Measuring English language use and exposure in a naturalistic setting[1]

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Abstract

It is widely agreed that the process of learning a second language involves exposure to the target language (Ellis, 1997; Lightbown & Spada, 1999; Saville-Troike, 2012). One of the settings where exposure occurs is the natural setting. Natural acquisition contexts or naturalistic settings are defined as environments where learners are exposed to the target language in their daily activities (Lightbown & Spada, 1999). The benefits of these contexts are that learners are provided with a wide variety of communicative instances as the target language is used as the default language resulting in encounters with different types of inputs (Lightbown & Spada, 1999). This study reports the findings from a two-week study of target language exposure experienced by two Chilean postgraduate students at a New Zealand university. Exposure was recorded and measured using a Google log diary, based and adapted from Ranta and Meckleborg's study (2013). Results show a tendency for participants to be involved in receptive communicative instances rather than productive and a predominant use of their L1 in oral interaction. The study discusses some of the reasons why participants did not engage in more oral interaction in English within this naturalistic setting and why their L1s were predominant in oral interactions.

Key Words: exposure, naturalistic setting, second language acquisition

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Medición del uso y exposición al idioma inglés en contexto natural

Resumen

Existe consenso en el mundo académico que el proceso de adquisición de un segundo idioma involucra exposición al idioma que se pretende aprender (Ellis, 1997; Lightbown & Spada, 1999; Saville-Trioke, 2012). Uno de los contextos donde existe exposición a un segundo idioma es el entorno natural. Los contextos de adquisición natural o entornos naturales se definen como ambientes donde los participantes son expuestos al idioma objetivo dentro de sus actividades cotidianas (Lightbown & Spada, 1999). Algunos de los beneficios de este contexto son la variada cantidad de situaciones comunicativas a las que son expuestos los participantes, entendiendo que el idioma objetivo se utiliza por defecto lo cual resulta en encuentros con distintos tipos de entradas de idioma (Lightbown & Spada). Este trabajo presenta los resultados de un estudio de dos semanas que registró la exposición al segundo idioma inglés de dos estudiantes chilenos de postgrado en una universidad de Nueva Zelanda. La exposición fue registrada utilizando un registro de Google, basado y adaptado del estudio de Ranta y Meckelborg (2013). Los resultados muestran que los participantes tienen una tendencia a participar en situaciones comunicativas receptivas más que productivas y un uso predominante de sus L1 en la interacción oral. Este estudio discute algunas de las razones de porqué los participantes no se involucraron en más interacción oral en inglés dentro del entorno natural y porqué sus L1s fueron más predominante en sus interacciones orales.

Palabras clave: exposición, entorno natural, adquisición de segundo idioma

1. Literature review

Exposure: Input, interaction and output

In the field of Second Language Acquisition (SLA), exposure is normally linked with the concepts of input, interaction and output. Input is defined as the pieces of a target language that a learner is exposed to in a specific context (Lightbown & Spada, 1999). The role and view of input and interaction in the acquisition of a second language has been a constant matter of discussion. Krashen (1985) introduced the input hypothesis which stated that learners acquired a second language when they were exposed to input that contained linguistic forms which were a level higher than the learners' current interlanguage, understanding acquisition as totally dependent on the comprehensible input. This hypothesis was questioned as critics stated that the theory was not supported on evidence and there were an excessive number of overclaims (McLaughlin, 1987).

Long (1996) followed Krashen's ideas by emphasizing the importance of comprehensible input and presenting the Interaction Hypothesis. The focus of this hypothesis was the process of negotiation for meaning in interactions. It was proposed that learners would interact and receive negative evidence, promoting interactional restructuring for the learning (Long, 1996). There are a number of studies which have supported the interaction hypothesis (Pica, Young, & Doughty, 1987; Gass & Varonis, 1994; Loschky, 1994; Ellis, Tanaka, & Yamazaki, 1994), which mainly confirmed that interactional modifications had an impact in the long-term understanding and acquisition of vocabulary items. Ellis (2008) stated that Interaction Hypothesis worked by combining input, the learners' internal capacities and modified output by selective attention.

Comprehensible output is a theoretical concept which represents the linguistic forms expressed by a learner when replying to written or oral interactions using the target language (Gass & Mackey, 2007). Swain stated that for a language to be acquired, production was required (Swain, 1985, 1995). Learners had to be forced to use language productively to move from a semantic position to a syntactic understanding, by doing it so learners were able to modify their speech or use

linguistic forms they had not tried before (Swain, 1985, 1995). Swain conceived the output hypothesis as having three main functions: noticing, testing and reflecting. The noticing function is understood as the process by which learners are able to visualize what they would like to say and what they are able to say, resulting in learners being aware of what is missing in their interlanguages. The testing hypothesis refers to learners having the opportunity to check if what they currently know about the target language is correct or incorrect and also, being able to receive feedback on their performances. Finally, the reflexive function deals with the process of reflection done by learners and how by producing utterances they can control, internalise or consolidate linguistic knowledge (Swain, 1985, 1995).

Interaction is another concept related to exposure. For some researchers, interaction is thought to be the place where the learner is exposed to input and output from the target language (Long, 1996; Gass & Mackey, 2009). Gass and Mackey (2009) indicated that in this construct is expressed when feedback is provided to learners as a result from their interactions. However, Mackey, Gass and McDonough's study (2000) showed that learners were accurate in their perceptions about lexical, semantic, and phonological feedback; nonetheless, they were not capable of identifying morphosyntactic feedback.

Measuring Language Exposure

The first SLA studies on language exposure were based on the Language Contact Profile designed by Seliger (1997). The difficulty with this type of instrument was that some categories were too general, and its reliability might not have been the best as it depended entirely on the learners' estimation of time, considering that some activities were easy while others might be difficult to estimate (Ranta & Meckelborg, 2013). Kaplan (1989) designed a checklist of language – related activities in her study to measure the frequency of language activities. This checklist allowed her to identify the type of activities learners were involved in. However, as it was only focused on frequency, it did not allow the study to measure the amount of time spent on these activities. Another instrument used to measure exposure is

the open-ended diaries, which provide deepness into the participants' experiences out of the teaching context. The main difference with this instrument is that it does not provide data that can be analysed in a statistical manner (Warden, Lapkin, Swain & Hart, 1995). A different design was employed by Brecht and Robinson (1993), who used a calendar diary to keep register of the daily activities of their students. The main difficulty with this design was that data presented major challenges when labelled. This design was improved by Ranta and Meckelborg (2013), who used a computer log system where participants had to log in and provide information of their interactions with 15 minutes time slot. To optimize the labelling of the data, the log displayed fixed categories that were included beforehand as the result of research on the daily activities PhD students had to address (Ranta & Meckelborg, 2013).

2. Research design

Research question and methodology

The research question for this study was:

- What is the amount and type of exposure to English language experienced by non-English speaking graduate students in a naturalistic learning setting for a period of two weeks?

To address the research question, the participants were provided with an online template log where they had to complete their daily activities with an interval of 30 minutes per activity (figure 1). The template was adapted from Ranta & Meckelborg's study (2013) and participants had to fill in five sections (Figure 1).

Figure 1

Diary study log interface

From these 5 categories, the only category that did not include fixed statements was the activity section as the level of customization provided by Google sheets was low and did not allow longer drop-down lists. Thus, the participants had to complete the activity section using their own words. To avoid too many words or too little or unclear information, participants were sent examples on how to complete all categories. The decision of not using the six categories was made as the Google online template log did not allow that level of customization and based on the number of participants and time of the study, it was determined that the researcher could make the process of labelling the primary activities based on the information from the activity section. The full description of content fields on the template can be observed in table 1.

Table 1

Description of content field of the Online Template Log

Field Label	Menu options
Activity	Provide a short answer.
I was with	1 other; 2-3 others; 4-5 others, 6-10 others; 11-20 others; 21-50 others; more than 50 others; alone

|	
They were	spouse/partner; family; relative(s); close friend(s); roommate (s); acquaintance(s); classmate/colleague; students; person (s) in authority; stranger(s); mixed; N/A
I was	at home; at someone else's house; in a restaurant; in a public place; outdoors; in a car/bus/plane/train; at school; in the library
I was using	English; English and some Spanish; Spanish; Spanish and some English

The process of categorizing primary activities was done using Microsoft Excel and based on Ranta & Meckelborg's categories (2013) (Appendix 1).

The category of attending classes was not considered for this study as the subjects were on holidays in their academic calendars. The participants were asked to complete the log from December 17th to December 31st and were encouraged to include interactions that took place during Christmas and New Year's Eve. To upload the log, participants had to access an online folder where they found folders labelled with the days during which the study took place (Figure 2). The participants were asked to complete the logs at least one hour before the day was over. Before the diary was completed, participants were asked to complete a short survey to confirm participants' background information (Appendix 2).

Figure 2

Diary log folders
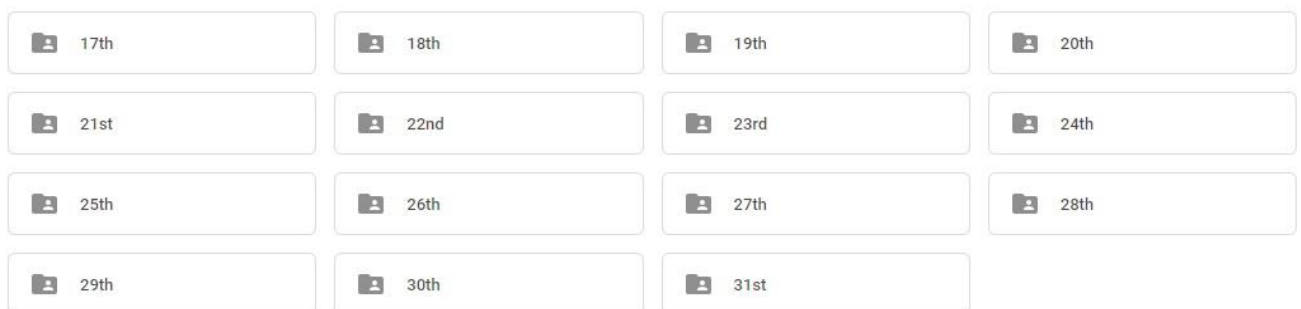
Participants

The participants were two Chilean graduate students at a New Zealand University. Both had spent less than four months in the country before the study took place and were living with their civil partners. As they were funded by the Chilean state, they were requested to sit for the TOEFL IBT obtaining scores of 90 and 101 respectively.

Data Collection and Analysis

A total of 465 logs were registered in a period of two weeks. The data contained in the Google Form document was accessed by downloading the data in Microsoft Excel format. Using the pivot table available in Excel, it was possible to calculate the total time spent doing different activities according to the specified parameters. Descriptive statistics were also calculated using Excel functions.
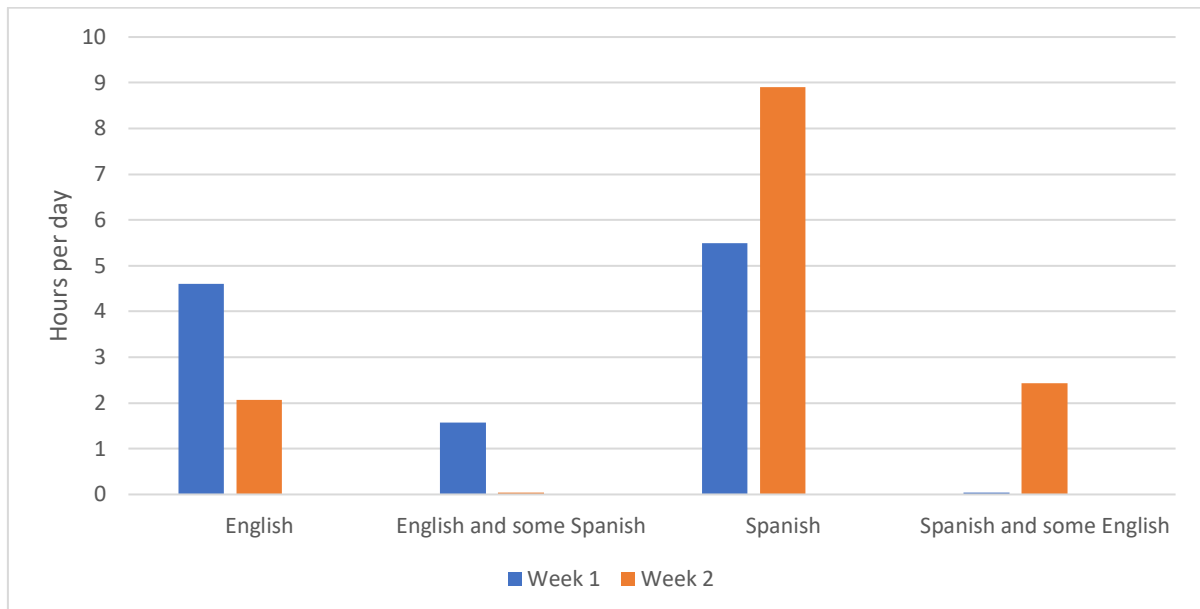
3. Results

As in previous SLA case studies (Ranta & Meckelborg, 2013), the analysis began comparing the amount of L1 and L2 use at the start and at the end of the study. Figure 3 shows the total use of English, Spanish, and the combinations of these languages within a period of two weeks. The results of use of language show that Spanish was the language most often used while the combination of English and some Spanish was the lowest. There was a decrease of use of English from week 1 to week 2, along with an increase in the use of Spanish within the same time. This difference could be explained because, during the second week, participants were engaged in activities related to Christmas and New Year Eves, where, according to the logs, most of the interaction was conducted in their L1. During the second week there seems to be an increase in the use of the combination of English with some Spanish and vice versa. The increase in their uses could respond to participants being with a L1 speaker of Spanish but conducting small and short social interaction activities in the L2 community (shopping, renting a car, watching fireworks, among others).

Figure 3

Use of English and Spanish in week 1 and 2.

In relation to the research question, it can be said that the participants have been exposed to oral and written inputs (table 1) and that there were instances of L2 exposure. However, results indicate that exposure was focused on reading, writing and listening activities. When analysing the activities the participants engaged in English, most of them are receptive rather than productive activities. This would not be suitable for the type of oral interaction proposed in Long's hypothesis (1996). As participants had spent more time in input-oriented variables (reading or watching movie) than output-oriented variable (oral interaction, academic speaking and talking to friends), it was likely that participants did not receive negative feedback and did not have many instances of producing comprehensible output (Swain, 1995). As most of naturalistic activities performed by participants were receptive, it can be concluded that these activities could be easily replicated in their home country and that participants missed one of the advantages of the naturalistic setting which is the encounters with native speakers who use language proficiently (Lightbown & Spada, 1999) (table 2).

Table 2

Time per day doing specific activities

Activity variable	Average of minutes per day
Reading and writing	141 minutes
Academic speaking	21 minutes
Oral interaction	34 minutes
Watching Tv/Movies	36 minutes
Talking to friends	5 minutes
Reading for pleasure	22 minutes

There are two factors that may have had a major influence in the study. The first is that participants lived in private houses with their civil partners whose L1 was Spanish. Results show that oral interaction happened mostly with the civil partner in Spanish (figure 3). The use of Spanish increased, as Christmas and New Year Eve in Chilean culture are conceived as family celebrations, participants spent more time video calling their families and thus interacting in Spanish. The second factor is the time, as most of their English-speaking classmates and professors were off the campus during the Christmas holidays. Doing an analysis of the interaction conducted during Christmas days (figure 4) and New Year's Eve (figure 4), both participants spent more than 95% and 97 % interacting in Spanish, while English was used once, and it was related to shopping.
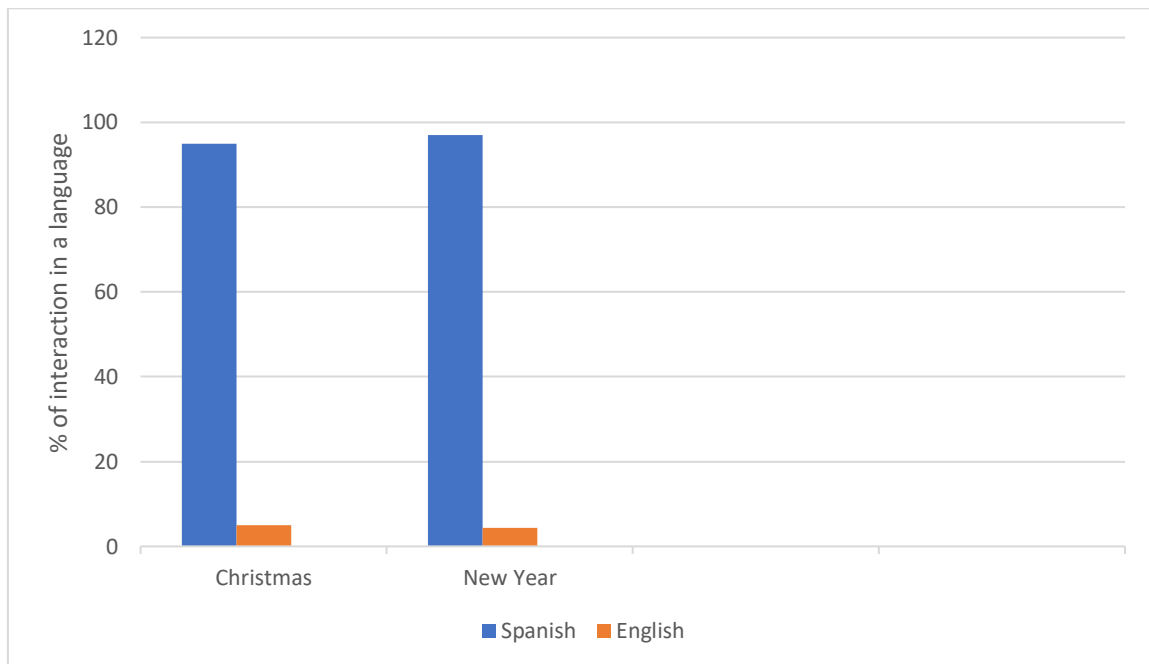
Figure 4

Amount of total interaction divided among participants.
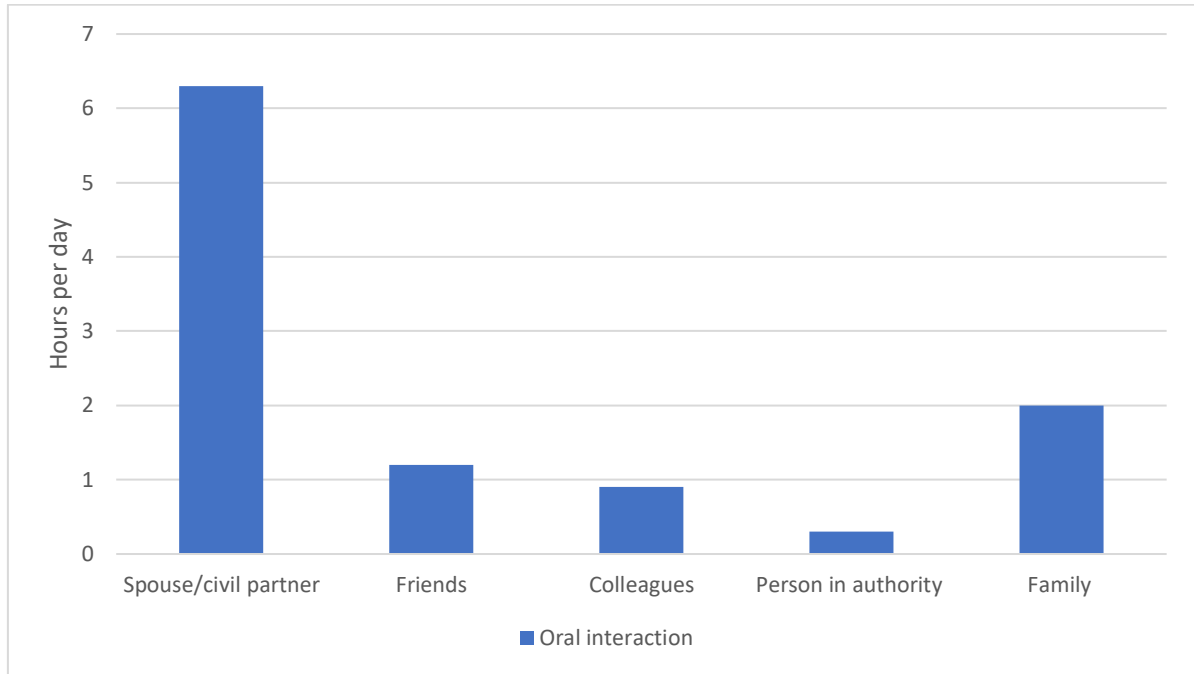
Figure 5

Interactions during Christmas and New Year

Finally, examination of the data for a period of two weeks shows that participants engaged in oral interaction mostly in Spanish. This is conceptualized under the concepts of input, interaction and output as predictors of learning a second language (Ellis, 2008). It can be stated that participants had few opportunities in a period of two weeks to shape their speaking fluency and acquire new aspects of English. Interaction was provided by limited inputs, which may affect improvement in participants' English skills for the accomplishment of their academic courses (Ranta & Meckelborg, 2013). Two reasons have been proposed for this situation. However, to have a clearer vision of these results, conducting interviews to analyse participants' experience and beliefs of learning English in detail would be required. Finally, these results match previous evidence of international students having little interaction with domestic students (e.g. Bochner, et al. 1985).

Conclusion

This study measured the interaction of two Chilean students in an English naturalistic setting. Results showed that participants used their L1 in almost all activities during a period of two weeks. Exposure to L2 was present; however, it was limited to receptive activities. Time and people who interacted with participants were mentioned as factors that may have influenced the limited exposure to oral interaction. The system used for collecting the data was an online logging system. However I cannot be completely sure that what subjects said about the language they used is true.

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Appendixes

Appendix 1: List of activities in Language Activity Log (Ranta & Meckelborg, 2013)

Daily Living	Appointments (medical, dental, hair, immigration)
	Childcare
	Chores and daily tasks (cooking, doing laundry, cleaning house, office, yard, packing your bag, organizing your material)
	Doing nothing
	Eating
	Exercising (jogging, working out, walking, swimming)
	Paperwork (writing cheques, doing account filling in forms)
	Personal care (sleeping, bathing, taking care of your body)
	Running errands/shopping (short trips to buy or deliver something, going to bank, post office, paying bills, grocery shopping)
	Thinking (planning, praying, problem solving, remembering)
	Transportation (going from one place to another)
Social Interaction	Attending a meeting
	Electronic chat
	Face-to-face conversation (general)
	Face-to-face conversation (personal)
	Face-to-face discussion (specific topic)
	Meeting with academic advisor/professor
	Online conversation (involves speaking such as NetMeeting)
	Reading/writing email
	Reading/writing formal correspondence (business letter)
	Reading/writing personal correspondence (personal letters)
	Telephone conversation
Academic work	Borrowing resources from the library (going to library, taking out books)
	Collecting data/doing an experiment
	Computing
	Doing language log
	Face-to-face discussion (specific topic)

	Listening to a presentation/lecture (by professor, lecturer, classmate)
	Making a presentation (to a class, a group, or the public)
	Photocopying
	Preparing for a presentation
	Reading an academic article/text
	Reading instructions
	Solving problems
	Studying for an exam/test
	Surfing the Web/library searches
	Thinking (analysing, problem solving, planning)
	Writing a memo/report
	Writing an assignment or paper
Attending class	Collecting data/doing an experiment
	Computing
	Face-to-face discussion
	Listening to a presentation/lecture
	Making a presentation
	Reading academic article/text
	Reading instructions
	Solving problems
	Surfing the Web/library searches
	Thinking
	Writing a memo/report
	Writing and assignment or a paper
	Writing an exam
TA/RA	Attending a meeting
	Borrowing material from library
	Chores/daily tasks
	Course planning and preparation
	Face-to-face conversation
	Face-to-face discussion
	Helping students
	Listening to a lecture or speaker

	Making a speech or presentation
	Marking
	Reading a reference book
	Reading academic articles/texts
	Reading instructions
	Reading or writing email/messages
	Surfing the Web and library searches
	Taking notes/making lists
	Talking on the telephone
	Writing an academic paper
Recreation	Attending a party
	Eating at a restaurant or someone's house
	Exercising/sports
	Going to a dance or nightclub
	Hobby (arts and crafts, bird watching, collecting, etc.)
	Personal writing/journal (such as diary)
	Playing computer games
	Reading comics
	Reading fiction (novels, short stories)
	Reading non-fiction (biographies, self-help, inspiration, historical)
	Surfing the Web/Computing
	Watching TV/movie

TA/RA = research assistant/teaching assistant

Appendix 2 (information survey)

Instructions: fill in the questions with your information.

1. What is your age?

2. Who do you live with?

3. Do you have regular access to a computer and internet?

4. How long have you been living in New Zealand?

5. What are you studying in New Zealand?

6. Why did you choose New Zealand?

7. How long are you staying in New Zealand?

8. What is your degree in Chile?

9. How are you paying for your degree?

10. Have you ever done an English certificate test?