others and experiences of marginalisation highlight some of the challenges of "integrating" into a host society.

The implications of this study include a suggestion for classroom teachers to discuss and reflect on their students' positive and negative experiences as a way of understanding students' agency within the social spaces they encounter. Drawing connections between what migrants experienced and how they felt may help mitigate feelings of self-blame or finger-pointing. By bridging the gap between migrants' lives from within and beyond the classroom, language choices become more real and meaningful. This will ultimately help migrants decide when, where and how to exercise their agency as they integrate themselves into the various communities they come across and as they go about their daily lives.

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University literature essays in the UK, New Zealand and the USA: Implications for EAP

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Abstract

This paper reports findings from a preliminary study of upper-level and high-scoring undergraduate literature essays from the Academic Writing at Auckland (AWA) corpus, the British Academic Written English (BAWE) corpus, and the Michigan Corpus of Upper-level Student Papers (MICUSP). The study aimed to identify differences in students' academic writing style in these contexts. Just under 100 argumentative essays were analyzed (25 each from Britain and New Zealand and 47 from Michigan), using the Multidimensional Tagger (Nini, 2014), the Linguistic Inquiry and Word Count (Pennebaker et al., 2015), measures of readability and manual analyses including counts of references. The essays from MICUSP were found to be the most interactive and conversational, and the essays from AWA were found to be the most formal and 'academic'. The essays from BAWE fell somewhere in the middle on most measures. This paper reports on these differences and suggests their implications for students studying in "Inner Circle" institutions, and for the teaching and learning of EAP around the world. Plans for the next stage of the research are also outlined.

Keywords: Academic Writing, Corpus Linguistics, Culture, Essays

Introduction

Essays, or 'library research papers', as they are called in some settings (Hyland, 2009), are widely acknowledged to be a key "pedagogical process genre", that is, a genre that plays an important role in facilitating student learning (Charles & Pecorari, 2016, p. 122). Essays are identified as one of the 13 genre families in the British Academic Written English [BAWE] corpus[1], a collection of nearly 3000 proficient texts written by students at UK universities. Nesi and Gardner (2012) contrast the Essay with the Explanation, a less demanding genre family which requires students to present shared and established information rather than their own perspectives. The primary purpose of the Explanation is to develop and demonstrate understanding of the object of study, whereas Essays require more elaborate construction and the application of critical thinking skills. Across disciplines, university essays generally require students to support a position using evidence derived from their reading and put forward views based on a sustained argument (Hyland, 2009; Nesi & Gardner, 2012). Essays link arguments with evidence (Nesi & Gardner, 2012) and move "beyond description to analysis and reasoning" (Hyland, 2009, 131).

Although the essay may be a challenging genre for novice writers, it is a very common assignment type in higher education (de Chazal, 2014; Wingate, 2012), especially in the humanities and social sciences. In the Arts and Humanities component of the BAWE corpus there are far more essays than any other type of assignment, and of the 111 BAWE assignments written by students of English, only 19 belong to other genre families. Essays cut across nearly all disciplinary fields of study, however, unlike for instance the Problem Question, a discipline-specific genre of central interest only to students of law (Jordan, 1997) or the Patient Case Study/Care Critique that is only relevant to students in the health disciplines (Gimenez, 2008). There is a more even spread of genre families amongst assignments in the Life and Physical Sciences, but of the 34 disciplines represented in BAWE, only one (small) Meteorology component contains no essays at all.

Because essays are so common and so widely distributed in higher education, they are often the main focus of EAP writing instruction. Arguments can be constructed differently in different disciplines, as Gardner (2012) reveals in her study of BAWE corpus essays from Classics, English, Law, Philosophy and Sociology, but in EAP a generic approach is often taken, without considering the different types of essays produced for different purposes in different contexts (Hewings, 2010). This tendency to treat 'the essay' as an undifferentiated single genre is possibly due to washback from university entrance language tests such as IELTS, and the need to teach students from a variety of disciplines in the same class, but it is also likely to be due to the fact that there is still very little written about the language of authentic essays, produced for real degree programmes. Unfortunately for EAP teachers, authentic, discipline-specific essays do not adhere to an established template, unlike essays produced for general academic language assessment (e.g., the 'five-paragraph essay' – see Wesley, 2000), or assignment genres such as Lab Reports. Part of the challenge of the essay-writing task is to develop and sustain an argument in one's own voice, while at the same time demonstrating critical and organizational skills appropriate to the topic, the discipline, the level of study, and local departmental conventions.

Several studies have acknowledged the influence of national and regional culture on the organization and style of student writing. Kruse & Chitez (2012), for example, compared university genres across three Swiss regions (Italian, French and German) and found that the Italian-speaking university they investigated stressed the expression of knowledge "in a personal voice", and that the French-speaking university stressed the voice of the discipline, arguing that "the personal should not appear in the text", while the German-speaking university required students to switch between the academic and the personal, according to genre. Variation has also been noted in the academic writing produced in countries where English is the first language - the "Inner Circle" as defined by Kachru (1985). For example, Ädel (2008) compared UK and US writing on general topics in the Louvain Corpus of Native English Essays (LOCNESS), and Chen (2013) compared phrasal verb use in a British General Studies corpus (GS-UK), a US counterpart (LOCNESS-US), and a

selection of humanities and social science undergraduate essays taken from the BAWE corpus and the Michigan Corpus of Upper Student Papers [MICUSP][2] . In Ädel's study, the US writers were found to use significantly more personal metadiscourse than the British writers. In Chen's study, significantly more phrasal verb types and tokens were found in each of the two US subcorpora than in each of the two British ones; there were also significantly more phrasal verbs in the general argumentative essays produced for LOCNESS-US and GS-UK than in the essay selections from MICUSP and BAWE, which Chen considered to represent more formal and 'academic' writing. (2013, pp. 426-7). Similar differences between UK and US writing are noted by Connor (1990), reporting on a study of compositions produced by 16-year old high school students in England, the US and New Zealand, collected in the 1980s for the International Association for the Evaluation of Educational Achievement. An analysis of fifty of these compositions, randomly chosen to represent each of the three countries, revealed that the US writers were significantly more likely to use colloquial and interactive features, as indicated by contractions, first and second person pronouns, and a low type-token ratio. The US writers were also less likely to nominalize and use conjuncts (p. 84).

The finding that academic writing conventions are not identical in different countries has implications for the success of student mobility programmes, and indicates a source of potential problems for academic communication at all levels, including between writing specialists around the world. Close register studies of student output in Inner Circle countries are few and far between, however, and we are not aware of any comparative studies focusing specifically on essays discussing works of literature, nor any general three-way comparisons of US, UK and New Zealand university student writing. The preliminary study reported in this paper seeks to establish whether the kinds of differences reported by Ädel (2008), Chen (2013) and Connor (1990) apply to proficient upper-level undergraduate literature essays, with a view to stimulating debate about possible differences in the expectations of university literature departments in Inner Circle countries generally. Such debate might help to inform writing tutors working with students from different educational backgrounds, EAP learners aiming for undergraduate level study, and producers of academic writing materials intended for different local markets.

Methods

Our data was collected from three corpora of university student writing: BAWE, MICUSP, and the Academic Writing at Auckland [AWA][3] corpus from New Zealand. Prior studies (e.g. Olinghouse & Wilson, 2012; Biber et al., 2014; Bruce, 2010; Charles, 2007) have shown that the student's level of attainment and the communicative demands of the specific writing task can affect register features in university writing. Thus, as "It is only against a background of sameness that differences are significant" (James, 1980, p. 169), we tried to match our data across the three university environments as closely as possible, in terms of the level of

study, genre, and disciplinary area. All the assignments we collected had been given high grades by subject specialists at their respective universities, and were therefore considered to have met departmental expectations regarding academic conventions and the quality of the language. They had also all been classed as argumentative essays by the original corpus compilers, and came from similar disciplines and covered similar topics. However, although we selected essays from comparable years of study where they were available, an absolutely perfect match was impossible to achieve as MICUSP contains no assignments below the final senior year of undergraduate studies (Year 4 for MICUSP) and neither BAWE nor AWA contained enough final year essays (Year 3 for BAWE and AWA) in the appropriate disciplines (AWA was still under construction). To make up numbers, we therefore added some essays from lower levels to the AWA and BAWE datasets. The MICUSP sample remained, however, considerably larger than those of AWA and BAWE.

There is also a further reason why the three datasets are not identical. All of the AWA writers were L1 users of English, but six of the 17 BAWE writers and three of the 40 MICUSP writers had other first languages. Two German speakers wrote three of the BAWE essays, three French speakers each wrote one essay, and we also included one essay by a Japanese speaker. Two of the MICUSP essays were written by an Urdu speaker and four by two different speakers of Chinese. Although all these writers were highly proficient users of English, as evidenced by their grades, the speakers of other languages who contributed to the BAWE dataset tended to use slightly shorter words and sentences, resulting in a lower level of reading difficulty. No such difference was noted for the MICUSP dataset. Details of the educational background of all contributors had been collected for the BAWE project, and so we knew that the French and German writers had received all their secondary education overseas and the Japanese writer had received just one year of pre-university education in the UK. MICUSP did not record the educational background of contributors, and it is possible that the Chinese and Urdu-speaking writers in the MICUSP dataset had actually received all their previous schooling in the US.

Examples of essay titles from the three corpora are provided below.

MICUSP
Father-daughter relationships in Shakespearian plays
Human-Animal Nature in H.G. Wells and Edgar Allen Poe
On Frames and Resistance in *Pride and Prejudice*
The Grey Zone of Shame in Levi's *The Drowned and the Saved*
The Ladder: Sexuality of Ancient Greece as an instrument of social mobility

BAWE
Accommodating the disagreeable in Victorian text closures
Two writers' conceptions of social identity through the politics of space and/or place
The construction of gender and gender roles in *The Good Soldier* and *Mrs Dalloway*
Gender and speech or eloquence in nineteenth century American literature

Discuss the pursuit of justice with reference to at least two Greek plays

AWA
Mary Shelley's mad scientist and the birth of a monster
Clowns in two Shakespeare plays
Rhizomatic Territory within Stephen King's 'Dark Tower Series'
'Cerium' in Primo Levi's *The Periodic Table*
In the *Lysistrata* is the focus on sexuality just a diversion from the seriousness of war?

The disciplines, quantity and levels of the chosen essays are given in Table 1.

Table 1. ***Disciplines, quantity & levels of selected essays***

	MICUSP	BAWE	AWA
	English 46 (Year 4)	English 20 (Year 3)	English 7 (Year 3) 15 (Year 2)
	Greek drama 1 (Year 4)	Greek drama 4 (Year 2)	Greek drama 1 (Year 1)
		Film (Classics) 1 (Year 3)	European Studies 1 (Year 3) 1 (Year 2)
Total essays	47	25	25
Total writers	40	17	13

The majority of the essays were discussions of literary themes, but two each in MICUSP and AWA, and five in BAWE, can best be described as 'close text analyses', as shown in Table 2.

Table 2. ***Type of essay***

	MICUSP	BAWE	AWA
General argument	45	20	23
Close text analyses	2	5	2

The essays were analysed manually and with the *Multidimensional Analysis Tagger* (MAT) 1.2 (Nini, 2014) and the *Linguistic Inquiry and Word Count* (LIWC2015) (Pennebaker et al., 2015). MAT uses an expanded and adjusted version of the Stanford Tagger to mark texts for the linguistic features used in Biber (1988).

LIWC2015 counts words per sentence, words of more than six letters, and parts of speech including function words (as a percentage of total words in the files). It also provides information about the psychometric properties of the words used in the files, but this information was not used in the current study as it was considered likely to reflect the nature of the literature under discussion, and would therefore not be a useful tool to reveal stylistic variation between groups of writers. The Flesch-Kincaid Reading Ease Test, the Gunning FOG Index and the SMOG readability formula were also applied, using the online tool *www.thewriter.com/what-we-think/readability-checker*.

A text's readability score indicates the ease with which it can be read by an L1 speaker of English, calculated on the basis of word and sentence length. A lower score in the Flesch-Kincaid Test indicates greater complexity, and higher scores in the FOG and SMOG tests indicate that the reader needs to have a higher level of education. MAT and LIWC measure many of the features in a text that have been taken to indicate proficiency in prior studies of ESL academic writing. Generally, writing produced by learners of English moves from a more spoken style to a more written style as writing ability develops, according to findings from both qualitative (e.g. Shaw & Liu, 1998) and quantitative studies where more advanced learners have displayed greater lexical diversity (Yu, 2009) and used longer sentences (Bulté & Housen, 2014), longer words (Ferris, 1994), more passives and 3rd person/impersonal pronouns (1994), and longer noun phrases and a more nominal style (Crossley & McNamara, 2014). These tendencies have also been observed by Grant and Ginther (2000), who used the tagging system developed by Biber (1988) to examine timed essays produced by L2 writers for the Test of Written English.

Preliminary results

Measures of formal written style

The three readability formulae were applied as a first, broad measure of the level of reading difficulty of writing produced by the three groups of writers (see Table 3).

As can be seen, the New Zealand essays were judged to have the highest levels of complexity in written style (highest level of reading difficulty) according to these formulae, and MICUSP essays from the US were judged to be the simplest. For the BAWE essays, the level of reading difficulty was reduced by the inclusion of the seven assignments written by speakers of other languages. No such effect was noticed for the MICUSP essays.

Table 3. ***Readability of selected essays, as measured by standard formulae***

	MICUSP	BAWE	AWA
Flesch-Kincaid	50.9 (10th to 12th grade; fairly difficult to read)	43.5 (College level; difficult to read)	41.7 (College level; difficult to read)
FOG	14.4 (College sophomore)	15.9 (College junior)	16.1 (College senior)
SMOG	10.7 years of education	11.7 years of education	12 years of education

The results from various measures using MAT and LIWC are shown in Tables 4 and 5. With references and footnotes removed, AWA essays ranged from 1074 to 3003 words, and MICUSP essays ranged from 803 to 4554 words. BAWE essays were the longest, ranging from 1111 to 4919 words. Although length has been taken as an indicator of writing proficiency in studies of timed high school essays, as reported by Connor (1990), the length of the BAWE, AWA and MICUSP assignments is probably of little significance, being dictated by local departmental rules.

Table 4. ***Essay length, lexical diversity & lexical density in selected essays***

	MICUSP	BAWE	AWA
Total words (footnotes & references)	93,411	75,217	45,267
Average essay length (no footnotes & references)	1,970 words (s.d. 718.7)	2,961.5 words (s.d. 1021.8)	1,774.5 words (s.d. 528.3)
Words per sentence	29.72	31.97	31.35
Type-token ratio	203.7	212.6	210.9
Lexical words %	46.8	47.7	48.4

On the other hand, measures of sentence length, type/token ratios and the proportion of lexical words, also shown in Table 4, suggest that the MICUSP essays were less phraseologically complex than AWA and BAWE, and used a narrower range of lexis. Lexical diversity is measured by MAT according to the number of types of words occurring in the first 400 words of the text, as in Biber (1988). If the type-token ratio is lower, the same words are being used more frequently. Lexical diversity in the MICUSP essays was significantly less than in the BAWE and AWA essays ($p = 0.04$). The AWA essays were the densest, containing the highest proportion of lexical

words to function words. Lexical density and lexical diversity are strongly associated with written as opposed to spoken discourse.

Table 5 indicates the same kind of differences between AWA, BAWE and MICUSP essays. AWA had significantly more conjunctions, generally associated with a more 'written' as opposed to 'spoken' style, as compared to BAWE ($p = 0.03$), and MICUSP ($p = 0.009$). MICUSP essays contained the lowest proportion of long words, and were also the least nominal, as measured by the proportion of nominalisations and attributive adjectives. Measures for the BAWE essays fell between those for MICUSP and AWA, as in Table 3.

Table 5. ***Word distribution in selected essays***

	MICUSP	BAWE	AWA
Words longer than 6 letters %	24.15	26.54	29.14
Nominalisations %	2.9	3.2	3.6
Attributive adjectives %	6.3	7.4	7.6
Conjunctions %	0.5	0.6	0.8

Differences in style between the AWA and MICUSP essays are illustrated in the following examples. Example 1, from AWA, shows the way adjective and verbs have been converted to nouns (*support, diversion, seriousness, assessment, importance*) and nouns have been modified by attributive adjectives (*limited support, sexual humour*). This makes the writing denser and more abstract.

Example 1
Limited **support*** exists for the hypothesis that in Aristophanes' Lysistrata the focus on **sexuality** is just a **diversion** from the **seriousness** of war. In forming this view, an **assessment** will be made of the **importance** of scenes portraying the **seriousness** of war, immediately undercut by ***sexual*** **humour**, which may be seen to support the hypothesis. (**AWA**)
***** Italics and bold font added to highlight attributive adjectives and nouns.

However, Example 2, from MICUSP, shows more evidence of human agency (*Many struggle, People feel, He would not let there be)*. Noun phrases tend to be shorter, there tend to be fewer words before the main verb, and the text is less dense.

Example 2
One common problem for the Christian tradition is the idea of evil in the world. *Many struggle****** to believe in a faithful and loving god when there are so many apparent problems with society. *People feel* that if God is so loving and just, merciful and great, *He would not let there be* so much pain and struggle and toil in the world.

Toil is a concept thoroughly explored in William Faulkner's *As I Lay Dying*. (**MICUSP**)
* Italics added to highlight use of human agency.

Measures of interactivity

A further difference between the three datasets relates to the degree of overt interaction with the reader. This was calculated according to the proportion of contractions, question marks, and 1st and 2nd person pronouns in the texts, as shown in Table 6. In corpus-based studies such as those reported in *The Longman Grammar of Spoken and Written English* (Biber et al., 1999) these features are all strongly associated with spontaneous speech rather than formal academic prose. Contractions are considered to be "typical of conversation", and "can be used to signal a degree of informality in writing" (1999, p. 43), while interrogative clauses tend to occur in "dialogue situations" (p. 203), and pronoun forms which refer to the speaker and the addressee (*I/me, you*) are "far more common in conversation (and to a lesser extent fiction)" than in the other registers studied (newspapers and academic prose) (p. 333).

Table 6. ***Interactive features in selected essays***

	MICUSP	BAWE	AWA
Question marks %	0.10	0.05	0.02
Contractions %	0.18	0.14	0.09
1st person pronouns %	0.63	0.61	0.23
2nd person pronouns %	0.26	0.23	0.11

The MICUSP essays contained the greatest proportion of all these interactive features, and it is notable that the use of 1st person pronouns is negligible in the AWA essays. It should be borne in mind, however, that some of the features occur in quotations from literary texts and therefore do not reflect the voice of the student writer, as noted by Gardner (2012) when comparing 1st person use in literature essays with essays from Law, Philosophy and Sociology in BAWE.

Use of references

Manual analyses revealed surprisingly large differences in the use of references and footnotes, as indicated in Table 7. BAWE essays had the most reference list entries, with an average of 10.5 compared to a 2.2 average for MICUSP essays. Taking essay length into account, both BAWE and AWA essays had on average a reference list entry for every 365 words of essay, almost three times more than the MICUSP essays. Almost half (47%) of the MICUSP sample contained only one reference, or

no references at all. Where given, these tended to be lists of "Works Cited" and/or numbered endnotes, which often only referred to the work or works under discussion.

Table 7. ***References and footnotes in the selected essays***

	MICUSP	BAWE	AWA
Average number of reference list entries per essay	2.2	10.5	6.7
Average number of essay words per reference list entry	1056	365	365
Average number of words per footnote/reference	8	34	28

The BAWE and AWA essays also tended to make extensive use of footnotes containing the "comment, explanation, or information that the text can't accommodate", as advocated by the Modern Languages Association (*MLA Style Centre*, n.d.). The style of these footnotes is illustrated in the following examples, the first from BAWE (Example 3) and the second from AWA (Example 4).

Example 3
1. Baldock, p.20
2. *Agamemnon*, L.361
3. Lebeck in Segal (eds.), p. 76
4. Examples can be found: Agamemnon in *Agamemnon* L.1520, 1642-3, Cassandra in *Agamemnon* L.1047. For Clytaemnestra and Aegisthus there is no direct use of metaphor of nets, but the frequently occurred idea that they are killed with the same trap as they killed Agamemnon and the tableau in *The Libation Bearers* where we see corpses of these two and the murder-robe from the previous play together, may help the audience to create the image that the two adulterers are also died as a result of being caught up by the 'net' of fate.
5. *The Eumenides*, L.116-7
6. Earp, p.114
7. According to Prag (p.44), this pre-Oresteia notion is expressed on a metope from Foce del Sele that shows a young man struggling with a snake, described not as a heroic battle but as self-defence and an attempt to escape, which exactly coincides with the situation Orestes is put in towards the end of the trilogy.

Example 4

3. Chaïm Perelman, "The New Rhetoric: A Theory of Practical Reasoning," in *The Rhetorical Tradition*, (Boston: Bedford/St. Martin's, 2001), 1388.
4. In this essay, the term *rhetor* will be used to encompass all producers of rhetoric - i.e. both those who speak their argument and those who write it. *Orator* will refer to one who uses speech for argument, and *writer* or *author* to one who uses text.
5. Ibid., 1391.
6. Ibid., 1393.

On the other hand, only one essay in the MICUSP sample used footnotes, and some of these notes were rather different in style from those in AWA and BAWE, referring directly to the opinions and actions of the student writer: *my own personal opinion*; *I have added*; *I make no assumption*; *I wish to make the point* (see Example 5).

Example 5

1. While this is my own personal opinion, it is not solely my own. James Brundage refers to Margery as "uncommon" (504), and qualifies his analysis of her in the context of theorizing medieval marriage and sexuality by mentioning that she was "atypical" (507).
2. Neither of these quotations are the text's original italicizations; I have added them for emphasis.
3. I make no assumption that she had ulterior motives for such a naming – I believe her avoidance of artistic self-aggrandizement was borne of genuine reverence for God's creation. In this paper, though, I wish to make the point that her actual motives are not relevant: only the beneficial end-products of her choices.

Conclusion

Several factors reduce the ability to claim statistical significance for our results. Our datasets were quite small, and were not completely matched: there were considerably fewer BAWE and AWA essays than MICUSP essays, in AWA only 13 writers were represented, as opposed to 17 in the BAWE dataset and 40 in the MICUSP dataset, and all the AWA writers were L1 speakers of English, whereas six of the BAWE writers and three of the MICUSP writers claimed other mother tongues.

However, although it is possible that factors other than educational context may have influenced some of the differences we discovered, a clear trend of less complexity in the MICUSP essays and greater complexity in the AWA essays was identified, with BAWE essays falling between these two on most measures. AWA texts were found to be more lexically diverse, and to contain longer sentences and words, and more nominalisations, attributive adjectives and conjunctions than the MICUSP texts. All these are markers of a more highly literate style (Bulté & Housen, 2014; Crossley & McNamara, 2014; Ferris, 1994; Grant & Ginther, 2000; Yu, 2009). MICUSP essays were rated easier to read (using the Flesch-Kincaid Test), more suitable for readers at

lower levels of study (using the FOG and SMOG formulae), and more interactive, containing five times as many question marks, twice as many contractions, almost three times as many 1st person pronouns, and more than twice as many 2nd person pronouns as the AWA essays. All these findings support the results reported by Ädel (2008), Chen (2013) and Connor (1990). The notable difference in the type and quantity of references to other works also indicates that referencing, a key aspect of professional academic writing, was less important for the MICUSP undergraduates.

Reasons for such differences can only be surmised, as further research is required in this area. However they point to the possibility that the general expectations for proficient undergraduate student writing vary across the three countries, and may apply across genres and disciplines rather than only to essays on literary topics. UK and New Zealand undergraduate writing may be expected to be closer to that required at postgraduate level, whereas a greater distinction may be made between undergraduate and postgraduate writing in the US. Differences in education participation rates might be influential in this respect; mass participation in tertiary education is still a relatively new phenomenon in New Zealand and the UK (Ganobcsik-Williams, 2006) compared to the US, where tertiary education has been accessed by a higher percentage of the population for longer. The more spontaneous 'oral' MICUSP style noted in our findings may possibly have developed as a result of, and as an encouragement to, this wider participation, because it enables undergraduates to express their own critical response to the literature before they have acquired all the skills associated with professional academic writing.

Our findings have a number of possible implications. Assumptions about the similarity of proficient student writing across the three countries, and the equivalence of language proficiency assessment systems, such as the US-based TOEFL, and IELTS, used more in UK and New Zealand, could be challenged, especially if the differences identified in the literature essays in our samples are also found in writing from other disciplines across the three countries. Because of such differences, high-achieving US students (or students who have received a US-influenced education elsewhere in the world) may do less well if they continue their studies in other Inner Circle countries. Writing tutors everywhere need to be made aware of this possibility, in order to give the best advice to internationally mobile students. For EAP tutors, a clear understanding of the expectations for undergraduate writing in the target country of study would help them to adapt their writing courses appropriately, and prepare learners to meet such expectations. The awareness that expectations can vary across countries, and that there is not necessarily one correct way to write, could also help learners understand the context-specific nature of written genres, and to adjust their writing to suit these contexts.

For those producing tertiary-focused EAP writing materials, it may be more helpful to focus on a local rather than international market. Exemplars drawn from one country, for example, may not be appropriate models for students aiming to study in another country. Anecdotal evidence suggests that US-based EAP teaching materials

are often rejected by New Zealand teachers because the style of the sample writing employed is more personal and informal than that required in a New Zealand university. The MICUSP and AWA essay data suggest that such differences in student writing in the US and New Zealand are real, and might therefore be seen to justify the New Zealand teachers' response.

Of course, any consideration of pedagogical implications must acknowledge the preliminary nature of the current study. Our next step will be to develop larger and more comparable datasets, use fuller statistical analyses, and explore in more detail the interplay between the writers' own voices and those of the writers and characters whose words they quote. However, despite its preliminary nature, we suggest the current study illustrates the contribution corpora-based studies can make to an understanding of expectations for academic writing, and as a guide for the adaptation of EAP teaching and learning to specific contexts. While still under development, AWA is now freely available as a searchable resource, which researchers and students may access and interrogate in the manner of BAWE and MICUSP.

Notes

1. See www.coventry.ac.uk/bawe. The British Academic Written English (BAWE) corpus was developed at the Universities of Warwick, Reading and Oxford Brookes under the directorship of Hilary Nesi and Sheena Gardner (formerly of the Centre for Applied Linguistics [previously called CELTE], Warwick), Paul Thompson (formerly of the Department of Applied Linguistics, Reading) and Paul Wickens (Westminster Institute of Education, Oxford Brookes), with funding from the ESRC (RES-000-23-0800).
2. See http://micusp.elicorpora.info/. Michigan Corpus of Upper-level Student Papers (2009). Ann Arbor, MI: The Regents of the University of Michigan.
3. See https://awa.auckland.ac.nz Academic Writing at Auckland.

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THE USE OF ACADEMIC WORDS AND FORMULAE IN L1 AND L2 SECONDARY SCHOOL WRITING

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Abstract

It is widely acknowledged that learning English in the context of academic studies implies mastering academic vocabulary. Such vocabulary is not merely made up of single words, but also consists of multi-word items. Despite the fact that linguists have long called for the inclusion of multi-word items in vocabulary studies and have also pointed out the importance of these units for language learning, few studies in this area have attempted to investigate the use of academic vocabulary at both word and phrase levels. To bridge this gap, the present study examined the use of academic words from the Academic Word List (Coxhead, 2000) and academic formulae from the Academic Formulas List (Simpson-Vlach & Ellis, 2010) in essays produced by first language (L1) and second language (L2) school-age students. To this end, a corpus of L2 school essays was compiled and compared with a matched L1 corpus. Substantial differences were observed between the two corpora in terms of the use of academic words. However, both L1 and L2 writers were found to be comparable in their use of academic formulae. These findings and their implications are discussed in the context of teaching and learning academic vocabulary in K-12 settings (primary and secondary education).

Keywords: native speakers, L2 learners, corpus, academic words, academic formulae

Introduction

Achieving proficiency in academic language can be very demanding for students, especially for those whose academic success is contingent, to a large extent, on their

ability to communicate effectively in their field of study. Research in this area has primarily focused on pathways through which students can achieve such proficiency. One promising avenue that has long been a topic of interest in studies and educational circles in this area is academic vocabulary knowledge. Knowledge of such vocabulary can be conducive to gaining academic literacy in that it provides students with varied lexical choices that are particularly useful for communication in academic discourse (Corson, 1997; Coxhead & Nation, 2001; Li & Schmitt, 2009; Snow & Kim, 2007). Over the past four decades, several academic vocabulary lists have been developed to meet the specific vocabulary needs of students and help them build a varied repertoire of the vocabulary required for undertaking their school or university studies (Campion & Elley, 1971; Coxhead, 2000; Gardner & Davies, 2013; Martinez & Schmitt, 2012; Praninskas, 1972; Simpson-Vlach & Ellis, 2010; Xue & Nation, 1984). These lists are developed on the basis that, in order for students to be able to successfully participate in academic conversations, they need to be familiar with words and sequences commonly used in academic texts (Blachowicz & Fisher, 2000; Coxhead, 2000; Durrant, 2016; Gardner & Davies, 2013; McKeown, Beck, Omanson & Pople, 1985; Simpson-Vlach & Ellis, 2010; Stahl & Fairbanks, 1986). However, expanding vocabulary and developing the ability to use this knowledge for academic purposes can be a relatively slow and difficult process (Cohen, Glasman, Rosenbaum-Cohen, Ferrara & Fine, 1998; Nation, 2000; Schmitt, 2000).

Based on various conceptualizations of what constitutes a vocabulary, two different strands of research have investigated the learning of academic vocabulary. On the one hand, studies have considered single-word lexical items as the unit of analysis for assessing learners' academic vocabulary knowledge (Bailey; 2007; Brock, Lapp, Salas, Townsend, 2009; Corson, 1997; Lee, 2003; Staehr, 2008), estimating the vocabulary size needed for undertaking academic tasks (Baumann & Graves, 2010; Ishii & Schmitt, 2009; Laufer & Nation, 1995; Webb & Nation, 2008), and exploring the lexical distributions and densities of written texts produced by learners (Laufer, 1994; Laufer & Nation. 1995; Lee, 2003; Muncie, 2002). On the other hand, studies have based their analyses on multi-word items, such as formulaic sequences, lexical bundles, and collocations (Siyanova & Schmitt, 2008; Biber, Conrad, & Cortes, 2004; Chen & Baker, 2010; Schmitt, 2004; Staples, Egbert, Biber, & MacClair, 2013). Although the findings from these studies have greatly informed theoretical and applied research into academic vocabulary knowledge and English language education, research that considers both aspects of the mental lexicon, single- and multi-word item, is needed. The present investigation aimed to explore the use of academic words from the Academic Word List (Coxhead, 2000) and academic formulae from the Academic Formulas List (Simpson-Vlach & Ellis, 2010) in essays produced by first language (L1) and second language (L2) adolescent writers.

Academic vocabulary

Academic vocabulary is typically classified into two sub-categories: technical and sub-technical vocabulary (Cowan, 1974; Hiebert & Lubliner, 2008; Nation, 2001).

Technical (or discipline-specific) vocabulary is a set of words or sequences which are exclusive to individual academic disciplines and differ by subject area. Words and sequences such as *antiproton*, *estrogen, anomie*, *ultra high-energy cosmic rays*, *Navier-Stokes equations*, *flow and heat transfer*, and *English for Academic Purposes* can be found among the terminologies specifically used in disciplines such as physics, biology, sociology, and applied linguistics. Although this vocabulary can be of particular importance for students to gain acquaintance with technical terminologies unique to a certain content area, the acquisition of such knowledge is likely to occur in parallel with the development of students' overall understanding of their field of study (Cowan, 1974; Farrell, 1990; Nagy & Townsend, 2012). The second category of academic vocabulary, however, appears to be more challenging for students to acquire. Sub-technical or general academic vocabulary, which is the focus of this study, is composed of lexical items (i.e., words or sequences) frequently used in a wide range of academic genres, yet relatively uncommon in non-academic registers (Corson, 1997; Coxhead, 2000; Coxhead & Nation, 2001). These lexical items differ from those of technical vocabulary in that they are not tied to any particular subject area, though they may exhibit some degree of semantic disparity across disciplines (Durrant, 2014; Hyland & Tse, 2007).

As was mentioned above, the use of general academic vocabulary is relatively infrequent in colloquial language. This makes it virtually impossible for students to acquire ample knowledge of such vocabulary through incidental learning and exposure to non-academic contexts (Hyland & Tse, 2007). This complication becomes even more serious in primary and secondary education (henceforth K-12), where students have limited exposure to academic language, compared to more academically competitive environments, such as university and college (Nagy & Townsend, 2012). Research has shown that, for students to be able to fully understand sub-technical words and phrases, having multiple exposures to academic texts is crucial (Blachowicz & Fisher, 2000; Stahl & Fairbanks, 1986). Moreover, it has also been argued that the students who are even at a greater disadvantage in the acquisition of such vocabulary are EFL/ESL students. According to Townsend and Collins (2008), these students may experience difficulties coping with the intricacies of academic languagedue to the daunting task of developing language proficiency while undertaking school tasks. In testing an academic vocabulary intervention with linguistically diverse adolescent students, Lesaux, Kieffer, Kelley, and Harris (2014) found that the effects of the intervention were larger for students whose primary home language was not English. Furthermore, Hakuta, Butler, and Witt (2000) and Short and Fitzsimmons (2007) also demonstrated that, in order to be able to do well in academic content areas, most adolescent English language learners need four to seven years of instruction before they can develop academic literacy. These findings suggest that students studying in K-12 settings have special vocabulary needs. More research could contribute to understanding the language needs of this demographic.

Academic vocabulary knowledge and development

Understanding academic vocabulary knowledge and how it develops requires attention to a number of key factors involved in the acquisition of a vocabulary. First, vocabulary acquisition is a continual process, which can take place over many months and years (Lindsay & Gaskell, 2010; Speidenberg & Zevin, 2006). It is during this protracted process that the knowledge of lexical items gradually develops and shifts from receptive to productive mastery, where the learner can finally use the stored item in its proper context (Laufer, 1991; Laufer & Paribakht, 1998; Levitzky-Aviad & Laufer, 2013; Melka, 1997). A considerable amount of research has focused on vocabulary acquisition at a receptive level, and the general consensus is that reading and listening can substantially contribute to expanding L2 vocabulary knowledge (Hirsh & Nation, 1992; Horst, 2005; Horst, Cobb, & Meara, 1998; Nation, 2006; Rott, 1999; Pigada & Schmitt, 2006; Saragi, Nation, & Meister, 1978; Shu, Anderson, & Zhang, 1995; van Zeeland, 2017). However, a number of studies have shown that, in order for language learners to be able to make appropriate use of such knowledge, they have to move beyond just the comprehension of input. Laufer (2005) found that only 16 to 35 percent of the vocabulary knowledge of learners in her study was active and ready to be used productively. This led Laufer to conclude that relying solely on the receptive knowledge of words is insufficient for learners to be able to use them correctly in their proper context. In a similar study, Laufer and Paribakht (1998) examined the gap between the receptive and productive knowledge of adult English language learners through investigating three types of vocabulary knowledge (i.e., passive, controlled active, and free active). They observed that the productive knowledge of words developed more slowly and less predictably than the receptive knowledge. The findings from these studies suggest that there is a chasm between the receptive and productive knowledge of a word. This gap becomes even wider when we enter the territory of abstract words, such as those of academic vocabulary. According to Corson (1995, p. 180), abstract words, "created by the introduction of an academic culture of literacy", demand more mental activation than those belonging to everyday meaning systems. As Schmitt (2014) states, the underlying reason for this mental activation being demanding is that many of the word knowledge aspects required for this process to take place are implicit in nature. That is to say, developing the ability to use abstract words requires having ample knowledge of the characteristics that are inextricably related to them. According to Nation (2013), characteristics such as register constraints, frequency intuitions, and collocational relationships are word knowledge aspects which are unlikely to be mastered solely through recognizing a word's form and meaning. The above suggests that achieving active knowledge of abstract words can be very demanding, and that a deeper knowledge of words is required to gain mastery of productive skills such as writing. (See Schmitt, 2014 for a detailed discussion of vocabulary depth.)

The second consideration is that vocabulary is not merely composed of individual words. In fact, one of the major findings of corpus-based studies is the pervasive

presence of multi-word items in the English language (Moon, 1997; Nattinger & DeCarrico, 1992; Schmitt, 2004, Sinclair, 1987, 1991; Wray, 2000, 2002). According to some estimates, these groups of words take up around 20 to 50 percent of spoken and written discourse (Biber, Johansson, Leech, Conrad, & Finegan, 1999; Erman & Warren, 2000; Foster, 2001; Howarth, 1998; Sorhus, 1977). While some of these sequences are intrinsically colloquial and informal in tone (e.g., phrasal verbs), others such as those included in the Academic Formulas List are frequently used in academic registers (Biber, *et al.,* 1999; Simpson-Vlach & Ellis, 2010). Research has shown that there are some differences between native and non-native speakers of English in terms of their active knowledge and productive use of these items. Schmitt, Grandage, and Adolphs (2004) investigated the psycholinguistic validity of recurrent word combinations by administering a number of multi-word items extracted from a corpus to a group of native and non-native speakers of English. They found that native participants, compared to their non-native counterparts, performed substantially better in terms of their accurate production of the target items. Based on these findings, the authors concluded that there is a substantial difference between native and non-native speakers of English in terms of the way in which they store, retrieve, and produce word strings, such as formulaic sequences. Such evidence suggests that the combinatory nature of words should not be considered a marginal phenomenon in vocabulary studies and that researchers should acknowledge "the fact that many English language users (e.g., L2 learners, L1 children) struggle to recognize, acquire, and utilize such items" (Gardner, 2007, p. 260).

We can conclude from this discussion that in order to gain a better understanding of academic vocabulary knowledge and its use among language speakers, both single- and multi-word components of such vocabulary should be investigated. Therefore, the present research explores the use of academic words and sequences in school essays produced by L1 and L2 adolescent writers. The following research questions guided the present study:

1. Is there a significant difference between L1 and L2 adolescent writers in terms of the diversity and richness of the lexical items used in their school essays?
2. Is there a significant difference between L1 and L2 adolescent writers in their use of general academic words from the Academic Word List (AWL)?
3. Is there any significant difference between L1 and L2 adolescent writers in their use of academic formulae from the Academic Formulas List (AFL)?

Corpus description and methodology

Corpora

The present study used data from two corpora: L1 corpus and L2 corpus. The L1 corpus was a sample of A-level essays extracted from the Louvain Corpus of Native

English Essays (LOCNESS). The essays for this corpus were selected in such a way that their topics broadly corresponded to those of essays in the L2 corpus. The L2 corpus was collected from a group of English as a Second Language (ESL) students, attending English for Academic Purposes classes in an all-girls' school in Wellington, New Zealand (the classes were designed specifically for ESL students, no native speaker students were attending these classes). The girls (age range 16-18 years old, Year 12 and 13) were from a variety of first language backgrounds (Mandarin, Dari, Hindi, Gujarati, Khmer, Arabic, Greek). They immigrated to New Zealand with their families as teen-agers (between 10 and 16 years old), although most had spent between one and three years in New Zealand prior to the data collection taking place. The participants were unpaid volunteers. Because, at the time of data collection, most participants were under the age of 18, permission was sought from the school board and the families, where necessary. The research was carried out fulfilling ethical requirements in accordance with the standard procedures of the school and Victoria University of Wellington.

The essays in both corpora were argumentative in nature, covering potentially controversial topics, such as *the impact of health issues and poverty on education*, *depression, obesity, immigration, transport, lottery,* and so on, topics that require the writer to establish a position on the issue in question. A computer spellchecker was used to identify and correct orthographic errors in the L2 corpus. Following this, any text which did not appear to belong to the prose of the essays, such as references, direct quotations, and annotations were removed and were excluded from the final word count. On average, L2 essays were longer in length, which led to the inclusion of more essays into the L1 corpus with the aim of reaching a matched word count for both corpora. Table 1 provides a description of the two corpora used in this study.

Table 1. ***Description of the corpora***

Corpus	Average Length	N. of Texts	Size
L1	309.6	34	22000
L2	970.6	21	22169

Analysis

In order to address the three research questions of the study, the following characteristics of the two corpora were investigated: 1) lexical diversity and richness, 2) the use of academic words, and 3) the use of academic formulae.

In order to provide a lexical text analysis of the two corpora, the *VocabProfile-Compleat* BNC-COCA 1-25 programme (Cobb, n.d.) was used. The vocabulary profiles of essays in each corpus were created and were then compared with regard to three factors: the overall number of word families and types in each corpus, the number of tokens per family and type, and the use of words from different frequency groups (i.e., K1-K25 frequency levels). Since the two corpora were closely matched

for token number, any significant differences in the overall numbers of word families and types would be informative. Therefore, these characteristics were compared using Chi-square tests. In addition, the differences between the two corpora, in terms of the number of tokens per family and type, were estimated using *t*-tests. For this particular analysis, the relevant mean characteristics were calculated using the vocabulary profiles of the respective essays. Finally, in the case of frequency groups, contingency table tests were performed to analyze the association between each corpus and the frequency distribution of word families, types, and tokens from each frequency level. Following this, a series of pairwise comparisons were made between the two corpora in order to explore their differences in the use of words from different frequency groups. For these analyses, the frequency groups K1-K5 were compared individually, whereas K6-K25 groups were collapsed into two frequency categories: K6-K10 and K11-K25. This was deemed necessary because the total number of words in the K6-K25 groups was very low (i.e., below 100 tokens in each frequency group), and some of the frequency groups were not represented at all.

To address the second research question, the two corpora were compared to investigate the extent to which L1 and L2 adolescent writers draw on the academic words (AWs) from the AWL. Coxhead's (2000) AWL consists of the 570 most frequent word families (i.e., approximately 3000 words) in a wide range of academic disciplines. The AWL is included in the *VocabProfile* programme (Cobb, n.d.), a web-based adaptation of Heatley, Nation & Coxhead (2002), which was used to analyze the two corpora. The total number of AWL families, types, and tokens used in the two corpora were compared using Chi-square tests. Also, the differences between the mean type-token ratios (TTR) of the AWs were estimated using *t*-tests. Moreover, the text-based RANGE software (Cobb, n.d.) was employed to evaluate the degree of overlap between the two corpora in terms of the use of AWs from the AWL.

Finally, to address the third research question, the use of academic formulae (AFs) in the two corpora was investigated. The aim of the analysis was to compare the total number of AFs from the AFL in the corpora and to assess the overlap. The AFL includes 207 phrases common in both academic written and spoken language (Core AFL), as well as 200 word combinations exclusive to academic written language (Written AFL) and 200 sequences specific to academic spoken language (Spoken AFL). In line with the general aim of the study (i.e., to compare L1 and L2 essays in terms of the AFs used), only the items included in the Core and Written AFL were used. In addition, following Simpson-Vlach and Ellis (2010), we too classified the AFs in the two corpora into three functional groups: referential, stance, and discourse. The total number of AFs in each corpus was compared, as well as the number of AFs belonging to each of these three groups. The analysis used the same statistical methods employed for AWs.

Results

Lexical diversity and richness

As stated above, the two corpora were closely matched for token number. The L2 corpus contained only 169 words more than the L1 corpus, which did not generate a statistically significant difference (χ^2=0.64663, *df*=1, *p*=0.4213). However, as shown in Table 2, the differences in the number of word families and types were much more noticeable and were found to be statistically significant (χ^2= 36.43, *df*=2, *p*<0.001). In fact, the L1 corpus was found to contain significantly more word families (χ^2=26.59, *df*=1, *p*<0.001) and word types (χ^2=13.00, *df*=1, *p*<0.001) than the L2 corpus. Table 2 presents the use of word families, types, and tokens in the two corpora.

Table 2 ***The total number of word tokens, types and families in the corpora***

Corpus	Tokens	Types	Families
L1	22000	3446	2073
L2	22169	3156	1754

As expected from the above results, the type-token ratio (TTR) of L1 essays was found to be significantly higher than that of L2 essays (L1 mean TTR=0.433, *SD*=0.074, L2 mean TTR=0.331, *SD*=0.057; *t*=5.817, *df*=52.577, *p*<0.001). Also, comparing the mean numbers of tokens per family and tokens per type in the two corpora showed similar results (see Table 3). However, no significant differences between the mean types per family ratios were found.

Table 3. ***The use of word families, types and tokens by L1 and L2 writers***

Ratio	L1 mean (*SD*)	L2 mean (*SD*)	*t* value	*df*	*p* value
Tokens per family	2.735 (.464)	3.507 (.663)	-4.872	33.941	<.001
Tokens per type	2.374 (.397)	3.096 (.522)	-5.558	36.12	<.001
Types per family	1.139 (.040)	1.135 (.047)	.319	39.003	.751

Following this analysis, we examined the lexical frequency profiles of the two corpora. The analysis revealed significant differences in the use of words belonging to different frequency groups (see Table 4). A contingency table Chi-square test also showed that the number of tokens from each frequency group was not independent of the corpus (χ^2=37.752, *df*=6, *p*<0.001).

As can be seen in Table 4, the two corpora differ in terms of the use of word tokens from different frequency groups. While the two corpora showed no significant differences in the use of word tokens from K1 and K2 levels (χ^2=4.041, *df*=1, *p*=0.044 for K1 tokens, χ^2=2.366, *df*=1, *p*=0.124 for K2 tokens), the L1 corpus was found to contain significantly more word tokens from lower-frequency levels, such as K3 (χ^2=20.089, *df*=1, *p*<0.001), K4 (χ^2=12.902, *df*=1, *p*<0.001) and K6-K10

(χ^2=16.294, *df*=1, *p*<0.001). However, the differences between the numbers of K5 tokens, as well as tokens belonging to K11-K25 levels appeared to be statistically insignificant (χ^2=0.276, *df*=1, *p*=0.599 for K5 tokens, χ^2=0.009, *df*=1, *p*=0.924 for K11-K25 tokens).

Table 4. ***Lexical frequency profiles of L1 and L2 corpora***

Frequency level	Family (%)		Type (%)		Token (%)		Cumulative % tokens	
	L1	L2	L1	L2	L1	L2	L1	L2
K1	761 (36.71)	711 (40.53)	1460 (42.37)	1331 (42.17)	17398 (79.08)	17024 (76.79)	79.08	76.79
K2	461 (22.24)	432 (24.62)	760 (22.05)	714 (22.62)	2206 (10.03)	2105 (9.50)	89.11	86.29
K3	406 (19.59)	339 (19.32)	581 (16.86)	462 (14.64)	1282 (5.83)	1067 (4.81)	94.94	91.10
K4	156 (7.53)	99 (5.64)	184 (5.34)	118 (3.74)	312 (1.42)	229 (1.03)	96.36	92.13
K5	93 (4.49)	59 (3.36)	106 (3.08)	71 (2.25)	175 (.80)	163 (.74)	97.16	92.87
K6	53 (2.56)	33 (1.88)	55 (1.60)	38 (1.20)	113 (.51)	73 (.33)	97.67	93.20
K7	38 (1.83)	22 (1.25)	40 (1.16)	24 (.76)	50 (.23)	34 (.15)	97.90	93.35
K8	30 (1.45)	12 (.68)	33 (.96)	14 (.44)	45 (.20)	25 (.11)	98.10	93.46
K9	26 (1.25)	11 (.63)	27 (.78)	12 (.38)	31 (.14)	15 (.07)	98.24	93.53
K10	11 (.53)	6 (.34)	11 (.32)	7 (.22)	15 (.07)	24 (.11)	98.31	93.64
K11	10 (.48)	8 (.46)	11 (.32)	8 (.25)	12 (.05)	10 (.05)	98.36	93.69
K12	7 (.34)	4 (.23)	7 (.20)	4 (.13)	7 (0.03)	4 (.02)	98.39	93.71
K13	7 (.34)	2 (.11)	7 (.20)	2 (.06)	8 (.04)	2 (.01)	98.43	93.72
K14	4 (.19)	3 (.17)	5 (.15)	3 (.10)	10 (.05)	15 (.07)	98.48	93.79
K15	4 (.19)	2 (.11)	4 (.12)	2 (.06)	5 (.02)	5 (.02)	98.50	93.81
K16	3 (.14)	2 (.11)	3 (.09)	2 (.06)	11 (.05)	2 (.01)	98.55	93.82
K17		2 (.11)		2 (.06)		2 (.01)		93.83
K18	1 (.05)	2 (.11)	1 (.03)	2 (.06)	1 (.00)	7 (.03)		93.86
K19	1 (.05)	2 (.11)	1 (.03)	2 (.06)	1 (.00)	3 (.01)		93.87
K20		1 (.06)		1 (.03)		2 (.01)		93.88
K21	1 (.05)	1 (.06)	1 (.03)	1 (.03)	1 (.00)	1 (.00)		93.88
K22								
K23								
K24		1 (.06)		1 (.03)		2 (.01)		93.89
K25								
Off-list			149 (4.32)	335 (10.61)	317 (1.44)	1355 (6.11)	100.00	100.00
Total	2073	1754	3446 (100)	1756 (100)	22000 (100)	22169 (100)	100.00	100.00

Figure 1 illustrates the frequency distributions of word tokens in the two corpora.

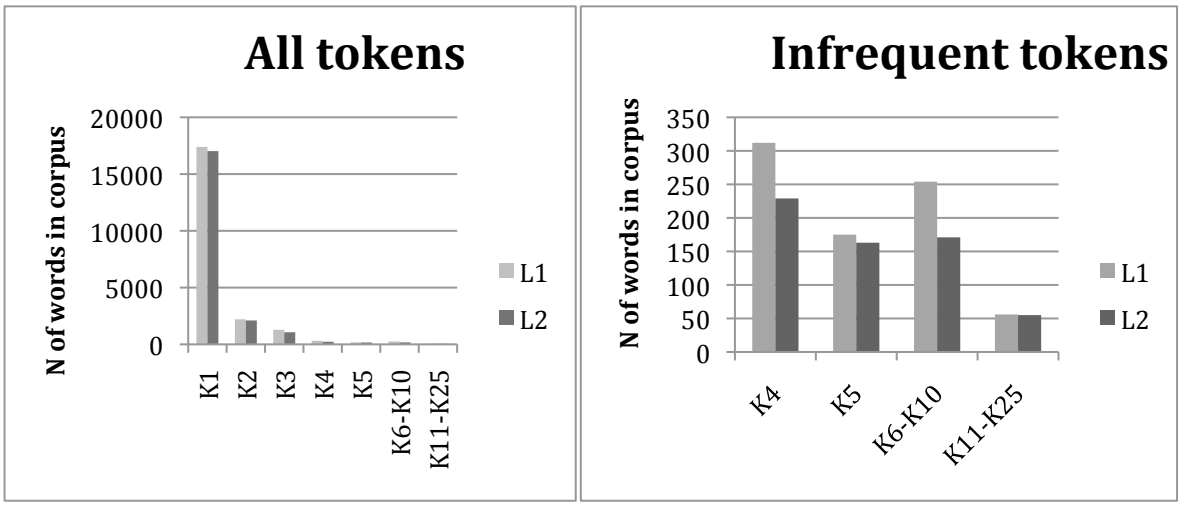

Figure 1. **Frequency distributions of word tokens in L1 and L2 corpora.**

Similar results were observed for word families and types. The Chi-square tests for contingency tables found significant relationships between each corpus and the number of word families and types from each frequency group (χ^2=26.254, *df*=6, *p*<0.001 for types, χ^2=26.173, *df*=6, *p*<0.001 for families). As was the case with tokens, most of the significant differences in the frequency distribution concerned less frequent words. As is shown in Table 5, the L1 corpus included significantly more word families and types from K3-K10 levels. Table 5 presents the differences between the two corpora in terms of the use of word families and types from different frequency groups.

Table 5. ***The differences in the frequency distributions of families and types***

Frequency level	Types			Families		
	L1	L2	χ^2	L1	L2	χ^2
K1	1460	1331	6.475*	761	711	1.960
K2	760	714	1.681	461	432	1.082
K3	581	462	13.934**	406	339	6.254*
K4	184	118	14.391**	156	99	12.655**
K5	106	71	6.765*	93	59	7.392*
K6-K10	166	95	19.197**	158	84	22.457**
K11-K25	40	30	1.225	38	30	0.774

**p*<0.05 ***p*<0.001

In addition, we also calculated the relative frequency distribution of word families in the two corpora. The results showed that, compared to the L1 corpus, the distribution of word families in the L2 corpus was more skewed towards families from higher-frequency levels (i.e., K1 and K2). The significance of these findings were all confirmed at the .01% level using a test of equal or given proportions (χ^2=143,11, *df*=1, *p*<0.001 for K1 families, χ^2=66.503, *df*=1, *p*<0.001 for K2 families).

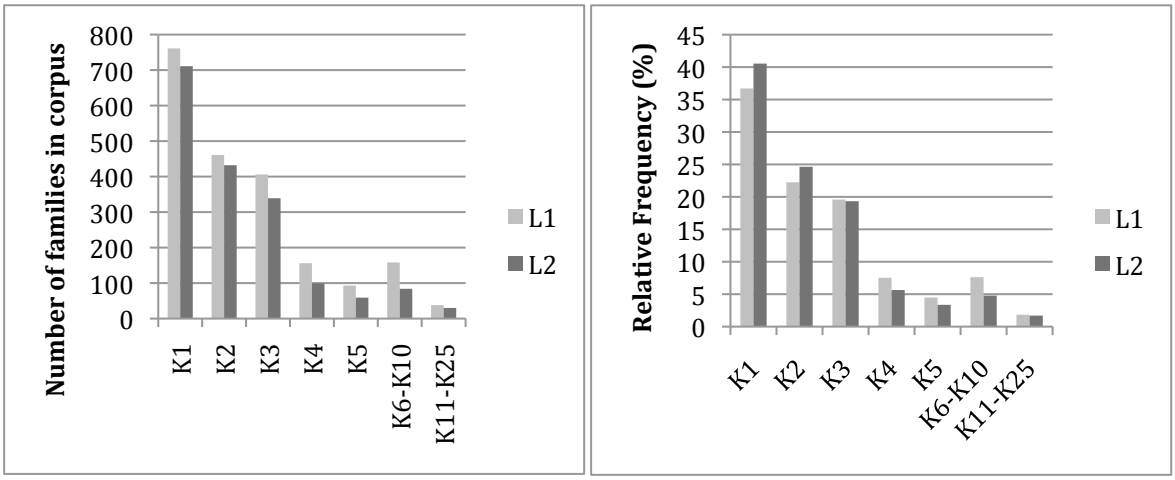

Figure 2. **Frequency distributions of word families in the two corpora**

The use of academic vocabulary

As shown in Figure 3, compared to the L2 corpus which contains more AWL tokens, the L1 corpus appears to include more AWL families and types. The results of pairwise Chi-square tests revealed that these differences were all significant at the 5% level

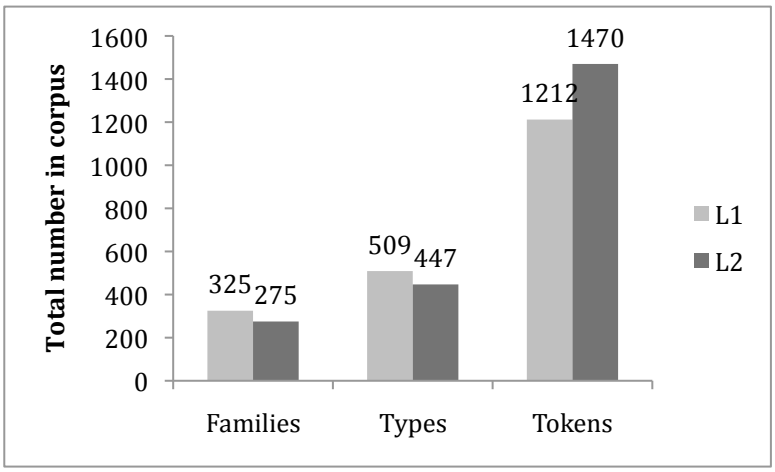

Figure 3. **The number of AWL units in the two corpora**

(χ^2=21.391, *df*=1, *p*<0.001 for tokens, χ^2=4.278, *df*=1, *p*=0.039 for types, χ^2=4.324, *df*=1, *p*=0.038 for families). Also, the results of a Chi-square test of independence confirmed that the number of AWL words was not independent of the corpus (χ^2=28.01, *df*=2, *p*<0.001). These results were consistent with the significantly higher mean TTR found in the L1 corpus (L1 mean=0.789, *SD*=0.117, L2 mean=0.610, *SD*=0.169, *t*=4.3463, *df*=33.694, *p*<0.001).

It is further worth noting that a considerable number of AWL items overlapped between the two corpora. In particular, 189 AWL families appeared in both corpora, which comprised 58.15% of the AWL families in the L1 corpus and 68.73% of the AWL families in the L2 corpus. The proportion of the overlap in the overall number of AWL types, however, was found to be lower. Specifically, 196 AWL types which appeared to take up 38.51% of all the AWL types in the L1 corpus and 43.85% of the AWL types in the L2 corpus.

The use of academic formulae

In contrast to the results reported in the previous section, the analysis of the use of AFs from the AFL revealed a surprising degree of similarity between the two corpora. First, the total number of AF types and tokens used in each corpus was found to be very similar in both corpora. Although the overall use of AF types and tokens was higher in the L1 corpus, the differences between the two corpora were not statistically significant (χ^2=1.371, *df*=1, *p*=0.242 for types, χ^2=1.775, *df*=1, *p*=0.183 for tokens). Figure 4 illustrates the number of AF types and tokens used in each corpus.

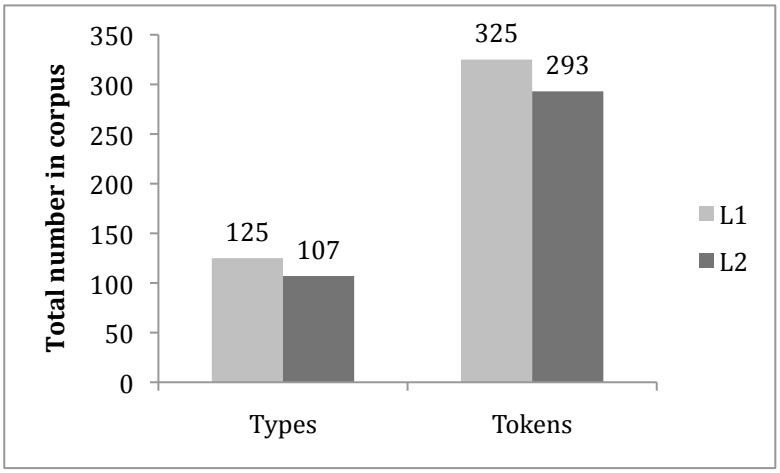

Figure 4. **The number of academic formulae in L1 and L2 corpora**

The analysis of the two corpora in terms of the use of AFs from different functional categories (i.e., referential, discourse, and stance) also revealed a similar trend. As can be seen from Figure 5, the number of referential, stance, and discourse AFs (both types and tokens) used in the L1 corpus was slightly higher than that in the L2 corpus. The differences, however, were not statistically significant (χ^2=0.087, *df*=2, *p*=0.957 for types, χ^2=0.312, *df*=2, *p*=0.855 for tokens).

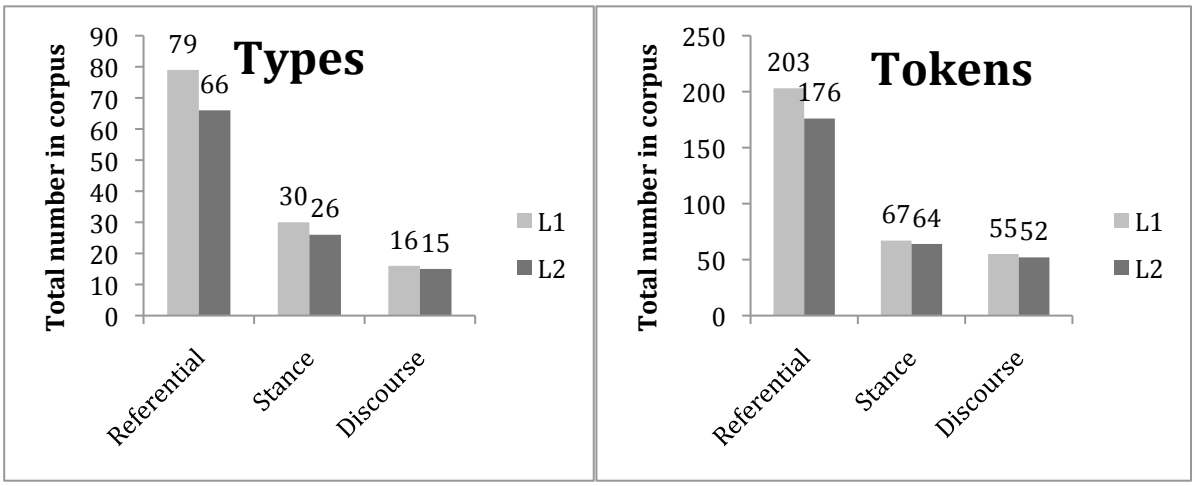

Figure 5. **The distribution of academic formulae by functional category**

In addition, a high proportion of AF types was found to overlap in the two corpora (i.e., 76 AF types, which comprised 60.8% of the AFs in the L1 corpus and 71.03% of the AFs in the L2 corpus). Further, a high degree of overlap was found in the use of AF types from each of the three categories. Table 6 provides information about the degree of overlap between the two corpora in terms of the use of AF types from all the three functional categories.

Table 6. ***Degree of overlap between L1 and L2 corpora across three categories***

Functional categories	N. shared AF types	L1 (%)	L2 (%)
Referential	49	62.02	74.24
Stance	18	60	69.23
Discourse	9	56	60

Moreover, the analysis of the frequency of occurrence of the AFs found in each corpus revealed interesting results. As can be seen from Table 7, six of the 12 most frequent AFs used in each corpus were found to be common between the two corpora (e.g., *a/the number of*, *due to the*, *for example*, *as well as*, *it is not*, *in order to*). It is also worth noting that both corpora contained a number of low-frequency AFs which occurred only once in each corpus (i.e., 56 AFs in the L1 corpus and 52 AFs in the L2 corpus). Among these low-frequency AFs, 12 were also found to be shared by the two corpora (e.g., *a variety of, exactly the same, in the form of, means that the*). However, it should be noted that the AFs which appeared only once in either of the two corpora were not found in the high-frequency list of the other corpus.

Table 7. ***The most frequent AFs in the two corpora (token frequency > 5)***

Top 12 AFs in the L1 corpus		Top 12 AFs in the L2 corpus	
AF	N tokens	AF	N tokens
a/the number of	16	a/the number of	24
due to the	12	in order to	12
for example	11	is that	11
such as the	10	there is a/an/no	9
they [did/do] not	8	this is [a/an/not]	9
(more) likely to (be)	8	for example	8
as well as	8	is not [a/the]	8
it is not	7	it is not	8
in order to	7	(the) fact that (the)	7
that there [are/is (a)]	7	the use of	7
(as) part of [a/the]	6	as well as	7
is that [it/the/there]	6	due to the	7

Discussion

This study aimed to investigate the production of academic words and sequences in compositions written by school-age L1 and L2 students. Our main focus was to determine the degree to which students in K-12 settings make use of academic vocabulary in their essays, as well as the extent to which L1 and L2 adolescent writers differ in terms of the use of these words and sequences.

To explore these differences, we first analyzed the two corpora in terms of their lexical diversity and lexical richness. Our results showed that the diversity of the words used in L2 essays was significantly lower compared to that of L1 essays. This finding suggests that the L1 adolescent writers in this study seemed to be better at expressing themselves with the vocabulary knowledge that they had at their disposal. As Laufer (1994) points out, a high level of lexical diversity "shows how well a person can express himself with whatever vocabulary he has" (p. 30). Following this, we also compared the two corpora in terms of their lexical profiles. Our analyses showed that the use of word families and types from K3-K10 frequency levels was significantly lower in L2 essays. Schmitt and Schmitt (2012) considered the frequency levels of K4 to K9 as mid-frequency groups and emphasized the prominent role of these words in ensuring effective communication. In addition, the authors also stress that the K3 level is the last frequency group which can be considered as 'high-frequency', and that this is the frequency level from which learners' performance starts to dwindle. Our findings support this assertion as the differences between the two corpora started to reach statistical significance from the K3 level, with the L2 writers making significantly less use of word families and types from this particular frequency group. Schmitt and Schmitt also propose that anything beyond the first 9,000 word families should be considered as low-frequency vocabulary, which is "not typically useful enough to warrant an explicit focus" (p. 498). Therefore, according to our findings, it appears that the words belonging to the frequency bands

of K3 to K9 should receive extra attention from content area teachers teaching L2 students. This conclusion is supported by the findings of previous research regarding the lack of attention to these particular groups of words in ESL classrooms (Horst, 2010; Horst, Collins, & Cardoso, 2009; cited in Schmitt & Schmitt, 2012).

We further found that the two corpora were comparable in terms of the use of word families and types from lower-frequency levels, such as K11 to K25. In fact, our results showed that both L1 and L2 writers made limited use of words from these particular frequency groups. This is not surprising as the words belonging to these frequency levels are relatively rare in discourse and that it is unlikely for school-age students to have multiple exposures to such words through every-day activities outside the classroom. However, a word of caution is needed when interpreting these findings. That is, we do not necessarily suggest a shift towards teaching low-frequency words in content classrooms. In the analysis of the vocabulary size required for understanding high-school level science textbooks, Coxhead, Stevens, and Tinkle (2010) found that leaners equipped with the knowledge of words from K9 frequency groups (i.e., mid-frequency word levels) would be able to understand 98.10% of the running words presented in these books. The authors also showed that many of the remaining unfamiliar words were technical words related to the analyzed subject area (i.e., science). Therefore, it can be concluded that, instead of teaching some random low-frequency words only because they are missing in learners' vocabulary, attention should instead be directed to those that play a supportive role in understanding the text.

Our further analyses focused on the differences between the two corpora in terms of the use of AWs from the AWL. We found that the essays written by L2 writers contained a significantly lower number of AW families and types. Our results also showed that the degree of diversity in the use of these words was significantly higher in the L1 corpus than L2 corpus. These findings are important in that they indicate the need for more attention to academic vocabulary needs of L2 school-age students in content classrooms. The importance of such consideration is echoed in a study conducted by Townsend, Filipini, Colins, and Biancarosa (2012), who investigated the importance of academic word knowledge in the academic success of linguistically and socio-economically diverse middle-school students. The authors found an empirical link between students' general academic vocabulary knowledge and their academic achievement, highlighting the importance of heightening teachers' awareness of the decisive role of academic words in ESL students' school success. Considering the high stakes involved in learning academic words for ESL adolescent students, one can interpret these findings as suggesting that this particular demographic can greatly benefit from appropriate scaffolding focused on the explicit instruction of general academic words. In doing so, teachers should be aware of the fact that, in order for students to be able to use academic words in their writing, the need multiple exposures to these words, for which there are limited opportunities in K-12 settings compared to tertiary education contexts (Nagy & Townsend, 2012).

Finally, following the analysis of academic words in the two corpora, we compared the compositions with regard to the use of academic sequences from the AFL. Unlike the results reported for AWs, the use of academic multi-word items was found comparable in L1 and L2 essays. In fact, the analysis of the top 12 most frequent AFs used in each corpus revealed a considerable degree of overlap between the two corpora. Further, by looking at the functions of the used AFs in each corpus, we found that both L1 and L2 writers made more use of referential sequences, which is in line with the findings of previous research, indicating the ubiquity of these word combinations in academic texts (Biber, *et al.*, 1999; Biber, 2006; Chen & Baker, 2010). These findings point to the fact that L2 writers in this study, just as their L1 counterparts, knew and were able to use academic sequences in their writing. Interestingly, these results appear to go against those reported in the literature regarding the underuse of multi-word items among L2 learners (Adel & Erman, 2012; Siyanova & Schmitt, 2007, Chen & Baker, 2010; Durrant & Schmitt, 2009; Granger, 1998; Wray, 2002). However, this contradictory evidence can be explained with reference to two intertwined factors in second language acquisition: age and exposure to an L2 environment. As explained in previous sections, the L2 participants from whom the data were aggregated were all immigrant school-age students, growing up in a naturalistic L2 environment (i.e., New Zealand). As opposed to ESL/EFL adult learners, L2 children of this age learn language faster and, as a result of their integration into the L2 environment, they mostly adopt a native-like approach towards acquiring different properties of the language, such as formulaic sequences. In an in-depth analysis of the effect of sociocultural adaptation on the acquisition of formulaic sequences, Dornyei, Durow, and Zahran (2004) found that acculturation and integration into a native English-speaking environment can play a pivotal role in the acquisition of formulaic sequences by L2 learners. This level of engagement with the target language appears to have substantial linguistic gains for school-age children. According to Kuiper, Columbus, and Schmitt (2009), during this age, the language used in social activities becomes more sophisticated and involves the use of phrasal items. This process can be facilitative to directing children's attention to the highly phrasal nature of language and help them build an intuition for storing and retrieving authentic sequences. Therefore, in the case of our findings, it can be argued that, although the analyzed sequences (i.e., academic formulae) are unlikely to be encountered in activities outside the classroom, it is possible for L2 students in this study to have developed a preference for 'picking up' and utilizing conventional sequences as a result of their sustained engagement with the target language in a naturalistic L2 environment. This conclusion appears to be in line with the findings of Siyanova-Chanturia and Spina (2015), who found a relationship between rich language exposure and L2 speaker intuitions of units above the word level.

Conclusion

The crucial role of academic vocabulary in achieving academic literacy applies not only to single words but also to multi-word items. The results presented in this study

offer some insights into this assertion by demonstrating that different conceptualizations of what constitutes a vocabulary can affect our understanding of learners' vocabulary competence in certain registers. That is to say, although the ESL learners in the present investigation exhibited poorer knowledge of academic vocabulary at the word level compared to their L1 peers, the analysis of their performance in using the phrasal aspect of academic vocabulary yielded a pattern of results comparable to L1 speakers. This is in line with previous research indicating that ignoring the phrasal aspect of the mental lexicon can have important ramifications for the validity of pedagogical theories and practices in the area of vocabulary (Gardner, 2007). Taken together, our findings, albeit involving some limitations – such as the use of small corpora – should be viewed as an attempt to underscore the importance of considering both single words and multi-word items in the research into academic vocabulary.

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E-LEARNING OF NEW ZEALAND SIGN LANGUAGE: EVALUATING LEARNERS' PERCEPTIONS AND PRACTICAL ACHIEVEMENTS

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Abstract

Computer assisted language learning (CALL) is an increasingly common component of L2 learning of sign languages, yet there has been limited research on the outcomes for learners using online sign language resources autonomously. This article describes the principles and design choices that informed the development of Learn NZSL, an innovative e-learning resource for New Zealand Sign Language, and reports on a study that evaluated the user experience and learning outcomes of a small group of autonomous beginner learners with this resource.

Keywords: NZSL, sign language, CALL, e-learning, autonomous learning

Introduction

Sign languages and L2 learners

The recognition that sign languages are bona fide languages is still quite recent. From 1880, the use of sign languages was actively prohibited in the education of deaf children in many countries. As a result, sign languages survived as 'underground' languages, but the lack of institutional and societal support restricted their use in official or public domains. Research on the linguistic properties of sign languages, pioneered by Tervoort (1953) and Stokoe (1960), led to a gradual reversal of this situation, and from the 1980s onwards, sign languages have been used in wider domains.

The re-introduction of signing in education and in some countries, public broadcasting, has made sign languages more visible to majority (hearing) society over recent decades. This increased visibility and increasing legal requirements to provide access through sign language interpreting have led to an increase in L2 learning of sign languages. People with a direct connection to the Deaf community - such as parents and family members of deaf children, or trainee professionals such as teachers and interpreters - continue to form a large proportion of L2 learners. However, there is also an increasing number of learners who have had no prior contact with Deaf people, but choose to learn sign language for interest. Sign languages are learned and taught in a variety of contexts, including schools, adult community education settings, family-directed teaching, tailored workplace tuition, and university programmes (McKee, Rosen, & McKee, 2014). The

professionalisation of sign language teaching is developing in many countries, led by Deaf teachers (as L1 signers).

Because sign languages do not have a commonly used written form, video materials have long been vital learning resources. In recent years, digital technology has enabled the creation of more interactive online resources. However, the number of CALL and e-learning resources for guided sign language learning remains relatively small.

Learning New Zealand Sign Language

In Aotearoa New Zealand, these broad patterns can also be observed. New Zealand Sign Language (NZSL) is estimated to be used by around 4,000 Deaf people as a first or main language (Dugdale, 2000). In the most recent census (Statistics New Zealand, 2013), 20,244 people said they were able to hold a basic conversation in NZSL. The majority of these people are likely to be L2 users (McKee, 2017).

NZSL has been formally taught to adult learners since the late 1980s, and the NZSL Teachers Association was formed in 1993; most of its Deaf members hold a certificate level qualification in teaching NZSL. Official recognition through the NZSL Act in April 2006 has bolstered public interest in learning the language. The demand for learning NZSL is partly met by community education classes as well as courses at Victoria University of Wellington and Auckland University of Technology.

In the 1990s, a notional-functional curriculum for American Sign Language, *Signing Naturally* (Smith, Lentz, & Mikos, 1988) was widely adopted by NZSL teachers. Supplementary study materials were developed to support the use of this curriculum in a New Zealand context, initially in the form of a suite of workbooks with accompanying video material on tape / DVD (New Zealand Sign Language Teachers Association, 2001, 2003; McKee & McKee, 2001; Pivac, 2006). Since then, a number of computer assisted language learning (CALL) resources have been developed (e.g. McKee, McKee, Alexander, & Paillat, 2010; Pivac Alexander, McKee, Berry, McKee, & Paillat, 2013; McKee, Berry, McKee, & Paillat, 2014). Online NZSL texts and exemplars are currently increasing in the deaf education sector, including resources targeted particularly towards young NZSL learners and towards (hearing) parents of deaf children. While it is not specifically a CALL resource, the multimedia, bilingual *Online Dictionary of New Zealand Sign Language* (McKee, McKee, Pivac Alexander, Pivac, & Vale, 2011) has also widened the accessibility of NZSL. The dictionary has a strong pedagogical focus as the needs of (hearing) learners of NZSL were considered at every stage of its design (McKee & McKee, 2013). Extensive video content in the dictionary, including usage examples, encourages learners to build their vocabulary knowledge both in terms of breadth and depth.

In this context of wider interest in learning NZSL and a current shift from reliance on face-to-face learning towards blended and digital learning modes, it is important to evaluate the effectiveness of new resources. In this article we reflect on the recently launched e-learning website *Learn NZSL*. We will describe the principles and design choices that informed the development of this resource and report on a study that evaluated the user experience and learning outcomes of a small target group of beginner adult learners using *Learn NZSL*.

Rationale for developing *Learn NZSL*

In 2015, work began on a new NZSL e-learning resource, *Learn NZSL*. The development of this resource was prompted by the launch of *TeachSign* (Pivac Alexander, 2014), an online resource hub for NZSL teachers. This online hub contains a level one curriculum for teaching NZSL to adult L2 learners and accompanying materials such as course outlines, lesson plans, PowerPoints, activity sheets and handouts (Pivac Alexander, Lessing, & Ovens, 2015). *Learn NZSL* was initially envisaged as a supplementary suite of self-study and practice materials for adult L2 learners, aligned with the new curriculum structure.

In addition, *Learn NZSL* aimed to be a stand-alone resource for autonomous learning, recognising that there would be great demand for such a resource from learners unable to attend classes. Face-to-face learning in classes is particularly advantageous for sign language learners, and is encouraged because for many learners, their Deaf teacher may be the first contact with the NZSL community. Learners also have to come to grips with the fundamentally different nature of signs, which are produced by hand, face and body movements in three-dimensional space. While video recordings offer a large advantage over static representations such as drawings or photographs, signs being produced 'live' still provide the best model to learn from. However, opportunities to attend classes have been restricted for two main reasons. Firstly, the number of NZSL teachers is small (estimated to be around 100 based on membership of the NZSL Teachers Association) and nearly half are based in Auckland (Pivac Alexander, 2012). This limits the availability of classes outside major centres. Secondly, the location, timing and costs of community education classes are a barrier for many learners, especially for families of young deaf children (see also Vicars, 2003; Human Rights Commission, 2013). The lack of NZSL learning opportunities has significant consequences for Deaf people's participation in society, ultimately affecting their access to education, employment, and communication in their family life. Since 90-95% of deaf children are born to hearing parents (Mitchell & Karchmer, 2004), limited learning opportunities for these parents impact on the acquisition of NZSL by deaf children.

Existing resources discussed in the previous section, while going some way towards serving learners unable to attend classes, are not suitable as independent learning programmes. Most of these resources were primarily designed to reinforce in-class tuition, while others were targeted at a younger age range or concentrated on a very

small set of topics and vocabulary. The *Online Dictionary of NZSL* was shown in a user study (Vale, 2015) to be used extensively by beginner NZSL learners, but while dictionaries can be valuable tools to support learning vocabulary (Nation, 2001), they do not by themselves provide sufficient opportunities for developing communicative language. Vale (2015) found that dictionary users looked up whole phrases (such as 'what is your name'), indicating a learning need beyond individual vocabulary items.

Principles

Although there has been some research evaluating sign language e-learning (e.g. Vicars, 2003; Ehrlich-Martin, 2006; Radford, 2012), research in this area is still scarce and mainly focused on blended learning environments where e-learning is used to complement in-class learning. To our knowledge, no research exists on exclusively online sign language learning programmes. The development of *Learn NZSL* therefore had to be informed by a wider review of both existing resources and general principles of effective e-learning.

An advisory group reviewed signed and spoken language learning resources from New Zealand and overseas, considering method of access, format and structure of learning tasks, progression, interactivity and assessment. From this review, the advisory group formulated the starting principles that *Learn NZSL* should be free to access, user-friendly, easy to navigate, flexible and interactive.

A key factor to consider was enabling learner autonomy. This concept, loosely defined as learners taking control of their own learning, has been influential in foreign language learning since its introduction by Holec (1979 / 1981). There has been a shift in many (language) classrooms from teacher-guided to learner-guided activities. Paired with this shift has been an acknowledgment of the importance of self-guided learning beyond the classroom. Computer-based resources have a crucial role to play here. Using video, audio, and hyperlinks, it is possible to create interactive environments that allow learners to access learning materials and activities in a variety of ways and at their own pace, creating their own links with the material in a way that is not normally possible in teacher-directed activities in the classroom (Nunan, Lai, & Keobke, 2012).

In his introduction to the field of learner autonomy, Crabbe (2012) distinguishes between cognitive factors and social factors that affect human learning. Although modern e-learning resources have the potential to provide vast quantities of information, the way in which this information is structured and presented to learners has to take into account cognitive factors such as the limits of short-term (working) memory (Clark, 2008) and, in the case of sign languages especially, the limits of visual perception (see e.g. Cantoni, Cellario, & Porta, 2004, who assume a maximum capacity of perceiving and storing into short-term memory 6 - 7 separate objects, items or visual features at any one time). In contrast to these universal cognitive

factors, social factors arise from the fact that learners are "embedded in their various cultural and social settings" (Oxford, 2008, p. 41). Differences in cultural approaches to teaching and learning (Oxford, 2008), individual differences in learning styles (Cercone, 2008) and learners' L1 language background all have to be taken into account when designing e-learning resources. Social diversity in the target language community and culture should also be considered.

Effective e-learning resources give autonomous learners room for self-reflection, ensuring that creativity and imagination remain challenged (Cercone, 2008); engage emotions as well as mental effort (Quinn, 2010); and promote active engagement with the tasks by offering rich simulated environments with varied types of content (Cantoni et al., 2004).

E-learning offers not only convenience and flexibility, cutting down on travel and fixed time commitments, but also allows adult learners to work at their own pace so that they have time to master the content and to review their previous learning (Coryell & Chlup, 2007; Cercone, 2008). Through e-learning, learners can practise in a risk-free environment where any mistakes they make are not exposed to their peers (Cantoni et al., 2004). In the case of sign languages and other minority languages for which teachers might be scarce in particular locations, e-learning also provides opportunities to connect learners with remote language experts (Berrett, 2011).

These advantages are offset by the demands that e-learning places on adult learners. First of all, some adults may not yet have the necessary computer literacy to navigate e-learning programmes (Mohammadi, Ghorbani, & Hamidi, 2011; Nunan et al., 2012). Secondly, in the absence of a structured classroom environment, learners have to be self-motivated. Motivation is helped greatly by e-learning resources that are fun to use (Price, 2013) and interactive (Stepp-Greany, 2002); however, it is recognised that the lack of immediate feedback from peers and teachers is a serious disadvantage (Fourie 2000; Mertzani 2011), and that human connections and collaboration with a community of other language users are crucial factors in the success of e-learning (e.g. Lewis et al., 2005; Coryell & Chlup, 2007; Mohammadi et al., 2011).

Design and content

The design of *Learn NZSL* was developed through an iterative process between the academic project team and e-learning specialist company Kineo Pacific. The *TeachSign* curriculum (Pivac Alexander et al., 2015) was used as a starting point to determine the content of the new resource, and Kineo's responsive multi-device e-learning platform, "Adapt", provided a framework for structuring and presenting this content.

Design was centred on the general principles described in the previous section. Throughout the development, the design was tested against the requirements of an envisaged adult NZSL learner with limited computer literacy and little or no prior

experience in independent learning or language learning. Usability was therefore a priority. The *Learn NZSL* website does not require users to register or to input login details. The "Adapt" platform uses what has been termed a 'deep scrolling' design, presenting content vertically so that users can scroll down the page and have a similar experience on any device. This intuitive design simplifies navigation and minimises time the learner has to spend on mastering the technology, both important factors in effective e-learning (e.g. Lewis et al., 2005).

High-quality video and graphic design can contribute greatly to the usability of any e-learning resource (Cantoni et al., 2004), and in the case of *Learn NZSL*, video was essential as the main presentation mode of sign content. The resource includes a total of 660 video clips of individual vocabulary items and conversations. Videos were kept short to fit in with the cognitive and perceptual constraints of language learners. Although more research is needed on non-traditional camera angles (Berrett, 2011), there is some evidence that showing conversations from both the signer's and the addressee's perspective can reduce the learning burden, for example in learning to spell words using a manual alphabet (fingerspelling) (Adamo-Villani & Beni, 2004). Conversations for *Learn NZSL* were therefore filmed from different angles.

Graphics can help learners to understand content (Cantoni et al., 2004) and in some parts of *Learn NZSL*, illustrations are used to supplement English texts and NZSL videos. Cartoon style characters support the overarching storyline. The layout of information on a web page can have a significant effect on the learner's ease of decision-making and their ability to extract deeper meaning (Cantoni et al., 2004). This is especially the case when presenting potentially competing visual information in the form of text, video, and graphics. There have been suggestions that related text and video should be presented close together (e.g. Schnotz, 2005), but providing plenty of white space is also important for readability.

Engaging students with text before video may be beneficial (Straetz et al., 2004). However, for sign language e-learning resources, how videos and text are laid out is not just a matter of visual organisation, but also determines the order in which learners are exposed to content **i**n their L1 (English text) and L2 (NZSL videos). Nation (2001; 2003) discusses the benefits of presenting information in the learners' L1, as a means of reducing cognitive load. Use of the L1 allows learners to focus on the form and fluent production of unfamiliar L2 vocabulary without expending mental effort on understanding the meaning. Task instructions in the L1 ensure that learners fully understand the task before it is started. *Learn NZSL* content and task instructions are therefore introduced in written English. Videos demonstrating new sign vocabulary items are captioned with an English word, on a grey transparent background in the bottom left corner in order to minimise text overlapping with the signers' hands. To provide learners with meaning-focused practice opportunities in the L2, longer phrases and conversation videos are first shown in NZSL only but are

captioned in English on second viewing. In other activities, L1 text and L2 video are presented separately. (See figure 1).

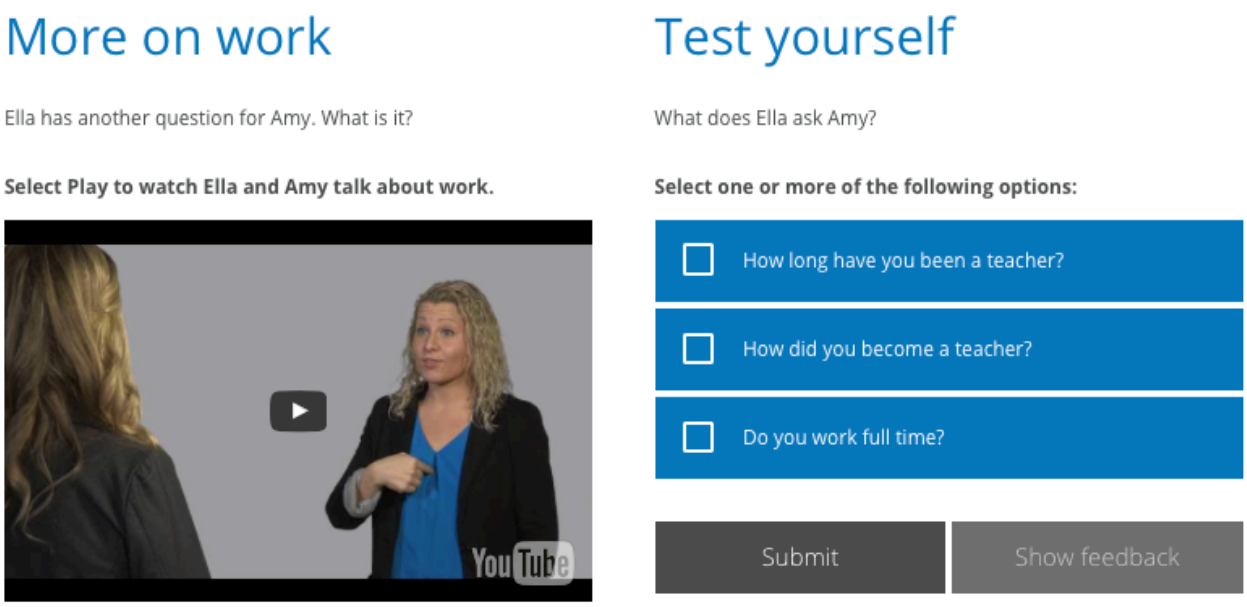

Figure 1. **Interaction of text and video in *Learn NZSL***

To encourage autonomy, *Learn NZSL* uses a 'pull' approach: content is arranged so that learners decide whether or not to access it, and in which order, based on their personal needs and interests. The overarching framework of the website is a 'story' of four characters interacting in a series of everyday situations. Content is organised into nine topics relating to events in this storyline. This structure is particularly suitable for adult learners because stories are easy to remember, are engaging, and provide an authentic context for practising the language content (Walsh, 2008). The story follows a Deaf couple moving to a new town. Learners see them settle, make connections with their neighbour and start their new jobs. All characters are initially introduced as cartoon figures and then 'come to life' through videos of live signers. Unlike written words, sign illustrations are 'embodied' – the sign itself cannot be separated from the characteristics of the person producing the sign. Care was therefore taken to represent a range of ages, genders and ethnicities in sign illustrations and actors.

The nine topics are presented in a spiralling design, returning to core phrases and content often while introducing further details with each iteration. Topics are related to everyday life such as 'family' and 'work'. The order of the topics provides a logical suggested sequence (Lewis et al., 2005) while at the same time offering multiple entry and exit points (Cercone, 2008). (See figure 2). An indicated duration of each topic is shown to guide learners. The estimated durations are based on learner feedback from a pilot trial and take into account the time learners realistically need to spend to engage with the material.

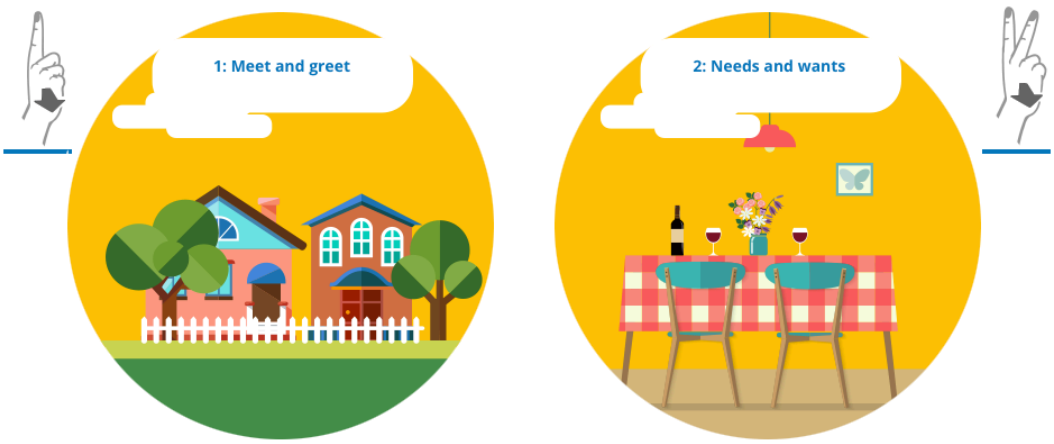

Figure 2. **Topics on the home page**

The internal structure of each topic follows Kineo's recommended 'PEET' tutorial sequence (Bean, 2011):

- *Present*: set out main learning points as clearly as possible, ideally as a guided story;
- *Exemplify* and *Explore*: consolidate learning with case studies or stories (ask the expert, multiple viewpoints, plan it, do it, review it, Goal-based scenarios to encourage exploration);
- *Test*: check that the learner has achieved the learning objectives.

Each topic is divided into four sections (shown as four menu tabs on the web page): Words, Phrases, Conversations, and Wrap Up. This sequence allows learners to progress from learning individual signs, to combining these signs into phrases and longer conversations or narratives. At each point, there are opportunities for practice and self-testing. Much of the content is interactive: for example, new vocabulary may be introduced through a clickable image, such as a family photo, a calendar or a map. When the learner clicks on a part of the image (e.g. one of the family members in the photo), a video demonstrating the relevant sign appears (see figure 3).

Other interactive elements include card matching games, where learners match sign illustrations with English translations; and 'learn more' and 'did you see that' buttons introducing further vocabulary and grammar and cultural notes. Learners can also download vocabulary sheets in PDF form which shows illustrations of all signs taught in a topic so they can print and practise offline.

Self-testing opportunities are mainly through multiple-choice comprehension questions, Ideally, task types should vary to provide a more effective measure of receptive skills (Berrett, 2011), but multiple choice questions were chosen for ease of administration. In the 'wrap up' section, learners are encouraged to film themselves producing short phrases in NZSL. Sample answers in NZSL are shown on video so that learners can compare and critique their own sign production. In later topics,

comprehension of slightly longer NZSL narratives is tested by asking learners to translate these narratives into English and comparing their answers with a captioned version of the video.

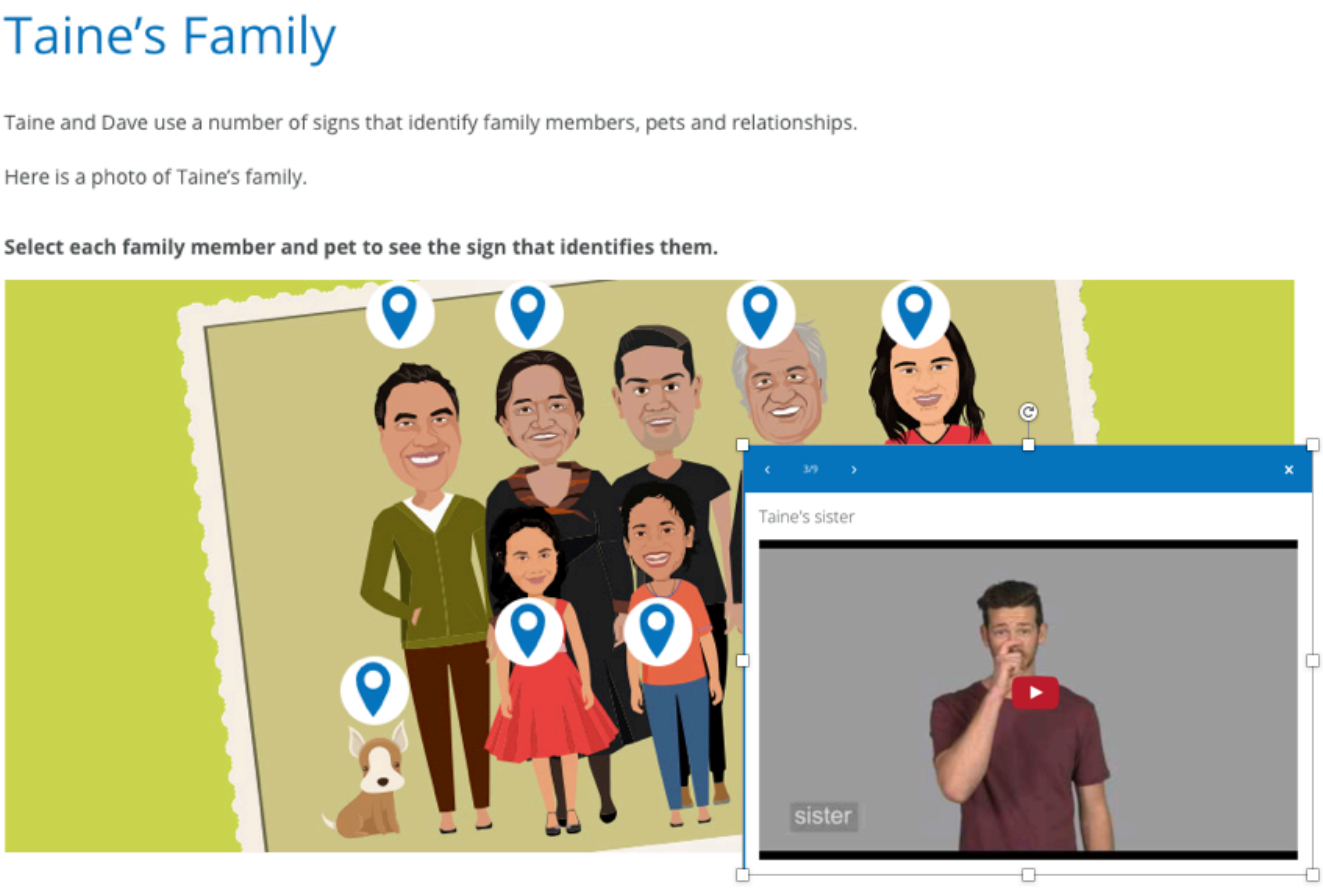

Figure 3. **Interactive image with 'pop-up' NZSL video**

Evaluation

Given that research on online learning of sign languages is still scarce, evaluating *Learn NZSL* use since its launch (in April 2017) can make an important contribution to the field. In particular, the effectiveness of *Learn NZSL* as a stand-alone resource for autonomous learning should be considered. To our knowledge, there have been no studies to date of the learning outcomes for L2 sign language learners using non-compulsory, stand-alone CALL resources. Existing research has instead described 'virtual classroom' environments, either as a component of existing courses or as a distance learning programme that included some interaction with peers and facilitation by a (remote) teacher.

Studies to date have mostly concentrated on the differences between face-to-face learning and online learning. The general opinion expressed in these studies is that face-to-face learning is superior. Fourie (2000) found that vocabulary learned in a

face-to-face setting was recognised better, and that face-to-face learning is especially important in the early stages of learning, but that benefits were less prominent later on. Ehrlich-Martin (2006) attributed negative perceptions of sign language learning via videoconferencing to both technical obstacles and a teacher-focused delivery style that failed to create an appropriate interactive environment. Miller, Hooper, Rose, and Montalto-Cook (2008) found that video frame rate was a crucial factor in comprehension of sign language videos, in particular fingerspelling comprehension. Mertzani (2011) showed that British Sign Language learners generally preferred face-to-face learning over CALL methods, mainly due to the lack of immediate feedback from a teacher in the CALL environment. However, the ability to work more autonomously and to learn at their own pace was appreciated. Two larger scale studies (Vicars, 2003; Radford, 2012) compared the learning outcomes of students taking a beginner's American Sign Language course either in face-to-face setting, delivered by the same instructor through the 'ASL Online' resource, or via a hybrid method. Although neither study found significant differences in test scores between the different delivery modes, Vicars (2003) concluded that online learning was less suitable for developing productive competence.

To complement the findings from the existing research, we carried out a small qualitative evaluation of *Learn NZSL*. The study was intended to answer the following three questions:

1. What are the characteristics of *Learn NZSL* that support NZSL learning?
2. How do second language NZSL learners experience autonomous digital learning using the *Learn NZSL* site?
3. Are these learners' practical achievements meeting the intended learning outcomes of *Learn NZSL*?

In designing the study, we drew in part on the methodology of existing studies. We used a combination of interviews and self-reflections as well as tests of learners' comprehensive and productive skills.

Before describing the methodology of our study in more detail and reporting on the results, we would like to give a brief overview of web analytics for *Learn NZSL* since its launch. Statistics on web traffic can provide an initial indication of the resource's audience and reach. Due to extensive promotion via social media and other outlets, the website quickly became well-used. In the first 10 weeks after its launch, the site was visited a total of 12,152 recorded sessions. Of the 6,592 unique users, 95.6% were from New Zealand.

As seen in table 1, the majority of users were female (81.9%), a gender difference that mirrors enrolments in NZSL classrooms. The largest proportion of users were in the 25-44 age group (50.7%), with fewer users under 24 (18.3%) and in the 45-54 age group (15.5%). Only 6 percent of users were aged 65+. These findings contrast with

Vicars (2003) who noted that online course enrolment included more male, older learners than traditional classroom enrolment.

Analytics data show that most users are concentrated in larger urban areas that are more likely to have NZSL classes. Approximately one-third of recorded sessions originated through social media and 97.1% of those were through Facebook.

Web analytics also give some indication of user behaviour. For example, a relatively short average session time of 5:23 minutes indicates that a large proportion of users did not view a complete topic section during their visit. It is likely, then, that freely available websites such as *Learn NZSL* attract a high level of interest from casual browsers, not all of whom will go on to use the website in a sustained fashion as language learners.

Table 1. ***Learn NZSL Demographics (first 10 weeks after launch)***

Gender	Male	18.1%
	Female	81.9%
Age group	18-24	18.3%
	25-34	29%
	35-44	21.7%
	45-54	15.5%
	55-64	9.5%
	65+	6%
Location (NZ users only)	Auckland	34.3%
	Wellington	21.2%
	Christchurch	12.3%
	Tauranga	5.5%
	Dunedin	3.9%
	Palmerston North	3.5%
	Hamilton	3.3%
	Napier	2.7%
	Other	4.6%

Method

Participants

Participants were recruited by flyers targeting students and staff at Victoria University of Wellington who had not previously engaged in learning NZSL through formal means. Initially 11 participants were recruited; 4 of these subsequently withdrew from the study. The remaining seven participants were aged between 18-40, and six were female. In terms of ethnicity, one participant identified as Māori, four identified as Pākehā (New Zealand European), and two as 'other'.

Procedure

Participants were asked to work through the first six topics of *Learn NZSL* on their own devices, either desktop or tablet, over one month with a suggested time commitment of 2.5 hours per week. At the end of each topic, participants filled in a short online survey to reflect on their own learning.

On completion, learners were tested against the comprehension and production objectives for vocabulary and grammar presented in the content of these topics. The test was administered at Victoria University of Wellington. The comprehension part required participants to translate NZSL sentences, watch a short description and write down key information, watch a dialogue and answer multi-choice questions, and identify a fingerspelled word in short sentences. (Fingerspelling is produced by spelling individual letters of English words and names through a manual alphabet). For the production part participants were required to complete two tasks. First, they signed a personal introduction based on prompts that were sent as preparation one week before the test. The second task tested participants on their ability to ask questions related to work, place of residence and family.

Although the intention was originally to have the participants sit the test in groups, just over half of the participants were not able to make the scheduled times. Individual appointments were therefore made with four participants, while three took the test in a shared room. In order to ensure consistency, participants were given up to 30 minutes to complete the production part and the researcher controlled the comprehension part, pausing the video in between to give participants time to write. All information was repeated twice.

A 20 minute semi-structured interview in English was held with each participant after completion of the topics. Participants were questioned about their prior language learning experience and whether they had used any computer-based resources, the things they normally do online, how they went about using *Learn NZSL* and whether they did anything else to practise NZSL.

Interviews were transcribed and a thematic analysis of the reflective survey and interview responses was carried out. Tests were marked according to an existing rubric and mean scores were calculated for the comprehension and production sections as well as an overall score.

Results

Data from participants' reflections, interviews and test results will be discussed to provide an insight into the use of *Learn NZSL* and to indicate whether participants are achieving the intended learning outcomes of the site.

RQ1: What are the characteristics of *Learn NZSL* that support NZSL learning?
Overall, participants found the site clear, visually appealing, friendly and easy to navigate. Content was perceived as well-organised and structured, logical and usable. They noted how each topic was built on previous topics, which *"helped a lot in retaining signs while learning new ones"*.

Videos were the best liked feature since these could be replayed and participants could work through video content at their own pace. One participant found it helpful that the speed of the embedded YouTube videos could be adjusted to watch and sign along at a slower rate.
Conversation videos were seen as valuable in earlier topics, because they helped participants to see how signs and sentences could be put together in the context of a dialogue.
The ability to replay videos with English captions after an initial uncaptioned viewing was also seen as valuable:

"It reaffirmed what I had been learning, felt very satisfying if I could understand and follow the whole conversation, and know what parts to work on/look over again if I couldn't".

Interestingly, participants perceived conversation videos as less valuable and harder in later topics, and words and phrases videos as more helpful.

Self-tests through multi-choice questions and, "Did you see that?" buttons were also seen favourably. The self-tests helped participants to check their comprehension and the buttons provided relevant information on NZSL grammar and Deaf culture which helped them to notice certain nuances.

With regard to less liked features of *Learn NZSL*, two participants mentioned technical issues with video loading on certain devices and browsers, and navigation between externally hosted videos and other website content. One participant said the "Identify the signs" activity was *"a bit underwhelming"* because the sign illustrations

were not always easy to decipher. Participants preferred to have this activity as a recurring game to assist with vocabulary recall.

There was some discussion around tasks in the Wrap Up section, which required participants to film themselves translating English phrases. Two participants did not film any translations due to lack of time and/or equipment and commented it *was "tempting to just skip to the answers"*. However, another participant said this task was useful to build their confidence and to compare their signing with sample answers in NZSL.

RQ2: How do second language NZSL learners experience autonomous digital learning using the *Learn NZSL* site?

First, participants' familiarity with the online environment and experience in learning other languages needs to be noted. All participants had prior experience learning another language at school to a basic level and six out of the seven participants had learned other language(s) in post-compulsory education. Moreover, five out of seven participants had used CALL resources to learn a second language. This profile may not be typical of a cross-section of anticipated users, and could be a result of self-selection to participate in the user evaluation task. All participants were active internet users as expected, considering their age, although one was less familiar with smartphones.

The time spent per topic ranged from thirty minutes to five hours, with an average of one hour and ten minutes. Participants were not asked to record time per session; however, they commented that the first and fourth topics took the most time. Participants generally felt more confident from topic two onwards, noting a repeated pattern in structure and expected tasks. It is still unclear why the fourth topic took considerable time and further data is needed. In addition, most participants remarked that each topic took more time than expected and indicated as a guide on the website. In fact, four participants withdrew from the evaluation due to lack of time, and other participants commented on not having enough time to devote to learning.

Interview data reveals that most participants used additional learning strategies, such as checking the NZSL Online Dictionary, printing vocabulary lists, signing in front of a mirror and signing along with videos. Four participants practised signing with other people in real life: three signed with either a friend or family member with no NZSL experience, and two practised with hearing friends who knew NZSL.

Overall, participants highlighted ease of use and flexibility, such as being able to return anytime to work at their own pace, as the major benefits of online learning. There are some disadvantages however, such as a lack of external motivation without two-way communication, and no external compulsion to visit the site even though they enjoyed practising once there. The lack of immediate feedback on signing attempts was an issue and one participant said she did not realise she was signing

incorrectly until someone mentioned it. Classroom learning was described as having exactly the opposite advantages and disadvantages: for example, it is less flexible, but provides motivation to get the work done, there is immediate feedback on sign production and grammar, and there are opportunities to have conversation practice.

RQ3: Are these learners' practical achievements meeting the intended learning outcomes of *Learn NZSL*?

Comprehension test scores ranged from 39% to 88%, with an average of 68%. Approximately half got correct marks for translating NZSL sentences. Participants particularly struggled with fingerspelled words, both in isolation and as part of a sentence. Scores ranged from 1 - 3.5 out of 4 possible points, with a median score of 2.1. *Learn NZSL* does not provide extensive practice with fingerspelling comprehension and these participants had considerably less exposure to fingerspelling than classroom learners where fingerspelling is used regularly in roll calls, asking others for their names and clarifying information. Reading fingerspelling appears to be one of the harder skills to master in sign language learning and may even be more difficult in an online environment as viewers cannot see letters being formed in 3D (Miller et al., 2008).

Most participants were successful in watching a short signed dialogue and answering multi-choice questions. *Learn NZSL* has many exercises like this which had prepared participants well for the format of this task. Also, participants were generally successful identifying key points from a short description about individuals.

Production test results ranged from 44% to 75%, with an average score of 62% and two below 50%. The written reflections of the two lowest scoring participants show that they spent the least time on *Learn NZSL*. One participant did not provide reflections for topics three to six due to limited time. This suggests a relationship between the amount of time spent on *Learn NZSL* and production test results.

Test videos show articulation errors both in fingerspelling and individual signs. Participants' personal introductions contained some articulation errors in individual signs, ranging from one to six, with an average of three errors. Articulation errors were more common in signs with more complex handshapes and/or movements, also noted in other studies (Ortega & Morgan, 2010; Willoughby, Linder, Ellis, & Fisher, 2015). This reflects that participants are relying on self-monitoring and correction of articulation errors after watching videos, which is undoubtedly less effective than direct teacher feedback.

Aspects of NZSL syntax are not always explicitly taught in *Learn NZSL* but are modelled in the phrases and conversations provided. The production part of the test showed that participants successfully incorporated many syntactic structures such as questions, negation, preferred sign order, pronominal reference, and spatial and facial grammar. Less commonly modelled phrase structures were attempted but reproduced

with some errors, suggesting that repeated demonstrations are necessary before learners can master these structures.

Test scores indicate that most participants met the intended learning outcomes, although to a lesser degree of proficiency than we have observed in classroom learners in a beginners course covering equivalent content over 12 weeks. Articulation flaws in participants' sign production are most likely due to limited exposure to NZSL over the short timeframe of the study, and the lack of direct feedback on participants' sign production.

Conclusion

The development of *Learn NZSL* contributes to advancing pedagogical design and production values of e-learning resources for sign languages internationally. The results of our evaluation show that attention to user-friendliness and presentation are essential first steps towards enabling autonomous learning online. Although many learners are increasingly comfortable in online environments, technical obstacles can still draw time and effort away from the task of language learning.

As is the case for autonomous learning in general, the flexibility of the e-learning environment is offset by the demand on learners to be self-motivated and the lack of immediate feedback. The high participant dropout rate in this study showed that it was difficult to maintain motivation and to set aside regular time for online study. Our data also clearly showed that participants craved some human connection for both feedback and practice opportunities. Berrett (2011), amongst others, stresses the importance of learning as part of a language community. While *Learn NZSL* does not currently offer many built-in opportunities for learners to connect with each other and with teachers or other language experts, efforts have been made to provide additional support through a dedicated learners' Facebook group. Future developments could include text or email notifications to encourage and remind learners to return to the site; the possible use of gamification techniques such as a competitive element between learners; and video recording and feedback facilities, whether in-built similar to the British Sign Language SignLab (Mertzani, 2011) or external such as through the cloud-based software package *GoReact* (Speakworks, 2017). However, such developments require regular moderation and feedback by language experts and may therefore not be feasible without ongoing investment in the resource.

This evaluation also has implications for improving the content and progression of *Learn NZSL*, with participant reflections pointing to parts of the resource where the learning curve may currently be too steep.

The evaluation study reported on in this article was small in scope, both in terms of its short timeframe and the number of participants. Given the scarce literature on sign language learning online, even a small but detailed qualitative study can begin to

shed light on the way in which sign language resources are used and what learning outcomes can be expected. Longer term monitoring with larger participant numbers will be beneficial both for the improvement of individual resources such as *Learn NZSL* and as a contribution to the study of learner autonomy in general.

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IS THERE A HOUSING CRISIS IN NEW ZEALAND OR IS IT ONLY A METAPHOR? RESULTS OF CRITICAL METAPHOR ANALYSIS

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Abstract

This paper reports on a corpus-based study of metaphor use in the discourse of the Auckland housing topic in News and Commentary sections of The New Zealand Herald over the months of July to September 2016, the time of intense debate in the media on the housing situation in Auckland. The paper outlines an approach combining cognitivist and the Critical Metaphor Analysis. The study aims to reveal the persuasive ideological functions of metaphors in the News and Commentary genres and the covert intentions of the writers with particular reference to perceptions of a housing crisis a year before elections in the country. Our findings include a classification of metaphors used in the reporting of and commenting on the housing situation in Auckland based on cognitivist conceptualisation of metaphors, a comparative statistical analysis of the metaphors used in the News and the Commentary genres, and an explanation of the factors that may influence the recipients' decoding of the identified metaphors. We conclude from the analysis of the newspaper texts and the corpora that the metaphorical language used in both these genres promotes the readership's perception of a market in crisis.

Keywords: metaphoric expression, conceptual metaphor theory, critical metaphor analysis, socio-political discourse, corpus analysis

Introduction

Rocketing house prices in 2016 and the insufficient housing supply in Auckland, New Zealand, led to ongoing debates in the media and moved many commentators to refer to the housing situation as a socio-economic and political crisis. The discourse used in the media at such times is of importance as it is via their discourse that the media fulfil the functions of informing the public, interpreting developments in the community, and influencing public opinion and civic decisions.

A central role in political discourse is played by metaphors due to their semantic, pragmatic and textual effects, and ability to evoke emotional responses (Charteris-Black, 2004; Perrez, J. & Reuchamps, M., 2015). The use and identification of metaphors have been investigated in a number of discourses and political domains: political and diplomatic dialogue and negotiation (Cameron, 2011; Musolff, 2004,

2011; Weng, 2013), religious discourse (Charteris-Black, 2004; Mohamed, 2014), party manifestoes, speeches by world known political leaders, advertising, news and financial reporting (Charteris-Black, 2004, 2011; Guo, 2013; Koller, 2004; Lopez & Llopis, 2010; Perez-Sobrino, 2016), debates about Europe and European integration (Drulak, 2006; Musollf, 2004; 2011), online news (Han, 2014), citizenship and immigration discourse (Lee, 2015; Salahshour, 2016).

However, areas and aspects of metaphor study in New Zealand socio-politics remain underdeveloped. We intend to explore aspects of metaphor use in the discourse of the Auckland housing topic in *The New Zealand Herald,* and through that, contribute to the understanding of the impact of metaphor on society.

Literature Review

Much of the existing literature on the use of metaphor in socio-political discourse continues to explore its important function in discourses (Carver & Pikalo, 2008; Charteris-Black, 2004, 2011; Deignan, 2015; Fairclough, 2013; Kovecses, 2015; Li, 2016; Musolff, 2012) and debate the methodology of identifying and researching metaphors (Drulak, 2006; Pragglejaz Group, 2007; Wilson, 2011). The debated research methodologies, based on the authors' understandings of metaphor, could be classified into three major types.

Traditional/semantic/substitution approach
The first approach builds on Aristotle's classical writing and considers metaphors to be rhetorical and substitutional decorative linguistic tools which transform meaning from literal to figurative and embellish the language (Walter & Helmig, 2008). However, critics of this approach see much more in a metaphor on examining it in context because it influences the type of value judgements that we make. Charteris-Black (2004, p. 25) for example, supports his criticism with the example of the phrase 'blood is shed', 28 occurrences of which in the Bank of English imply a negative evaluation of the person responsible for the killing unlike the possibly neutral evaluation the phrase may provide when taken out of context.

Cognitive approach/interactive view: Conceptual Metaphor Theory (CMT)
CMT, deriving from Lakoff and Johnson's seminal work of 1980, conceptualises metaphors as crucial elements of cognition, which, rather than transforming plain into figurative language, structure our thinking as they represent one aspect, or domain, of experience in terms of another, e. g. *housing market as a wild animal* or *housing market as a game*. This school of thought focuses on 'conceptual metaphor' (CM) (Lakoff & Johnson, 1980; Lakoff, 2008; Drulak, 2008), assuming the existence of a universal system of 'primary metaphorical mappings' in our cognition (Lakoff, 2008, p. 26). It distinguishes between CMs, and metaphorical expressions (ME), which are also called 'linguistic metaphors'. A CM is a cognitive concept, not necessarily appearing in the actual text, but serving as a kind of a reference point for concrete

statements (MEs), which occur in the discourse and exemplify the CM. Thus, there is a variety of metaphors relying on the CM *"housing market*" is "*a wild animal*": *"debt monster gaining weight"; "what a shambolic monster our city would have become"*.

Han (2014) supports the cognitive view that metaphor constitutes everyday English, and reiterates Lakoff and Johnson's definition of metaphor as understanding one thing in terms of another and as a 'cross-domain conceptual mapping' between a *target domain* and a *source domain,* the latter often grounded in people's physical, bodily, experience of the concept referring to the target domain. An example of this is the possible physical, bodily effect of a "*fire raging in the housing market"*.

Vertessen and De Landtsheer (2008) studied metaphor frequency, intensity, content and power in Belgian quality newspapers and tabloids at election time and between elections. They combine the traditional and the cognitive approaches, considering metaphors to be linguistic elements with important cognitive and emotional effects, and at the same time addressing the questions of why politicians use metaphors, and how and why political metaphors work, thus incorporating principles of Critical Metaphor Analysis (CMA). Lakoff and Johnson's early CMT has received serious criticisms for its invented, decontextualised data, sourced from the researchers' own mental lexicons or dictionaries and thesauri (Charteris-Black, 2004; Cameron, 2008; Deignan, 2010; Musolff, 2012), as opposed to data from real language use, hence calls to use corpus analysis (Drulak, 2008; Han, 2014) to establish a broader base for metaphor interpretation. Criticisms have also referred to cognitivists' insufficient consideration of the textual grammatical form of the metaphor itself, to its highly irregular character, and to the effect derived from using a metaphor in combination with other figurative language, such as hyperbole or metonymy (Forceville, 2006).

The emphasis on the cognitive at the expense of the textual and contextual has now shifted. Kovecses (2011), for example, accepts the criticisms and calls for identification of linguistic and conceptual metaphors to be as complete as possible, for quantitative metaphor analysis to be supplemented by qualitative analysis, and for equal attention to be paid to regularity and irregularity in metaphor use.

A number of new cognitively oriented approaches have emerged, focusing on the complex relationships between metaphor and metonymy (Gentner & Bowdle, 2008) and on the principles of both 'cognitive' and 'communicative relevance'. The latter is a modified cognitive approach informed by Relevance Theory within CDA (Cameron, 2011; Musolff, 2011, 2012; Wilson, 2011), where, unlike the coding-decoding communication model, communication is mediated by context.

Gibbs (2011) contends that many conceptual metaphors should be understood as allegories, i.e. extended metaphors which introduce a whole narrative about a metaphorical source domain in order to present a symbolic understanding of people and events in a certain context.

Critical Metaphor Analysis (CMA)

Charteris-Black's CMA approach (2004) accepts the CMT understanding of metaphor as a thinking constituent, but tests this claim against numerous examples of metaphor use in specific text genres, aligning CMT with the CDA tradition and corpus methodology. Charteris-Black shows that 'covert' and 'unconscious' intentions and ideologies underlie the use of metaphor in discourse, and through critical analysis of metaphor, these intentions and ideologies can be revealed and a stance on socio-political issues taken. To achieve this, he proposes a three-stage procedure:

> 1) *metaphor identification,* which aims at establishing the presence of metaphor and determining whether there is incongruity or semantic tension between a literal source domain and a metaphorical target domain; 2) *metaphor interpretation,* which aims at identifying the type of social relations constructed through metaphors; and 3) *metaphor explanation*, which aims at examining the way that metaphors are interrelated and become coherent in the context in which they occur." (p. 35)

He sees these as being similar to Fairclough's (2013) three stages of identification, interpretation and explanation, based on Halliday's (2014) functional linguistics.

Charteris-Black's approach (2004) highlights the complex linguistic, cognitive and pragmatic dimensions of metaphor and the contextual importance of metaphor in persuasion. Authors choose metaphors drawing on two types of resources: individual (thoughts, feelings, physical experiences, knowledge of language systems) and social (ideology, historical and cultural knowledge).

More recent approaches are characterised by overall integration of CMT and CDA disciplines (see Li, 2016), with cognitive linguistics paying more attention to discourse and sociocultural factors in language use, and CDA resorting to the methodology used in cognitive linguistics. It has now been confirmed that the use of metaphor can have cultural motivations (Musolff, 2012) and that different metaphors can co-occur, forming metaphorical clusters (Cameron & Stelma, 2004). Musolff (2006) distinguishes between the general source domain level and the level of specific metaphor source "scenarios", or "narratives" as focal areas of source domains, characterising a "scenario" as a set of assumptions made by competent members of a discourse community about typical aspects of a source situation, such as its participants and their roles, the "dramatic" storylines and outcomes, and providing a "platform to link the conceptual side of metaphor to its usage patterns in socially situated discourse" (p. 36). At the heart of Cameron's (2011) "complexity/dynamic systems approach" lies an understanding of linguistic and cognitive phenomena as processes, flows, or movement, rather than as objects.

However, following Chilton (2005), Song Guo (2013) is critical of CDA's insufficient attention to cognitive aspects of discourse and argues that the integration

of the two fields is beneficial to both because it is through human mind that discourse influences and changes social reality, hence the need to know cognitive processes.

Han's (2014) corpus-based, modified integrative CMA study of the use of war metaphors in Chinese online entertainment news and political news, suggesting that metaphors are genre specific, employs both qualitative and quantitative methods. Corpus analysis is seen as essential as it reveals the norms of language use (p. 32).

Of interest to this project is a recent corpus-assisted New Zealand study, the findings of which highlight the role of liquid metaphors in the representation of migrants in New Zealand socio-political discourse not only as a negative phenomenon (and the impact on housing being an important part of the negative representation), but also their role in shaping a view of immigration as a constructive force in New Zealand society (Salahshour, 2016).

This study

Adopting an approach based on a combination of cognitive tenets and works by Charteris-Black (2004, 2011) and other scholars exploring the use of metaphor in authentic discourse (Cameron & Stelma, 2004; Drulak, 2008; Koller, 2004; Semino, 2008; Walter & Helmig, 2008), this study uses a corpus-based approach to investigate metaphor in news and comment texts published in *The New Zealand Herald*, all on the topic of Housing in Auckland. We follow Charteris-Black (2004, p. 21) in considering that a metaphor is caused by a shift in the conceptual system revealing a previously unperceived similarity between the referents in the original *source context* and those in the novel *target domain*. In addition to cognitive criteria, metaphor is also seen pragmatically as an incongruous linguistic representation, which aims to persuade, often covertly. Finally, a *conceptual metaphor* is a statement that resolves the semantic tension of a set of mataphors by showing them to be related.

Rationale, aim and research questions

The study of metaphorical discourses of a traditional newspaper is important both for second language acquisition at an advanced proficiency level and for a native speaker's developed ability to comprehend and evaluate sophisticated socio-economic and political situations and their participants. By examining metaphors in a corpus of language, we may become more aware of what is hidden by a metaphor as well as what is highlighted by it, thus enabling us to challenge the author's stance and to propose an alternative way of thinking about the topic. Therefore, understanding more about metaphor is an essential component of intellectual freedom (Charteris-Black, 2004, p. 253).

We aim to reveal the possible rhetorical effects of the use of metaphors and their ideological functions in the current socio-economic environment of New Zealand, with a focus on the discourses of reporting and commenting on housing problems in

Auckland and with particular reference to perceptions of crises. A comparison of metaphors used in news reports and commentaries aims to contribute to the understanding whether the use of metaphors is genre-specific.

This study can be seen as an attempt to contribute to the investigation of metaphor as used in New Zealand media discourse, particularly in specific genres of language use.

The research questions we seek to address are:

1. What are the metaphors used in reporting and commenting on the housing situation in Auckland and how can they be classified?
2. What factors influence the decoding of the identified metaphors?
3. Is there any difference in the patterns of use of metaphors in the two genres under investigation?

Design and methodology

Two small corpora were created: a corpus of news reports and a corpus of commentary articles on the topic of housing, published in *The New Zealand Herald* and collected over the period of 21 July - 21 September 2016 (162 texts totalling 111, 606 words). Frequent sources of metaphors (e.g. human activity, politics, games) and targets (e.g. housing, housing market) were identified, as well as the multi-faceted relationships between the MEs via close reading and corpus analysis. Differences in metaphor use in the two corpora were identified, analysed statistically and explained. The news and comment texts were identified by using a search for Housing in Auckland on *The New Zealand Herald* website. The *Wellington Corpus of Written New Zealand English* was used for comparison purposes.

Two software programmes were used to examine the corpora: *WordSmith Tools 7.0* (Scott, 2016) to produce word and keyword lists and concordances of MEs, and *Wmatrix* (Rayson, 2008) for corpus analysis and comparison. *Wmatrix* has similar functions to *Wordsmith Tools* but, in addition, enables the sematic annotation of texts. *Wmatrix* assigned semantic tags to the keywords from the corpora, thus enabling the predominant semantic categories in the corpora to be identified.

Candidate MEs were identified through close reading of texts from the two corpora and from the wordlists and keyword lists. These expressions were then classified according to the source domains to which they refer. On this basis, CMs were identified and checked against the semantic categories as determined by *Wmatrix*. Further searches for MEs were then carried out, concordances were made for each of the expressions and the CMs modified as appropriate. Conventional metaphors were distinguished from idiosyncratic ones so that only the former were further analysed. This was done following the Pragglejaz Group's (2007) Metaphor Identification Protocol (MIP) approach: if the candidate metaphor has a more basic meaning distinct from its contextual meaning but can be understood in relation to it, then it is regarded as metaphorical. In the example '*Our MPs are promising to feed us*

affordable homes', 'feed' has a basic meaning of 'give food to' 'provide enough food for' (Longman Dictionary of Contemporary English, 2003). The contextual meaning is the more abstract one of the organised provision of housing but it can be understood in comparison with the more concrete meaning of 'feed'. Once candidate metaphors were confirmed, the CMs and MEs were then analysed to determine patterns and inter-relationships, including comparisons between their use in the two corpora. For this purpose, four 400-word snapshots from each of the two corpora were subjected to descriptive statistics and two-sample hypothesis testing.

Table 1. ***Information on corpora used in study***

Corpus	Number of texts	Total number of words	Average text length
Corpus of texts on the topic of housing in Auckland from *The New Zealand Herald* News sections	127	79,869	628 words
Corpus of texts on the topic of housing in Auckland from *The New Zealand Herald* Comment sections	35	31,737	906 words
Wellington Corpus of Written New Zealand English	500	1 million	2,000

Findings

Identification stage

As indicated above, identification of MEs in the two corpora and the CMs that frame them involved several stages of corpus-based analysis. Wordlists and keyword lists were produced for the Herald News (HN) and the Herald Comment (HC) corpora using *Wordsmith Tools Version 7* (Scott, 2016), with a subsequent focus on the words that directly reference the topic of housing in Auckland. *Wmatrix* was used to confirm semantic categories for those keywords, a process which pointed to potential target domains, e.g. HOUSING, HOUSE(S), HOME(S), MARKET, INVESTORS as well as aspects of these domains: apartments, tax, speculator.

Keywords

The keyword lists indicate the words that occur unusually frequently in comparison to a reference corpus, in this case the *Wellington Corpus of Written New Zealand English* (1993). *Auckland, per, cent, housing* occupy the first four places for both keyword lists. *Said* is fifth for the HN corpus but does not appear in the first 50 for

the HC Corpus, clearly indicating the reportage nature of the HN Corpus. Table 2 contains selected data from the keyness lists with an indication of the key concepts contained in the corpora, a potential focus for exploration of metaphor use. (See Appendix 1 for keyness data for the first 50 keywords for each of the corpora.)

Table 2. ***Selected keyness data in HC and HN corpora***

Keyness data	Similarities and differences
prices, buyers, house, houses, investors, bank, banks, property	The key semantic concepts in both corpora are related to *housing* as
market is at 13 on the HN list but is at 34 io the HC list	Reflects the dominance of the topic *Auckland housing market* in news
crisis is at 15 on the HC list but at 67 on the HN list	Greater willingness to describe the situation as a crisis
bubble is at 35 on the HC list but is absent from the HN list	Apparent propensity for a rhetorical stance on the housing market
c*ouncil* is at 30 on the HN list but is at 39 on the HC list *government* is at 28 on the HC list but is at 84 on the HN list	An apparent indication of who the key agents are seen to be, indicating the greater role proposed for the government by commentators.
tax is at 9 on the HC list but is at 161 on the HN list	Possible indicator of a key solution as seen by commentators
apartments is at 18 on the HN list but is at 42 on the HC list	Indicating favoured solutions
Chinese is 37 on the HN list but is at 55 on the HC list	Indicating ethnicity is less of an issue in commentaries than in reports

Wordlists

A comparison of the keyword and frequency lists for the two corpora seems to indicate that news reports and comment pieces both focus on core aspects of the housing market: *house, houses, property, prices, buyers, investors, banks*. The news reports, however, seem to foreground stories of access to *homes* or lack thereof with the council seen to be a key player, whereas the comment texts are more likely to describe the situation as a *crisis or bubble* and to see the government as a key player.

Wmatrix

A secondary analysis was carried out using *Wmatrix3*, a semantic annotation tool (Rayson, 2008). The semantic tags assigned to the keywords identified using *Wordsmith Tools* were analysed in order to confirm the predominant semantic

categories in the two corpora. *Table 3* indicates that the most key semantic categories are those of *Architecture, Buildings, Houses* and *the Home* (for example, *Architecture, kinds of houses & buildings* and *Residence*)*; Money and Commerce* (particularly *Money: generally, Money and Pay, Business: selling); Possession: getting and giving.* (See Appendix 2 for a full list of the relevant *Wmatrix* semantic categories with keyness data from each corpus aligned to them.)

Table 3. ***Most frequent words in each category and sub-category***

Semantic category, UCREL Semantic Analsysis System at *Wmatrix*	Most frequent words for each category or sub-category
Architecture, housing and buildings	Housing, house, house, building, properties, apartments, housing market, apartment, developers, build, built, construction, developer, buildings, estate agent, home owners, housing shortage, residences
Residence	Home, homes, housing, residential, living, suburbs, residents, dwellings, live, house, tenants, dwelling, suburb, liveable, accommodation, lived, housing policy
Money: generally	Investors, tax, capital, investment, income, investor, funding, fund, afford, profits, profit, banking, GDP
Money: cost and price	Price, prices, house prices, cost, house price, costs, worth, valuation, expense, charge, pricing, fees, charged, priced, cost of living, prices up, expenses, revaluations, costing
Business: selling	Buyers, market, sales, sold, buy, sale, rent, bought, selling, rents, buying, rental, purchase, trade, sell, agency, buyer, purchases, auction, agencies

The first two semantic categories of the above table guide us towards investigating HOUSING and the last three towards investigating MARKET. For this study, we have combined these into a single target domain of HOUSING MARKET.

Target and source domains

This study then examined the target domain of HOUSING MARKET and identified expressions that carry metaphorical senses (see Table 4).

The number of MEs occurring in the news texts is recorded as being higher than that in the commentary texts when the MEs relate to the source domains of “games”, “crisis” and “fire”. However, the total number of MEs used in the commentary genre is higher than in the news genre.

Table 4. ***Source domains with frequency of metaphorical expressions in corpora***

Source domain	MEs in corpora	
	HN	HC
LIVING BEING	15	15
SPACE WITH IDENTIFIABLE BOUNDARIES AND ACTIVITIES INSIDE IT	3	8
A GAME WITH RULES AND PLAYERS	22	11
A CRISIS	21	16
A POLITICAL AGENDA	4	31
A BUBBLE	4	17
STATE FUNCTION TO BE REGULATED	9	9
ON FIRE	13	6
A WILD ANIMAL	5	7
IMPACT/AGENT/ACTOR	4	4
PRODUCT OF HUMAN ACTIVITY	3	3
A PROCESS OF ACQUISITION	6	-
CONFLICT/STRUGGLE	3	3
A STRUGGLE BETWEEN GOOD AND EVIL	-	5
Totals	112	135

Interpretation stage

As the interpretation stage involves establishing a relationship between metaphors and the cognitive and pragmatic factors that determine them (Han 2014), we identified the CMs, involving the primary metaphorical mappings for the understanding of the notion of the current housing market in terms of other things, creating "cross-domain conceptual mappings" (p. 37). The choice of MEs and then their interpretations are based on the encoders' (the authors') and decoders' (the researchers' in this case) individual thoughts, feelings and bodily experiences of the world as well as their knowledge of the lexical fields and various word senses that are available.

Below is a list of such cross-domain conceptual mappings identified in our corpora, with examples of the actual MEs presenting the CMs.

HOUSING MARKET IS A LIVING BEING
"Chinese buyers are showing a growing appetite"; "Auckland market has proved resistant"; "the timing of the market collapse"; "the market could not achieve"; "market drivers"; "you are seeing the market responding"; "the market has turned"; "to get onto the Auckland property ladder"; "if the housing market grows fast".

We observe clear examples of metaphors based both on personification and reification here, having to do with the market's growth, spread, fall, rise, collapse or activities leading to 'feasting' of some of the participants and to 'misery' of the others. Yet, there is a third element to the market – those who are struggling to get in.

HOUSING IS A SPACE WITH IDENTIFIABLE BOUNDARIES AND ACTIVITIES INSIDE IT

"*to measure market distortions and spill-overs"; "the top of the market"; "at the bottom of the market"; "demand and supply sides of the market"; "swamped the market with supply"; "a surge in buyer activity".*

The associations aroused in the reader by the metaphors in the above two categories have to do with measurable and changing dimensions, physical movement and change.

HOUSING MARKET IS A GAME WITH RULES AND PLAYERS

"the impact of the recently announced rule-changes"; "these tighter lending rules are likely to hurt some first home buyers outside Auckland"; "locking first home buyers out"; "property investors are increasing their stronghold on the housing market shutting out families"; "first home buyers snapped up 25%"; to up the ante Labour's new Housing policy promises to".

The source domain of 'game' is often closely related to that of 'fight/struggle/war', where first-home buyers struggle to get on the board. This relationship demonstrates the possibility of a ME being mapped onto more than one source domain.

HOUSING MARKET IS A PRODUCT OF HUMAN ACTIVITY AND OBJECT OF THAT ACTIVITY

"prices and the NZ dollar are over-cooked"; "giving up smoking or learning to cook on a budget"; "property prices in Auckland were over-cooked".

The semantic tension created here by reification implies the usefulness and the need of housing to humans, similar to cooked food. At the same time, the source domain of over-cooked food, particularly within the context of its "messy consequences" sounds alarming.

HOUSING MARKET IS A PROCESS OF ACQUISITION

"it will be cold comfort for first-home buyers", "first home buyers have picked up 33% of sales"; "leaving wannnabe buyers starved of choice"; "would help more first home buyers get a foothold in the Auckland market".

The above expressions can serve as a perfect illustration of the multi-semantic nature of metaphors. Depending on the personal, social and cultural experiences of a particular reader, different other semantic aspects of the metaphor may come to light. Thus the possible CMs for some of the above expressions can be: *housing is a*

struggle/fight/war; or*: housing is a building difficult to climb into;* or*: housing is a game with players that first-home buyers appear to be losing.*

HOUSING MARKET IS A WILD ANIMAL
"debt monster gaining weight"; "arrest the wild caravan of real estate exuberance"; "expected to cool Auckland's rampant market"; "bidding war mania"; "what a shambolic monster our city would have become".

The metaphors in this cohort are based on personification and reification at the same time and often present the characteristic metaphoric feature of exaggeration, and it may depend of the decoder's individual experiences which of these bases appear the brightest.

HOUSING MARKET IS IMPACT/ACTOR/AGENT
"leaving wannnabe buyers starved of choice"; "it is sickening for first home buyers who are shut out of the market"; "rules are likely to hurt some first home buyers outside Auckland"; "crisis drives jump in WINZ loans".

First home buyers feature in this cohort of expressions again, but with a different, stronger, source domain as the impact is physically and emotionally hurtful, painful and leading to the need of help, something that could be related to most people's personal experience in one way or another. There is also social impact and reference to crisis is made.

HOUSING MARKET IS ON FIRE
"w*hether the limits would help to cool the overheated market"; "rates have undoubtedly added fuel to the fire";"the fire raging in the housing market"; "the heat was coming out of the market".*

The source domain of fire/heat/fuel creates a vicious picture for the housing market. The heat increases as it is not only the market that is fuelled, but also Auckland, demand, excessive speculation, buyer behaviour. The fuel is added by immigration levels, increase in bank credit, thus lifting the negative evaluation to its extreme. We also note the polysemy of the key word 'cool'.

HOUSING MARKET IS A STATE FUNCTION TO BE CONTROLLED AND REGULATED
"should be cracking down on speculators"; "to strengthen the provisions in putting heat on the landowner"; "jolly good go at unclogging the housing supply chain"; "keep that under control and cut fat".

The bodies to set the rules and to control and supervise housing are the Government and Government departments, agencies, banks, Council.

HOUSING MARKET IS CONFLICT
"likely to hurt first-home buyers"; "account of the heated debate and struggle"; "for stretched first-home buyers"; "as affordability in Auckland is more squeezed than anywhere else".

HOUSING MARKET IS STRUGGLE BETWEEN GOOD AND EVIL
'the evil which is land banking"; "the social carnage which is the Auckland housing market"; "the drug of lower interest rates"; "disease of house price inflation".

HOUSING MARKET IS A BUBBLE
"market bubble is still growing'; "could spot a housing bubble only after it burst"; ***"****economists call this "riding the bubble""; "by further inflating a housing bubble".*

The CM does not seem to bear a lot of seriousness – rather it creates a light and somewhat playful impression, distancing the housing bubble away from the coder's concerns or worries. Even the use of the verb "burst" does not add seriousness to the description of the condition of the housing as the totally opposing views of the two major political parties are presented as both lacking a serious approach and unworthy of serous comment.

HOUSING MARKET IS A POLITICAL AGENDA ITEM
"shooting for the housing moon"; "our MPs are promising to feed us affordable homes while pledging"; "the central bank is barracking about the increased"; " labour policy promises to "crack down on speculators"; "politicians only tinkering with the current crisis".

The source domain here is closely connected with the domain of bubble but presents housing overtly as being an object of major politics despite the need of urgent decisions and action.

HOUSING MARKET IS CRISIS
"lost control of the Auckland's housing crisis"; "a crisis rages"; "the nation's housing crisis"; "creating brain drain"; "state of emergency over"; "housing agencies to get on top of the crisis"; "Auckland's rent crisis is forcing would-be tenants to.."; "the housing crisis was likely to deepen".

Because of the source domain having to do with serious danger and threat, this cohort of MEs draws a picture of a crisis situation needing urgent solutions on the part of politicians and political bodies.

Explanation stage
The concordance lines, confirmed by the analysis of their contexts, often demonstrate the use of two MEs in one sentence, which strengthens the evidence for metaphors being a characteristic feature of the two newspaper genres:

"with dwindling supply had pushed prices up"
"it is sickening for first home buyers who are shut out of the market"
"it is expected to cool Auckland's rampant market"
"needed to arrest the wild caravan of real estate exuberance"
"jolly good go at unclogging the housing supply chain"
"to get its act together on the housing crisis"
"the huge imbalances of a housing bubble gone mad"

These expressions often contain two homogenous, simultaneous or consecutive, actions, with the verbs being the key words of the MEs:
"swamp the market with supply and suppress prices"
"giving up smoking or learning to cook on a budget"
"keep that under control and cut fat"
"this market is not a bubble and it is not a crisis"

This use of parallel structures and crowding of the metaphor space shows how metaphor usage serves evaluative purposes and at the same time helps to decode the intention of the writer.

Comparison of MEs in News and Commentary genres

It is noticeable that our corpora not only abound in MEs, but also the expressions, often presenting different CMs, do not occur in isolation from each other but rather cluster in short spans of text. This tendency, although observed in both the genres, appears to be more characteristic of commentaries than news reporting, where the overall number of metaphors is lower. A comparison of the following two sets of concordance lines and their context samples for 'housing' illustrates this point. As short a text passage from the commentary corpus as 210 words contains 21 metaphorical expressions: "*told a story of two bubbles"; "a broad-based real estate market bubble relative to rent and income emerged… and then collapsed… with the financial crisis"; "a new bubble formed… but had not spread"; "the excesses of the Auckland housing market, including the bidding war mania for run-down properties"; "the mushrooming Auckland statistics"; "riding the bubble",* whereas the newspaper's news reporting genre of the same length contains only 15 metaphorical expressions: "*New Zealand's spiralling property prices"; "the rate of Auckland house price increase was slowing"; "the average price is on the verge of topping $1 million"; "are over-inflating where prices are heading"; "property investors are increasing their stronghold on the housing market"; "shutting out families needing a bigger home"; "to take a lion's share of housing stock".*

The descriptive statistics (see Table 5) and the two-sample hypothesis testing (see Table 6) carried out on 4 randomly chosen 400-word snapshots from each of the two genres showed sufficient evidence to conclude that the mean, median and mode indicators of metaphor use in the commentary texts are statistically greater than that in the news texts (at 5% level of significance).

Table 5. ***Descriptive statistics***

Commentary texts vs News texts in *The New Zealand Herald*		
	Commentary texts	News texts
Mean	26.1667	13
Standard Error	3.6825	2.3805
Median	25	11
Mode	17	10
Standard Deviation	9.0203	4.7610
Sample Variance	81.3667	22.6667
Skewness	0.3023	1.7792
Range	21	10
Minimum	17	10
Maximum	38	20
Sum	157	52
Count	6	4

Table 6. ***Two sample hypothesis testing***

	Commentary texts	News texts
Mean	26.1667	13
Variance	81.3667	22.6667
Observations	6	4
Pooled Variance	59.3542	
Hypothesized Mean Difference	0	
Df	8	
t Stat	2.6476	
P(T<=t) one-tail	0.0147	
t Critical one-tail	1.8595	
P(T<=t) two-tail	0.0294	
t Critical two-tail	2.3060	

In the analysed samples, the use of clusters clearly assists in developing a "story" (Cameron, 2011) and intensifies the authorial negative evaluation of the passage and the potential persuasive power of the text, thus allowing the paper to better fulfil its function of influencing public opinion. When using clusters, writers appear to select metaphorical expressions from the same CMs for the same cluster, for example, *"to cool Auckland's rampant market, the limits would help to cool the overheated market"*. This use of metaphor extensions (Gibbs, 2011) may be an indication of cognitive aspects of metaphor selection and an assistance with the readers' decoding process. Here however a question arises whether decoders of all political views and

dispositions in fact undergo the same kind of influence that is intended by the writer-encoder using such closely clustering, highly emotional metaphors.

A further question arises about the nature of the expression 'housing crisis' itself. It appears from the analysed corpus data that the housing discourse is characterised by the use of the 'crisis' metaphor, both the CM "CRISIS" itself and inter-related CMs, such as BUBBLE, WILD ANIMAL, FIRE. This is a finding from both the genres. Even those CMs that do not appear to relate directly to the "CRISIS" CM often harbour MEs with a strong negative evaluation, for example, "*the evil which is land-banking"; "the social carnage which is the Auckland housing market"; "the disease of house price inflation".*

The rhetorical nature of many of the MEs occurring in the news reporting genre is often different from the highly emotional ones used in the commentary corpus. The texts reporting the news provide frequent references to experts' and politicians' opinions, and analysis of statistical data on housing, which may be determined by the expectations of their audience. The MEs often share the same CM, thus referring to the same source domain of LIVING BEING with their characteristic changes and activities, and involved in drawing a scenario of gaining profit, money and commodity. They may therefore be appealing to the cognition of the reader rather than to emotions, which makes us think that to certain categories of reader they may appear even more persuasive than the emotive ones.

Discussion and conclusions

Our corpora provide evidence for the ideological and rhetorical motivation for the use of metaphors. The analysis of the metaphorical expressions used in the two corpora illustrates that metaphors occurring in the discourses of news reporting and commenting on the housing market in a traditional newspaper in New Zealand do in fact draw on a relatively wide ranging set of source domains, but these prove to be systematic rather than unlimited in both corpora. Domains such as living being, space with identifiable boundaries, product of human activity, process of acquisition, game playing, fire, impact, wild animal, threat, object of politics, state function, conflict, bubble are common to both types of discourse to varying degrees. However, several source domains appear to be more productive than others. These are fire, game, bubble, political agenda, and crisis.

The critical part of metaphor analysis was identifying the underlying cognitive basis of metaphors and revealing the intentions of speakers, who use metaphor to persuade by combining the cognitive and linguistic resources at their disposal (Chateris-Black, 2004). Our analysis has shown that the latter is accomplished by the writer selecting MEs from two or more CMs or by clustering MEs from one CM. When the MEs do not occur in isolation from each other, but tend to cluster and interact in the same paragraph, sometimes forming extended metaphor frames, they form a manifold

housing market scenario, often producing the impression of political propaganda. This concurs with the results of earlier studies (Cameron & Stelma, 2004) and in particular with a finding related to the use of war metaphors in the political genre (Han, 2014). The above appears more characteristic of the commentary genre, where influencing judgments is a central discourse goal.

It is also interesting to note that POLITICAL AGENDA ITEM appears to be the most productive CM in the commentary corpus, serving the pragmatic role of a stylistic resource for conveying authorial evaluation, that is a particular rhetorical intention within a particular context, and demonstrating the importance of metaphor in persuasion and in shaping society. It is also indicative that this CM is more productive in the commentary corpus, where the intention of persuading the reader is paramount, than in the news corpus.

A question arises as to whether the encoder uses MEs intentionally or naturally. On the other hand, how does the decoding process work? Is meaning made by encoder and decoder together? Is the message always decoded as intended? The choice of metaphors for the encoder depends on individual resources and experiences.

The decoding process may also depend on the same factors. Metaphoric speech allows the decoder to participate in the final formulation of the message delivered to them as a metaphor leaves it to the addressee to finally formulate the information in their mind. We believe this brings metaphoric speech close to the arts, particularly music, which is perceived by an individual as addressed to them personally at the subconscious level. Similarly to music, which operates emotional, non-concrete images, a metaphor switches on a person's individual experience, which is correlated with the metaphor and reinforces its effect. Fine art influences the recipient in a similar way, with the only difference of using visual metaphors, which also subconsciously connect with personal experience.

The CM CRISIS is one of a group of semantically-related CMs identified in our analysis. The nature of these CMs (FIRE, BUBBLE, EVIL, etc.) and the related MEs feature extreme and dramatic lexical meanings that in combination contribute to the perception of a situation clearly judged to be in crisis. Our analysis of *The NZ Herald* texts and the corpora shows that the writers use metaphorical language in both the news and the commentary articles about housing to describe its critical condition. The persuasive drive, or rather the political agenda in the paper at such a time is seen by us as part of a larger effort to increase the involvement of the public in politics and thus to perform its function of forming a public opinion.

With regard to limitations and subjects of further investigation, we can assume that the difference in the nature of the MEs used in the HN and the HC corpora will not necessarily be confirmed on all texts of these two genres as it may depend on the political disposition of the author and on other persuasive newspaper genres.

Another, related, subject for further research would be the researcher subjectivity factor. More limitations of the study include the limited focus on the topic of housing only, the short period during which texts were collected, the explanation stage being based on two short, randomly selected text samples, and the statistical analysis being based on only 8 randomly selected 400-word text snapshots. The findings therefore will require further confirmation.

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Appendix 1

Comparison of the keyword lists from *The New Zealand Herald* News and *The New Zealand Herald* Comment corpora

NZ Herald News corpus			*NZ Herald* Comment corpus		
Keyword	HN corpus frequency /%	WCWNZE frequency/ %	Keyword	HC corpus frequency /%	WCWNZE frequency/%
1 HOUSING	636/0.79	32/-	1 HOUSING	158/0.5	32/-
2 CENT	162/0.51	254/0.02	2 CENT	162/0.51	254/0.02
3 PER	175/0.55	337/0.03	3 PER	175/0.55	337/0.035
4 AUCKLAND	179/0.56	558/0.05	4 AUCKLAND	179/0.56	58/0.05
5 SAID	793/0.99	2120/0.20	5 PRICES	90/0.28	85/-
6 PROPERTY	283/0.35	112/0.01	6 PROPERTY	90/0.28	112/0.01
7 HOMES	198/0.25	71/-	7 LAND	127/0.40	455/0.04
8 PRICES	189/0.23	85/-	8 BANK	84/0.26	145/0.01
9 PLAN	192/0.24	101/-	9 TAX	77/0.24	187/0.02
10 UNITARY	111/0.14	0	10 INVESTORS	45/0.14	26/-
11 BUYERS	121/0.15	9/-	11 BUYERS	37/0.12	9/-
12 AFFORDABLE	110/0.14	2/-	12 HOUSES	58/0.18	95/-
13 MARKET	228/0.28	286/0.03	13 HOUSE	101/0.32	532/0.05
14 HOUSE	288/0.36	532/0.05	14 UNITARY	27/0.08	0
15 PRICE	179/0.22	145/0.01	15 CRISIS	38/0.12	39/-
16 HOUSES	142/0.18	95/-	16 URBAN	44/0.14	82/-
17 INVESTORS	100/0.12	26/-	17 BANKS	38/0.12	49/-
18 APARTMENTS	84/0.10	8/-	18 RESERVE	37/0.12	46/-
19 BANK	145/0.18	145/0.01	19 RENTAL	28/0.09	13/-
20 MEDIAN	84/0.10	9/-	20 MORTGAGE	27/0.08	13/-
21 AUCKLAND'S	100/0.12	33/-	21 INCOME	46/0.14	120/0.01
22 YEAR	302/0.38	906/0.08	22 PRICE	49/0.15	145/0.01
23 PROPERTIES	109/0.14	61/-	23 GROWTH	50/0.16	156/0.01
24 CITY	173/0.22	283/0.03	24 WEALTH	31/0.10	36/-
25 AVERAGE	121/0.15	104/-	25 POLITICIANS	32/0.10	41/-
26 HOME	260/0.32	734/0.07	26 ESTATE	25/0.08	13/-
27 RESIDENTIAL	78/0.10	12/-	27 AFFORDABILITY	18/0.06	0
28 LENDING	73/0.09	8/-	28 GOVERNMENT	88/0.28	633/0.06
29 APARTMENT	71/0.09	13/-	29 RESIDENTIAL	23/0.07	12/-
30 COUNCIL	148/0.18	253/0.02	30 GAINS	25/0.08	19/-
31 SALES	96/0.12	75/-	31 VALUE	50/0.16	198/0.02
32 NZ	90/0.11	64/-	32 RATES	49/0.15	189/0.02
33 MONTH	11/0.14	129/0.01	33 AUCKLAND'S	28/0.09	33/-
34 BUILDING	127/0.16	201/0.02	34 MARKET	58/0.18	286/0.03
35 RESERVE	80/0.10	46/-	35 BUBBLE	20.0.06	6/-
36 BANKS	81/0.10	49/-	36 PLAN	38/0.12	101/-
37 CHINESE	78/0.10	43/-	37 DEPOSITS	22/0.07	13/-
38 JULY	88/0.11	73/-	38 BANKING	27/0.08	35/-
39 DEVELOPERS	57/0.07	9/-	39 COUNCIL	52/0.16	253/0.02
40 JUNE	95/0.12	104/-	40 SUPPLY	34/0.11	97/-
41 SOLD	90/0.11	93/-	41 LENDING	18/0.16	8/-
42 GROWTH	106/0.13	156/0.01	42 APARTMENTS	18/0.06	8/-
43 DATA	106/0.13	174/0.02	43 INFLATION	26/0.08	43/-
44 DEPOSIT	50/0.06	9/-	44 INFRASTRUCTURE	20/0.06	15/-
45 AUCKLANDERS	47/0.06	7/-	45 CAPITAL	33/0.10	93/-
46 CONSENTS	45/0.06	6/-	46 KEY	33/0.10	95/-
47 VALUE	107/0.13	198/0.02	47 ASSETS	33/0.10	20/-
48 COUNCILLORS	52/0.06	17/-	48 KIWISAVER	13/0.04	0
49 MILLION	115/0.14	245/0.02	49 AUCKLANDERS	17/0.05	7/-
50 QV	37/0.05	0	50 YEAR	92/0.09	906/0.08

Appendix 2

The New Zealand Herald News and *The New Zealand Herald* Comment Keyness data aligned to the Wmatrix semantic categories

Semantic categories in order on the *Wmatrix* USAS table	News corpus keywords (order of keyness in brackets)	Comment corpus (order of keyness in brackets)
Getting and giving: possession	PROPERTY (6)	PROPERTY (6)
Giving	LENDING (28)	SUPPLY (40) LENDING (41)
Important	VALUE (47), QV (50)	VALUE (31)
Difficult		CRISIS (15)
Comparing	AVERAGE (25)	
Government	COUNCIL (30), COUNCILLORS (48)	GOVERNMENT (29) COUNCIL (39)
Politics		POLITICIANS (25)
Architecture, kinds of houses and buildings	HOUSING (1), HOUSE (14), HOUSES (16), APARTMENTS (18), PROPERTIES (23), APARTMENT (29), DEVELOPERS (39), BUILDING (34)	HOUSING (1), HOUSES (12), HOUSE (13) (REAL) ESTATE (26), APARTMENTS (42)
Residence	HOMES (7), HOME (26), RESIDENTIAL (27)	RESIDENTIAL (29)
Money generally	BANK (19), RESERVE (35), BANKS (36), DEPOSIT (44)	BANK (8), BANKS (17), RESERVE (18), DEPOSITS (37) BANKING (38), RATES (32), KIWISAVER (48)
Money and pay	INVESTORS (17)	INVESTORS (10), TAX (9), INCOME (21), CAPITAL (45), ASSETS (47)
Money: affluence		WEALTH (24)
Money: debts		MORTGAGE (20)
Money: cost and price	PRICE (15)	PRICE (22)
Money: Cheap	AFFORDABLE (12)	AFFORDABILITY (27)
Money: expensive		INFLATION (43)
Business Generally		INFRASTRUCTURE (44)
Business: selling	PRICES (8), BUYERS (11), MARKET (13), SALES (31), SOLD (41)	PRICES (5), BUYERS (11), RENTAL (19), MARKET 34),
Places	CITY (24)	URBAN (16)
Mathematics	MEDIAN (20)	
Numbers	MILLION (49)	
Size: big	GROWTH (42)	GROWTH (23)
Quantities	PER (3), CENT (2)	PER (3), CENT (2)
Objects generally		BUBBLE (35)
Speech/communicative	SAID (5)	
Groups and affiliation	UNITARY (10)	UNITARY (14)
Allowed	CONSENTS (46)	
Time: period	MONTH (33), YEAR (22), JULY (38), JUNE (40)	YEAR (50)
Knowledge	DATA (43)	
Wanted	PLAN (9)	PLAN (36)
Success		GAINS (30)
Geographical names	AUCKLAND (4), AUCKLAND'S (21), NZ (32), CHINESE (37), AUCKLANDERS (45)	AUCKLAND (1). AUCKLAND'S (33) AUCKLANDERS (49)
Geographical terms		LAND (7)
Personal names		KEY (46)

GUIDELINES FOR CONTRIBUTORS

NZSAL is a national refereed journal that is published once or twice a year. It welcomes manuscripts from those actively involved in Applied Linguistics/Applied Language Studies including second and foreign language educators, researchers, teacher educators, language planners, policy makers and other language practitioners. The journal is a forum for reporting and critical discussion of language research and practice across a wide range of languages and international contexts, but submisisons are expected to have a connection to New Zealand. A broad range of research types is represented (qualitative and quantitative, established and innovative), including cross-disciplinary approaches.

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- full postal address and telephone, e-mail and fax numbers of all authors
- a brief autobiographical sketch of the authors(s) (50-80 words)
- any references removed for the review process

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They should not be included within the text, but submitted each on a separate page. All figures and tables should have a number and a caption, above for tables and below for figures. Use APA (American Psychological Association) style conventions.

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> It is stated by McCloud and Henry (1993, p. 238) that "students never …" This, however, has not been the case (Baker & Thomas, 2001; Frank, 1996; Smithers,1985).

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References

Books

Lillis, T. M. (2001). *Student writing: Access, regulation, desire.* London: Routledge.

Wenger, E. (1998). *Communities of practice: Learning, meaning and identity.* Cambridge: Cambridge University Press.

Article in book

Clark, R. (1992). Principles and practice of CLA in the classroom. In N. Fairclough (Ed.), *Critical language awareness* (pp. 117-140). Harlow: Longman.

Journal articles

Lea, M. R., & Street, B. V. (1998). Student writing in higher education: An academic literacies approach. *Studies in Higher Education, 23*(2), 157-172.

Turner, J. (2004). Language as academic purpose. *Journal of English for Academic Purposes, 3*(2), 95-109.

Unpublished manuscript

Park-Oh, Y.Y. (1994). *Self-regulated strategy training in second language reading*. Unpublished doctoral dissertation, University of Alabama, USA.

Stein, F. & G.R. Johnson. (2001). *Language policy at work.* Unpublished manuscript.

Conference presentation

King, J., & M. Maclagan. 2001, August. *Maori pronunciation over time*. Paper presented at the 14th Annual New Zealand Linguistics Society Conference, Christchurch, New Zealand.

Internet sources

Sanders, R. (2006). The imponderable bloom: Reconsidering the role of technology in education. *Innovate Journal of Online Education, 2*(6). Retrieved from http//www.innovateonline.info/index.php?view=article&id=232

For other sources use APA (American Psychological Association) conventions.

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