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A Qualitative Investigation of Language Learners' Epistemological Beliefs: Core Dimensions and Development in Focus

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Abstract

Language Learners' epistemological beliefs (LLEBs), as their conceptions about the nature of L2 knowledge and L2 knowing, are among the determinants of the route and the outcome of language learning; however, research into their dimensional and developmental nature is at the premium. This qualitative study was designed to (a) unravel the dimensions of LLEBs, and (b) delineate data-driven dimension-specific developmental patterns. Following "maximum variation" sampling, data obtained in 30 one-to-one semi-structured oral interviews were subjected to directed qualitative content analysis to detect utterances related to L2 knowledge and knowing conceptions. Seventeen themes, each reflecting beliefs about one of epistemological beliefs' core dimensions (i.e., knowledge certainty: N=4; simplicity: N=4; source: N=5; and justification: N=4), were extracted, and inter-coder agreement was ensured. In the second phase, data obtained in three separate focus-group interviews from another 18-member sample selected via "critical case sampling" were analyzed to sketch differential dimension-related beliefs, if any, and map possible developmental paths. The results showed clear distinctions across the three sub-samples in terms of all the 17 LLEBs' themes extracted in the first phase, roughly reflecting Baxter Magolda's (1992) four-point epistemological development continuum from "absolute knowing" through "transitional knowing" and "independent knowing" to "contextual knowing." The findings indicate the dimensionality and developmental nature of LLEBs, and the alignment of LLEBs with research on domain-general epistemology.

***Keywords*:** Epistemology, L2 knowledge certainty, Justification, Simplicity, Source

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INTRODUCTION

Second language (L2) learners' beliefs about language learning have been shown to substantially influence the route as well as the outcome of their learning (Fazilatfar, Rayati Damavandi, Harsej Jan, & Kia Heirati, 2014; Ghobadi Mohebi & Khodadady, 2011; Horwitz, 1987; Mori, 1999; White, 2008). Among learners' beliefs, their epistemological beliefs (EBs), or beliefs about the nature of knowledge (what knowledge is) and knowing (how one comes to know) (Baxter Magolda, 2004; Bendixen & Rule 2004; Hofer, 2001; Schommer-Aikins, 2004), have attracted substantive domain-general research interest in cognitive psychology and education. There is ample evidence for the significance of EBs for learning (e.g., Baxter Magolda, 1992, 2004; Schommer, 1994). They have been shown to predict persistence with difficult tasks and comprehension of written tasks (Schommer, 1994), text comprehension (Schommer, 1990), criteria for evaluating one's own written work (Moon 2008), learning strategy use (Schraw & Olafson, 2003), creative and critical thinking (Kember 2001; Moon 2008), and interpersonal and intrapersonal development (Baxter Magolda, 1999, 2001). Moreover, there is research evidence as to the situated and context-dependent nature of EBs, which justifies the investigation of the nature and development of discipline-specific knowledge, including L2 knowledge (Nikitina & Furuoko, 2018).

Despite the evidenced learning implications and domain-specificity of language learners' beliefs on the one hand and EBs on the other, beliefs about the nature of L2 knowledge (L2 knowledge simplicity and certainty) and L2 knowing (source and justification of L2 knowing) are underresearched. Existing studies have mainly capitalized on general language learning beliefs (e.g., Horwitz, 1987), and on the implications of language learners' domain-general EBs in relation to language learning and their dimensions, and not their development. For one, Akbari and Karimi (2013) found language learners' general EBs to be positively correlated with their language proficiency. Along the same lines, Shirzad, Barjesteh,

Dehqan, and Zare (2021) found language learners' EBs to be negatively correlated with their learning strategy use; this finding hints at the distinctiveness of general EBs and language learning-specific EBs. Mori (1999) showed the independence of language learners' domain-general EBs and their language learning beliefs. As for EBs' dimensional and developmental discipline specificity, Kuhn, Cheney, and Weinstock (2000) found EBs' developmental patterns to be largely contingent on the domain of knowledge at issue, which justifies the independent investigation of language learners' epistemological beliefs (LLEBs). Palmer and Marra (2004), too, showed that humanities could facilitate students' move from a single perspective to an appreciation of multiple perspectives, while science subjects would enable students to conceive of knowledge as contextual, rather than static.

There are, however, only a handful of studies which have probed LLEBs. This qualitative study was designed to delve into LLEBs through extracting their main themes in interview data with language learners, and sketching the pattern of development in relation to each of the extracted themes.

LITERATUTRE REVIEW

Epistemology is a sub-branch of philosophy, denoting one's conception (mostly unconscious) of knowledge and knowing (Hofer & Pintrich, 1997; Schommer-Aikins, 2004). Research has substantiated the multi-dimensional and developmental nature of personal epistemology. With few exceptions, most conceptualizations of the construct ascribe to it two core dimensions:

1. beliefs about the nature of knowledge (knowledge simplicity and certainty), linked to one's metacognitive knowledge;
2. beliefs about the nature of knowing (knowledge source and justification), linked to metacognitive monitoring (Bendixen & Rule 2004; Hofer & Pintrich 1997; Pintrich 2002).

"Knowledge simplicity" reflects beliefs about the structure of knowledge. In this regard, knowledge can be positioned along a continuum with simple knowledge (consisting of separate bits and pieces) at one end, and integrated knowledge (consisting of inter-related elements) at the other. Likewise, a continuum can be sketched for "knowledge certainty" with absolute and unchangeable knowledge at one end, and relative and context-contingent knowledge at the other. As for "source," knowledge may be thought of as held by one or multiple, more or less invincible, sources. As the last dimension of epistemology, "knowledge justification" would either rest on direct observation and authority, or rules of inquiry and criticality (Hofer 2001). Other EB-related beliefs (e.g., those about the innateness of learning ability, learning effort, learning speed, the process of gaining knowledge, and the process of learning) have been viewed in domain-general EBs research as peripheral, and not directly reflecting personal epistemologies (see Bendixen & Rule, 2004 for a review).

Epistemological beliefs are developmental, as evident in attempts at delineating their continual nature (e.g., Baxter Magolda 1989, 1992; Belenky, Clinchy, Goldberger, & Tarule, 1986; King & Kitchener, 2004). There is a consensus that more advanced EBs predict more active learning and conceptual understanding (Louca, Elby, Hammer, & Kagey, 2004). Development has been conceptualized in existing models as a movement from absolutism (wherein knowledge is viewed as simple, certain, and at a pre-ordained difficulty level, held and transmitted to others by an all-knowing innately endowed expert) to evaluatism (wherein knowledge is viewed as integrated, relative, context-contingent, and obtainable from multiple sources). Differences in such models are related to the nature and number of developmental stages. Perry's (1970) study is an often-cited early study of the epistemological beliefs and development of male university students. He sketched his participants' development from absolute thinking to the recognition of multiple perspectives and others' right to dissidence, and then to relativistic thinking; however, contextual thinking, which is the epitome of epistemological development, was never reached. Kember

(2001) distinguished between didactic/reproductive beliefs as absolutist thinking, and facilitative/transformative beliefs as relativistic thinking. The former implies a view of teachers as omniscient authority, teaching as knowledge transmission, and learning outcome as the reproduction of taught material. The latter, however, is on a par with the conception of knowledge as constructed, teachers as facilitators of independent learning, and learning outcome as the ability to judge alternative theories based on evidence. Along the same lines, Baxter Magolda (1992) delineated a four-point continuum of developmental epistemology: absolute knowing, transitional knowing, independent knowing, and contextual knowing.

A similar movement from absolutist to relativistic/contextual thinking can be detected in the epistemic undertones of second language acquisition (SLA) theories and language instructional methods/approaches over time. Both behavioristic and cognitive SLA theories and their instructional offshoots viewed the L2 system as consisting of distinct components and skills, and delimited their scope to context-independent language elements. They represented L2 teachers as the omniscient authority, and L2 knowing as approaching native speaker competence, irrespective of performance conditions and language functions (Ziegler, 2015). With the advent of the concept of communicative competence in the 1970s (Hymes; cited in Ellis, 2008) and its resultant communicative language teaching and related approaches (e.g., task-based language teaching and content-based instruction), a reconceptualization of the L2 system was due; it was now viewed as an integrated and relative knowledge system. Knowing an L2 was also reformulated as drawing on internal and external sources to engage in effective L2 communication. This epistemic move forward witnessed its zenith in the social turn in SLA theory in the mid-1990s, which featured an appreciation of variation and the context-contingency of language use (Ortega, 2013). Wagner (2019) recapitulates the major tenets of this new sociology-rooted epistemology, emphasizing life world participation, spoken interaction and repair, as well as strategies-based and resource-based instruction.

In the field of language education, Mori (1999) found learners' personal epistemology measured through Schommer's (1990) inventory to be only weakly related to their language learning beliefs measured through Horwitz' (1987) "Beliefs about Language Learning Inventory" (BALLI). This observation can be attributed to the distinctiveness of the construct of personal epistemology from that underlying frequently used language learning beliefs questionnaires. Apart from Mori (1999), there are two studies related to LLEBs. One is Nikitina and Furuoko (2018), whose 13-item questionnaire covered the nature of language and language knowledge, knowledge authority (teacher, native speaker, dictionary), and the process of gaining knowledge as LLEBs' dimensions. The developmental aspect of such beliefs, however, was not addressed in their study. The instrument was validated in terms of EBs' dimensionality with 23 participants, which the authors themselves admit as a limitation. They advise future researchers to include items on the process of learning, alongside their three explicated dimensions. The second study is Ziegler (2015), who investigated LLEBs with a particular focus on vocabulary learning, and evidenced a developmental path from absolutism to evaluatism. As a qualitative study on LLEBs, Ziegler's could be considered as an initial attempt tapping into LLEBs; however, the study was limited in focus, and did not involve the investigation of LLEBS in their full range.

This brief review indicates the scarcity of exploratory research on LLEBs. Most existing research, though too far and few between, has employed existing conceptualizations and instruments of domain-general EBs. This qualitative study took the initiative to explore the dimensions of core LLEBs, and sketch the potential developmental pattern of each as a stage-like progression. To this end, the following two questions were posed:

1. What are the themes of LLEBs in relation to L2 knowledge certainty, simplicity, source, and justification?
2. What is the nature of LLEBs' developmental pattern for each of the themes?

METHOD

Participants

A total of 48 language learners participated in this study. Sampling was carried out in two phases. In order to answer the first research question, 30 English Language Teaching (ELT) major students were purposively sampled through the "maximum variation" sampling strategy. This strategy helps ensure sufficient variation in relation to variables implicating in the study (see Dornyei, 2007). To line up with the study's purpose, the sampling plan necessitated sufficient variance in terms of:

- gender (male (N=14) and female (N=16))
- degree program (Bachelor's (BA) (N=21); Master's (MA) (N=7); doctoral (PhD) (N=2));
- Study year (Y) (BA Y1 (N=5); BA Y2 (N=3); BA Y3 (N=6); BA Y4 (N=7); MA Y1 (N=3); MA Y2 (N=4); PhD Y1 (N=2))
- English language proficiency (elementary (N=11); intermediate (N=8); upper-intermediate (N=5); advanced (N=3); very advanced (N=3))
- Language learning setting besides university (school-only (N=9) and/or the private sector (N=21))
- Language learning experience (less than 5 years (N=12); more than 5 years (N=18))

Maximum variation sampling was employed in the first phase of the study to ensure the interview data would yield all possible aspects of language learners' beliefs about L2 knowledge and knowing. Variance was ensured in terms of the just mentioned participant parameters, which have all been shown to correlate with EBs and their developmental paths (e.g., Akbari & Karimi, 2013; Bagherkazemi, in press; Nikitina & Furuoko, 2018; Perry, 1970).

The second purpose of the study was to find out if development could be patterned as a stage-like progression for the themes, which is

common practice in domain-general EBs research (e.g., Baxter Magolda, 1992; Kember, 2001). The specific sampling strategy in this phase (i.e., the second phase of the study) was "critical case sampling," which, according to Dornyei (2007, p. 128) "shows the limits of the experience." Accordingly, three six-member groups of language learners (all studying ELT at university) were selected. Study program and year, proficiency level, and language learning setting and experience were kept constant for each of the groups (see Table 1 for more detail). Gender distribution was identical across the groups. Each group took part in an online focus-group interview on extracted LLEB themes/dimensions in the first phase.

Table 1: Participant Characteristics for Mapping LLEBs' Development

	Gender		Degree program and study year	Language proficiency	Language learning setting	Language learning experience
	Male N	Female N				
Group 1	3	3	BA Y1	elementary	School-only	Less than 7 years
Group 2	3	3	BA Y4 and MA Y1	upper-intermediate	School + Private sector	Between 8 and 10 years
Group 3	3	3	Doctoral, Y1	very advanced	School+ Private sector	More than 10 years

Instruments

For the purpose of the present study, three main instruments were used. What follows is a brief description of each.

Oxford Placement Test (OPT)

The paper-and-pen version of OPT was used to determine the language proficiency level of the participants in both sampling phases. In the first phase, OPT results showed that the 30 participants sampled for the first research question represented a variety of proficiency levels. The second

sampling phase involved the use of OPT results to make sure students in each of the three six-member groups had a similar proficiency level. Group 1 scored within the range of 18-25; Group 2 scored within the range of 41-47; and Group 3 scored within the range of 58-60. OPT comprises 60 receptive-response reading comprehension, vocabulary, and grammar items, and its results can be reported along Association of Language Testers in Europe (ALTE) levels from "beginner" to "very advanced." The test took 40 minutes to complete online.

One-to-one Interview

Thirty semi-structured interviews were conducted to elicit the first 30 participants' LLEBs. The interview guide included six main questions, the first two of which capitalized on the participants' conceptions of language learning, their needs and wants, and the most effective language learning strategies and language teaching approaches in their viewpoint. The remaining four were related to L2 knowledge's certainty (Q 3), simplicity (Q 4), source (Q 5), and justification (Q 6). The questions were worded in general terms to let emerge, rather than lead, LLEBs' dimensions. They were first piloted with three ELT-major BA students to ensure comprehensibility and effectiveness for yielding relevant data on core LLEBs. Here are the English translations of the interview questions:

Q1. What does the term "second language classroom" conjure up for you?

Q2. What are the most effective language learning strategies and approaches in your point of view?

Q3. Should the second language be divided into its four constituent skills and components for effective learning? To what extent are they related to one another?

Q4. Does the L2 that one learns serve all L2 use settings well? Is there any relationship between L2 and its contexts of use?

Q5. How do you describe "a language teacher" and a "language learner" in terms of their roles and identities?
Q6. Have you ever taken issue with L2 knowledge contained in the instructional materials or presented by your language teacher?

There were also several detail-oriented probes following the main questions, which ushered the participants towards expressing their LLEBs. The interviews were held online through WhatsApp's "video call" option, as the Covid 19 pandemic precluded onsite interviews. They were all conducted in Persian (the participants' first language) by one of the researchers, and took between 30 to 50 minutes each. Interviews were audio-recorded, and subsequently transcribed for further analysis.

Focus Group Interview

Data collection in the study's second phase involved three six-member focus-group interviews. The choice of focus group interviews was due to the consideration that the synergistic environment induced by within-group discussions would help the "groupthink" regarding core LLEBs take shape. In terms of composition, maximum intergroup heterogeneity and intragroup homogeneity in terms of language proficiency level, degree program, study year, and language learning experience was ensured through segmentation (see Participants). The interview guide included 17 open-ended questions, designed to elicit groupthinks regarding core LLEBs in relation to extracted themes in the first phase. Specific probes and closed-ended questions were posed by the researcher where clarification and additional focus was required. Following the interviews on each of the themes, 17 groupthinks were formulated by two of the researchers based on their joint analysis of expressed EBs. They were presented to the group members for member check and finalized in case at least three out of the six group members agreed on them. The interviews were held online at http://engage.shatel.com (as a free online conference venue), rather than onsite owing to the Covid 19

pandemic. They were conducted by one of the researchers as the moderator in Persian (the participants' first language), took between 1.40 to 2 hours each, and screen-recorded (upon all the group members' consent form completion) for further analysis.

Procedure

The study began with the first round of sampling (i.e., maximum variation sampling (see Participants)). Upon sampling, all the 30 participants in the first phase filled out an online consent form agreeing to participate in the study and have their interviews recoded. The one-to-one interview guide was subsequently developed and piloted online with three B.A. English-major university students in order to make sure they elicited LLEBs, and were comprehensive and sufficiently general not to sound leading. All the 30 interviews were held in Persian, over a course of one month at the participants' convenience, by one of the researchers through WhatsApp's video call; they were audio-recoded, and transcribed. Subsequently, transcriptions were subjected to manual "directed qualitative content analysis" (DQCA), which assigns detected cases in the data to a priori categories (see Mayring, 2000; Shava, Hleza, Tlou, Shonhiwa, & Mathonsi, 2021). To develop an operational definition of the distinctiveness of LLEBs from general language learning beliefs, a close analysis of BALLI and Nikitina and Furuoko's (2018) LLEB inventory was jointly conducted by two of the researchers. The study's focus on core aspects of EBs finds theoretical justification in existing research evidence on the commonality of these EBs across various fields and domains (Hofer, 2001, 2004; Pintrich, 2002). Operationally, LLEBs were taken as utterances containing beliefs, rather than self-concepts or experiences, which were directly or implicationally related to the core aspects of epistemology. Beliefs about the language learning process were included as LLEBs only if they were derived from core LLEBs. To ensure inter-coder agreement, initially all the utterances related to L2 knowledge and knowing were detected and marked

in 10% of the corpus. Afterwards, disagreements were discussed and resolved in a discussion session. Subsequently, both researchers analyzed the whole corpus, and detected and categorized LLEB-related statements into 17 themes. These were further categorized in relation to certainty, simplicity, source and justification, based on the agreed-upon operational definition. A Cohen kappa coefficient of .87 indicated high inter-coder agreement. The extracted themes were then worked into a 17-probe focus-group interview guide (see Instruments), and deployed to answer the second research question. Three groups of six male and female ELT-major university students were sampled so as to represent three critical cases in relation to English language proficiency, degree program and study year, as well as language learning experience. They all filled out a consent form for participating in focus groups and having the interview sessions audio-recorded. The three focus group interviews were aimed at unearthing each of the groups' most common LLEBs (groupthink) with reference to the themes extracted in the first phase of the study. Subsequent to completion of the interviews, two of the researchers worked out the groupthink for each of the 17 themes, and sent them out to all the group members for member check. The groupthink statement was then revised (changed in terms of content, or details added or removed) where necessary, and finalized based on the majority's (N>4 for each six-member group) comments. At the end, each group's 17 groupthinks were tabulated, and analyzed in terms of their convergence with or divergence from existing models of epistemological development.

RESULTS

In order to answer the first research question, one-to-one interview data were subjected to DQCA. A total of 421 belief statements (101 related to L2 knowledge certainty; 77 related to L2 knowledge simplicity; 114 related to L2 knowledge source; and 129 related to L2 knowledge justification) were detected. Table 2 presents a sample belief statement related to each of the four core dimensions of EBs in the study's dataset. Heed was taken not to

include experience and self-concept utterances, unless they had turned into beliefs, which was double-checked by the researcher in the interview session. For example, statements such as "I have never tried to learn the skills together" and "I am very good at relating my listening knowledge to my speaking knowledge" were excluded as they reflected experience or self-concepts, rather than beliefs. On the other hand, the statement "I believe knowledge of different language areas cannot be separated" was taken as a belief statement. Upon the detection of the utterances signifying beliefs about L2 knowledge (through a hypothetic-deductive approach), the two researcher-coders came into an agreement in terms of controversial cases (41 utterances, the majority of which (N=24) were related to knowledge justification). The 421 belief statements were then classified in terms of their main theme into 17 categories, and further in relation to certainty, simplicity, source, and justification. It should be noted that that 17 extracted themes are exclusive to this study. Upon extracting the themes, the three critical case samples (see Participants) were focus group-interviewed (see Procedure), and 62 groupthinks (i.e., each group's dominant belief related to each of the themes) down. The themes for each of the four core areas of L2 knowledge conceptions, together with the groupthinks for each of the three focus groups are presented in this section.

Table 2: *Sample Belief Statements for Core EB Dimensions and Their Frequency*

EBs' core dimension	Frequency of belief statements	Sample belief statement (translated from Persian)
Simplicity	77	"*In my opinion, learning each of the language skills is best accomplished in materials which exclusively focus on that particular skill, rather than those which focus on all the skills.*"
Certainty	101	"*I believe the English language changes over time, and is used differently in various contexts.*"
Source	114	"*I think my classmates' understanding of a passage or word can be as dependable as my own understanding of it.*"
Justification	129	"*My belief is language learning success largely depends on the learner's intelligence.*"

L2 knowledge Certainty

The 101 belief statements in this category fell into four classes, the first two of which (L2 system's synchronic and diachronic variability) were directly related to L2 knowledge certainty, while the last two (ELT content structuring and nature of tasks) were induced by beliefs about it:

1. *beliefs about general L2 areas' certainty (N=26):* This dimension is related to the synchronic variability of L2 knowledge. The participants articulated beliefs as to whether L2 skill-related knowledge (e.g., how to start a conversation) and componential knowledge (e.g., where to apply a grammar rule) is certain, or otherwise variable and context-dependent. Regarding between-group differences, Group 1 (G1) viewed most L2 skill-related or componential knowledge as certain, and invariable across contexts of use; Group 2 (G2) viewed such knowledge (e.g., word meaning or applicability of a pragmatic routine) as mostly uncertain; and Group 3 (G3) admitted the prevalence of uncertainties, but also their resolvability through context awareness.

   Example groupthink (G1): *In my opinion, there are straightforward answers to most questions I face in terms of different language areas (e.g., vocabulary, grammar, speaking)*
2. *beliefs about L2 dynamicity (N=19):* This dimension denotes beliefs about the L2 system's diachronic variability. G1 unanimously expressed beliefs as to L2 system's diachronic stability. Four G2 members posited minimal diachronic variability, mainly in relation to word coinage. The other two propounded the idea of ultimate variability, which, to them, would make learning an additional language very difficult. On the other hand, G3 were in complete accord on L2's diachronic variability which they thought learners could grasp considering users, social events, and related contextual variables giving rise to change.

Example groupthink (G2): *Many aspects of the L2 system undergo change over time, which makes them volatile and difficult to learn.*

3. *beliefs about building block/cyclic knowledge presentation in syllabi (N=21):* Beliefs constituting this category relate to whether to present all about a word, grammar point, and the like in one lesson (as building blocks) or at various points in the materials with/without a context awareness-raising accompaniment. G1 expressed with one accord that learning all about the lesson's language focus (e.g., the present perfect tense) is most effective as it precludes potential ambiguity. Three G2 members, on the other hand, moderated this extreme viewpoint, stating some few language elements cannot be fully covered or learnt as building blocks (e.g., speech acts). The other three G2 members believed no L2 features could be learned only in one sitting, which makes language learning really difficult. This is while G3 were united on the effectiveness of cyclic knowledge presentation in L2 syllabi in differential contexts to induce context awareness.

   Example groupthink (G3): *A language/point can be learned most effectively if revisited several times in different contexts of use.*

4. *beliefs about task clarity and outcome (N=34):* A belief in the efficacy of single-outcome vs. variable-outcome language learning tasks can be taken as an indicator of one's belief in the certainty/uncertainty of L2 knowledge (see Moon, 2008). G1 believed in the efficacy of single-outcome and convergent L2 learning tasks (e.g., the jigsaw). Adopting a milder stance, two G2 members viewed variable-outcome tasks of only some efficacy while preferring single-outcome tasks. The other four G2 members, on the other hand, viewed variable-outcome tasks optimal for L2 learning. G3, however, placed a premium on the task's potential to induce context-based evaluation of information (e.g., group problem solving), rather than its being single- or variable-outcome.

Example groupthink (G3): *Tasks which involve context-based critical evaluation of information and perspectives (e.g., group problem solving) are most effective for language learning.*

L2 Knowledge Simplicity

There were 77 belief statements in the interview data, which fell into four categories:

1. *beliefs about L2 skills/components' distinctiveness/interrelationship (N=21):* This dimension incorporates beliefs about whether L2 skills and components are distinct from one another or interrelated. G1 enunciated their belief in the distinctiveness of L2 skills and components. As for G2, three viewed the integratedness of the L2 system as non-central, while the other three thought it to be one of its inherent features in all sorts of contexts. Just as the latter, G3 admitted the inherent integratedness of the L2 system, but also uttered with one voice the context-contingency of the nature of this interrelationship.

   Example groupthink (G2): *L2 skills and components are all interrelated in all sorts of contexts.*
2. *beliefs about multiple-choice/open-ended L2 test item and assessment forms (N=16):* The distinction between receptive-response, and open-ended (productive-response and task) items (Brown, 2005) turned out to be an indicator of the participants' core LLEBs related to knowledge simplicity. G1 attributed the greatest efficacy to receptive-response items since, according to them, they could reflect the simplicity of L2 knowledge. G2's beliefs were divided in this regard as three assigned only a marginal role to open-ended items and assessment forms, while the other three believed in the primacy of individualized open-ended items and assessment forms owing to L2 system's ultimate integratedness. Admitting L2 knowledge's complexity and integratedness, G3 were in complete

agreement that open-ended items and assessment forms would be effective if they reflected features of targeted use contexts and students' needs and goals.

Example belief statement: *The best language test items are those with options (like multiple-choice, matching, and true/false) as they reflect the simplicity of L2 knowledge.*

3. *beliefs about language learning through memorization/knowledge construction (N=23):* The participants' evaluation of the centrality of memorization of L2's bits and pieces versus context-based knowledge construction/skill development constitute the gist of beliefs in this category. G1 propounded memorization as all that there is to language learning. G2 and G3, on the other hand envisioned language learning as a gradual process of knowledge construction and skill development. G3 also referred to the significance of developing an awareness of social and linguistic contexts of language use in this process.

   Example groupthink (G3): *Language learning is primarily a process of knowledge construction and skill development in relation to specific use contexts.*

4. *beliefs about L2 skill/component-specific or inclusive materials (N=17):* This last dimension was manifest in conceptions about whether the learning focus should be on only one language skill/component (e.g., a book on reading comprehension), or it is most effective when the integratedness and context-contingency of L2 knowledge is echoed in the materials (e.g., commercial series which coherently attend to all or most skills/components). G1 members were most eloquent about skill/component-specific materials. G2 and one G3 member expressly advocated inclusive materials for all proficiency levels, objecting to single-focus language courses or materials. Five G3 members, on the other hand, were unanimous as to the necessity of appreciating L2 system's integrated nature even in single-focus courses and materials, but also

of learners' needs and goals for deciding about the proportionate weight of the skills and components.

Example groupthink (G1): *The most effective language learning materials are those which focus on a specific language skill or component, with occasional focus on related language areas.*

L2 Knowledge Source

Belief statements in this category totaled 114, falling into five classes:

1. *beliefs about L2 teachers' authority to L2 knowledge (N=15):* The participants expressed beliefs about whether or not L2 teachers' general knowledge about the target language should be taken for granted. Taking an absolutist stance, G1 expressed their belief in the unquestionability of L2 teachers' knowledge. Conversely, G2 believed such knowledge should always be called into question, and tested against existing sources. On the other hand, G3's groupthink embodied G2's relativism, but with an eye to learners' needs and goals, as well as contexts of language use.

   Example groupthink (G2): *Language learners should always adopt a questioning attitude toward their teacher's knowledge about the target language.*
2. *beliefs about language learning strategy source (N=26):* Statements on the effectiveness of teacher-introduced or own-selected strategies, with or without a concern for context, were included in this category. G1 believed in the general efficacy and applicability of strategies introduced by the teacher, as they concertedly admitted his/her authority to L2 knowledge. On a slightly more moderate scale, G2 believed the efficacy of teacher-introduced language learning or communication strategies could only on rare occasions be doubted. As for G3, two participants believed in the development of independent L2 learning strategies, which was taken as an indicator of independent knowing. The remaining four, on the other hand,

inserted contexts of use and the subject of learning into the equation for gauging the efficacy of teacher-introduced strategies.

Example groupthink (G2): *The effectiveness of language learning strategies presented by the teacher can only in few cases be questioned.*

3. *beliefs about peers' authority to knowledge (N=17):* The extent to which peers' knowledge about the target language can be relied upon and valued was the theme of belief statements in this category. G1 rejected their peers' authority to knowledge, and three G2 members assumed peer knowledge to be reliable only occasionally. The other three G2 members, on the other hand, believed peers' knowledge about the target language expressed in the course of peer discussion and groupwork would be as reliable as one's own L2 knowledge and understanding. Finally, G3 found, with one accord, the value of peers' knowledge in its potential to lead to collaborative meaning making and L2 knowledge construction.

   Example groupthink (G1): *Peers' knowledge about the target language (expressed in peer discussion and groupwork) is unreliable.*

4. *beliefs about the book's authority to knowledge (N=31):* Belief statements in this category relate to whether or not L2 knowledge presented in the book can be taken for granted. While G1 uttered their belief in the book as the most reliable source of L2 knowledge, G2 referred to the necessity of taking a critical stance through cross-checking the content of the book against existing related sources. G3, on the other hand, took an evaluative stance, stating whether or not L2 knowledge presented in the book could be taken for granted depended on learners' needs and goals, as well as the learning and target use contexts.

   Example groupthink (G3): *Book-contained knowledge about the target language should be evaluated by learners in relation to their needs and goals, as well as contexts of use.*

5. *beliefs about native speakers' authority to L2 knowledge (N=25):* This category relates to beliefs on the extent to which language learners can rely on native speakers' knowledge about the L2, question it, or evaluate it in relation to context. G1 viewed native speakers as unquestionable sources of L2 knowledge. For three G2 members, native speakers' knowledge could only in few cases be called into question (e.g., when the native speaker does not speak standard English). The other three G2 members cast doubts on the general acceptability of native speakers' knowledge, reasoning that English is now used in international contexts as an international language; as such, native speakers are no longer in a position to dictate norms. On the other hand, G3 believed native speakers' knowledge should be evaluated by learners in relation to the language and culture of interactants, and other use context variables. Example groupthink (G2): *A native speaker's knowledge about the target language can only in few cases (e.g., when he/she does not speak standard English) be called into question.*

L2 Knowledge Justification

A total of 129 statements were designated as L2 knowledge justification beliefs, which fell into four categories:

1. *beliefs about native-speakerist provenance (N=44):* Belief statements in this category are related to whether nativelike or communicative competence should be the target of L2 learning. G1 opted for nativespeakerist competence. Two G2 members believed in the primacy of nativespeakerist competence, and reserved communicative competence only for informal oral interaction with nonnative speakers. The remaining four G2 members, on the other hand, defined ultimate L2 attainment as the achievement of communicative competence, rather than nativelike competence, for all contexts of use. Adopting a more evaluative stance, G3 referred

to the importance of use contexts for deciding which to set as the goal of L2 learning: nativelike competence or communicative competence.

Example groupthink (G2): *The main goal of language learning is achieving communicative competence, rather than nativelike competence (e.g., nativelike pronunciation).*

2. *beliefs about innateness/effort (N=23):* Statements under this heading are related to whether or not L2 knowledge achievement success can be attributed to an innate endowment. G1 attributed a central role to innateness. G2, on the other hand, viewed innateness as the main drive behind L2 learning success, but also effort/perseverance as significant for such L2 components as vocabulary. Three G3 members denied the role of aptitude and intelligence (as innate endowments) for language learning, while the other three posited a significant role to both innateness and effort, depending on learning tasks and contexts.

   Example groupthink (G1): *The ability to learn an additional language is innate.*

3. *beliefs about learning difficulty (N=35):* This category of LLEBs is related to beliefs on whether learning difficulty is an inherent feature of particular L2 skills/components, or is individually and contextually variant. G1 put forth the absolutist view that some L2 areas could be by nature more difficult than others for all language learners (e.g., speaking). This is while all G2 members associated such difficulty with individual learner variables, believing it would differ across learners. G3's united belief, however, was that difficulty is neither specific to particular L2 areas, nor simply variant across learners; rather, it lies in mapping L2 features onto their contexts of use.

   Example groupthink (G2): *The difficulty of learning different L2 skills and components differs across individuals.*

4. *beliefs about instruction necessity (N=27):* How and the extent to which the participants valued classroom learning and self-study made up the content of belief statements in this category. While G1 regarded classroom learning as absolutely necessary, G2's beliefs were twofold: Two viewed self-study of only little value, while the other four rejected the idea of instruction necessity and advocated self-study, owing to their belief in independent knowing. G3, however, valued classroom learning to the extent that it would promote autonomy and awareness of context-related aspects of language use.

   Example groupthink (G1): *Languages are best learnt in the language classroom with a knowledgeable teacher.*

DISCUSSION

The qualitative analysis of one-to-one interviews with a maximally variant sample in terms of language learning experience and background resulted in the extraction of 17 belief categories in relation to L2 knowledge simplicity, certainty, source, and justification. First and foremost, owing to the praxis-oriented nature of the field of language education (Nikitina & Furuoko, 2018), the majority of the belief categories are characterized by pedagogic and learning-related underpinnings (e.g., beliefs about task types, test item forms, strategies, and materials); this is justified in two respects. First, in domain-general EB research, learning beliefs have been viewed as crucial links to epistemology (e.g., Baxter Magolda, 2004; Golino, H.amer, Almers, & Kjellstrom, 2019; Schommer-Aikins, 2004). Such beliefs gain salience when EBs related to the educational domain are plotted. Insofar as the field of applied linguistics is concerned, Nikitina and Furuoko (2018) pointed out that "language learning beliefs" should constitute a distinct dimension of LLEBs; however, Mori (1999) showed only a weak correlation between domain-general EBs and language learning beliefs as measured by BALLI (Horwitz, 1987). An analysis of BALLI showed only few of its items were

linked to L2 knowledge and knowing conceptions, hence the weak correlation. This urged the present researchers to view language learning beliefs not as a category distinct from, but constituting core LLEBs. This conceptualization of LLEBs finds partial support in Ziegler's (2015) study, which substantiated the inseparability of learning beliefs from LLEBs, though the study's focus was delimited to vocabulary learning. Moreover, the truth or falsity of the beliefs was not as much in focus as their relationship to personal language learning-related epistemology and their potential for sketching developmental patterns.

L2 knowledge certainty conceptions were found to be embodied in the participants' beliefs about (a) L2 system's synchronic variability, (b) diachronic dynamicity, (c) building block/cyclic L2 knowledge presentation in syllabi, and (d) L2 tasks' clarity and outcome. *Themes a* and *b* are directly related to conceptions about L2 knowledge certainty. Nikitina and Furuoko's (2018) instrument includes one item on diachronic change (though of language in general, rather than the L2), but none on synchronic and context-based variability. Its inclusion among the themes of LLEBs is theoretically justified as awareness of this aspect of L2 knowledge has been recognized to be a constituent of most conceptualizations of linguistic and communicative competence (e.g., Bachman, 1990), following the social turn of the field of applied linguistics in the 1990s (Ortega, 2013). As for *Themes c* and *d*, the distinctions put forth by the participants reflect their shared experience of building-block L2 knowledge presentation as well as the prevalence of single-outcome tasks in Iran's school English textbooks (Bagherkazemi, in press). These themes were taken as linked to LLEBs since they root in beliefs about whether one views L2 knowledge as certain or variable and context-contingent (see Ziegler, 2015).

L2 knowledge simplicity beliefs fell into the four categories of beliefs about (a) L2 skills/components' distinctiveness/interrelationship, (b) multiple-choice/open-ended L2 test item and assessment forms, (c) memorization/knowledge construction, and (d) L2 skill/component-specific or inclusive materials. The inclusion of these dimensions of L2 knowledge

finds theoretical support in the epistemological development of SLA theory (Ortega, 2013). Behavioristic SLA rested on the idea of L2 skills/components' distinctiveness, effectiveness of memorization for language learning, distinct-focus materials, and discrete-point testing (see Richards & Rogers, 2001). On the other hand, constructionist and developmental accounts of SLA place a premium on the inherent integratedness of L2 knowledge, which should be appreciated in its presentation and assessment (see Waters, 2012). Simple L2 knowledge is componential (rather than integrated), can be learnt through memorization (rather than constructively through meaning making), and its constituents presented and tested separately. On the other hand, integrated L2 knowledge should be learnt, presented, and assessed in an integrated manner.

L2 knowledge source beliefs were concretized in the participants' conceptions about (a) L2 teachers' authority to knowledge (both in terms of general L2 knowledge and as a strategy source), as well as that of (b) peers, (c) books, and (d) native speakers. Behavioristic ELT pictured the language teacher, book, and native speakers as omniscient authorities to L2 knowledge. Nikitina and Furuoko's (2018) questionnaire includes items on teachers and native speakers' authority to L2 knowledge, but not on that of materials and peers. Historically, while the cognitive movement of the 1960s countered this position by recognizing the agency of L2 learners in the process of language acquisition, L2 knowledge was still conceptualized as certain, simple, and held by an omniscient authority. About three decades ago, Schwartz (1986) argued for Chomsky's UG as a sound epistemological anchor for SLA theory and research, making no mention of the implications of contexts and use and performance conditions for this grounding. This absolutism was, however, mediated following the postulation of the notion of communicative competence and the social turn of SLA. There is now a bulk of research evidence on the significance of peer interaction and the desirability of criticality and evaluatism (Waters, 2012). Wagner (2019) cogently refers to the significance of appreciating the potential of interaction and peer feedback for L2 development as a main epistemological foundation

of language learning-in-action. Moreover, with the growing research interest in English as an International Language (EIL) (e.g., Doan, 2014), L2 knowledge is no longer believed to be an exclusive territory of native L2 speakers.

Finally, L2 knowledge justification beliefs included beliefs about (a) nativespeakerist provenance, (b) language learning innateness/effort, (c) language learning difficulty, and (d) L2 instruction necessity. Nikitina and Furuoko (2018) included in their LLEB questionnaire a few items on L2 learning innateness and effort, and grouped them together under the heading "gaining L2 knowledge." They stated that beliefs in this category were distinct from conceptions about the nature of L2 knowledge. This is while Schommer (1990), as one of the most frequently cited domain-general EB studies, included them as distinct categories from knowledge certainty, simplicity and source beliefs. To the present researchers, these best fit in the knowledge justification category particularly for LLEBs, since this core knowing dimension rotates around the process and goal of knowledge development (Bendixen & Rule, 2004). Making reference to the developmental epistemology of the field of applied linguistics, absolutists would justify L2 knowledge development as resting on an innate endowment, with its constituents having an inherent learning difficulty. On the other hand, evaluatists appreciate effort and the process of learning over innateness, and envision difficulty in view of context awareness development. Wagner (2019) counters the traditional conceptions in the field as to the necessity of didactic classroom learning, and brings to the forefront an alternative view regarding learners' autonomy and language learning-in-action through participation in life world situations. Along the same lines, Waters (2014) challenges "nativespeakerist provenance" and refers to "communicative competence" as the goal of L2 learning in a sociologically implicated conceptualization. Context-specificity and dynamicity of the English language is also embodied in the surge of research on "English as a Lingua Franca" (ELF), "English as an International Language" (EIL), and World Englishes (see Sifakis, Lopriore,

& Dewey, 2018). This burgeoning ELT research trend has at its core an appreciation of communicative, rather than nativelike, competence in various contexts of use, and therefore reflects evaluatist conceptions of L2 knowledge and knowing (Karimi & Nafissi, 2017).

An analysis of G1, G2, and G3's beliefs in relation to each of the 17 extracted themes showed a clear developmental pattern for LLEBs. Absolutist G1 groupthinks and evaluatist G3 groupthinks for all the themes lines up with the continual ends of most domain-general EB developmental models put forth to date (Baxter Magolda, 1992, 2004; Golino et al., 2019; Kember, 2001; Perry, 1970; Schommer, 1990). G1 tended to view L2 knowledge as simple and certain, and L2 knowing as outsourced and justified on the grounds of innateness, inherent difficulty, and instructional effects. On the other hand, G3 invariably viewed L2 knowledge as integrated and context-contingent (rather than simple and certain), and L2 knowing as multisourced and justified on the grounds of effort, contextual difficulty, and combined instructional and self-study effects. That G1 and G3 held similar beliefs in terms of all the 17 extracted themes indicates the interrelatedness of LLEBs. To exemplify, an absolutist not only believes in the effectiveness of multiple-choice items over more open-ended assessment forms, but also in the teacher as the omniscient authority. In other words, learners' absolutism or evaluatism turned out to span most of the 17 themes. G2, on the other hand, were divided into two groups: (a) those who had just begun to abstract away from absolutism, holding more advanced beliefs for only a few aspects of L2 learning and use, and (b) those who posited an all-encompassing relativism for all aspects of L2 learning and use. The results best match Baxter Magolda's (1992, 2004) domain general developmental epistemology model, which involves the four points of absolute knowing, transitional knowing, independent knowing, and contextual knowing. G1 clearly featured as absolute knowers, while G2 expressed beliefs reflecting transitional and independent knowing. G3, on the other hand, could be viewed as contextual knowers. Based on this model, independent knowing is one stage ahead of transitional knowing. Bendixen and Rule (2004) view

what Baxter Magolda calls "independent knowing" as indicative of epistemic doubt devoid of context awareness. An analysis of belief statements in this study provides support for this postulation, as G3 invariably mentioned context and its significance in relation to all the 17 themes. Language learning-specific epistemic doubt was avoided by absolutists, welcomed by relativists, and valued by evaluatists insofar as it would facilitate criticality and enhance context awareness. Moreover, the study showed that language learning experience which was the distinguishing characteristic of the three groups in this study could affect LLEBs. In this regard, Bagherkazemi (in press) showed, in her study of the epistemic climate of a high school English language classroom in Iran, that language learning experience at the private sector would aid language-learning specific epistemological development.

CONCLUSION AND IMPLICATIONS

The present study sketched the dimensions of LLEBs in relation to the nature of L2 knowledge and L2 knowing. Based on the results of the study, it can be concluded that L2 knowledge simplicity, certainty, source, and justification beliefs are embodied in conceptions about such aspects of L2 learning and use as L2 knowledge's synchronic and diachronic variability, content presentation, task type, L2 components' relationship, assessment forms, approach to L2 learning, L2 knowledge source (teacher, materials, peers, and native speakers), and justification (goal, innateness/effort, difficulty, instruction necessity). Accordingly, LLEBs, by virtue of the field's praxis-oriented nature, are intertwined with language learning beliefs, though to the extent that such beliefs denote beliefs about the nature of L2 knowledge and knowing. The interview data, in this study, for example, included beliefs about the importance of culture learning and nationality, which were not included among the extracted themes owing to their distinctness from L2 knowledge and knowing beliefs. A further conclusion is the possibility of envisioning a developmental route for LLEBs in line

with Baxter Magolda's (1992, 2004) model from absolute L2 knowing, through transitional and independent L2 knowing, to contextual L2 knowing; however, whether transitional L2 knowing precedes independent L2 knowing should be shown in further research, since beliefs related to both were expressed by G2 similar in terms of language learning background and experience. Moreover, language learning experience plays a central role in the formation of LLEBs, and overshadows conceptions about all its aspects from the perceived value of peer interaction to that of instruction.

The domain specificity of epistemological beliefs held by language learners, as shown in this study, has two implications. Theoretically, LLEBs can be mapped onto (a) the four core dimensions of EBs in domain-general epistemology research: knowledge simplicity, certainty, source, and justification, though with language learning and use conceptions included; and (b) developmental models sketched in such research. Practically, language educators are advised to facilitate learners' epistemological development in all the 17 aspects of LLEBs delineated in this study. This could be partly done through minimizing perceptual mismatches, to use Kumaravadivelu's (2006) postmethod condition's macro-strategy, with learners early in their language learning experience (see Rashidi & Mansourzadeh, 2017). Devising tasks which would guide learners along the developmental epistemology path would also be needed. This is justified as more advanced beliefs have been shown to induce better learning outcomes (Moon, 2008). The characteristic features of tasks which can potentially move learners from absolute knowing to transitional and independent knowing, and then to contextual knowing through the creation of epistemic doubt and context awareness in the 17 themes is yet to be shown in further research. In domain-general epistemology research, Moon (2008) used critical thinking-based writing tasks for development. Whether tasks of the kind would also facilitate LLEBs' development needs to be researched. Furthermore, whether domain-general EBs exert any influence on LLEBs should also be demonstrated in research.

Finally, in this study all the participants were Iranian ELT-major university students (owing to convenience sampling). Interview data obtained from a more variable sample in relation to age, nationality, and major might lead to the extraction of a different set of themes. Overall, this study can be thought of as one of the few efforts aimed at sketching the nature of core LLEBs and their development. It was part of a larger study aimed at constructing a developmental LLEB questionnaire. The path is still untrodden, and the pedagogical implications of this conceptualization of LLEBs can be further shown in future research.

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