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A mixed-methods study of the impact of sociocultural adaptation on the development of pragmatic production

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A R T I C L E   I N F O

A B S T R A C T :

This study employs a mixed methods research approach to investigate the effect of sociocultural adaptation on the development of pragmatic production in a study abroad (SA) context. It focuses on the ability to produce pragmatic routines, and whether sociocultural adaptation experiences by learners of different cultural backgrounds predict pragmatic gains. Eighty-seven college students participating in SA programs in the US completed a pre-test and a post-test version of a sociocultural adaptation scale (SCAS) and of a written discourse-completion task (DCT) that measured their ability to use prototypical routines. Supplementary interviews to a subset of 2 students provided further insights on the nature of their adaptation experiences. A quantitative analysis revealed that sociocultural adaptation development had a partial effect on pragmatic gains, due to the mediation of learners' background culture, which had a direct influence on routine production. The qualitative analysis revealed individual trajectories that illustrated the interplay among sociocultural adaptation, background culture, and gains in production of pragmatic routines.

1. Introduction

Mixed methods research is considered an approach of wide scope and validity, which maximizes the strengths and minimizes the weaknesses of quantitative and qualitative approaches (Riazi & Candlin, 2014). By integrating both quantitative and qualitative research components, mixed methods research allows to calculate outcomes, and to provide an explanation of the reported findings. Indeed, it has been claimed to be a particularly suitable methodological option in longitudinal and impact evaluation studies, as it facilitates understanding of the factors that affect changes that take place over time (Bamberger, 2012; Riazi & Candlin, 2014).

The present study employs a mixed methods approach to explain second language (L2) pragmatic development in the study abroad (SA) context. Longitudinal studies that have focused on pragmatic learning during SA programs have reported gains in different pragmatic aspects (see Xiao, 2015, for a review). These studies have been either quantitative (Eslami & Ahn, 2014; Félix-Brasdefer and Hasler Baker, 2015; Ren, 2015; Vilar-Beltrán, 2014) or qualitative (Diao, 2011; Kinginger, 2008; Kinginger & Farrell; 2004), with a few investigations implementing a mixed methods design, providing a comprehensive account of general patterns and individual trajectories of pragmatic learning (Alcón-Soler, 2015; Barron, 2003; Iwasaki, 2010; Schauer, 2009; Taguchi, 2011a, 2011b).

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Framed within the Acculturation Theory of second language acquisition (SLA) (Schumann, 1986), this study explores whether learners' pragmatic gains are determined by their sociocultural adaptation experiences during a semester of SA. In addition, it draws from Schumann's (1986) proposal of cultural congruence as a determiner of SLA to explore whether students' background culture mediates the association between sociocultural adaptation and pragmatic gains. The target pragmatic feature is pragmatic routines, that is, semi-fixed expressions recurrently used by native speakers (NSs) in particular situations. Previous studies have pointed out that to achieve successful intercultural communication, pragmatic routines must be used accordingly to the norms of the sociocultural context (Shi, 2007). However, to the best of our knowledge, the direct relationship between sociocultural adaptation and knowledge of pragmatic routines has not been addressed yet.

To address this research gap, the present study explores the impact of sociocultural adaptation on gains in production of pragmatic routines by learners of diverse cultural origin. Additionally, it presents mixed methods research as the most advantageous approach for such investigation.

2. Theoretical background

2.1. Learning pragmatic routines in the SA context

The use of pragmatic routines is particularly beneficial for L2 learners participating in SA programs as it facilitates communication with NSs, therefore easing integration in the target language (TL) community. Mastering of routines makes a language learner sound native-like, and it reduces the risk of misunderstandings in interactions with NSs (Wray, 2012). Moreover, it helps L2 students, especially lower-level ones, gain fluency and therefore confidence as they feel that they are more clearly understood by NSs in recurrent situations; this is why routines are often called "islands of reliability" (Dechert, 1983, p. 183). In addition to this, routines reflect cultural distinctiveness (Barron, 2003); thus, their acquisition enhances understanding of a foreign culture, and ultimately assists L2 learners in fitting into the TL society.

The majority of studies that have addressed the acquisition of pragmatic routines in the SA context have been cross-sectional, that is, comparing pragmatic competence across proficiency groups, or between L2 learners and NSs. A series of quantitative cross-sectional studies have indicated that knowledge of routines is determined by three main contextual factors, namely length of stay, intensity of interaction and previous SA experience, and also by the individual differences of proficiency, cultural background and attitude towards the TL variety and the TL culture (Bardovi-Harlig, 2008; Bardovi-Harlig & Bastos, 2011; Davis, 2007; Roever, 2005; Roever, Wang, & Brophy, 2014; Sánchez-Hernández & Alcón-Soler, 2018, forthcoming; Taguchi, 2011a, 2013). Nevertheless, there are inconclusive findings on whether learners' cultural background affects knowledge of pragmatic routines. In this sense, Bardovi-Harlig, Rose, and Nickels (2008) reported similarities in routine production across Turkish, Chinese, Japanese and Korean students in an instructed L2 English context, with only the Turkish group showing slight deviations in the use of routines in thanking situations.

The few longitudinal studies that have explored gains in knowledge of pragmatic of routines over SA have observed that the context affords significant gains in comprehension and in production of routines, although achieving full native-like pragmatic performance seems to be a difficult task, given the interplay of different factors that affect L2 pragmatic learning (Alcón-Soler & Sánchez-Hernández, 2017; Barron, 2003; Dörnyei, Durow, & Zahran, 2004; Taguchi, Li, & Xiao, 2013).

Using a mixed-methods approach, Barron (2003) explored the development of production of German pragmatic routines (among other strategies to perform speech acts) by 33 Irish learners over a 10-month SA program in Germany. Participants completed a series of quantitative production tests at 3 times over the academic year abroad, and they provided qualitative information through SA questionnaires and retrospective interviews. Findings from this study revealed that although routine-learning paths developed towards the L2 norm, the increase was non-linear, as different factors such as frequency and saliency of input were at play.

Taguchi et al. (2013) used a quantitative longitudinal approach to explore gains in production of L2 Chinese pragmatic routines over a 3-month SA program. The study followed a pre-test/post-test design to investigate routine production development by 31 US students, reporting significant gains in terms of appropriateness and frequency, although findings also showed that there was evidence of an increased use of non-target-like routines. According to the authors, some students seemed to be more concerned about conveying meaning than about producing accurate and target-like language.

In a further quantitative study, Alcón-Soler and Sánchez-Hernández (2017) examined the development of recognition and production of English pragmatic routines by 122 international students in the US, reporting that 4 months of exposure afforded pragmatic gains, particularly in terms of pragmatic recognition. Moreover, they observed that recognition of routines was determined by the situation-bound nature of the routines, and production by prototypicality of the expressions in given daily situations, but both abilities were unrelated to learners' proficiency level.

Summing up, findings from cross-sectional studies addressing SA learners' knowledge of pragmatic routines suggest that routine production is determined by both contextual factors and individual differences. Moreover, longitudinal investigations have showed that during SA programs, learners are likely to improve their ability to use pragmatic routines (Alcón-Soler & Sánchez-Hernández, 2017; Barron, 2003; Dörnyei et al., 2004; Taguchi et al., 2013), and that the reported gains are influenced by saliency of input, and by the conventional nature of the pragmatic routines. In this study, we add to the existing picture of longitudinal studies the variable of sociocultural adaptation as a potential predictor of gains in production of pragmatic routines.

2.2. Sociocultural adaptation and pragmatic learning

Sociocultural adaptation to a new context refers to the changes related to how an individual acquires cultural values and social skills, and is able to apply them in day-to-day situations. It thus implies contextual factors such as availability of contact with L2 speakers and similarity between cultures, as well as individual differences such as knowledge of the TL culture, attitude towards the L2 and social-integration strategies adopted (Ward & Kennedy, 1999).

Quantitative studies addressing sociocultural adaptation by international students have commonly used the Sociocultural Adaptation Scale (SCAS, Ward & Kennedy, 1999). This instrument allows measuring sociocultural adaptation in terms of two subscales, namely behavioral and cognitive adaptation. Behavioral factors involve aspects related to managing everyday situations and interactions, and cognitive factors entail an understanding of the values and customs of the TL society (Ward & Kennedy, 1999). The present study employs Ward and Kennedy's (1999) SCAS to explore quantitatively gains in behavioral and cognitive sociocultural adaptation. In addition, it quantitatively analyzes the relationship between sociocultural adaptation and pragmatic production, association that, to the best of our knowledge, has only been explored qualitatively.

Qualitative studies addressing the relationship between sociocultural adaptation and pragmatic competence have drawn from Schumann's (1978, 1986) Acculturation Theory of SLA. Schumann (1978) proposed that the degree to which an L2 learner acculturates to the TL community will influence the extent to which he/she learns the TL, acculturation being first in a list of factors that determine the acquisition of an L2, but not being a direct cause of SLA. According to Schumann (1986), acculturation is two-fold, as it involves sociocultural and psychological adaptation. More specifically, 7 social factors and 4 psychological ones determine how close the individual is to the TL group. The first set of variables include social dominance of the sojourning and the TL groups, integration strategies adopted by the L2 learners (assimilation, preservation or adaptation), social networks and enclosure, cohesiveness and size of the sojourning group, cultural congruence between both groups, L2 leaners' attitude towards the TL culture, and intended length of residence. Regarding psychological variables, language anxiety, cultural shock, motivation, and identity permeability are likely to determine acculturation and subsequent SLA. This study focuses on 4 of Schumann's (1986) sociocultural factors to carry out a qualitative exploration of SA participants' experiences — integration strategy, development of social networks, cohesiveness and size of the L1 group and attitude towards the TL culture. — It also considers a fifth variable, namely cultural congruency, by examining sociocultural adaptation across cultural groups quantitatively, and across individuals of different cultural background qualitatively.

SLA studies that have drawn on Schumann's (1978) model have pointed out that SLA, especially at the oral level, is benefited by the students' process of acculturation (Hansen, 1995; Lybeck, 2002). In the field of pragmatics, only a few qualitative studies have explored the role of acculturation on the acquisition of L2 pragmatic competence (Dörnyei et al., 2004; Schmidt, 1983).

Schmidt (1983) conducted a case study of Wes, a 33-year-old Japanese male who immigrated to the US (Hawaii) without having previous formal instruction in English. Wes' development of acculturation and SLA were tracked over 3 years. Having the optimal sociocultural and psychological orientations, he increased his pragmatic ability but decreased his grammatical competence. Regarding the use of pragmatic routines, earlier stages of development were characterized by a reliance on a small number of formulas that he used in a few situations, and by transfer from Japanese sociopragmatic norms. Over time, he improved the appropriateness of routine use, pragmatic transfer was reduced, he gained awareness of cross-linguistic differences, and he developed a significant control of the formulas used in social interactions. For instance, the initial *shall we go?* became *shall we maybe go out for a coffee now, or you want later?*

In a further case study, Dörnyei et al. (2004) explored the effect of acculturation on the acquisition of routines by 7 international students over a 7-month SA program in the UK. Interviews to the participants focused on 2 psychological adaptation aspects — culture shock and motivation — and on one sociocultural adaptation factor — the development of social networks. — Four of the participants made gains in their use of routines over SA, while the other 3 experienced negative gains. The development of routine production was mainly determined by learners' sociocultural adaptation, despite the observation that most of the participants found it extremely hard to have meaningful contact with the TL speakers outside of class.

In addition to the investigations mentioned above, some studies have addressed the effect of specific acculturation aspects on L2 pragmatic competence. These aspects include identity (Iino, 2006; Siegal, 1995), motivation (Eslami & Ahn, 2014), development of social networks (Kinginger & Farrell, 2004; Shively, 2015), integration strategy and participation in the TL community (Diao, 2011; Shively, 2015; Taguchi, 2011b; Yates & Major, 2015), and cultural congruity (Bardovi-Harlig et al., 2008), all of them exerting an influence on L2 pragmatic development.

The studies reviewed above suggest that the relationship between sociocultural adaptation and L2 pragmatic competence has mainly been addressed through case studies that have revealed the important role of different aspects associated with immersion in the SA context. The present study was motivated by the scarcity of studies addressing the relationship between sociocultural adaptation and pragmatic routines, as well as the lack of studies exploring that association quantitatively with a large sample of participants. By using a mixed methods approach, this investigation aims to conduct a solid analysis of the interplay between the two variables, and to learn about the processes that explain the reported associations. To this end, two main research questions and a sub-question were formulated:

RQ1 Do L2 learners develop their production of pragmatic routines during a semester-long SA program?
RQ2 Does sociocultural adaptation development affect gains in production of pragmatic routines?
    RQ2a Does learners' background culture play a role in such association?

3. The study: a mixed-method approach

3.1. Participants and setting

Participants in the study were 87 learners of English as a second language (ESL) in their first semester of participation in a SA program at a Midwestern university. The sample consisted of 54 males and 33 females, and their ages raged from 18 to 33 (average 22.8 years old). They were from 3 different countries, including Brazil ($n = 31$), China ($n = 36$) and Turkey ($n = 20$), and none of them had relevant previous exposure in the US. All of the students were enrolled in ESL courses through the semester, but course curricula did not include pragmatic instruction. Moreover, participants' proficiency level was determined by their results in an entrance-exam TOEFL test, the sample including 18 beginners, 43 intermediate, and 26 proficiency learners. However, no significant difference across proficiency levels was found for changes in production of pragmatic routines [$t (78) = 0.21$, $p = .84$], or for sociocultural adaptation gains [$t (78) = 0.21$, $p = .84$].

From the 87 subjects, a subset of 13 voluntarily participated in semi-structured interviews. From that group, David and Mark (pseudonyms) were chosen for this study on the basis of maximum variation sampling with regards to their pragmatic performance. David (a 21-year-old male from Brazil) made gains in both pragmatic competence and sociocultural adaptation, while Mark (a 22-year-old male from Turkey) experienced a decrease in both aspects.

3.2. Research design and instruments

The present study is a longitudinal investigation that employs a concurrent triangulation mixed methods design (Creswell, Plano Clark, Gutmann & Hanson, 2003). This approach is characterized by the combination of two different research methods − a quantitative and a qualitative one − to cross-validate the main findings and provide further explanation for the reported results that may not be obtained from one single research method. The procedure for data collection in a concurrent triangulation mixed method is illustrated in Fig. 1.

As indicated in the figure, both quantitative and qualitative data are gathered within the same data-collection phase, they are analyzed separately, and results from the two analyses are integrated in the interpretation of results. In addition to this, priority may be given to either the quantitative or the qualitative approach. In this study, the primary analysis is the quantitative one, and it is complemented by insights from the qualitative analysis.

The quantitative research component of this study consisted of administration of a discourse completion task (DCT) and of a Sociocultural Adaptation Scale (SCAS) at the beginning and at the end of SA. To further explain the quantitatively-observed effects and to gain a comprehensive understanding, qualitative data were obtained from semi-structured interviews to a subset of 2 participants.

3.2.1. Productive task − DCT

A DCT was created to measure learners' ability to produce pragmatic routines. In this task, participants were asked to respond to 13 scenarios, which represented situations frequently encountered in the TL context. The 13 situations that were presented in the pre-test are included in Appendix A. To design the instrument, 4 steps were followed. Firstly, a list of 30 pragmatic routines used in previous studies was established (Bardovi-Harlig, 2009, 2008; Roever, 2005; Taguchi, 2013). We considered that the studies included routines used near the context of the present study. Secondly, the DCT scenarios were designed. A third step was to pilot test the instrument with 92 NSs in order to check for frequency and community-wide use of the pragmatic routines. A cut-off point was established at 50% of NS agreement, and it determined pragmatic routines that were produced by 50% of more of the NSs, which were considered as high-prototypical routines. A further cut-off point was set at 15%, and expressions elicited by at least 15% (and less than 50%) of the NS sample were considered low-prototypical pragmatic routines. The cut-off points served as
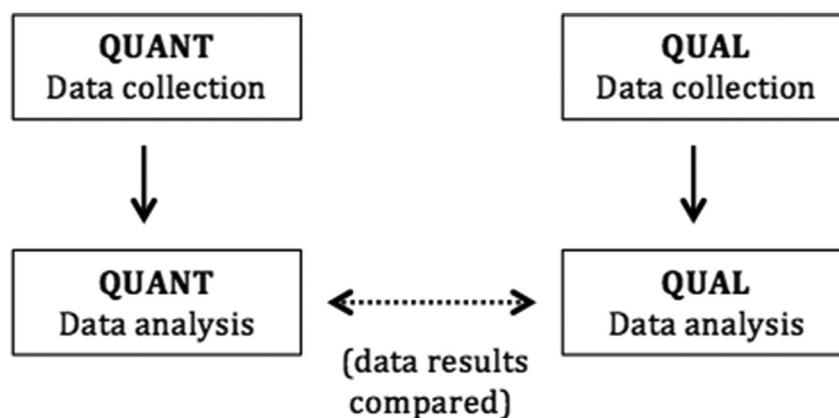

Fig. 1. Concurrent triangulation mixed methods design (adapted from Creswell et al., 2003, p. 181).

indicators of validity of the instrument by showing NS agreement and situation boundness. It also enabled us to establish a final list of 13 scenarios, each of which prompted the use of one prototypical routine, and some of them additionally allowed the use of low-prototypical pragmatic routines (see Table 2). Finally, in order to avoid familiarity with the instrument in the post-test, a modified version of the DCT was designed by modifying the order of the items presented.

3.2.2. Sociocultural adaptation scale (SCAS)

The SCAS (Ward & Kennedy, 1999) was used to measure participants' sociocultural adaptation in the US. It is a five-point Likert-scale in which students are asked to rate from 1 (= very difficult) to 5 (= no difficulty) their level of adaptation to 29 items. These items include 21 behavioral situations such as "finding food you enjoy" and "making friends," and 7 cognitive aspects such as "seeing things from an American point of view." Items were reversed from the original scale so that higher scores correspond with a positive adaptation.

Reliability, internal consistency and validity of the SCAS were initially analyzed and corroborated by Ward and Kennedy (1999). They designed the scale by testing it across a wide range of culturally diverse groups of sojourning students and adults. More specifically, internal consistency measures ranged from 0.75 to 0.91 ($M = 0.85$), and construct validity was seconded by results of contemporary research on social skills acquisition (Ward & Kennedy, 1999). In this study, Cronbach alphas were calculated for the overall instrument scale and for behavioral adaptation and cognitive adaptation subscales, the three ratios indicating a strong reliability for overall sociocultural adaptation ($\alpha = 0.937$), for behavioral adaptation ($\alpha = 0.910$), and for cognitive adaptation ($\alpha = 0.989$).

3.2.3. Semi-structured interviews

Semi-structured interviews with 2 participants at the beginning and at the end of the semester abroad aimed at eliciting reasons for individual trajectories of L2 pragmatic learning and of adaptation development. Students were asked about their pragmatic awareness and, following Schumann's (1986) acculturation framework, questions were designed to obtain details about 4 aspects that determine sociocultural adaption: integration strategy adopted by the individuals, development of social networks, cohesiveness and size of the L1 group, and attitude towards the TL culture. A fifth social variable included in Schumann's model, that is, cultural congruency, was also taken into account by interviewing participants of diverse culture — in addition to conducting a quantitative analysis across cultural groups. —

3.3. Coding of pragmatic routines

Routine production was operationalized as the ability to use prototypical pragmatic routines, that is, expressions frequently used by NSs in particular situations. Answers to the DCT scenarios by the NS sample were classified into three categories that determined production scores. Two points were given to a response with a high-prototypical routine; 1 point was given to production of a low-prototypical one and to production of a high-prototypical routine poorly expressed — that is, learner-specific routines such as "I sorry I late." The reason for considering learner-specific routines as not fully correct is that they represent that the participant is on their way to learning appropriate use of routines, but has not reached such a level yet. Finally, zero points corresponded with freely-generated utterances, that is, non-formulaic language and routines produced by less than 15% of the NSs. The highly-prototypical and low-prototypical pragmatic routines elicited in each of the situations (see Appendix A) are included in Table 2.

Comparison with NSs' routine production also allowed establishing the limits of variability. Correct responses were measured as fitting within the boundaries of variation, which may take many forms (lexical, morphological or syntactic; Bardovi-Harlig & Bastos, 2011). For example, *nice to meet you* and *nice meeting you* were considered under the same routine, as well as contractions or lack of copula, such as in *I'm sorry, I am sorry* or *sorry*.

Finally, data coding was preceded by establishment of inter-rater reliability. One of the researchers and a recruited scholar practised coding together on data from a preliminary pilot study. Then, they independently coded 20% of the data, the agreement rate being 87%.

3.4. Data analysis and procedure

Employing a pre-test/post-test design, the process of collecting the data took one semester. At the beginning of the semester, newly arrived international students were asked for participation during regular ESL lessons. The instruments were administered in paper format during face-to-face sessions. Pre-tests were completed on the second week of the semester, and post-tests two weeks before the end of the semester. Additionally, interviews took place the day after completion of the pre-test instruments, and the day after administration of the post-tests.

To examine normality of the data, a series of Shapiro-Wilk's tests ($p > .05$) were conducted. Since the data confirmed a normal distribution (Skewness and Kurtosis were between -1 and 1), parametric tests were used. To account for statistically significant differences from pre-to post-test, a series of paired-samples t-tests enabled us to observe whether the sample of participants made significant gains in terms of sociocultural adaptation and of pragmatic production over a semester of SA. To test the effect of the independent variables, namely sociocultural adaptation and its two subscales, behavioral and cognitive adaptation, on the dependent one, that is, gains in production of pragmatic routines, a series of linear regression analyses

were conducted. Additionally, we explored differences across cultural groups in terms of adaptation and routine production through Analysis of Variance (ANOVA) tests. Results were considered significant at a value of $p < .05$.

In order to code qualitative data obtained from the semi-structured interviews, different themes were elicited to as to establish a profile of participants based on development of their sociocultural adaptation experiences during the semester. Following Schumann's (1986) proposal of social acculturation variables, comments in the interviews were coded into 4 main themes: changes in integration strategies, development of social networks, cohesiveness and size of the sojourning group, and changes in attitude towards the US culture. Additionally, we considered that the semi-structured interviews could reveal further factors that accounted for students' adaptation experiences, especially psychological factors (Schumann, 1986).

We were aware that one of the main difficulties in using a concurrent triangulation mixed method design is that the use of two different research methods, a quantitative and a qualitative one, may difficult interpretation of results. This is because equivalence across categories — in this case, categories of sociocultural adaptation — are not always possible. In this study, the quantitative analysis focused on behavioral and cognitive sociocultural adaptation, while the qualitative analysis considered 4 aspects that are more related to behavioral adaptation. Nevertheless, we carried out such an analysis in an attempt to counterbalance the weaknesses of one analysis with the strengths of the other (Creswell et al., 2003). This allowed us to obtain a more comprehensive and realistic whole picture of sociocultural adaptation.

4. Results

4.1. Quantitative results

4.1.1. Development of production of pragmatic routines

The first research question of the study addressed learners' gains in production of pragmatic routines over a semester-long SA program. To determine differences between pre-test ($M = 8.98$; $SD = 4.24$) and post-test ($M = 10.93$; $SD = 4.20$) pragmatic production, a paired-samples t-test was conducted, and the effect size was calculated using Cohen's d. Results indicated that changes between pre- and post-test were statistically significant [$t(86) = 4.652$; $p < .001$], the effect size being medium ($d = 0.472$), this result implying that a semester abroad afforded significant pragmatic gains in production of pragmatic routines.

To shed more light on learners' development of routine production in the 13 situations included in the DCT, a descriptive analysis was carried out on the number of L2 learners and NSs that produced each expression, and results were compared from pre- to post-test. Table 1 illustrates average number of learners and NSs that produced high-prototypical pragmatic routines, low-prototypical ones, and freely-generated utterances. Percentage of gains was calculated as the difference between number of students producing the routine in the post-test minus number of students using the routine in the pre-test.

Information in Table 1 reveals that students increased their use of highly-prototypical routines (average 6.18% of gains), they decreased their use of low-prototypical routines (−1.07%), and they showed the highest decrease in their use of freely-generated utterances (−5.13%). This finding suggests that during a semester of exposure in the TL setting, students tend to approximate NSs' production of pragmatic routines.

A closer look at production gains of each pragmatic routine in each situation is illustrated in Table 2. As stated above, production scores were calculated by amount of participants (N = 87) producing each of the routines in the pre-test and in the post-test, and the difference rate is calculated in terms of the amount of participants producing the given routine from pre- to post-test.

Several observations can be drawn from Table 2. Firstly, students improved their use of highly-prototypical routines in all of the presented situations except for one, that is, situation "late", which elicited the routine *sorry I am late* (−2.30%). Learners showed the greatest gains in *{Thanks/thank you/-} you too* elicited in the situation "farewell" (26.44%), followed by *hello?* in the situation "phone" (12.64%), *for here or to go?* in the scenario "restaurant" (10.34%) and *no thanks, I'm full* in the situation "dinner table" (6.89%). This implies that the corresponding scenarios could be highly recurrent in the given context, so students encountering these situations were most likely to improve the use of the corresponding routines. In contrast, small and negative gains in prototypical routines (e.g. *no thanks, I'm just looking* in the situation "store", 1.15%, *be careful* in the situation "careful driving", 0%, *sorry I am late* in the situation "late", -2.30%) indicated either that students had already encountered the scenarios before and hence did not improve their use of the given routine, or that they did not encounter them frequently enough to learn how to produce the appropriate routine. It could also be the case that the given situation was frequent enough in the SA context, but the routine input was not always available. For instance, a student may not hear "no thanks, I'm just looking" every time they go to a shop.

Table 1
Production of high-prototypical routines, low-prototypical routines and freely-generated utterances.

	Pre-test (N = 87)		Post-test (N = 87)		Difference		NSs (N = 92)	
	(n)	%	(n)	%	(n)	%	(n)	%
High-prototypical routines	31	35.67	36	41.87	5*	6.18	66	71.31
Low-prototypical routines	6	6.68	5	5.61	−1*	−1.07	19	20.75
Freely-generated utterances	50	57.65	46	52.52	−4*	−5.13	7	7.24

Note: the values for the difference column are changes from the pre-test to post-test. *$p < .05$ (paired-samples t-test).

Table 2
Production gains in each pragmatic routine.

Situation	Pragmatic routines elicited	Pre-test (N = 87)	Post-test (N = 87)	Difference	
				(n)	%
1. Dinner table	No thanks, I'm full	39	45	6	6.89
	No, thank you*	8	1	−7	−8.05
	I'm stuffed*	1	2	1	−1.15
2. Introduction	Nice {to meet/meeting} you	56	59	3	3.45
3. Restaurant	For here or to go?	19	27	9	10.34
	How can I help you?*	11	4	−7	−8.04
4. Puddle	Watch out	21	26	5	5.74
5. Farewell	{Thanks/thank you/-} You too	52	75	23	26.44
6. Late	Sorry I am late	40	38	−2	−2.30
7. Phone	Hello?	43	54	11	12.64
8. Borrow pen	{Could/Can/May} I borrow a pen?	23	25	2	2.30
	Do you have (a/an extra) pen I [could/can] borrow?*	4	3	1	−1.15
9. Store	No thanks, I'm just looking	27	28	1	1.15
	(No, thanks) I'm just browsing*	1	2	1	1.15
10. Decease	I am sorry for your loss	8	12	4	4.60
	I am (so) sorry*	10	12	2	2.30
	Sorry to hear that*	19	22	3	3.45
11.Messy house	Sorry for the mess	22	28	5	5.74
	Sorry my {place/house}is a mess*	7	3	3	−3.45
12. Piece of paper	Here you go	7	11	4	4.60
13. Careful driving	Be careful	53	53	0	0

A second pattern of development of production of pragmatic routines was a decrease in the use of low-prototypical routines and an increase in the use of high-prototypical ones. This pattern was observed in 4 of the 6 situations that elicited both high- and low-prototypical expressions (see Table 2): "dinner table", "restaurant", "borrow pen", and "messy house." To illustrate this pattern, Fig. 2 includes learners' production in the pre- and the post-test, together with NSs use of routines in the situation "restaurant."

This scenario triggered the use of the high-prototypical routine *for here or to go?* where learners reported positive production gains (10.34%), and the low-prototypical one *how can I help you?* which students decreased using (−8.04%). If we compare these findings with NSs production, this trend indicates an approximation to NSs' use of routines.

The third developmental pattern discerned involved an increase in the use of both high-prototypical and low-prototypical routines in the same situation. This was the case of the scenarios "store" and "decease." For instance, in the first one, there was an increase in the high-prototypical routine *no thanks, I'm just looking* (1.15%), as well as in the low-prototypical one n*o, thanks, I'm just browsing* (1.15%).

The three patterns that explain the increase in the ability to produce pragmatic routines suggest that during a semester of SA, students approximate NSs' use of routines, as evident in a higher use of high-prototypical routines and a decrease in the production of low-prototypical ones and in freely-generated utterances.
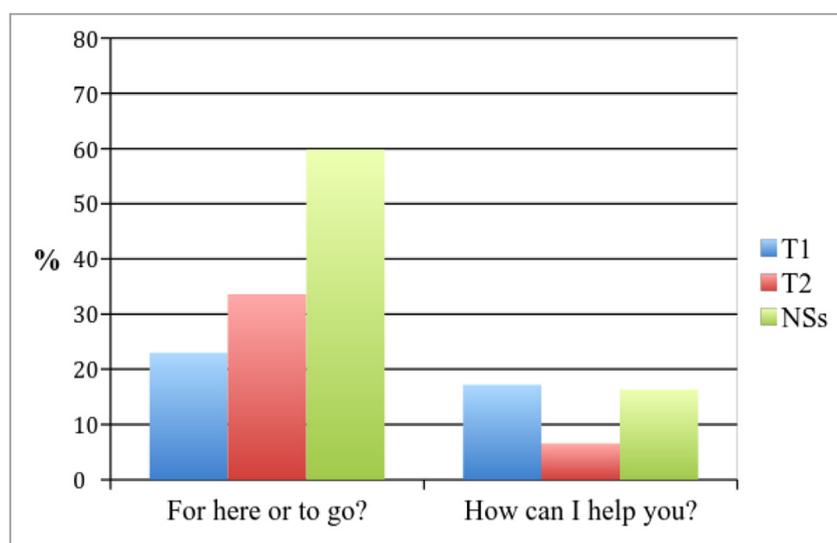

Fig. 2. Learners' and NSs' production of routines in the "restaurant" situation.

Table 3
Sociocultural, behavioral and cognitive adaptation.

	Pre-test		Post-test		Difference	
	M	*SD*	*M*	*SD*	*M*	*SD*
Sociocultural adaptation	3.68	0.51	3.90	0.54	0.21*	0.59
Behavioral	3.70	0.51	3.89	0.55	0.19*	0.60
Cognitive	3.63	0.62	3.92	0.59	0.30*	0.69

*$p < .05$ (paired-samples T-test).

4.1.2. Effect of sociocultural adaptation on gains in production of pragmatic routines

The second research question of the study addressed the influence of sociocultural adaptation gains on routine production gains by learners of diverse cultural background. To address this purpose, a first analysis was conducted on participants' gains in sociocultural adaptation and in the two subscales behavioral and cognitive adaptation. Table 3 displays pre- and post-test means, standard deviations, and differences (gains) for each of the three aspects.

A series of *t*-tests revealed significant gains and a medium effect size in overall sociocultural adaptation [t (86) = 3.334; $p = .001$; $d = 0.407$], behavioral [t (86) = 2.918; $p = .004$; $d = 0.355$], and cognitive adaptation [t (86) = 4.034; $p = .000$; $d = 0.491$]. In addition to this, a correlation test indicated that behavioral and cognitive developments were positively correlated [r (122) = 0.778; $p = .000$]. That is to say, learners who improved their behavioral adaptation (e.g. going shopping) tended to improve their cognitive adaptation too (e.g. having an American perspective on the culture), and vice versa. In particular, one may observe in Table 3 that the average difference between pre- and post-test was higher for cognitive adaptation ($M = 0.30$; $SD = 0.69$) than for behavioral one ($M = 0.19$; $SD = 0.60$), suggesting that the SA context particularly enhances the ability to understand the values and customs of the TL society.

In order to address the second research question of the study, that is, the effect of sociocultural adaptation on production of routines, a first analysis was focused on the cultural congruity factor (RQ2a). Table 4 shows pre- and post-test means, standard deviations, and changes in routine production and sociocultural adaptation across the 3 cultural groups of the study.

A series of ANOVA tests revealed significant differences among at least two of the groups in routine production development [F (2,84) = 6.292; $p = .003$], sociocultural adaptation [F (2,84) = 7.197; $p = .001$], behavioral [F (2,84) = 6.521; $p = .002$], and cognitive adaptation [F (2,84) = 6.609; $p = .002$]. Regarding pragmatic gains, a post-hoc Tuckey multiple-comparison test indicated that Brazilian students significantly differed in their gains in production of routines with the Chinese group (M difference = 3.192; $p = .002$), but there were not significant differences between Brazilian students and Turkish ones, or between Chinese and Turkish students. As for sociocultural adaptation, significant differences were observed between Brazilian and Chinese students, and between Brazilian and Turkish students in the three aspects − overall sociocultural adaptation, behavioral and cognitive adaptation. − Nevertheless, there were no significant differences in sociocultural adaptation between the Chinese and the Turkish groups. That is to say, a similarity between Chinese and Turkish students was found in terms of pragmatic learning and acculturation development, this finding pointing to an effect of learners' background culture on both sociocultural adaptation progress and gains in production of pragmatic routines.

Given that learners' cultural background directly affected the development of pragmatic production and of sociocultural adaptation, we examined the effect of the latter on the former by focusing on the three groups separately. Three linear multiple regression analyses were performed with overall sociocultural adaptation and the 2 subscales − namely, behavioral and cognitive acculturation − as the independent variables, and production gains as the dependent factor. The analyses revealed that sociocultural adaptation development influenced Turkish students' ($\beta = 0.893$; $p = .02$) production gains. More particularly, behavioral ($\beta = 0.71$; $p = .02$) adaptation predicted their pragmatic gains, while cognitive adaptation development did not show a significant influence. Similarly, in the case of Chinese students, only behavioral adaptation development predicted their gains in routine production ($\beta = 0.285$; $p = .04$). In the two cases, that is, Turkish and Chinese students, the relationship between sociocultural adaptation and routine production was relatively small, behavioral adaptation explaining

Table 4
Routine production and sociocultural adaptation across cultural groups.

		Brazilian ($n = 31$)			Chinese ($n = 36$)			Turkish ($n = 20$)		
		M	*SD*	Difference	*M*	*SD*	Difference	*M*	*SD*	Difference
Routine production	T1	9.42	3.92	3.58*	8.83	3.62	0.39*	8.55	5.71	2.25*
	T2	13.00	3.33		9.22	4.33		10.80	3.91	
Sociocultural adaptation	T1	3.66	0.43	0.51*	3.71	0.56	0.11*	3.62	0.59	0.05*
	T2	4.16	0.27		3.82	0.60		3.68	0.54	
Behavioral	T1	3.67	0.44	0.47*	3.75	0.57	0.08*	3.60	0.52	0.06*
	T2	4.15	0.30		3.83	0.61		3.66	0.60	
Cognitive	T1	3.60	0.52	0.61*	3.59	0.67	0.21*	3.73	0,69	−0.03*
	T2	4.22	0.26		3.79	0.66		3.71	0.66	

*$p < .05$ (paired-samples *t*-test).

5% of the variance of Chinese production, and 17% of the variance of Turkish students' production gains. Regarding the Brazilian group, gains in sociocultural adaptation were unrelated to their gains in production of routines, suggesting that adaptation to the TL context played a partial role on pragmatic gains, as the relationship was only significant in the case of Chinese and Turkish students. This finding also shows that production of routines is related to behavioral adaptation and not to cognitive one, implying that learners who improve their understanding of US values do not necessarily experience gains in their use of routines.

In summary, a quantitative analysis focused on gains over a semester-long SA program revealed that sociocultural adaptation development, specifically behavioral adaptation, partly influenced gains in production of pragmatic routines, since cultural congruity mediated such association, exerting a direct effect on sociocultural adaptation and on pragmatic development.

4.2. Qualitative results

In addition to the general patterns revealed by the quantitative analysis, pre-test and post-test interviews to 2 informants, David and Mark, provided qualitative insights about their sociocultural adaptation and pragmatic learning experiences. A first descriptive analysis is displayed in Table 5, which includes the participants' gains in routine production and in sociocultural adaptation − including behavioral and cognitive adaptation.

Following Schumann's (1986) proposal of social acculturation variables, David's and Mark's comments in the interviews were coded into 4 main themes: changes in integration strategies, development of social networks, cohesiveness and size of the sojourning group, and changes in attitude towards the US culture. Integration strategies involved assimilation (that is, the optimal acculturation strategy), adaptation, and preservation of heritage values and identity (the less desired strategy). In addition, participants were asked about their awareness of learning pragmatic routines.

4.2.1. David

David made gains in both production of pragmatic routines and sociocultural adaptation, particularly in terms of cognitive adaptation. His level of pragmatic awareness was high, as he reported having learned common daily expressions over the semester. In the first interview, he explained that he had not learned particular recurrent expressions yet. At the end of the stay, however, he was excited to claim that he had learned a vast amount of English expressions, and mentioned *for here or to go?* as an example. According to David, learning these expressions helped him gain confidence with his L2 use, and felt comfortable communicating in English.

David's sociocultural adaptation was characterized by an adoption of an assimilation integration strategy, the development of meaningful social networks with NSs, and an increasing positive attitude towards the TL culture. He became well integrated into the US community thanks to making a few close American friends and finding a girlfriend from the US. At the beginning of the semester, David explained that he had only made friends with international students and did not know anyone from the US. By the end of the semester, although he had mostly made friends from other cultures, he was very close to the four or five American friends with whom he regularly spent time practicing sports, watching movies, and going out. Moreover, he started dating an American girl, and he had the opportunity of meeting her family and participating traditional festivities such as Thanksgiving with them. He reported learning much about the US culture as a result of his SA experience, fact that illustrates his particular gains in cognitive adaptation.

David also commented on the strong cohesion and large size of the Brazilian group of students, which in his view limited language gains of many of his L1 peers. According to him, he was able to go beyond the Brazilian network because he had a good level of English and could interact with NSs, unlike some of his friends who were afraid of interacting with them.

Therefore, in the case of David, we observed that his positive sociocultural adaptation development probably enhanced his ability to use pragmatic routines during the semester in the US. More particularly, we observed that his sociocultural adaptation was determined by his integration strategy adopted, the development of social networks, and an increasingly positive attitude towards the US culture.

4.2.2. Mark

Mark experienced negative gains in knowledge of pragmatic routines, as well as in sociocultural adaptation. He was not able to integrate into the TL society, and instead preserved his sociocultural values over the stay. This unsuccessful integration, according to him, was mainly due to academic pressure. At the end of the semester, he had to take a TOEFL exam, the results of which would determine his stay in the program, and this represented his main concern throughout the semester of SA.

Table 5
Pragmatic and sociocultural adaptation gains by the 2 case studies.

Participant	Behavioral gains Score %		Cognitive gains Score %		Sociocultural gains Score %		Pragmatic gains Score %	
David	0.77	15.4	1.57	31.4	0.96	19.2	4	15.4
Mark	−0.32	−6.4	−0.14	−2.8	−0.27	−5.4	−7	−26.9
AVERAGE	0.15	3.08	0.25	5.06	0.18	3.56	5.3	2.87

Additionally, he had a negative experience trying to interact with members of the TL community, and as a result did not develop a social network with NSs and his attitude towards the US culture, which was originally positive, changed towards a negative one. Mark lived with two US students because he was aware that was the best living option to interact with NSs, but he did not talk with them much because they were always very busy. According to Mark, "when they talk, it's only short conversations." He also enrolled in a conversation-partner program and paid for private conversation lessons, but the NSs were not consistent and met with each NS no more than 3 times.

As a consequence, Mark substantially increased his language shock and at the end of the semester reported being scared or ashamed of using his English at times. When asked about whether he had learned any daily or common expressions he regretted that he had not really learned any. The only expressions he had learned were those his American roommates normally used, such as *you're welcome* or *what's going on?* but he was already familiar with them.

Consequently, in the case of Mark, his negative sociocultural adaptation development could have been what limited his ability to learn to use pragmatic routines during the sojourn. His sociocultural adaptation was marked by a lack of integration in the community, a lack of development of a significant social network, and a resulting increasingly negative attitude towards the US culture. In addition to the explored factors, the interviews with Mark revealed two further aspects that seemed to determine his unsuccessful sociocultural adaptation; that is, academic pressure and language shock. This finding echoes Schumann's (1986) proposal that in addition to social factors that determine acculturation, there are a number of psychological variables that are also at play.

Summing up qualitative findings, the interviewed participants were aware of their pragmatic learning, and showed their perspectives on reasons for making a positive or a negative development. The two case studies revealed that the adoption of an assimilative integration strategy and development of meaningful friendship networks enhanced gains in sociocultural adaptation and subsequently in the use of pragmatic routines. In contrast, strong cohesiveness and large size of the sojourning group, academic pressure and language shock seemed to limit adaptation and pragmatic development, suggesting that psychological adaptation could have also played a role in learning pragmatic routines during SA.

5. Discussion

By means of a mixed method research approach, the present study revealed significant insights on the effects of sociocultural adaptation on the development of L2 pragmatic competence. Quantitative research findings showed that gains in production of pragmatic routines during a semester-long SA program in the US were directly determined by students' cultural background, and secondly affected by their sociocultural adaptation development. Qualitative results illustrated the interplay among sociocultural adaptation, background culture and gains in use of routines by providing insights on individual variation.

This investigation provided evidence of the potential of a mixed methods approach in longitudinal research, allowing for a more comprehensive and wide understanding of the processes through which outcomes take place (Bamberger, 2012). In particular, findings related to the first research question of the study showed that learners made significant gains in their production of pragmatic routines during SA. The participants improved their use of high-prototypical pragmatic routines, and decreased their use of low-prototypical ones and other non-formulaic expressions, thus revealing a general trend of approximation to NSs' use of routines. This finding suggests that L2 learners were on a process of "nativelike selection" (Pawler & Syder, 1983); that is, they started to distinguish formulaic native-like expressions among a range of grammatically-correct and less natural formulations, this process indicating a step towards L2 pragmatic acquisition.

These findings are in line with previous studies that have observed an approximation to NSs' use of pragmatic routines (Barron, 2003; Taguchi, 2013; Taguchi et al., 2013; Alcón-Soler & Sánchez-Hernández, 2017). In particular, this study echoes Barron's (2003) findings that learners decreased their use of non-target-like forms and increased their reliance on L2-like routines. Nevertheless, the present results are only partially in line with Taguchi et al. (2013), who reported that learners increased their ability to use low-prototypical pragmatic routines in addition to high-prototypical ones. Since this study focused on Chinese pragmatic routines, we suggest that the nature of the routines and the cultural factor could explain the different results.

Employment of a mixed method is also especially beneficial in impact evaluation studies, where it facilitates our understanding of the interplay among different variables and outcomes and of how these are determined by the context (Bamberger, 2012). In this sense, findings in relation to the second research question of the study indicated that pragmatic gains were determined by learners' sociocultural adaptation and also by their background culture. On the one hand, the results showed significant differences across cultural groups — which included Brazilian, Chinese and Turkish students — in terms of sociocultural adaptation and production of routines, thus pointing to a direct effect of background culture on both pragmatic and sociocultural adaptation development. With the exception of Bardovi-Harlig et al. (2008), most ILP studies on the SA context include only one nationality. However, our results are only partially in line with Bardovi-Harlig et al. (2008), who reported similarities in routine production across cultural groups. Drawing from Schumann's (1986) proposal of cultural congruity enhancing SLA, we hypothesize that similarity between some of the cultures included in our study and in Bardovi-Harlig et al. (2008) determined learners' ability to use routines. Indeed, the strong association between cultural background and production of routines reported in this study supports the tenet that pragmatic routines reflect cultural distinctiveness (Barron, 2003), and hence their acquisition promotes understanding of a foreign culture.

Sociocultural adaptation development also influenced gains in production of routines, although the effect was only significant in some cultural groups (Turkish and Chinese students). This finding provides support for Schumann's (1986)

Acculturation theory, which posits that acculturation, rather than being a direct cause of SLA, is one of the main predictors of acquisition of an L2. In particular, the results of the present study echo case studies that have reported the relationship between acculturation and acquisition of pragmatic routines (Dörnyei et al., 2004; Schmidt, 1983). Moreover, it supports previous studies that have observed that different pragmatic features are related by specific aspects of acculturation in the SA setting, particularly the development of social networks (Kinginger & Farrell, 2004; Shively, 2015), and integration strategies adopted by the sojourning student to participate in the TL community (Diao, 2011; Shively, 2015; Taguchi, 2011b; Yates & Major, 2015).

Despite the general trends reported in the quantitative analysis, the qualitative one revealed individual variation in sociocultural adjustment and in pragmatic learning. Indeed, individual variation is commonly reported in studies addressing L2 pragmatic development (Félix-Brasdefer & Hasler-Baker, 2015). One of the case study participants, David, developed a significant social network with NSs, his attitude towards the TL setting improved, and as a consequence his pragmatic knowledge did so too, thus paralleling Schmidt's (1983) case study of Wes. In contrast, Mark showed that a presentation integration strategy and academic pressure were limitations to pragmatic development, and hence might also explain negative or small gains reported in the quantitative analysis as for certain routines (i.e. *sorry I am late*).

The qualitative analysis also revealed that in addition to sociocultural adaptation, psychological factors also shaped students' process of adaptation in the SA context. More particularly, the role of academic pressure and language shock seemed to limit Mark's acculturation and consequent pragmatic learning. Variation in psychological variables not addressed in the analysis (e.g. motivation, cultural shock, or identity), may have varied among informants and thus indirectly influenced sociocultural aspects such as the development of social networks and integration of the learners. Therefore, we propose that future investigations on SA students' acculturation experiences consider both sociocultural and psychological factors underlined in the SA experience (Schumann, 1986).

6. Conclusions, limitations and direction for further research

Results from this study have revealed that L2 learners improved their production of pragmatic routines during a semester-long SA program in the US, and that the reported gains were firstly influenced by their background culture and secondly by their sociocultural adaptation development through the sojourn. However, some limitations of the study should be considered when interpreting these results. We propose that the following limitations are addressed in future studies.

The first limitation includes the nature of the pragmatic gathered data. Learners' production of pragmatic routines was measured through a written DCT. Being aware that written DCTs do not trigger natural conversational data, they were used as the best option to collect large amounts of data on learners' production of pragmalinguistic features, as well as to focus on the target pragmatic feature and not on further aspects such as conversational management or discourse organization. We suggest that future studies redesign the DCT used in this study to be administered aurally and orally via computer.

Secondly, in this longitudinal investigation a delayed post-test was not administered since loss of participants would have been too high. While it is acknowledged that data collection from only two data points limits the analysis of longer stays, this option also provides relevant insights as it accounts for pragmatic gains in a typical and frequent context, namely semester-long SA programs. Further longitudinal ILP research employing (at least) three data-collection points is encouraged so as to observe whether pragmatic knowledge is retained upon return to the home country.

Moreover, this study did not address receptive ability. Alcón-Soler and Sánchez-Hernández (2017) report that recognition of pragmatic routines develops at a greater extent than production during a semester of study in the US. It would be interesting to explore how learners develop their pragmatic comprehension taking into account results from this study as well as previous findings on factors that affect routine production gains over SA (Barron, 2003; Taguchi et al., 2013).

This investigation provides insights on a growing field within Interlanguage Pragmatics, that is, the development of knowledge of pragmatic routines in the SA context. While we acknowledge that gains in production of routines is determined by students' background culture and by their sociocultural adaptation over SA, as well as by social contact and intercultural competence (Taguchi et al., 2013), we strongly encourage further studies addressing different variables that may influence routine learning. In particular, we suggest further exploration on the relationship between acculturation and knowledge of pragmatic routines by addressing Schumann's (1986) psychological variables, so as to achieve complete accounts of how SA learners' acculturation experiences determine pragmatic gains.

Ultimately, findings from this study emphasize the need to promote positive SA experiences during SA programs so as to enhance students' acculturation development and pragmatic learning. It has been revealed that SA students experience a number of difficulties that impede their adaptation to the environment, including academic pressure, unsuccessful integration in the TL community, difficulty to interact with NSs, cohesiveness of the L1 group, and language shock. These need to be considered by SA program coordinators, instructors, and by students themselves so as to maximize SLA during the programs.

Overall, the present study provides some directions to employ a mixed methods research approach to the analysis of the development of L2 pragmatic competence in the SA context. It has allowed us to conclude that, unlike other pragmatic aspects, the acquisition of routines needs a higher level of integration in the TL community, which at the same time is determined by learners' individual differences. That said, this investigation supports previous studies that have highlighted the importance of combining quantitative and qualitative methods to observe the effect of different factors on pragmatic development during SA (Alcón-Soler, 2015; Barron, 2003; Iwasaki, 2010; Taguchi, 2011b).

Acknowledgements

Appendix A. Situations included in the DCT

Name	Situation
1. Dinner table	Your friend invites you to have dinner with his parents. His mom offers you more food but you couldn't possibly eat more. You say:
2. Introduction	You are just introduced to a new person. You tell him/her:
3. Restaurant	You work in a fast food restaurant which serves food which customers can eat seated down in the restaurant or can take it home with them. Before a customer starts ordering, you ask him/her:
4. Puddle	You are walking together with your friend, and he is about to step in a puddle. You tell him:
5. Farewell	You go to the bank and after you are done talking to the banker she tells you "Have a nice day!" You respond to her:
6. Late	You have an appointment with one of your teachers, but you are 10 min late. After she tells you "Good morning, come on in" you answer:
7. Phone	The phone rings. You pick it up and answer:
8. Borrow pen	You are in class and you need to write something down, but you realize you forgot your pen at home. You tell the classmate sitting next to you:
9. Store	You are in a store but you do not really want to buy anything. The salesperson comes to you and asks you if he can help you. You tell him:
10. Decease	You see your friend and he tells you that his grandpa just died. You tell him:
11. Messy house	A friend you just made comes to your home, and you did not clean, did not do the dishes and your clothes are everywhere. As he comes in, you tell him:
12. Piece of paper	A classmate asks you for a piece of paper. As you give it to him, you tell him:
13. Careful driving	Your roommate is getting ready to drive his car to school, and the roads are very icy. Before he leaves you tell him:

References

Alcón-Soler, E. (2015). Pragmatic learning and study abroad: Effects of instruction and length of stay. *System, 48*, 62—74.

Alcón-Soler, E., & Sánchez-Hernández, A. (2017). Learning pragmatic routines during study abroad: A focus on proficiency and type of routine. *Atlantis, 39*(2).

Bamberger, M. (2012). *Introduction to mixed methods in impact evaluation. Impact Evaluation, Notes 3.* Retrieved from: http://www.interaction.org/impact-evaluation-notes.

Bardovi-Harlig, K. (2008). Recognition and production of formulas in L2 pragmatics. In Z. H. Han (Ed.), *Understanding second language process* (pp. 205—222). Clevedon, UK: Multilingual Matters.

Bardovi-Harlig, K. (2009). Conventional expressions as a pragmalinguistics resource: Recognition and production of conventional expressions in L2 pragmatics. *Language Learning, 49*(4), 755—795.

Bardovi-Harlig, K., & Bastos, M. (2011). Proficiency, length of stay, and intensity of interaction, and the acquisition of conventional expressions in L2 pragmatics. *Intercultural Pragmatics, 8*(3), 347—384.

Bardovi-Harlig, K., Rose, M., & Nickels, E. (2008). The influence of first language and level of development in the use of conventional expressions of thanking, apologizing and refusing. In M. Bowles, R. Foote, S. Perpiñán, & R. Bhatt (Eds.), *Selected proceedings of the 2007 second language research forum* (pp. 113—130). Somerville, MA: Cascadilla Proceedings Project.

Barron, A. (2003). *Acquisition in interlanguage pragmatics: Learning how to do things with words in a study abroad context*. Amsterdam: Benjamins.

Creswell, J. W., Plano Clark, V. L., Gutmann, M. L., & Hanson, W. E. (2003). Advanced mixed methods research designs. In A. Tashakkori, & C. Teddlie (Eds.), *Handbook of mixed methods in social and behavioral research* (pp. 209—240). Thousand Oaks, CA: Sage.

Davis, J. (2007). Resistance to L2 pragmatics in the Australian ESL context. *Language Learning, 57*, 611—649.

Dechert, H. (1983). How a story is done in a second language. In C. Faech, & G. Kasper (Eds.), *Strategies in interlanguage communication* (pp. 175—195). London, UK: Longman.

Diao, W. (2011). Study abroad, participation and turn taking: a case study. In G. Granena, J. Koeth, S. Lee-Ellis, A. Lukyanchenko, G. Prieto, & E. Rhoades (Eds.), *Selected proceedings of the 2010 second language research forum* (pp. 1—17). Somerville, MA: Cascadilla Proceedings Project.

Dörnyei, Z., Durow, V., & Zahran, K. (2004). Individual differences and their effects on formulaic secquence acquisition. In N. Schmitt (Ed.), *Formulaic secquences: Acquisition, processing and use* (pp. 87—106). Amsterdam: Benjamins.

Eslami, Z., & Ahn, S. J. (2014). Motivation, amount of interaction, length of residence, and ESL learners' pragmatic competence. *Applied Research on English Language, 3*(1), 9—28.

Félix-Brasdefer, J. C., & Hasler-Baker, M. (2015). Complimenting in Spanish in a short-term study abroad context. *System, 48*, 75—85.

Hansen, D. (1995). A study of the effect of the acculturation model on second language acquisition. In F. Eckman, D. Highland, P. Lee, J. Mileham, & R. Weber (Eds.), *Second language acquisition theory and pedagogy* (pp. 305—316). Hillsdale, NJ: Lawrence Erlbaum.

Iino, M. (2006). Norms of interactions in a Japanese homestay setting: Toward two-way flow of linguistic and cultural resources. In M. A. DuFon, & E. Churchill (Eds.), *Language learners in study abroad contexts* (pp. 151—173). Buffalo, NY: Multilingual Matters.

Iwasaki, N. (2010). Style shifts among Japanese learners before and after study abroad in Japan: Becoming active social agents in Japanese. *Applied Linguistics, 31*, 45—71.

Kinginger, C. (2008). Language learning in study abroad: Case studies of Americans in France. *The Modern Language Journal, 92*, 1—124.

Kinginger, C., & Farrell, K. (2004). Assessing the development of meta-pragmatic awareness in study abroad. *Frontiers: The Interdisciplinary Journal of Study Abroad X*, 19—42.

Lybeck, K. (2002). Cultural identification and second language pronunciation of Americans in Norway. *The Modern Language Journal, 86*, 174—191.

Pawley, A., & Syder, F. H. (1983). Two puzzles for linguistic theory: Nativelike selection and nativelike fluency. In J. C. Richards, & R. W. Schmidt (Eds.), *Language and communication* (pp. 191—226). London: Longman.

Ren, W. (2015). *L2 pragmatic development in study abroad contexts*. Berlin: Peter Lang.

Riazi, M., & Candlin, C. (2014). Mixed-methods research in language teaching and learning: Opportunities, issues and challenges. *Language Teaching, 47*(2), 135—173.

Roever, C. (2005). *Testing ESL Pragmatics: Development and validation of a web-based assessment battery*. Berlin: Peter Lang.

Roever, C., Wang, S., & Brophy, S. (2014). Learner background factors and learning of second language pragmatics. *International Review of Applied Linguistics in Language Teaching, 52*(4), 377—401.

Sánchez-Hernández, A., & Alcón-Soler, E. (2018). The role of individual differences on recognition and production of pragmatic routines. In P. Salazar, & V. Codina (Eds.), *Investigating the learning of pragmatics across ages and contexts (pp. xx-xx)*. Brill (Forthcoming).

Schauer, G. (2009). *Interlanguage pragmatic development: The study abroad context*. London: Continuum.

Schmidt, R. W. (1983). Interaction acculturation, and the acquisition of communicative competence: A case study of an adult. In N. Wolfeson, & E. Judd (Eds.), *Sociolinguistics and language acquisition* (pp. 137—174). Rowley, MA: Newbury House.

Schumann, J. (1978). *The pidginization process: A model for second language acquisition*. Rowley, MA: Newbury House.

Schumann, J. (1986). Research on the acculturation model for second language acquisition. *Journal of Multilingual and Multicultural Development, 7*(5), 379—392.

Shi, X. (2007). Intercultural language socialization: Theory and methodology. *Intercultural Communication Studies, 26*(1), 230—241.

Shively, R. L. (2015). Developing interactional competence during study abroad: Listener responses in L2 Spanish. *System, 48*, 86—98.

Siegal, M. (1995). Individual differences and study abroad: Women learning Japanese in Japan. In B. Freed (Ed.), *Second language acquisition in a study abroad context* (pp. 225—244). Philadelphia: John Benjamins.

Taguchi, N. (2011a). The effect of L2 proficiency and study-abroad experience in pragmatic comprehension. *Language Learning, 61*, 904—939.

Taguchi, N. (2011b). Pragmatic development as a dynamic, complex process: General patterns and case histories. *The Modern Language Journal, 95*(4), 605—627.

Taguchi, N. (2013). Production of routines in L2 English: Effect of proficiency and study-abroad experience. *System, 41*, 109—121.

Taguchi, N., Li, S., & Xiao, F. (2013). Production of formulaic expressions in L2 Chinese: A developmental investigation in a study abroad context. *Chinese as a Second Language Research Journal, 2*(1), 23—58.

Vilar-Beltrán, E. (2014). Length of stay abroad: Effects of time on the speech act of requesting. *International Journal of English Studies, 14*, 79—96.

Ward, C., & Kennedy, A. (1999). The measurement of sociocultural adaptation. *International Journal of Intercultural Relations, 23*, 659—677.

Wray, A. (2012). What do we (think we) know about formulaic language? An evaluation of the current state of play. *Annual Review of Applied Linguistics, 32*, 231—254.

Xiao, F. (2015). Adult second language learners' pragmatic development in the study-abroad context: A review. *Frontiers: The Interdisciplinary Journal of Study Abroad, 25*, 132—149.

Yates, L., & Major, G. (2015). Quick-chatting", "smart dogs", and how to "say without saying": Small talk and pragmatic learning in the community. *System, 48*, 141—152.