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Variations in developmental patterns across pragmatic features[1]

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Abstract

Drawing on the findings of longitudinal studies in uninstructed contexts over the last two decades, this synthesis explores variations in developmental patterns across second language (L2) pragmatic features. Two synthesis questions were addressed: (a) What are the variations in developmental patterns across pragmatic features?, and (b) What are the potential explanations for the variations? In response to the first question, previous studies showed that L2 pragmatic development is a non-linear, dynamic process, with developmental paces varying across pragmatic features (Ortactepe, 2013; Taguchi, 2010, 2011, 2012; Warga & Scholmberger, 2007). These studies revealed that some aspects of pragmatic features (e.g., semantic strategies of speech acts) develop faster than others (e.g., lexical features such as mitigators). In response to the second question, three potential explanations were identified to account for the developmental variations: (a) language-related, (b) situation-dependent, and (c) learner-related explanations, with three subcategories for the language-related explanation: (a) the functions of pragmatic features, (b) the frequency of availability of target features, and (c) the similarity and difference between languages with respect to the target feature.

Keywords: L2 pragmatic development; variations; longitudinal perspective; non-linearity

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1. Introduction

Pragmatic competence in a second language (L2) involves mastering pragmalingistic and sociopragmatic knowledge (Thomas, 1983), as well as developing efficient control of both knowledge bases when encoding and decoding language functions in a sociocultural context (Taguchi, 2010, 2011). Pragmalinguistics refers to the linguistic resources available to perform language functions, while sociopragmatics refers to a language user's assessment of the context in which those linguistic resources are implemented (Leech, 1983; Thomas, 1983). Research on L2 pragmatics encompasses two primary areas: the study of L2 use and the study of L2 learning (Kasper & Rose, 2002). The former investigates how non-native speakers comprehend and produce speech actions in the target language. The latter examines how L2 learners develop the ability to understand and perform those actions in the target language. Additionally, both L2 use and learning are constrained by social conventions and contexts in which learners decide between different pragmatic meanings (Kasper & Rose, 2002). Therefore, L2 pragmatic development involves acquisition of a complex interplay among language, language users, and social contexts (Taguchi, 2012).

Two methods have been adopted to study pragmatic development in uninstructed contexts: cross-sectional and longitudinal. Cross-sectional studies compare pragmatic performance among different groups based on different proficiency levels or length of stay. The group differences of pragmatic performance are perceived as changes that learners exhibit at different learning stages and thus indirectly demonstrate development. In contrast, longitudinal studies trace the trajectory of L2 pragmatic development over a period of time with the same learner(s). The changes captured over time provide insights into the developmental patterns and the factors affecting pragmatic development. This longitudinal perspective directly addresses the developmental process of pragmatic competence, which contrasts with cross-sectional studies' indirect ways of demonstrating development.

Compared with cross-sectional studies, longitudinal investigations are still under-explored in the area of L2 pragmatics, as acknowledged by many researchers (e.g., Bardovi-Harlig, 1999, 2000; Kasper & Rose, 2002; Kasper & Schmidt, 1996; Taguchi, 2010, 2011, 2012). It is only within the past two decades when the number of longitudinal studies started to increase. This body of studies have examined various pragmatic features: address terms (e.g., Hassall, 2013), implicatures (e.g., Bouton, 1992), formulaic expressions (Taguchi, Li, & Xiao, 2013), discourse markers (e.g., Polat, 2011), and speech acts such as apologies (e.g., Warga & Scholmberger, 2007), compliments (e.g., Félix-Brasdefer & Hasler-Barker, 2014), disagreement (e.g., Bardovi-Harlig & Salsbury, 2004), indirect

opinions (e.g., Taguchi, 2012), offers-refusals (Barron, 2003), refusals (e.g., Ren, 2012), requests (e.g., Li, 2014), and suggestions (e.g., Matsumura, 2001).

These studies showed that the developmental paces varied across pragmatic features or aspects. For example, Taguchi's (2007, 2008) studies revealed that learners' comprehension developed faster and more accurately for indirect refusals than for indirect opinions. Several studies on speech acts (e.g., Schauer, 2009) uncovered that semantic strategies used to structure a speech act progressed faster than lexical and syntactic forms. These findings suggest that pragmatic development is a non-linear, dynamic process with uneven developmental paces in developmental patterns (e.g., Ortactepe, 2013; Taguchi, 2012; Warga & Scholmberger, 2007). Despite this generalization, with the notable exception of Taguchi's (2010) synthesis, very few studies have systematically addressed the uneven developmental paces or explored the potential explanations for variations in these longitudinal studies.

To fill these gaps, this synthesis seeks to describe and explain the variations in developmental patterns across pragmatic features in uninstructed contexts. Two questions guide this investigation:

1. What are the variations in developmental patterns across pragmatic features?
2. What are the potential explanations for the variations?

Before addressing these two questions, the following section will first briefly introduce the background guiding this synthesis.

2. Background

In interlanguage pragmatics, research has revealed that pragmatic development shows uneven developmental paces across pragmatic aspects and features. This pathway aligns with the non-linear perspective in complex dynamic systems theory (CDST), which claims that language development is a non-linear, complex process in which changes emerge at uneven paces. Some changes emerge gradually over time, but others occur suddenly and radically (Larsen-Freeman & Cameron, 2008). In language development, different aspects of language abilities have different rates of changes and changes in one aspect do not necessarily cause changes in others. As part of language ability, pragmatic competence also shows uneven paces in the developmental process, which is called developmental variations in this synthesis. Several studies of speech acts have revealed that, within the same period of time, the developmental pace with semantic strategies was faster than that with pragmalinguistic expressions (e.g., Felix-Brasdefer & Hasler-Barker, 2014; Li, 2014; Schauer, 2004, 2009). The characteristic of non-

linearity in pragmatic development and the empirical evidence provide justification for the exploration of variations in L2 pragmatic development.

In addition to non-linearity, the temporal dimension is another key feature in tracing and observing language development in general, and L2 pragmatic development in particular. The critical role of "time" is emphasized by Ortega and Iberri-Shea (2005): "Many, if not all, fundamental problems about L2 learning that second language acquisition (SLA) researchers investigate are in part problems about 'time'" (p. 26). Similarly, CDST also stresses this time scale in language development (de Bot, Lowie, Thorne, & Verspoor, 2013; Ortega & Bynes, 2008). The observation of developmental processes is not limited to static phases themselves, but also involves the transitions between phases within a period of time (de Bot et al., 2007). This time-based view underlines the importance of the longitudinal perspective on language development. To capture the developmental variations in pragmatic patterns, the present synthesis focuses on longitudinal investigations of L2 learners' pragmatic competence.

To date, research does not only describe the developmental process but also explains pragmatic development from diverse perspectives. Two categories of theories have been applied to explain pragmatic development: theories with an individual-psychological focus (e.g., cognitive-processing models) and theories with a social practice focus (e.g., sociocultural theory and language socialization; Kasper & Rose, 2002, p. 61). Both approaches are valuable in explaining pragmatic development since the development of pragmatic competence is characterized by the interactions between "cognitive, social, and environmental factors" (Taguchi, 2012, p. 66). The diversity of explanations for pragmatic development provide insights into developmental variations across pragmatic features, which can be explored from various perspectives.

The non-linear and time-based traits of language development guide this synthesis to address the developmental variations (uneven paces) across pragmatic features investigated in longitudinal studies, as well as to explore the potential explanations for these variations. Below, the methodology section will define longitudinal studies, which is followed by the literature search procedures used to locate the primary studies. It will also present the inclusion/exclusion criteria used to screen the studies and the coding process of categorizing the studies. After this, operationalization of key terms (e.g., developmental patterns, variations, pragmatic features) will be explained. Then, in the findings section, the answers to the two synthesis questions will be presented. Finally, the conclusion section will summarize the synthesis findings and provide implications for future research directions.

3. Methodology

The present synthesis adopts the criteria proposed by Ortega and Iberri-Shea (2005) and later revised by Taguchi (2010) to define longitudinal research. According to Ortega and Iberri-Shea, longitudinal research is the observation of the same participant(s) over an extended period of time. They presented four definitional features of a longitudinal study: (a) the specific time length, (b) the presence of multi-wave data collections, (c) the conceptualization of capturing changes over time, and (d) the focus on establishing contextualized antecedent and consequent relations by tracing the phenomenon in its context, instead of with experimental controls.

Drawing on these characteristics, a literature search was conducted using four electronic databases: LLBA, ERIC, Google Scholar, and the Carnegie Mellon University (CMU) library database (a university database). Key words including *interlanguage pragmatics, pragmatic development, second language learning/acquisition*, and *longitudinal study* were used to carry out the bibliographic search. This search, conducted in 2014, yielded 17 hits in LLBA, 286 in ERIC, 453 in Google Scholar, and 308 in the CMU library database. After cross-examining the studies, a total of 765 articles were identified as unique studies. Then, the following inclusion and exclusion criteria[2] were used to screen the studies:

1. The study was empirical and was published in a journal or book.[3]
2. The study focused on adult participants.
3. The study traced the changes of specific pragmatic features[4] over a period of time (it was a longitudinal study).
4. The data in the study were collected systematically over time (e.g., pre- and post-results).
5. The study included pragmalinguistic analysis.[5]
6. The study focused on naturalistic development: It did not involve instructional intervention or other types of training.[6]

[2] These criteria are based on those in Taguchi's (2010) synthesis of longitudinal studies.

[3] Doctoral dissertations (e.g., DuFon, 1999) were not included because they were not published in journals or books.

[4] Some longitudinal studies (e.g., Dings, 2014; Shively, 2013) did not meet this criterion because they did not focus on specific pragmatic features.

[5] Some ethnographic studies (e.g., Siegal, 1995) did not meet this criterion because they did not code the data for pragmalinguistic analysis. Neither did this study present the changes of certain pragmatic features over the 18 months

[6] Some longitudinal studies such as Cohen and Shively (2007) and Shively (2011) did not meet this criterion because their design involved instruction or training. For example,

7. The study showed different paces of development of particular pragmatic features, meaning that within the same period of time and within the same group of learner(s), some pragmatic features/aspects developed faster while others did not develop or developed more slowly.

After applying these inclusion and exclusion criteria, 26 primary studies remained for the synthesis.

3.1. Coding for substantive and methodological features

Each study was first coded for substantive and methodological features (Norris & Ortega, 2006). The substantive features involve target pragmatic features and learning contexts (second or foreign language context). The methodological features consist of six aspects: (a) length of study, (b) frequency of data collection, (c) measures used to capture development, (d) sample size, (e) participants' L1(s) and the target language, and (f) participants' proficiency. The appendix displays all 26 studies coded for these features.

As shown in the appendix, the pragmatic features examined include address terms, formulaic expressions, discourse markers, the sentence final particle *ne*, conversational implicatures and speech acts. These studies fall into three broad categories of examination: pragmatic comprehension, awareness/perception, and production, with 17 studies concentrating on pragmatic production. Only seven studies investigated pragmatic comprehension and three studies pragmatic awareness/perception.[7] Additionally, most studies were conducted in the second language (SL) context. Seven involved the foreign language (FL) context, but only two were conducted exclusively in the FL context; the other five were carried out in both SL and FL contexts, comparing the learning outcomes between the two contexts. Finally, 16 of 26 studies had English as the target language. Other target languages included Spanish, Indonesian, Chinese, Japanese, French, and German.

Regarding the length of study, there is little consensus about the optimal length of observation for a longitudinal study (Ortega & Iberri-Shea, 2005). The 26 studies confirm this claim, exhibiting a wide range of the study length (from four weeks to over four years). Most studies used convenience scaling based on institutional time (e.g., one academic year). The frequency of data collection points ranges between two and eight times, with a majority of studies involving

Shively's (2011) study involved an hour-long orientation to pragmatics and approximately 30 minutes of instruction on pragmatics before participants started doing their tasks.

[7] Taguchi's (2012) study was coded twice because it included two separate analyses of pragmatic comprehension and production.

two or three points. The data were written or oral production elicited by instruments such as the discourse completion task (DCT) and questionnaires. A few studies collected authentic data by recording naturalistic conversations (e.g., Bardovi-Harlig & Hartford, 1993; Bardovi-Harlig & Salsbury, 2004; Polat, 2011) or administering role-plays (e.g., Bataller, 2010).

3.2. Coding for developmental variations and explanations

In this step, each study was further coded for the aspects that directly answer the research questions: (a) pragmatic features that developed and did not develop/developed slowly, namely, developmental variations, (b) evidence (e.g., test scores, frequency) for faster and non-/slower development, and (c) potential explanations for the developmental variations.

The key terminology used in this coding process was defined. First, *pragmatic features* were defined as the operationalization of pragmatic competence in each study. Specifically, they refer to the units of analysis (e.g., address terms) researchers used to examine pragmatic competence. Second, the *measurement of development and non-development* was adopted from previous studies that regarded target language speakers' performance as the normative use of a certain pragmatic feature. Within the same observation period, the changes that approximate the target-like norms indicate faster development, while the divergence from the target-like norms or no change represents slower or non-development.[8] Third, *developmental patterns* were defined as paces or rates of changes of pragmatic features. These changes were traced in the performance of the same leaner(s) within the same period of time. Finally, *variations* were operationalized as the uneven developmental paces or rates across pragmatic features, which means that variations involved two aspects: faster and non-/slower development of the pragmatic feature.[9]

When coding for the potential explanations for the variations, I did not simply copy the authors' explanations reported in their studies. Instead, I reanalyzed the study features and the findings/results reported in each study. This

[8] The distinction between faster and non-/slow development was based on the evidence (e.g., test scores, frequency) presented in the original studies. For example, the accuracy scores in Taguchi's (2012) study showed significant differences of low-imposition speech acts between the first and the second data collection points, as well as between the second and the third data collection points. However, high-imposition speech acts showed significant differences only between the second and the third data collection points. Thus, low-imposition speech acts developed faster than high-imposition speech acts.

[9] Since variations cover these two aspects, the corresponding explanations should also address the two aspects at the same time.

re-analysis process relied on the information provided by the author(s) in the original studies and resulted in three potential explanations: (a) language-related, (b) situation-dependent, and (c) learner-related explanations. Each single explanation was identified to account for both faster and non-/slower development simultaneously because developmental variations involve these two aspects of development.

Based on the language properties (e.g., frequency) in the studies, three subcategories in the language-related explanation were further identified: (a) the functions of the target feature, (b) the frequency of availability of the target feature, and (c) the similarity and difference between L1 and L2 for the target features. The situation-dependent explanation concerns the characteristics of the task items used in the study, specifically, the social variables involved in the task situations, that is, degree of imposition, social distance, and social status (Brown & Levinson, 1983). Finally, the learner-related explanation refers to the learners' initial conditions (e.g., initial-level pragmatic knowledge) at the start of the study. When each study was categorized into a specific explanation, the explanation has to account for both faster and non-/slower development at the same time.

Of the 26 studies, 20 studies were categorized into the language-related explanation, six studies into the category of the situation-dependent explanation, and two studies into the category of learner-related explanation. To improve the reliability of this categorization, three pragmatics PhD students recategorized six different studies (about 20% of the 26 studies). Each of them selected two studies s/he had read from the 26 studies. None of them selected the same article. After this, they received the variation description found by the researcher in each study. The co-coders were required to come up with their own explanations for the variations they received. They were informed that the explanation that they came up with had to account for both faster and non-/slower development. None of the co-coders knew any of the explanations the researcher identified. The agreement rate between the researcher's and the co-coders' explanations was 83.3%, with one disagreement on a study. Agreement was achieved after the discussion of the variations in that study.

4. Synthesis findings

This section synthesizes the findings of the 26 studies to answer the two questions: (a) What are the variations in developmental patterns across pragmatic features and (b) What are the potential explanations for the variations? Since the variations found in these studies are associated with explanations, the findings for these two questions are presented together according to the three explanations: (a) language-related, (b) situation-dependent, and (c) learner-related.

4.1. The language-related explanation for developmental variations

The first category of studies concerns the developmental variations caused by the language-related factors. Among the 26 primary studies, 20 studies fall into this category: one study of pragmatic awareness/perception, seven studies of pragmatic comprehension, and 12 studies of pragmatic production. As shown in Table 1, three specific types of language-related explanations were further identified: (a) the functions of pragmatic features, (b) the frequency of availability of the target feature, and (c) the similarity and difference of the target features between L1 and L2.

Table 1 Studies in the category of the language-related explanation

Studies	Target pragmatic features	Features/aspects that developed or developed relatively quickly	Features/aspects that did not develop or developed slowly
Studies in the function subcategory (2 studies)			
Polat (2011)	Discourse markers	The use of *you know* and *like*	The use of *well*
Sawyer (1992)	Sentence final particle *ne*	The formulaic use of the particle *ne* as in *soo desu ne* 'that's right'	The use of the affective particle *ne*
Studies in the frequency subcategory (2 studies)			
Khorshidi (2013)	Requests	Direct strategies and conventionally indirect strategies	Hints
Ortactepe (2013)**	Formulaic expressions	Expressions such as *I didn't catch your name* and *get out of here*	Expressions such as *come again*
Studies in the L1-L2-similarities-and-differences subcategory (15 studies)			
Bardovi-Harlig & Hartford (1993)	Suggestions and rejections	Frequency and the success rate of initiated suggestions and refusals	The use of mitigators and aggravators
Bardovi-Harlig & Salsbury (2004)	Disagreements	Indirect disagreement strategies (i.e., the agreement-before-disagreement strategy, postponing disagreement across turns)	Lexical devices (i.e., overgeneralized use of *but* in disagreement)
Barron (2003)	Requests, offers, and refusals to offers	Discourse structure in offers-refusals[10]	Linguistic behaviors (i.e., linguistic forms and internal modification in requests and offers)
Bouton (1992, 1994)**	Conversational implicatures	Relevance-based implicatures	Pope questions, sequence implicatures, indirect criticism, and irony
Félix-Brasdefer & Hasler-Barker (2014)	Compliments	The range of compliment strategies (e.g., an increase in the number of strategy types from four to seven)	The use of adjectives in compliments
Hassall (2013)*	Address terms	Address terms in the vocative slot	Address terms in the pronoun slot and the use of pronouns *anda* and *kamu* (both meaning 'you')
Li (2014)	Requests	External modifiers	Alerters and internal modifiers (e.g., mitigators)
Ren (2012)	Refusals	Types of refusal strategies	Use of adjuncts to strategies
Schauer (2004, 2009)	Requests	External modifiers and request strategies (fewer direct strategies and more conventionally indirect strategies)	Lexical and syntactic downgraders (e.g., *a bit*, *would you mind*)
Taguchi (2007, 2008a, 2008b, 2012)**	Conventional implicatures	Conventional implicatures (i.e., indirect refusals)	Non-conventional implicatures (i.e., indirect opinions) and language-specific conventional implicatures (i.e., routines)
Warga & Scholmerge (2007)	Apologies	Apology strategies (e.g., justifications, offers of repair)	Linguistic forms (e.g., *tres* 'very,' *vrainment* 'really')

Note. * studies of pragmatic awareness/perception; ** studies of pragmatic comprehension (other studies focused on pragmatic production).

[10] This study only focused on offers-refusals in the discourse structure.

4.1.1. Functions of pragmatic features

Pragmatic functions vary across features, with some serving simple functions and others affording complex functions. It is easier for learners to register the simple form-function mapping such as the one-to-one mapping of a pragmatic feature. Learning and using these features do not require much processing and retrieving workload. In contrast, the complexity of functions conveyed by the pragmatic features may slow down learners' pragmatic development because learners have to establish the multiple form-function relationships and use the specific function based on their assessment of the context. One example illustrating the function effect on developmental paces is the Japanese sentence final particle *ne* investigated by Sawyer (1992). The study examined 11 Japanese learners' use of *ne* in four semi-structured interviews over one year. The findings showed that learners developed a sufficient command of the formulaic use of *ne* as in *soo desu ne* 'that's right/I see,' but their progress was slow with the use of *ne* as an affective particle.

The faster development of the formulaic *ne* is likely due to the function it serves in the conversation. As Sawyer (1992) claimed, *soo desu ne* serves an all-purpose function. Interlocutors can use this expression to keep the conversation going without other responses. For L2 learners who have limited interactional competence, such a common, all-purpose expression is useful, which probably facilitates learners' development of the formulaic use of *ne*. In contrast, the affective *ne* is difficult because it has complex interpersonal functions: to make a conversation flow smoothly by showing consideration of the hearer or involving the hearer in the conversation (Sawyer, 1992). Thus, the use of the affective *ne* seems to be more demanding because L2 learners have to monitor the flow of conversation and identify the right timing to use the particle for interpersonal purposes.

This function explanation is supported by Polat's (2011) study, which traced the development of three discourse markers (DMs), that is, *you know, well*, and *like,*[11] by an untutored Turkish adult over one year. The analysis of 24 recordings of informal conversations between the researcher and the learner revealed different paces of changes across the three DMs. The use of *you know* and *like* showed an approximation toward the target-like pattern. The frequency of *you know* declined by 50% over the year (from 4,122 to 2,019 occurrences per 100,000 words), even though this frequency was still higher than that in native speakers' (NSs) utterances (580 occurrences per 100,000 words). The use of

[11] In the study, the analysis of a corpus, Santa Barbara Corpus of Spoken American English (SBCSAE), showed that the three DMs have similar frequency in the native speakers' utterances (see details in Polat, 2011).

like increased dramatically from zero to 1010 occurrences per 100,000 words, approximating the NSs' frequency (1800 occurrences per 100,000 words). However, the DM *well* rarely appeared in the learner's speech over the year.

These different developmental rates can be attributed to the different functions these markers serve. The marker *you know* is primarily used to guide the listener in the interpretation of the message (e.g., understanding the implication of the speaker's utterances; Erman, 2001). The DM *like* serves the functions of approximating, exemplifying, and hedging (Jucker & Smith, 1998). It also occurs when people search for a word (Müller, 2005). These functions are diverse, but they are relatively simple and straightforward and, thus, easy to understand. In comparison, *well* has more diverse and nuanced functions. It can be used to signal a reaction to information provided by another speaker or to modify the speakers' own utterances (e.g., preface a disagreement). When speakers use *well* with these two functions, face management and mitigation are involved. Moreover, *well* also affords functions of changing topics, repairing utterances, initiating conversation, and delaying the response (Müller, 2005). These interpersonal functions require learners to pay attention to the direction of the conversation. Compared to the straightforward functions of *you know* and *like*, these functions are relatively opaque and complex. Furthermore, different from *like* and *you know,* which can occur at the beginning, in the middle, and at the end of utterances, the position of *well* is restricted. It usually occurs turn-initially and only in certain contexts, such as in indirect responses (Polat, 2011). Because of this functional complexity, learners may fail to differentiate between the multiple and opaque functions of *well* and use it as an interpersonal device.

The two studies revealed developmental variations in two pragmatic features: the sentence final particle *ne* and DMs. The explanation for the variations seems to come from the functions of the target features. Features with simple, straightforward or one-size-fit-all functions show a faster developmental pace, whereas features with complex or nuanced functions show slower development.

4.1.2. The frequency of availability of the target pragmatic feature

Another language-related explanation, the frequency of availability of the target pragmatic feature, was identified in Ortactepe's (2013) and Khorshidi's (2013) studies. Ortactepe (2013) investigated learners' comprehension of formulaic expressions. Over one year in the USA, seven advanced Turkish learners of English completed a DCT twice, in which they responded to 20 formulaic expressions (e.g., *What's up?*) based on their understanding. Twenty native speakers rated the participants' responses. The rating scores, ranging from one to three, represented participants' comprehension of the formulaic expressions. The findings

revealed faster improvement with the expressions *I didn't catch your name* and *get out of here*. Learners' scores increased by about two points, nearing the perfect score of three. However, the development of other expressions such as *come again* was much slower. Learners either interpreted these forms literally or failed to demonstrate their understanding of the expressions.

In another study, Khorshidi (2013) investigated three types of request-making strategies by 72 Iranian learners of English: direct strategies (e.g., the imperative form as in *Please let me through*), conventionally indirect strategies (e.g., *Would you please . . .?*), and hints (e.g., *Excuse me, guys* when asking the hearer to step aside). Participants responded to 16 situations in a DCT three times over a 6-month period. Results showed that the development of direct and conventionally indirect strategies was faster than that of hints. Learners approximated the normative pattern by decreasing the use of direct strategies and increasing the use of conventionally indirect strategies. However, the frequency of hints in the learners' data remained much lower over time (from 0.8% to 4%), compared with that of NSs' use of hints (11%).

In these two studies, the different rates of changes in formulaic expressions and request strategies can probably be explained by the frequency of availability of these expressions. As Ortactepe (2013) pointed out, formulaic expressions such as *get out of here* frequently occur in informal daily conversations, while expressions such as *come again* occur in more restricted speech contexts such as a bank situation. Similarly, compared to hints, direct and indirect request strategies are widely used and easier for learners to notice in the target community. Learners may have frequent access to expressions with higher frequency, which makes learners familiar with the form-function-context mapping of these expressions. This process will further facilitate learners' acquisition and use of the target expressions. However, expressions with lower frequency are more difficult and slower to develop because the limited availability of the expressions hinders learners from registering the form-function-context mapping in their linguistic repertoire.

4.1.3. The similarity and difference between L1 and L2

The third language-related explanation relates to the similarity and difference between L1 and L2 with respect to the target pragmatic feature. The analysis of the available findings from the 16 studies (see Table 1) revealed that pragmatic features/aspects shared between L1 and L2 seem to facilitate the development, whereas the language-specific features/aspects tend to slow down the development.

Hassall (2013) observed 12 Australian learners' perception of Indonesian address terms during their 7-week residence in Indonesia. Two categories of address

terms were investigated. One was the four kin terms in the vocative slot: *bapak* 'father'/*ibu* 'mother' and *mas* 'brother'/*mbak* 'sister.' The other included the same four kin terms in the pronoun slot and two additional pronouns, *anda* and *kamu* (both meaning 'you'). In this study, none of the 12 learners had heard of *mas*/*mbak* before their arrival in Indonesia, but they learned the use of vocative *mas*/*mbak* after four weeks of stay and maintained the use until the end of the program. In contrast, only slight improvement was observed with the use of the four kin terms in the pronoun slot and the two additional pronouns (*anda* and *kamu*). Learners underused *kamu* and overused *anda* in situations where *mas*/*mbak* and *bapak*/*ibu* (in the pronoun slot) were appropriate. Hence, developmental variations were found in learners' faster development of the address terms in the vocative slot, in contrast to their slower development of *anda*, *kamu* and the kin terms in the pronoun slot. The L1-L2 similarity and difference may account for these variations. Indonesian address terms in the vocative slot are similar to the address terms in Australian English such as *bro* and *sis*, whereas the address terms in the pronoun slot are different from those in English. In English, the single, all-purpose pronoun *you* (not address terms) is used in the pronoun slot (Hassall, 2013). These L1-L2 similarities and differences probably lead to the developmental variations in these address terms.

Turning to the studies dealing with comprehension of conversational implicatures, Bouton (1992, 1994) examined L2 English learners' comprehension of different types of implicatures. He (1992) found a profound development with relevance-based implicatures over four years; however, language-specific implicatures (e.g., Pope question implicatures) remained difficult for learners to comprehend. A similar developmental variation was found in Bouton's second study (1994), in which comprehension of relevance-based implicatures was fast-developing, while four types of implicatures were slow-developing: Pope questions (e.g., responding to a question *Did you finish your homework?* with *Is the Pope Catholic?*), indirect criticism, sequence implicatures, and irony.

Taguchi's (2007, 2008a, 2008b, 2012) studies added to Bouton's findings. Her studies investigated learners' comprehension of indirect refusals, situational routines, and indirect opinions among Japanese learners of L2 English. Of the three target features, indirect refusals and situational routines[12] (e.g., *that's so sweet of you* in thanking someone) are conventional, while indirect opinions are non-conventional. In these studies, regardless of the target comprehension items (accuracy and response time) or learning contexts (ESL vs. EFL), the findings were similar: indirect refusals were easier and faster for Japanese learners to comprehend than routines and indirect opinions.

[12] These situational routines are those used in daily communication such as thanking someone and greeting customers in a shop.

The explanation for the variations found in Bouton's and Taguchi's studies also relates to the L1-L2 similarity and difference. The relevance-based implicatures and indirect refusal strategies are easier to comprehend because they are conventional, and their conventionality is shared between L1 and L2.[13] For example, the shared discourse pattern in indirect refusals (i.e., giving a reason for refusal) between Japanese and English may facilitate learners' comprehension because it is possible for them to transfer their L1 pragmatic skills to L2 (Taguchi, 2012). While Pope questions and routines are also conventional, their conventionality is language-specific, not shared between learners' L1s and English. For instance, the direct translation of routines, such as *How can I help you* from a shop assistant, does not work in Japanese (L1). Other features such as sequence implicatures and indirect opinions are less or non-conventional. These language-specific characteristics may slow down the development of pragmatic comprehension because these features are not associated with specific linguistic expressions or language use patterns. Learners have to make inferences from contextual cues to interpret language-specific and non-/less conventional implicatures (Taguchi, 2012). Therefore, conventionality facilitates implicature comprehension, as long as it is shared between languages (e.g., indirect refusals). Language-specific conventionality (e.g., routines) or lack of conventionality (e.g., indirect opinions) slows down the development of pragmatic comprehension.

Shifting from comprehension studies, L1-L2 similarity and difference also account for the developmental variations in the production of speech acts. Nine studies in this category (see Table 1) shared a common developmental trend: The acquisition of semantic strategies used to construct a speech act is relatively faster than that of exact pragmalinguistic forms used in a speech act. It is likely because semantic strategies are often shared between cultures (L1-L2 similarity), while the linguistic forms used to convey these strategies vary across languages (L1-L2 difference). For example, when making an apology, a common strategy is to express regret (e.g., *I'm sorry*). This strategy is shared between many languages (Olshtain, 1989; Olshtain & Cohen, 1983). However, upgraders (e.g., *really* in *I'm really sorry*) used to intensify the impact of a particular utterance on the addressee are usually language-specific (Warga & Sholmrger, 2007). All the nine studies showed the variations of semantic strategies and linguistic forms in the production of speech acts, regardless of the types of speech act examined or the instruments used for data collection (e.g., DCT, multimedia elicitation task or MET, recordings of naturalistic conversations).

[13] For the refusal strategies, L1 and L2 are limited to the language pair of Japanese and English, but not all language pairs. For details, see Taguchi (2012).

Bardovi-Harlig and Hartford's (1993) study investigated the production of suggestions and rejections in advising sessions by recording conversations (twice) between students and their advisors in a U.S. university over a semester. The findings showed that students increased the frequency of suggestion and rejection strategies, as well as the success rate of both strategies. However, students continued to overuse aggravators and ignore the use of mitigators, which was in contrast to the frequent use of mitigators by NSs. In another study, Bardovi-Harlig and Salsbury (2004) examined ten ESL learners' development in the speech act of disagreement in naturalistic conversations recorded biweekly in a 1-year period. The findings revealed the approximation to native speakers in learners' use of disagreement strategies: Learners shifted from the direct disagreement strategy to the agreement-before-disagreement strategy or postponing disagreement within or across turns. However, learners did not expand on the use of lexical devices: They overused *but* to preface disagreement. Therefore, learners' use of semantic strategies (shared across languages) developed over time, whereas their competence in producing the lexical devices (specific linguistic forms) in these speech acts, that is, suggestions, rejections, and disagreement, did not develop as quickly.

Similar findings were also found in other studies of different speech acts, including apologies (Warga & Scholmberger, 2007), compliments (Félix-Brasdefer & Hasler-Barker, 2014), offers-refusals and requests (Barron, 2003), refusals (Ren, 2012), and requests (Li, 2014; Schauer, 2004, 2009). Particularly notable is Ren's (2012) study that compared developmental patterns between EFL and ESL learners over one year. Regardless of the learning context, these two groups showed similar developmental variations in refusals: a faster pace with semantic strategies and a slower pace with pragmalinguistic forms. Although both groups expanded the repertoire of refusal strategies and refusal adjuncts (linguistic forms),[14] the developmental paces were different. From the first to the second data collection point, 80% of the ESL and 85% of the EFL learners produced new refusal strategies, but the percentage was only 40% (ESL) and 60% (EFL) for the refusal adjuncts. Thus, the development of linguistic forms in refusal seems to fall behind that of refusal strategies.

These nine studies revealed developmental variations between semantic strategies and pragmalinguistic forms in speech acts: Within the same period of observation time, the same group of learners showed a faster developmental pace with semantic strategies and a slower pace with precise syntax and lexis. These variations seem to come from the L1-L2 similarity and difference. Compared to

[14] Refusal adjuncts are modifications prefacing or following the refusal response utilized to modify the refusal; however, they do not in themselves carry refusing force.

pragmalinguistic forms, the strategy for a pragmatic event, for example, softening requests with small talk, is universal across languages. The universality makes it easier for learners to apply their L1 pragmatic knowledge and skills to L2. However, the syntactic and lexical devices used to encode pragmatic intention are often language-specific. The mastery of these pragmalinguistic forms is a slow-developing progress (Taguchi, 2010, 2012), especially when the corresponding translation does not exist in another language (e.g., L1). It is difficult for learners to directly apply their L1 pragmalinguistic knowledge to L2, which may slow down their development in syntactic and lexical ability.

In summary, the L1-L2 similarities and differences can illustrate the developmental variations found in the 16 studies discussed in this section. The shared norms in address terms, the shared conventionality encoded in implicatures, and the similar semantic strategies in speech acts between L1 and L2 facilitate the development of these target pragmatic features. In contrast, the language-specific aspects in address terms (e.g., address terms in the pronoun slot in Indonesian), language-specific conventionality (e.g., routines), non-conventional utterances (e.g., indirect opinions), and culture-specific pragmalinguistic forms (e.g., mitigators) seem to slow down the development of the features. As already mentioned, the shared aspects in pragmatic features provide learners with opportunities to transfer their L1 pragmatic knowledge and skills to L2 situations, while the differences between L1 and L2 require learners to register the new form-function-context mapping for language use. This process may lead to the uneven developmental paces in speech acts.

4.2. The situation-dependent explanation for developmental variations

This section discusses developmental variations associated with the situation-dependent explanation, which refers to the characteristics of the situations investigated in the study. Specifically, they are social variables involved in the task situations, that is, degree of imposition, social distance, and social status. As shown in Table 2, six studies were identified. Two of them (Hassall, 2013 and Kinginger & Farrell, 2004) focused on pragmatic awareness/perception and the other four focused on pragmatic production.

Hassall's (2013) study of address terms discussed in the language-related section revealed another explanation for variations from the situation characteristic perspective. This study examined L2 Indonesian learners' choices of address terms in three types of situations: superior situations, non-superior and non-intimate situations, and non-superior and intimate situations. The findings showed that learners did not show much improvement in their knowledge of address terms for superiors, but they developed knowledge of address terms

for non-superiors. This phenomenon is probably caused by the situation characteristics in the study. The superior situation items are more difficult for learners to complete because the sociopragmatic norms involved in these situations are relatively complex and the consequences of using inappropriate address terms are more severe, as opposed to those in situations with equal- or lower-status individuals.

Table 2 Studies in the category of situation-related explanations

Studies	Target pragmatic features	Features/aspects that developed or developed relatively quickly	Features/aspects that did not develop or developed slowly
Barron (2000)	A polite marker (*bitte* 'please') and downgraders in requests	*Bitte* and downgraders in situations involving low- or equal-status individuals (e.g., friends)	*Bitte* and downgraders in situations involving high-status individuals (e.g., lecturers)
Barron (2006)	Address terms	Address terms in situations with acquaintances (e.g., relatives, friends)	Address terms in situations with high-status individuals (e.g., professors)
Bataller (2010)	Request strategies	Request strategies in the low-imposition situation (ordering a drink)	Request strategies in the high-imposition situation (exchanging shoes without a receipt)
Hassall (2013)*	Address terms	Address terms in "non-superior" situations	Address terms in "superior" situations
Kinginger & Farrell (2004)*	Address terms	Address terms in babysitting situations, age-peer situations, and a bakery situation with a mother	Address terms in the bakery situation with an age-peer
Taguchi (2012)	Requests, opinions	Requests and opinions in low-imposition situations (e.g., borrowing a pen from friends)	Requests and opinions in high-imposition situations (e.g., asking a professor for an extension)

Note. * studies of pragmatic awareness/perception (other studies focused on pragmatic production).

This situation-dependent explanation can also account for the developmental variations found in Barron's (2000, 2006) studies. Barron (2000) examined learners' development in the use of the politeness marker, *bitte* 'please' and the downtoners (e.g., *etwas* 'a little') in request-making strategies. Among the five situations in the DCT, three situations involved equal- or lower-status individuals (e.g., friends). The other two involved higher-status individuals (e.g., lecturers). The NSs' data showed that they preferred downtoners to the politeness marker in all the five situations. In situations involving equal- or lower-status individuals, learners increased the target-like use of downtoners and decreased the non-target-like use of the politeness marker *bitte* over the ten months. However, in the situations involving higher-status individuals, learners showed a slower and unsteady developmental pace with the use of downtoners and the politeness marker. They underused downtoners and overused the politeness marker.

Similar variations were observed in Barron's (2006) other study which investigated the use of address forms in six situations over a 10-month period. In situations involving relatives and friends, learners displayed target-like use of *Sie* and *du* (both meaning 'you') and the target-like switching between the two forms. But no such target-like pattern was found in situations involving higher-rank people (e.g., a professor).

In another study, Kinginger and Farrell (2004) found that L2 French learners showed a faster improvement in the perception of address terms (*tu/vous* 'you') in situations where the social variables such as status, age, and familiarity were easier to identify. Three types of scenarios (two situations each) were involved in the study: babysitting situations with a mother or a child, bakery situations with a mother or a daughter (sales persons), and age-peer situations with an acquaintance or a stranger. In the language awareness interviews, the learners were asked to choose an address form in each of these situations and to explain the rationale underlying the choice. The comparison between the pre- and post-interviews uncovered that learners remained uncertain about their choice in the bakery situation with a daughter, which involved addressing an age-peer girl in a bakery. However, all learners moved toward the target-like choice of address terms in other situations involving peers.

Different from the status explanation for the variations in Hassall's and Barron's studies, the developmental variations in Kinginger and Farrell's study are associated with ambiguity and complexity of the situation. When interacting with the age-peer interlocutor in a bakery situation, learners can choose either *tu* to project "closeness" based on the same age or *vous* to project "distance" in this business transaction. These concerns associated with social variables result in the complexity of this situation and can lead to learners' uncertainty in selecting the appropriate address term. In such situations, it seems to be difficult for learners to determine what social variables should be considered to choose the appropriate address term. Therefore, when the social variables are not clear-cut and thus ambiguous, learners may make little improvement.

In addition to social status and social distance between interlocutors, the degree of imposition in tasks also affects learners' performance. Here, the degree of imposition refers to the relative ease/difficulty in performing the target pragmatic features. For example, the degree of imposition in a request is greater when asking for a big favor (e.g., asking a professor for an extension) in comparison to a small favor such as asking a close friend for a pen. Two studies lend support to this explanation: Bataller (2010) and Taguchi (2012).

Bataller's (2010) study investigated L2 Spanish learners' requests in two service encounter scenarios in a role play task: a low-imposition scenario (requesting something to drink from a girl working behind the counter) and a high-

imposition scenario (asking a shop assistant to exchange shoes without a receipt). The findings showed that more target-like strategies (e.g., need statements, elliptic expressions) were observed in the low-imposition scenario than in the high-imposition scenario over the period of four months.

This pattern is in tandem with that found in Taguchi's (2012) study, which investigated the speech acts of requests and opinions in low- and high-imposition situations among L2 English learners over eight months. The low-imposition speech acts included requests such as asking a friend for a pen and opinions such as expressing negative comments on the color of a close friend's jacket when buying clothes. The high-imposition speech acts involved requests such as asking a professor for an extension of an assignment and opinions such as giving negative feedback about a professor's class. The analysis of learners' pragmatic speaking tests (three data collection points) revealed that low-imposition requests and opinions displayed a larger gain in terms of appropriateness scores and speech rate, but no such development occurred in the high-imposition counterparts.

Taken together, both Bataller's and Taguchi's studies demonstrated developmental variations associated with the situation characteristics of imposition. Learners tend to make greater advancement with low-imposition speech acts than with high-imposition speech acts. This is probably because, compared with the low-imposition situations, high-imposition situations often require longer utterances and more complex linguistic forms (e.g., mitigated expressions) to encode the speaker's intentions. The elaboration of these intentions often requires a large processing capacity to retrieve and produce the complex illocution (Taguchi, 2012). However, L2 learners' limited processing capacity may hinder them from performing the complex high-imposition speech acts. Thus, learners' incompetency, combined with the linguistic complexity, slows down their developmental rate in high-imposition situations.

In summary, the above six studies illustrate how the situation characteristics can influence developmental patterns across pragmatic features (address terms and speech acts). Learners can make faster progress or demonstrate a recognizable change with situations where equal- or lower-status individuals are involved, as well as with situations where social variables are easier to identify, or with situations where the degree of imposition is lower. In these situations, it is easier for learners to recognize the normative sociocultural knowledge, which may enable learners to convey their intentions. For example, in the low-imposition situation of ordering a drink, the customer-waiter/waitress relationship is easy to identify. A simple, elliptical form such as *two beers* can realize the speech act. However, in the high-imposition situation such as exchanging a pair of shoes without a receipt, direct expressions such as *exchange shoes* are less desirable because they may offend the shop clerk. Instead, more indirect and

syntactically complex forms such as *would it be possible . . .* are expected in these situations. Additionally, the consequence of using inappropriate expressions in high-imposition situations are more severe than that in low-imposition situations. This difference may give learners additional "workload" when they express their intentions in high-imposition situations.

4.3. The learner-related explanation for developmental variations

As defined in the methodology section, the learner-related explanation in this synthesis refers to learners' initial conditions when they participated in the studies. It primarily concerns learners' initial-level pragmatic knowledge, either sociopragmatic or pragmalinguistic knowledge. As shown in Table 3. two studies fall into this category: Matsumura (2001) and Taguchi, Li, and Xiao (2013). Matsumura investigated pragmatic awareness/perception, while Taguchi et al. examined pragmatic production of formulaic expressions.

Table 3 Studies in the category of learner-related explanations

Studies	Target pragmatic features	Features/aspects that developed or developed relatively quickly	Features/aspects that did not develop or developed slowly
Matsumura (2001)*	Advice-giving expressions	Giving advice to equal- and lower-status individuals (e.g., friends)	Giving advice to higher-status individuals (e.g., professors)
Taguchi, Li, & Xiao (2013)	Formulaic expressions	Expressions in situations involving ordering food and asking about the price	Expressions in situations involving trying on a hat and saying goodbye

Note. * studies of pragmatic awareness/perception (the other study focused on pragmatic production).

Matsumura (2001) investigated changes in learners' perception of advice-giving expressions. The participants were 102 Japanese learners of English who completed a multiple-choice survey four times during 1-year study abroad in Canada. The survey questions asked them to select the most appropriate advice-giving form out of four options: direct advice, hedged advice, indirect comments with no advice, and opting out. The findings showed that, at the very early stage of the stay, the learners shifted their preferences from direct to indirect advice-giving strategies with individuals of equal- or lower-status (e.g., friends), which moved toward the NSs' preferences. In contrast, no change was found in the advice given to higher-status individuals (e.g., professors). Learners showed a stable preference for hedged and indirect advice in this situation, which was congruent with that of the NSs.[15] These different rates of changes seem to come

[15] While variations were found in lower-status and higher-status situations, Matsumura's (2001) study does not fit into the situation-dependent explanation because when the study

from learners' initial-level pragmatic knowledge about social norms of giving advice. The sociopragmatic norms for situations involving higher-status individuals are similar between Japanese and Canadian cultures. In both cultures, indirect expressions are preferred with individuals of higher status in advice-giving situations. Learners did not show any change with their advice-giving strategies because they already had the knowledge of L2 social norms in these situations before they started the study abroad program. However, learners did not have such knowledge for giving advice in English to equal- or lower-status individuals before they came to Canada. When learners were in Japan, they preferred direct strategies, which diverged from the NSs' choice of indirect strategies. Their knowledge gradually changed as their choice shifted from direct to indirect advice-giving strategies in situations involving equal- or lower-status individuals after exposure to the target community (Canada).

With a focus on formulaic expressions, Taguchi et al. (2013) examined 31 American learners' development of Chinese formulaic expressions over 14 weeks. The findings revealed a larger pre-post gain with certain expressions such as *Yào gè yúxiāngròusī* 'Want one Yúxiāng ròusī'[16] and *Píngguǒ duōshǎo qián*? 'How much is the apple?.' The progress occurred greatly probably because, at pre-test, most learners were able to produce part of the expressions, *Yào yúxiāngròusī* 'Want Yúxiāng ròusī' for *Yào gè Yúxiāng ròusī* and *Yīgè/Zhègè píngguǒ duōshǎo qián*? 'How much is the/this apple?' for *Píngguǒ duōshǎo qián*? Having these similar (but not exact) forms in their linguistic repertoire, the learners were able to acquire correct formulaic expressions quickly through elaboration and/or simplification process after exposure to the target forms.

In contrast, the developmental pace with other expressions was slower. For example, learners showed a tendency to stick to the same (*zàijiàn* 'goodbye') across different leave-taking situations, while NSs varied their expressions according to situations. This slower developmental pace is probably explained by the fact that learners' knowledge of the form *zàijiàn* had already been firmly established as a one-to-one mapping, which makes it difficult to incorporate new expressions into their linguistic repertoire (Taguchi et al, 2013). In other

started, learners' initial-level pragmatic knowledge of these two types of situations was different. Learners had already acquired the target-like advice in higher-status situations, but their knowledge of lower-status situations was divergent from the native norms. The non-change in higher-status situations was irrelevant to the social variables. However, learners in the studies in the situation-dependent explanation did not have the target-like knowledge of either higher-status or lower-status situations at the beginning of studies. Their uneven paces in these two types of situations were caused by the social variables associated with the situations, but not learners' initial-level pragmatic knowledge.

[16] Yúxiāng ròusī is the name of a Chinese dish.

words, the learners' pre-existing knowledge of *zàijiàn* had been fossilized. As a result, the same expression (e.g., *zàijiàn*) might have come to the learner's mind whenever they were dealing with similar situations (e.g., a leave-taking situation). This fixed one-to-one mapping between formulaic expressions and situations in learners' knowledge seems to hinder learners from varying their expressions in similar situations.

To summarize, these two studies revealed developmental variations across pragmatic features (advice-giving expressions and formulaic expressions) due to learners' initial-level pragmatic knowledge. Both studies showed that learners' prior knowledge about the target features influenced their progress. Little room is left for development if learners' pre-existing knowledge is already target-like (e.g., Matsumura, 2001) or if the knowledge is already fixed at the level that does not allow entry of new knowledge (e.g., Taguchi et al, 2013). On the other hand, a certain level of learners' pre-existing knowledge can also facilitate development, as indicated in Taguchi et al.'s study where learners made improvement when they had knowledge about a part of the expressions.

5. Conclusion and implications

With the non-linear and time-based perspectives on language development, the present synthesis reviewed 26 longitudinal studies in uninstructed contexts, with the purpose of exploring the variations in developmental patterns across pragmatic features and the potential explanations. The findings indicate that pragmatic development shows variations across pragmatic features within the same learner(s) in the same observational period. These findings not only confirm the developmental variations of pragmatic development revealed in previous studies (e.g., Ortactepe, 2013; Taguchi, 2012; Warga & Scholmberger, 2007) but also aligns with the view of CSDT that language development is a non-linear, complex process with uneven developmental paces for different language abilities and aspects (de Bot et al., 2007; de Bot et al., 2013; Larsen-Freeman & Cameron, 2008).

To explain the uneven paces of the observed changes, three potential explanations were identified: (a) language-related, (b) situation-dependent, and (c) learner-related explanations. Specifically, the language-related explanation consists of three subcategories: (a) the functions of pragmatic features, (b) the frequency of availability of the target feature, and (c) the similarity and difference between L1 and L2 with regard to the target feature. The situation-dependent explanation addresses the social variables involved in the task situations, that is, social status, social distance, and the degree of imposition. The learner-related explanation primarily concerns the learners' initial-level sociopragmatic or pragmalinguistic knowledge about the target feature.

In concluding this paper, I would also like to point out some limitations of the current synthesis, as well as implications for future research on developmental variations in L2 pragmatics. The first limitation relates to the potential explanations for developmental variations. Language development goes beyond the simple cause-and-effect relationship. It also involves the interaction of different factors and resources such as the learning environment and learners' cognitive capacities. The three identified explanations provide insights into developmental variations in L2 pragmatic competence, but the analysis did not address the effects of interaction of these explanations on pragmatic developmental variations.

For future research in this direction, some studies such as Hassall (2013) and Taguchi (2012) may inform researchers of how different variables influence the uneven developmental paces. For instance, two explanations were identified to account for the developmental variations in Hassall's (2013) study: language-related and situation-dependent explanations. On the one hand, the similarity between L1 (English) and L2 (Indonesian) address term systems facilitated the development of the address forms in the vocative slot, while the L1-L2 differences (i.e., address terms not functioning as pronouns in English) slowed down the development of the two pronouns (*anda* and *kamu*) and the address terms in the pronoun slot. On the other hand, the developmental variations were also associated with the situation-dependent explanation. The smaller improvement in the use of terms for addressing higher-status individuals could be attributed to the more complex social variables involved in such situations. These multiple explanations for developmental variations make it necessary for future research to explore the issue of how different forces or resources available to learners shape pragmatic development.

Second, the findings on developmental variations in this synthesis showed an imbalance in the three areas of L2 pragmatics longitudinal studies: comprehension, awareness/perception, and production. Among the 26 studies, only three studies are in the area of pragmatic awareness/perception, seven studies in pragmatic comprehension, and 16 studies in pragmatic production.[17] The area of production accumulates most findings. However, the variations in pragmatic developmental patterns are not limited to the ability to produce pragmatic features. The variations in pragmatic comprehension and awareness also contribute to the understanding of pragmatic competence. Limited findings in the areas of pragmatic comprehension and awareness/perception call for future examination. Additionally, similar to the exploration of the interaction between different explanations, it is also essential to investigate whether the developmental

[17] Taguchi's (2012) book was counted twice because it focused on both comprehension and production.

variations in one pragmatic area (e.g., awareness) are associated with the variations in other areas. In pragmatic competence, comprehension, awareness, and production are three primary components. Thus, the interaction among these components may influence the development of pragmatic competence as a whole.

The third issue relates to the developmental variations found in speech acts: The developmental paces for semantic strategies are faster than those for pragmalinguistic forms. However, a question remains as to why pragmalinguistic forms take a longer time to develop. According to de Bot et al. (2007), different systems usually require unequal amount of resources for growth. Thus, for the uneven rates of changes between pragmalinguistic forms and semantic strategies, it is important to understand what additional resources are needed for the slower development of pragmalinguistic knowledge. Another question associated with this issue is the relationship between grammar and pragmatics. This is not about whether grammar or pragmatics develops first. Rather, it is about explaining how one system supports another (Bardovi-Harlig, 2013; Kasper & Rose, 2002). As two subsystems of language ability, grammatical ability and pragmatic ability are interconnected. While grammatical knowledge may not guarantee the appropriate use of pragmalinguistic forms across contexts, sufficient grammatical knowledge seems to facilitate the development of pragmatic competence (Bardovi-Harlig, 1999, 2000). When learners are exposed to available resources (e.g., the language used in the environment), linguistic forms in their repertoire may be triggered, which might eventually establish the form-meaning-function mapping of the pragmatic feature. Meanwhile, the growth of pragmatic competence can also facilitate the development of grammatical ability (Bardovi-Harlig, 2012). As learners' sociopragmatic knowledge increases, they become more sensitive to social variables. As a result, they realize the need to use a greater variety of lexical devices to mitigate their pragmatic performance in some situations. The need for adopting new lexical and syntactic forms, then, probably leads to increased grammatical ability.

Finally, research that revealed developmental variations, particularly the studies of speech acts, was primarily conducted under the traditional framework of speech act theory. One of the weaknesses of speech act theory is that it assumes a one-to-one correspondence between utterance and force (Taguchi, 2012). Nevertheless, a speech function is usually co-constructed by the speaker and hearer through interactions and negotiations over a number of sequences and turns. While an increasing number of studies have investigated L2 pragmatics in constructed interaction, only a few studies have revealed developmental variations from an interactive perspective. In this synthesis, only four studies collected interactive data by conducting role-plays (Bataller, 2010) or recording naturalistic conversations (Bardovi-Harlig & Hartford, 1993; Bardovi-Harlig &

Salsbury, 2004; Polat, 2011). Other studies have used either DCT or questionnaires for data elicitation, both of which neglect sequential or discourse-level analysis of speech acts. One possible method to unveil the interactive features in speech acts is to adopt the conversation analysis (CA) perspective. Several studies have started to apply CA to investigate L2 development (e.g., Hauser, 2013; Lee & Hellermann 2015). Hauser (2013) collected naturalistic conversation data between an immigrant (Nori) and the researcher and analyzed the production of negation forms. The findings showed that the negation form *I don't know* developed fast. This change was attributed to the occurrence of *I don't know* in the interaction. Nori used this negation form each time the researcher produced the same formula, which implies that Nori's ability to produce negation forms was co-constructed in the interaction. Following this line of work, future L2 pragmatics research may apply the CA perspective to investigate pragmatic developmental variations through interactions.

The trends found in this synthesis suggest the usefulness of some perspectives for future L2 pragmatics research to explore the variations in developmental patterns. It is not only a matter of what the variations are but also a matter of how and why the variations emerge. The explanations for language development in various theories (e.g., CDST) provide researchers with some implications for examining the role of different resources available to learners and the interactions of resources on language development in general, and pragmatic development in particular. The potential interactions between different pragmatic areas may present a holistic picture of L2 pragmatic competence. The application of CA to the analysis of developmental variations can reveal how the co-constructed interaction affect the emergence of developmental variations in pragmatic comprehension, awareness/perception, and production.

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APPENDIX

Substantive and methodological features of the synthesized studies

Study	Target pragmatics	Participants (sample size and L1s)	Context	Target language	Proficiency	Measures (# of data collection)	Length of study
Studies under the language-related explanation (20 studies)							
Bardovi-Harlig & Hartford (1993)	Suggestion & rejection	10 graduate students with mixed L1s	SL	English	Advanced	Recordings of advising sessions (2)	7-14 weeks
Bardovi-Harlig & Salsbury (2004)	Disagreement	10 learners with mixed L1s	SL	English	Beginning	Recordings of conversations (every two weeks)	1 year
Barron (2003)	Requests & offers-refusals	33 Irish learners of German	SL	German	Advanced	DCT & free DCT (3)	10 months
Bouton (1992)	Conversational implicatures	30 learners with mixed L1s	SL	English	In-house proficiency test	Written multiple-choice test (2)	4 years and a half
Bouton (1994)	Conversational implicatures	34 learners (17-month group) and 35 learners (33-month group) with mixed L1s	SL	English	Not given	Written multiple-choice test (2)	17 months and 33 months
Félix-Brasdefer & Hasler-Barker (2014)	Compliment	26 American learners in Mexico and 12 in America	SL & FL	Spanish	Advanced	Oral DCT (3)	8 weeks
Khorshidi (2013)	Request strategy	72 Iranian learners	SL	English	Intermediate	DCT (3)	6 months
Hassall (2013)	Address terms	12 learners of mixed L1s	SL	Indonesian	Elementary to upper-intermediate	Written multiple-choice (2)	4-7 weeks
Li (2014)	Request	31 American learners	SL	Chinese	Intermediate and advanced	Computerized oral DCT (2)	15 weeks
Ortactepe (2013)	Formulaic expressions	7 Turkish learners	SL	English	Advanced	DCT (2)	1 year
Polat (2011)	Discourse markers	1 Turkish learner	SL	English	Advanced	Recordings of informal conversations every two weeks	1 year
Ren (2012)	Refusal	20 Chinese learners in Britain and 20 in China	FL & SL	English	Advanced	Multimedia elicitation task (3)	1 year
Sawyer (1992)	Sentence final particle *ne*	11 learners with mixed L1s	SL	Japanese	Beginning	Semi-structured interviews (4)	1 year
Schauer (2004)	Request	12 German learners	SL	English	Not given	Multimedia elicitation task (3)	9 months
Schauer (2009) (Production)	Request	49 Germen learners	SL & FL	English	Not given	Multimedia elicitation task (3)	9 months
Taguchi (2007)	Indirect refusal and indirect opinion	92 Japanese learners	FL	English	Average TOEFL 20	Listening test with *yes-no* questions (2)	7 weeks
Taguchi (2008a)	Indirect refusal and indirect opinion	44 Japanese learners	SL	English	Average TOEFL 400	Listening test with *yes-no* questions (3)	4 months
Taguchi (2008b)	Indirect refusal and indirect opinion	57 Japanese learners in the US and 60 in Japan	SL & FL	English	Beginning	Listening test with *yes-no* questions (2)	EFL group: 7 weeks; ESF group: 5 weeks
Taguchi (2012; comprehension)	Refusal and routine	48 Japanese learners	FL	English	Beginning: TOEFL 413-497 The end: TOEFL 467-563	Computerized pragmatic listening test (3)	8 months

Warga & Scholmberger (2007)	Apology	7 Austrian learners	SL	French	Not given	DCT (5)	10 months
Studies under the task situation-dependent explanation (6 studies)							
Barron (2000)	Request	33 Irish learners	SL	German	Advanced	DCT (3)	10 months
Barron (2006)	Address terms	33 Irish learners	SL	German	Advanced	DCT (3)	10 months
Bataller (2010)	Request strategy	31 English-speaking learners	SL	Spanish	Not given	Role-play (2)	4 months
Hassall (2013)	Address terms	12 learners of mixed L1s	SL	Indonesian	Elementary to upper-intermediate	Written multiple-choice (2)	4-7 weeks
Kinginger & Farrell (2004)	Address terms	8 American learners	SL	French	Elementary to basic	Language awareness interview (2)	3 months
Taguchi (2012; production)	Indirect requests and opinions	48 Japanese learners	FL	English	Beginning: TOEFL 413-497 The end: TOEFL 467-563	Computerized pragmatic speaking test (3)	8 months
Studies under the learner-related explanation (2 studies)							
Matsumura (2001)	Advice giving expressions	94 Japanese learners in Canada and 102 in Japan	SL	English	TOEFL 480-600	Multiple-choice survey (4)	1 year
Taguchi, Li, & Xiao (2013)	Formulaic expressions	31 American learners	SL	Chinese	Intermediate	CODCT (2)	14 weeks

Note. FL = foreign language, SL = second language.