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Research Paper

Language Learners' Epistemological Development: Impact of Creative Writing Task-Based Instruction

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Abstract

Research on L2 learning-specific epistemological beliefs (LLEBs), i.e., beliefs about L2 knowledge and knowing, is at a premium. This study explored the impact of creative writing tasks on the development of L2 learners' LLEBs. To this end, 47 Iranian intermediate EFL learners were convenience sampled and divided into a control group (N= 23) and an experimental group (N=24). The experimental group received 10 sessions of instruction, each involving a distinct creative writing task. Tasks were designed to induce epistemic doubts on LLEBs, for which the instructor provided resolution strategies. The control group, on the other hand, engaged in essay writing and received written feedback. LLEBs' development along the 4 points of epistemological continuum, i.e., absolute, transitional, independent, and contextual L2 knowing, was traced through the Language Learning-Specific Developmental Epistemology Inventory (Rahmani et al., 2023), and 10 experimental group members' LLEBs-focused diaries at pre-, mid-, and post-treatment phases. ANOVA results showed the experimental group's significant development from absolute to contextual L2 knowing. This finding was also confirmed in the directed qualitative content analysis of

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diaries. The findings have implications for the potential of creative writing tasks for LLEBs' development.

Keywords: Absolute L2 Knowing, Contextual L2 Knowing, Creative Writing Tasks, Epistemological Development, Independent L2 Knowing, Transitional L2 Knowing

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1. Introduction

A scrutiny of second language acquisition (SLA) theory and research brings to light an epistemological revolution over time. Absolutist conceptions about L2 knowledge, representing it as simple, certain and transferrable from an omniscient authority, underlay audiolingualism and cognitive approaches to language teaching (Ortega, 2013). Such approaches generally defined nativespeakerist competence as the ultimate aim of language learning and attributed success to language learning aptitude (Asakereh et al., 2019). These assumptions were called into question following the mid-1990s' social turn of the field, which brought along a recognition of social context variables as determinants of language use appropriacy (Lantolf, 1994). Research in several key areas has now reshaped SLA, emphasizing its ties to context awareness and evaluation. These include intercultural communicative competence, interlanguage pragmatics, critical language awareness and pedagogy, English as an International Language (EIL), English as a Lingua Franca (ELF), and World Englishes (Esmaeili et al., 2022; Sifakis, 2019). SLA's epistemological remolding, however, has failed to make its mark on language teaching practices and curricula. The passed-on absolutism has been promoted in Iran's language education system (Bagherkazemi, 2024). The theory-practice gap (Waters, 2012) could be said to be partly driven by

teachers and learners' absolutist beliefs about the nature of L2 knowledge and L2 knowing, collectively referred to as their LLEBs.

Facilitating LLEBs' development is justified on three grounds. Firstly, beliefs about language learning are instrumental for language learning (Akbari & Karimi, 2012; Bernat & Gvozdenko, 2005; Fazilatfar et al., 2014). Among such beliefs, epistemological beliefs (EBs) have been assigned an essential role in determining the learning path and success, though in general education (Bendixen & Rule, 2004). Given the epistemological evolution of the field of SLA and the theory-practice gap, this role can be assumed for language learning as well (Rahmani et al., 2021). Secondly, LLEBs are distinct from domain-general epistemological beliefs (Mori, 1999). The distinctiveness of EBs and LLEBs is implied in Shirzad et al.'s (2021) finding as to the negative relationship between EBs and strategy use, which contradicts the evidenced accompaniment of advanced EBs with independent learning; had the researchers investigated LLEBs, instead of domain-general EBs, the results might have turned out to be different. Thirdly, LLEBs are developmental in nature (Rahmani et al., 2021; see Golino et al. (2019) for evidence on the developmental nature of domain-general EBs), but how L2 instruction can facilitate this development is a moot point.

Studies addressing LLEBs are few and far between (Bagherkazemi, 2024; Nikitina & Furuoka, 2018; Rahmani et al., 2021, 2023). Recent work by Rahmani et al. (2023) proposed a four-stage developmental continuum for LLEBs, aligning with Baxter Magolda's (1992, 2001, 2004) framework: (a) absolute knowing, (b) transitional knowing, (c) independent knowing, and (d) contextual knowing. This model builds on their earlier qualitative study (Rahmani et al., 2021) to create a normative measure of development; however, research on EBs' developmental trajectories remains limited. Perry's (1970) foundational four-stage model (absolutist, multiplist, relativist,

and contextualist thinking) inspired later frameworks (e.g., Baxter Magolda, 1992; King & Kitchener, 1994; West, 2004), but few studies have explicitly explored EBs' development.

Though variably termed (e.g., "reflective judgment" (King & Kitchener, 1994) or "constructivist development" (West, 2004)) and differentially staged, epistemological development has been generally conceptualized as the move from absolutism to evaluatism. Interventionist research on development is at a premium, both for domain-general EBs and LLEBs. As for LLEBs, there are literally no interventionist studies on the facilitation of epistemological development. Given this research lacuna, the present study investigated the impact of creative writing tasks (CWTs) on L2 learners' LLEBs. Such tasks were selected for their (a) long-evidenced potential for conceptual and metacognitive development, and (b) inherent affordances for self-expression, flexibility, and inventiveness, paving the way for challenging and reflecting over absolutist conceptions of L2 knowledge and knowing (Smith, 2013).

2. Literature Review

Beliefs about L2 learning have been shown to mediate learners' approach to proficiency development and ultimate L2 learning success (Bernat & Gvozdenko, 2005). The related literature embodies conceptualizations capitalizing on beliefs' dimensions (see Horwitz' (1987) Beliefs about Language Learning Inventory). More recent individual differences research has sought to capture their dynamic and developmental nature (Dornyei, 2015). A category of language learners' beliefs inadequately treated in beliefs research is LLEBs. LLEBs can be defined as beliefs about the nature of L2 knowledge (its certainty/uncertainty and simplicity/integratedness) and the nature of L2 knowing (its source and justification).

There is research evidence for the significance of domain-general EBs for learning (e.g., Baxter Magolda, 2001; Howitt and Wilson, 2016; Moon, 2008; Schommer, 1994; West, 2004), and for the significance of investigating discipline-specific EBs (e.g., Ding et al., 2016; Schommer-Aikins, 2004); however, there is a dearth of research on LLEBs, and the existing research is mostly descriptive. Ziegler (2015) investigated LLEBs held by English as a second language (ESL) learners, specifically focusing on vocabulary knowledge. The participants were found to hold evaluatist LLEBs in relation to L2 vocabulary knowledge certainty and simplicity, but absolutist LLEBs in relation to its source and justification. In his study, Ziegler made use of Kuhn's (1999) domain-general EBs' developmental model encompassing the three stages of absolutism, multiplism, and evaluatism. Along the same lines, Bagherkazemi (2024) uncovered nine LLEBs' aspects in relation to L2 knowledge certainty, simplicity, source, and justification. Her study showed (a) the absolutist epistemic climate of a high school L2 classroom in Iran, and (b) the more facilitative role of L2 learning at private institutions for LLEBs' development. As another pioneering study on LLEBs, Nikitina and Furuoka (2018) developed a 13-item questionnaire on the basis of their review of research on domain-general EBs. They showed the items' factorability into "the nature of language and language knowledge," "knowledge authority", and "the process of gaining knowledge" items. This questionnaire, however, fails to capture all the core dimensions of EBs sketched in domain-general research (viz., certainty, simplicity, source, and justification). Moreover, it does not capture the developmental nature of LLEBs.

To bring LLEBs' research in line with domain-general EBs' research in terms of both their core dimensions and development, Rahmani et al. (2021, 2023) extracted 17 LLEBs' themes based on interview data obtained

from a maximally variant sample of EFL learners, and categorized them in relation to L2 knowledge certainty, simplicity, source, and justification (see Table 1). They further charted LLEBs along a four-stage developmental path, roughly matching Baxter Magolda's (1992) developmental continuum, and constructed and validated a 68-item LLEBs questionnaire, namely Language Learning-Specific Developmental Epistemology Inventory (LDEI) (see Instruments). Based on their model, "absolute L2 knowing" (Stage 1) involves viewing L2 as a simple and certain knowledge system that is held by a reliable source (e.g., the teacher, native speaker, or the book). Absolutist L2 learners also believe in the significance of innateness, the inherent difficulty of certain aspects of L2, and the necessity of instruction for achieving nativespeakerist competence as L2 learning's ultimate aim. The onset of development is marked by "transitional L2 knowing" (Stage 2) when epistemic doubts on L2 knowledge and knowing begin to emerge. Epistemic doubts overtake in Stage 3 wherein "independent knowing" leads to a state of relativism and epistemic disequilibrium. Stage 4 denotes the most advanced stage where "contextual knowing," marked by the critical evaluation of social context variables for L2 use appropriacy and L2 learning, replaces relativistic thinking. Contextual thinkers appreciate L2 knowledge's context contingency, and refute nativespeakerist provenance.

No studies have explored the impact of instruction on LLEBs' development. Nonetheless, there is ample sociocultural theory (SCT)-based research evidence for the significance of instructional artefacts for learners' cognitive and metacognitive development (Lantolf, 1994). On the basis SCT, it is possible to mediate L2 learners' beliefs, including LLEBs, as metacognitive entities (Hofer & Pintrich 1997) through instruction. Based on Bendixen and Rule's (2004) "process model of personal epistemology development," an instructional module aimed at facilitating epistemological

development should initially aim for raising an “epistemic doubt” (i.e., a state of disequilibrium regarding knowledge certainty, simplicity, source, and justification) (e.g., Kerwer & Rosman, 2020). This is contingent on the presentation of conflicting information on a subject area (e.g., Kerwer & Rosman, 2020; Moon, 2008). Instruction should further aim for generating epistemic curiosity (Sheifer et al., 2020) (AKA “epistemic sensitization” (Porsch & Bromme, 2011) and “epistemic volition” (Schommer-Aikins, 2004)) (i.e., sensitivity to conflicting information and motivation for reaching equilibrium in relation to the certainty, simplicity, source, and justification of knowledge). The final stage is offering or guiding learners to come up with evaluatist and context-contingent “resolution strategies” through guided epistemic reflection and social interaction (Bendixen & Rule, 2004; Howitt & Wilson, 2016; Klopp & Stark, 2019; Schommer-Aikins, 2004; Shiefer et al., 2020; West, 2004). To exemplify, Kerwer and Rosman’s (2018) intervention involved the presentation of resolvable/unresolvable conflicting evidence on learning strategies and gender stereotyping to science students. The results showed the positive effect of diverging information-contained instruction on topic-specific epistemological development, but not domain-general development, for participants with prior naïve epistemic beliefs. Along the same lines, Shiefer et al. (2020) implemented an extracurricular “inquiry-based learning approach,” encouraging epistemic reflection on science with elementary school children. They found the treatment effective for the development of epistemic beliefs, but not of investigative interests. Klopp and Stark (2019), too, investigated the effect of a treatment involving resolvable conflicting information on psychology students’ epistemic beliefs and argumentation skills. Epistemic sensitization, achieved through the presentation of controversies in psychology in a reading text, proved to mediate the intervention effect.

A venue for implementing these three instructional constituents (i.e., epistemic curiosity, doubt, and resolution) is writing. Writing embodies opportunities for critiquing uncontested assumptions (Moon, 2008), and urges learners' voice, which is "a notion of empowerment" (Frostig, 2011, p. 52). These inherent advantages are related to epistemological development, which has learners' autonomy, context awareness, and evaluatism at its heart. Among all writing tasks, CWTs are particularly suited to an epistemological development-focused instructional module. CWTs range from devising similes and reconstructing narratives to the creation of acrostics, patterned poetry, and imaginary fiction (Holmes & Moulton, 2001; Lee, 2019; Smith, 2013; Tin, 2010). Such elements of creative writing as the use of rhymes, repeated patterns, puns, morphological inventiveness, and jokey deconstruction of idioms (Carter, 2004) lend it originality and flexibility (Baleghizadeh & Dargahi, 2016), which are aligned with advanced EBs. Smith (2013) referred to CWTs' facilitation of language play through, for example, an unusual word choice or sentence structure, morphological inventiveness, and shifts to shared L1 culture and worldviews. These features can pose challenges to L2 knowledge's certainty, simplicity, source, and justification.

Despite their rarity in English language teaching (ELT) curricula (Smith, 2013), CWTs have been shown to be influential in identity re/construction and empowerment through the facilitation of creative self-expression, reflection, and personal change (Fitzgerald & Schutte; 2010; Hoey, 2020; Smith & Martin, 2014). These can be envisioned as a necessary first step before epistemic doubts begin to emerge. Research evidence on CWTs' potential to enhance learners' academic motivation, self-esteem, and self-efficacy beliefs (Hoey, 2020) further justifies their appropriateness for the present study's instructional module. As stated earlier, for epistemic

doubts to be effectively resolved, learners should possess epistemic volition, and CWTs potentially nest this volition owing to their motivating and autonomy-promoting nature. In addition to these benefits, CWTs provide the grounds for argumentation as an important academic skill (Smith, 2013), which can lead to new shared understandings. In the field of L2 learning, CWTs have been mainly employed for language development purposes. As an example, Smith (2013) showed the benefits of poetry and fiction writing for the achievement of communicative competence. Despite research evidence on the benefits of CWTs for self-development on the one hand, and language learning on the other, no study has even investigated CWTs in terms of their potential for L2 learners' epistemological development. Given this research gap, the present study was designed to answer the following question:

Do creative writing tasks have a significant effect on EFL learners' L2 learning-specific epistemological development?

3. Methods

3.1 Participants

To meet the purpose of the study, 47 Iranian intermediate ELT-major university students (10 male and 37 female students, aged 19 to 27), as members of two intact essay writing classes convened by the same instructor-researcher, agreed to take part in a 10-session extracurricular writing course in an official consent form. They were randomly assigned into an EG (N= 24) and a CG (N=23). The decision to include only intermediate, and not elementary or advanced, learners was made to raise the probability of sampling learners who were capable of managing CWTs, while at the same time holding elementary LLEBs. CWTs' proficiency level appropriateness of tasks was checked in a pilot study, and only students with elementary

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epistemic beliefs were included in the study. More specifically, pretreatment LDEI mean ranks of all the participants were below two (mean rank <2). This was a concern owing to research evidence as to treatment's effectiveness contingency on initial learners' beliefs (Kerwer & Rosman, 2018). All the participants completed LDEI at the pre-, mid-, and post-treatment phases. Ten EG members (3 male and 7 female) further kept an interval-contingent diary during the treatment period (see Instruments).

3.2 Instruments

3.2.1 Oxford Placement Test (OPT)

In order to include only intermediate proficiency learners in the study, the paper and pen version of Oxford Placement Test, developed jointly by Oxford University Press and the Syndicate of Cambridge ESOL Examinations, was used. The test comprises 60 receptive-response reading comprehension, vocabulary, and grammar items, and takes 40 min to complete online (as a Google Docs Form). The two groups' homogeneity was ensured by including learners scoring within the range of 35 (the mid-score of the lower-intermediate band) to 44 (the mid-score of the upper-intermediate band) (see Geranpayeh, 2003). A KR-21 index of .79 showed the reliability of the selected participants' OPT scores.

3.2.2 Language Learners' Developmental Epistemology Inventory (LDEI)

Developed and validated by Rahmani et al. (2023), LDEI comprises 17 items on 17 themes related to the four core dimensions of EBs (certainty, simplicity, source, and justification). Each is made up of four developmental belief statements (as a 4-point Likert scale) reflecting epistemological development stages: (a) absolute knowing, (b) transitional knowing, (c)

independent knowing, and (d) contextual knowing (see Table 1 for the themes).

Table 1.

LDEI's 17 Dimensional Themes (Reproduced from Rahmani et al. (2021))

Core Dimensions	Themes
L2 knowledge certainty	<i>beliefs about general language areas' certainty</i> <i>beliefs about L2 dynamicity</i> <i>beliefs about building block/cyclic knowledge presentation in syllabi</i> <i>beliefs about tasks' clarity and outcome</i>
L2 knowledge simplicity	<i>beliefs about L2 skills/components' distinctiveness/interrelatedness</i> <i>beliefs about multiple-choice/open-ended L2 test items and assessment forms</i> <i>beliefs about language learning through memorization/knowledge construction</i> <i>beliefs about L2 skill/component-specific or inclusive materials</i>
L2 knowledge source	<i>beliefs about L2 teachers' authority to knowledge</i> <i>beliefs about language learning strategy source</i> <i>beliefs about peers' authority to knowledge</i> <i>beliefs about the book's authority to knowledge</i> <i>beliefs about native speakers' authority to L2 knowledge</i>
L2 knowledge justification	<i>beliefs about nativespeakerist provenance</i> <i>beliefs about innateness/efforts</i> <i>beliefs about language learning difficulty</i> <i>beliefs about language instruction vitality</i>

Respondents were required to select the statement matching their belief from among the four on each theme. In LDEI, development is charted as a gradual abstraction away from absolute knowing (encompassing beliefs in L2 as a system of simple and certain knowledge, held by L2 native speakers to be sought from omniscient sources, and justified on accounts of innateness and pre-ordained difficulty) to contextual knowing (encompassing a belief in L2 as a context-dependent system of integrated and dynamic knowledge underlying communicative, rather than native speaker, competence, to be sought from a variety of sources, and justified on accounts of learners' effort and learning context variables). In between the two ends of the continuum,

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learners first develop transitional knowing, wherein they begin to question their belief in L2 knowledge certainty and simplicity in a few language areas and doubt the unidimensionality of the L2 knowledge source (e.g., the teacher or the book). Subsequently, epistemic doubt and relativism, devoid of context evaluation, overtakes in an independent knowing phase. LDEI was completed online (as a Google Docs Form) within a range of 36-48 min. Cronbach's alpha coefficients of .78, .83, and .81 at pre-, mid-, and post-treatment phases showed LDEI's internal consistency.

3.2.3 Solicited Interval-Contingent LLEBs-Focused Diaries

To complement quantitative measures of the participants' epistemological development, diaries of 10 self-selected EG members were qualitatively analyzed for self-report evidence of LLEBs' change. The diaries were interval-contingent, solicited in a directed reflection sheet, in Sessions 2, 6, and 10 in Persian. The reflection sheet was developed by the researchers based on the core dimensions of EBs in the literature, and revised based on an expert review by an applied linguistics and a philosophy assistant professor for content relevance. The English translation of the reflection sheets' three LLEBs-focused questions are as follows:

1. Did instruction make you doubt any of your beliefs about the nature of the English language? Were your doubts, if any, resolved?
2. Did instruction cause you to doubt any of your beliefs about learning English? Were your doubts, if any, resolved?
3. Did instruction cause you to doubt any of your beliefs about knowing the English language as an additional language? Were your doubts, if any, resolved?

The 30 solicited diaries were subjected to manual directed qualitative content analysis (DQCA) by both researchers, separately. DQCA assigns detected cases in the data to a priori categories (Shava et al. 2021). The

analysis foci were epistemic doubts and belief change statements in relation to L2 knowledge certainty, simplicity, source, and justification. A Phi correlation of .79 showed inter-coder agreement on the assignment of statements to L2 knowledge certainty, simplicity, source, and justification belief categories. Cases of disagreement were further discussed and resolved.

3.3 Data Collection Procedure

Instructional treatment to EG was implemented over 11 1-hr to 1.5-hr sessions, which were held biweekly on Skyroom. It began with a 1-hr session, presenting conflicting information about L2 knowledge and knowing. The session began with an introduction to EIL, critical language awareness, and pragmatically implicating features of L2 performance. Learners were then presented with (a) extracts from music and movies involving cases of ungrammaticality by native speakers (for L2 knowledge certainty and source), (b) dictionary entries where words have been indicated to be archaic (e.g., the word “hath”) (for L2 knowledge certainty), (c) transcripts of a conversation between two nonnative speakers and one between a native speaker and a nonnative speaker (for L2 knowledge certainty, source and justification), and (d) one news extract with and one without a related pre-listening reading text (for L2 knowledge simplicity). The participants were first asked to reflect upon the presented input, and discuss in pairs and then as a whole class what they thought was unusual in them about L2 knowledge and knowing. Subsequently, the treatment was implemented. Ten CWTs were designed (namely simile writing, acrostics writing, story ending, picture-based story writing, narrative reconstruction in a different setting, narrative reconstruction from a different point of view, advice letter writing to one’s younger self, imaginary autobiography writing, and poetry writing (see Appendix for detailed features of the tasks)), on the

basis of such considerations as (a) amenability to epistemological development-focused instruction and (b) proficiency level suitability. A pretreatment pilot study with five intermediate proficiency ELT students was conducted to (a) inquire about learners' task priority based on a bank of 23 CWTs, and (b) evaluate tasks' suitability in students' posttask reflections. As for the main study, task selection and grading was conducted on the basis of Ellis' (2003) features of task input, processes, conditions, and outcomes. All the tasks were first modelled by the instructor (Hoey, 2020). In terms of task conditions, the first six were group tasks (carried out via "WhatsApp's video call option" during the related sessions by six self-selected groups of four learners), and the last four were monologic tasks. Progression from group to monologic tasks was intended to facilitate the participants' move to independent and contextual knowing. Regarding task processes, all the group tasks involved opinion, rather than information, exchange; monologic tasks on the other hand involved independent reflection. Task outcomes were all written and open, involving narrative, descriptive, and argumentation discourse modes. These decisions were made to ensure whilst-task epistemic doubt raising. Tasks were also different in terms of formal constraints, with similes and acrostics involving the highest formal constraints. Task completion was followed by students sharing outcomes with the whole class. The instructor took notes regarding the four core dimensions of LLEBs with reference to LDEI's main themes, and put them forward for discussion and resolution. This involved her online decision making regarding the themes of post-task discussions and resolution strategies. The foci of doubt-raising and resolution strategies were either linguistic (grammar, vocabulary, pronunciation), discourse (speech act strategies, hedges and boosters, lexical bundles, generic moves), or cultural, with specific reference to context. As for resolution strategies, "reflection" and "discussion" are often cited in

interventionist EBs' research (see Bendixen & Rule, 2004). In this study, owing to the specificity of LLEBs, the instructor drew upon five epistemic doubt resolution strategies inducing reflective episodes on conflicting information as follows:

1. exemplification of conflicting information regarding L2 knowledge's certainty, simplicity, source, and justification;
2. online contact with a native English and a non-Persian (Chinese) speaking EFL teacher to counter native speakerist provenance: Both the native and Chinese EFL teachers were online during all the sessions, and contributed to the class proceedings upon the instructor's request. They were both male, and had taught English in different language institutes in Iran for more than 3 years. They were debriefed on the study's purpose, and agreed to take part in the online sessions in a consent form prior to the study.
3. use of sources (dictionaries and the Net) to counter L2 knowledge's simplicity, certainty, absolutist justification;
4. peer evaluation to counter the absolutist belief in the mono-source authority to L2 knowledge; and
5. emphasis on the strengths of low performing pairs to counter monolithic conceptions of intelligence and language learning difficulty as justifications of L2 learning effectiveness.

Regarding data collection, LDEI scores and students' diaries were obtained at pre, mid, and post-treatment phases. In parallel with quantitative data collection, students' diaries were collected, and analyzed by both researchers upon the completion of the treatment period (see Instruments for details). CG, on the other hand, was offered an extracurricular course on essay writing. The 10 1-hr to 1.5-hr sessions involved the explicit instruction of different essay types, followed by students' writing. Corrective feedback

was then provided by the teacher. To ensure control and experimental conditions' procedural distinctiveness, care was taken to keep instruction to CG teacher-fronted, and present L2 knowledge as if it were fixed and certain. This would obviate epistemic doubts regarding L2 knowledge and knowing and the need for doubt resolution, as two of exclusive features of the experimental condition. LDEI was administered to CG at three points during the course in parallel with its administration to EG.

3.4 Data Analysis

In order to answer the research question, each of the control and experimental groups' pre, mid, and post-treatment L2 knowledge, L2 knowing, and total LDEI scores were compared separately through Friedman's ANOVA as the nonparametric equivalent of repeated measures ANOVA, given the observed cases of distributional skewedness. In addition to quantitative analysis, DQCA was conducted on 10 self-selected EG members' diaries (see Instruments). Diaries were originally provided in Persian, and totaled 2434 words. The analysis foci were epistemic doubts and belief change statements in relation to L2 knowledge certainty, simplicity, source, and justification.

4. Results

4.1 Quantitative Results

This study was designed to investigate the effect of an instructional module with CWTs at its core on the participants' L2 learning-specific epistemological development. Table 2 shows the descriptive statistics of LDEI scores for EG and CG. Ratios of skewness and kurtosis values to their associated standard errors exceeded + 1.96 (Pallant, 2005), indicating skewness (cases with skewed distributions have been boldfaced in the table). Moreover, descriptives showed the rise of mean ranks for EG over time for

L2 knowledge (i.e., certainty and simplicity) items, L2 knowing (i.e., source and justification) items, and total LDEI items, but not for CG.

Table 2.

Descriptive Statistics: Pre, Mid, and Post-treatment LDEI Scores

Group	Phase	LDEI Items	Mean	Median	SD	Skewness		Kurtosis	
						Statistic	SE	Statistic	SE
EG	Pretreatment	L2 knowledge	1.26	1.12	.35	1.43	.47	1.38	.91
		L2 knowing	1.26	1.15	.30	.65	.47	-.81	.91
		Total	1.26	1.23	.25	1.24	.47	1.62	.91
	Midtreatment	L2 knowledge	2.14	2.00	.37	.12	.47	-.06	.91
		L2 knowing	2.40	2.00	.53	-.39	.47	.90	.91
		Total	2.27	2.25	.37	.31	.47	1.41	.91
	Post-treatment	L2 knowledge	3.32	3.37	.31	-.62	.47	.32	.91
		L2 knowing	3.38	3.43	.29	-.49	.47	1.51	.91
		Total	3.38	3.42	.29	-.49	.47	1.51	.91
CG	Pretreatment	L2 knowledge	1.34	1.37	.31	.30	.48	-.87	.93
		L2 knowing	1.36	1.25	.45	1.43	.48	1.66	.93
		Total	1.35	1.25	.25	1.26	.48	1.51	.93
	Midtreatment	L2 knowledge	1.42	1.50	.42	.80	.48	.19	.93
		L2 knowing	1.26	1.00	.33	.92	.48	-.14	.93
		Total	1.34	1.25	.21	.44	.48	-.30	.93
	Post-treatment	L2 knowledge	1.37	1.37	.34	.53	.48	-.75	.93
		L2 knowing	1.28	1.20	.31	1.11	.48	.34	.93
		Total	1.28	1.20	.30	1.13	.48	.34	.93

Table 3 shows the results of Friedman's test for CG and EG, with time (pretreatment, midtreatment, and post-treatment) as the independent variable, and LDEI and its two constituent factors (L2 knowledge items (N=8) and L2 knowing items (N=9)) as dependent variables.

Table 3.

Friedman Test Results for EG and CG

Group	Test	χ^2	df	Sig.
EG	L2 knowledge	48.00	2	.00
	L2 knowing	47.51	2	.00
	Total	48.00	2	.00
CG	L2 knowledge	1.96	2	.37
	L2 knowing	1.26	2	.53
	Total	2.94	2	.22

As shown in Table 3, with a conservative significance level ($p = .01$) for multiple comparisons, Friedman's Chi-square value was not significant for L2 knowledge items, L2 knowing items, and total LDEI items for CG.

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Accordingly, CG's scores for LDEI and its two constituent factors did not significantly change over time; however, significant Chi-square values were obtained for L2 knowledge items, L2 knowing items, and total LDEI items for EG. This was taken as an indication of significant difference(s) in L2 knowledge, L2 knowing, and total LDEI scores over time.

Subsequently, post hoc analyses were conducted to locate significant differences, using Bonferroni's adjustment for multiple comparisons. Table 4 shows pairwise comparisons.

Table 4.
Post Hoc Pairwise Comparisons Across Time for EG

<i>LDEI</i>	<i>Phases</i>	<i>Test Statistic</i>	<i>SE</i>	<i>Standard Statistic</i>	<i>Test Sig.</i>	<i>Adjusted Sig.</i>
<i>L2 knowledge</i>	<i>Pre-Mid</i>	-1.00	.28	-3.46	.00	.00
	<i>Mid-Post</i>	-2.00	.28	-6.92	.00	.00
	<i>Pre-Post</i>	-1.00	.28	-3.46	.00	.00
<i>L2 knowing</i>	<i>Pre-Mid</i>	-.95	.28	-3.32	.00	.00
	<i>Mid-Post</i>	-1.97	.28	-6.85	.00	.00
	<i>Pre-Post</i>	-1.02	.28	-3.53	.00	.00
<i>Total</i>	<i>Pre-Mid</i>	-1.00	.28	-3.46	.00	.00
	<i>Mid-Post</i>	-2.00	.28	-6.92	.00	.00
	<i>Pre-Post</i>	-1.00	.28	-3.46	.00	.00

It is evident in Table 4 that differences were significant for L2 knowledge, L2 knowing, and total LDEI scores between (a) pre and midtreatment phases, (b) mid and post-treatment phases, and (c) pre- and post-treatment phases. In other words, EG made a significant improvement in L2 knowing, L2 knowledge, and total LDEI scores from the pretreatment to the midtreatment phase ($p < .00$), and from the midtreatment to the post-treatment phase ($p < .00$). An inspection of score changes (see Table 2) also revealed this group's higher L2 knowledge, L2 knowing, and total LDEI gain scores from the midtreatment to the post-treatment phase, compared to gain scores from the pretreatment to the midtreatment phase. Effect sizes were also calculated using Kendall's W coefficient of concordance, which turned out to be large;

Kendall's W was .91 for L2 knowledge score differences, .89 for L2 knowing score differences, and .92 for total LDEI scores.

Between-groups comparisons were also conducted through nine separate Mann Whitney U tests, setting the significance level at .01 to adjust for multiple comparisons (see Table 5).

Table 5.

Mann Whitney U Test Results for Between-Groups Comparison

Phase	Test	Mann Whitney U	Z	Sig.
Pretreatment	L2 knowledge	319.00	.95	.33
	L2 knowing	305.00	.65	.51
	Total	339.00	1.35	.17
Midtreatment	L2 knowledge	61.00	-4.71	.00
	L2 knowing	25.50	-5.42	.00
	Total	8.50	-5.73	.00
Post-treatment	L2 knowledge	.02	-5.89	.00
	L2 knowing	.08	-5.78	.00
	Total	.01	-5.88	.00

The results, presented in Table 5, indicated that there was no significant difference between EG and CG at the pretreatment phase for L2 knowledge scores, L2 knowing scores, and total LDEI scores; however, differences reached significance at the midtreatment and post-treatment phases for all the three score sets. Accordingly, EG made significant gains in their L2 knowledge, L2 knowing, and total LDEI scores over CG at both the mid and post-treatment phases.

4.2 Qualitative Results

Following the quantitative analysis, DQCA of diaries was conducted. A total of 117 unresolved doubts [$N = 21$ ($N_{\text{simplicity}} = 9$; $N_{\text{justification}} = 12$)] and resolved doubts [$N = 96$ ($N_{\text{certainty}} = 31$; $N_{\text{simplicity}} = 10$; $N_{\text{source}} = 32$; $N_{\text{justification}} = 23$)] were detected by two of the researchers, and inter-coder agreement as indicated by the Phi correlation reached .79. The 117 extracted statements were further inspected for belief change statements across the four continual

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points defined in LDEI [$N = 41$ ($N_{\text{certainty}} = 14$; $N_{\text{simplicity}} = 5$; $N_{\text{source}} = 13$; $N_{\text{justification}} = 9$)]. Example utterances (translated into English) are provided in Table 6.

Based on the DQCA results, epistemic doubts that remained unresolved were related to knowledge simplicity and justification. Unresolved L2 knowledge simplicity doubts were solely pertaining to the relatedness of different language skills, more specifically speaking and writing ($N = 3$) and effectiveness and possibility of learning them together ($N = 6$). One of the students stated, "I have always criticized teachers who include vocabulary and grammar practice in their speaking courses. I believe these should be taught in separate courses." Absolute knowing learners reached transitional knowing and at best independent knowing in this regard, but failed to advance to contextual knowing. Unresolved L2 knowledge justification doubts were mainly related to the necessity of instruction ($N = 3$), native speaker competence ($N = 6$), and intelligence ($N = 3$). Those who failed to resolve doubts in these regards advanced only to transitional knowing, and failed to improve to independent knowing and contextual knowing.

On the other hand, statements that indicated doubt resolution were detected for all the four dimensions of L2 learning epistemic beliefs: certainty, simplicity, source, and justification. Regarding L2 certainty, resolved doubts mainly related to:

1. word meaning and formation ($N = 8$) following the simile, acrostic, and two poetry writing tasks;
2. grammatical correctness ($N = 5$) and pronunciation ($N = 6$) following the simile, acrostics, picture-based narrative writing, and pattern poetry writing tasks;

Table 6.*Sample Utterances for Unresolved and Resolved Epistemic Doubts and LLEBs' Change*

Main Category	LLEBs' Dimension	Sample Utterance
Unresolved Doubt	L2 knowledge simplicity	The examples provided by the teacher have actually shaken my belief in the distinctness of skills. The point it I still cannot work out the nature of this relationship. I don't know what factors can affect it. (LLEBs' stage: independent knowing)
	L2 knowledge justification	I have come to realize the significance of autonomous learning in some language areas, and creative writing has helped me think writing is a "can-do." but I still believe instruction is vital (LLEBs' stage: transitional knowing)
Resolved Doubt	L2 knowledge certainty	Now that I have seen examples of ungrammaticality and strange word formation by native speakers and by my classmates in their pattern poetry (to which the teacher did not object), I have come to believe that language knowledge is not fixed. It can change from context to context. Unorthodox language use can be acceptable in one context (e.g., in lyrics for rhyming or to make a poem look like a poem), but not in the other (e.g., in a formal lecture). (LLEBs' stage: contextual knowing)
	L2 knowledge simplicity	Now I understand the relatedness of language skills is contingent on contextual variables, particularly the purpose of language use, formality and severity of the situation, and your audience's standards. One just needs to evaluate context features to realize how important this can be. (LLEBs' stage: contextual knowing)
	L2 knowledge source	Interaction with the native and Chinese teachers was a great experience. I now think that it is not only the teacher or the book that I should rely on for norms of accuracy and appropriateness. Now I believe L2 knowledge is multi-sourced, and the value of the teacher knowledge, materials-contained information, the Net, etc. depends very much on the purpose, audience, and other context variables. (LLEBs' stage: contextual knowing)
	L2 knowledge justification	Creative writing and the teachers' mention of the strengths of my writing were both inspiring. I have come to believe writing is not as difficult as I had thought. It is how you approach a writing task, and teachers' feedback which determine its difficulty. (LLEBs' stage: contextual knowing)

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3. hedging and boosting modals (N = 4) following advice letter writing and narrative reconstruction tasks;
4. lexical bundles (N = 3) following narrative writing tasks; and
5. speech act strategies (N = 5) following narrative reconstruction tasks.

Learners invariably pointed to a gradually emerging belief in the diachronic and synchronic variability of L2 knowledge, but also the significance of such contextual variables as audience, purpose of language use, situational severity, and formality for understanding this variability. They also pointed to the benefits of online interaction, teacher's example provision, and Net surfing in the posttask phase for developing criticality and context awareness.

As for L2 knowledge simplicity, resolved doubts, though rare, were embodied in mentions of context-contingent evaluatism in related utterances. They were focused on:

1. the relatedness of L2 skills (N = 3) following the acrostics, and story and narrative writing tasks;
2. the relatedness of linguistic and pragmatic competence (N = 2) following the advice letter writing task;
3. the relatedness of writing and discourse (genre) knowledge (N = 2) following the imaginary autobiography writing task; and
4. the inefficacy of memorization of L2 knowledge as the sole approach to its learning (N = 3) following poetry writing tasks.

Learners referred to (a) posttask teacher-led awareness-raising guided discovery activities and discussions on L2 knowledge in relation to its integratedness, and (b) provision of opportunities for experiencing this integratedness and for language play as the two most useful doubt resolution strategies. Beliefs were consistently expressed in the importance of

considering learners' needs and course goals for evaluating the effectiveness of single-focus or integrated approaches to L2 learning.

As far as the legitimate sources of L2 knowledge are concerned, resolved doubts (N = 32) were almost as frequent as those on L2 knowledge certainty (N = 31). The students were in accord regarding the usefulness of (a) live interactions with both native and nonnative EFL teachers, and (b) teacher-provided examples of conflicting information from different sources. They used to take teachers, materials, and native speakers' L2 knowledge for granted, and undermine peers' L2 knowledge and context-contingent evaluation of sources. Instruction offered a range of conflicting information on:

1. pronunciation (doubted source: teacher) (N = 3) following the simile task;
2. word meaning and grammar (doubted source: materials, peers, and native speakers) (N = 9) following the simile and acrostics tasks;
3. most effective learning strategies (N = 2) (doubted sources: teacher and peers) following advice letter writing and imaginary autobiography writing tasks;
4. legitimate content and L2 cultural norms (doubted source: teacher) (N = 3) following the acrostics and picture-based story writing tasks;
5. narrative's generic features (doubted sources: teacher, materials, and peers) (N = 3) following the story ending and picture-based story writing tasks;
6. speech act strategies (doubted sources: teacher and peers) (N = 7) following the narrative reconstruction task; and
7. the relative importance of L2 feature, skills, and components (doubted source: teacher) (N = 5) following the narrative reconstruction task.

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Finally, resolved doubts on L2 knowledge justification were not as frequent as those raised on L2 knowledge certainty and source. They were related to:

1. aptitude/intelligence for writing effectively (N = 4) following the simile and narrative reconstruction tasks;
2. nativespeakerist provenance (N = 12) following the simile, picture-based story writing, narrative reconstruction, and the two poetry writing tasks;
3. inherent difficulty of L2 writing (N = 4) following the acrostics and picture-based story writing tasks; and
4. the vitality of L2 instruction for the development of generic knowledge and letter writing ability (N = 3) following the story ending, advice letter writing, and imaginary autobiography writing.

The students mentioned the teacher's emphasis on comprehensibility, exemplification of erroneous and nonstandard English use by native speakers, provision of guidance on Net-based autonomous learning, and native and nonnative teachers' evaluation of task outcome as the most effective resolution strategies.

Overall, a number of observations regarding DQCA results are worth mentioning:

1. Most of the belief change statements followed a linear pattern from absolute knowing to transitional knowing, and then from transitional knowing to independent knowing. Contextual knowing was achieved simultaneously with independent knowing owing to instruction (N = 29). There were also a few examples of (a) development from absolute knowing to independent knowing (N = 3), (b) development from absolute knowing to contextual knowing (N = 5), (c) development from transitional knowing to contextual knowing (N = 5), and (d)

regress from independent knowing to transitional knowing ($N = 3$). None, however, involved a direct transition from absolute knowing to contextual knowing.

2. While instruction aimed at raising epistemic doubts on all the four core dimensions of EB, one or two aspects were noticed by each learner every session.
3. While instruction capitalized on raising learners' context awareness and criticality, some failed to achieve contextual knowing, backfiring instead on independent knowing.
4. Doubts were mainly induced by CWTs, and their resolution occurred more through posttask creative writing discussions, rather than the tasks themselves.
5. Although instruction focused on both linguistic competence and issues of culture and appropriateness, most of the expressed doubts were focused on linguistic competence.

5. Discussion

The present study showed the positive effect of a specifically designed instructional module comprising CWTs on English language learners' LLEBs' development. The observed positive effect can be explained in terms of the inherent features and sequencing of CWTs, and resolution strategies offered in the posttask phase. CWTs provided the instructor with ample opportunities to raise learners' epistemic doubts. Such tasks were at the same time inherently motivating, which could have induced part of the epistemic volition necessary for the doubts' resolution. In this regard, Dai (2010) stated that CWTs would pave the way for students' evaluation of their learning experiences and beliefs and for positive self-development. Along the same lines, Lee (2019, p. 13) maintained that CWTs help learners "generate new ideas, refine how they think,

develop their voices, and reshape their points of view.” Accordingly, they would serve well an instructional module aimed at raising and resolving epistemic doubts.

Task conditions and processes can also justify the findings. Learners were given the opportunity for group convergent task performance before they proceeded to monologic tasks. Afzali and Salehi (2022) and Robinson (2011) recapitulated the benefits of dialogic task performance for deeper and more critical learning. This benefit is specifically inherent in convergent, rather than divergent, tasks. Insofar as LLEBs are concerned, convergent tasks could possibly thrust the need to resolve whilst-task epistemic doubts in the face of one's peer's conflicting information. The epistemic sensitization phase together with group whilst-task discussions could have jointly prepared learners for approaching monologic tasks from an epistemological perspective. Progression from group to monologic tasks could have also created in learners “language learning-specific epistemic autonomy,” a concept in need of further research.

Resolutions strategies, however, were mostly contained in discussions of task outcomes. In other words, it was not CWTs alone that led to development; rather, the instructor's online decision making on resolution strategies probably worked to this effect. The common feature of all resolution strategies was raising learners' awareness of the significance of context for the choice of L2 features and learning strategies. This context awareness is the embodiment of the epistemological shift of the field of applied linguistics (Ortega, 2013; Waters, 2012); however, absolutist LLEBs (though not researched under this rubric) still abound among EFL learners and teachers in Iran. Asakereh et al. (2019) found a predominant inclination toward native speakers' accent and culture among Iranian L2 teacher trainers, and pre-service and in-service EFL teachers alike. They attributed this finding to the nativespeakerist provenance promoted in L2 classrooms. This resonates with Bagherkazemi's (2024) finding

that absolutism is what the epistemic climate of L2 classrooms in Iran hinges on. As for the present study, students pointed in their diaries to the benefits of live interaction with the native and Chinese EFL teachers, teacher's exemplification of conflicting information in relation to linguistic, generic, and pragmatic features, emphasis on the strengths of low performing pairs, and teacher-provided opportunities for evaluating L2 use appropriacy in context (e.g., Net surfing). These, they stated, helped them abstract away from their earlier absolutist knowing. In this regard, Marlina (2014) pointed to the need for raising L2 learners' awareness of different language varieties, and boosting their intercultural openness and criticality. ELT houses a wide range of opportunities for resolving learners' epistemic doubts, and technology can come of special aid in this respect. That the two EFL teachers contributed to discussions in six of the 10 was a great opportunity for learners to fight against their long-held faith in nativespeakerism.

All the 10 treatment sessions provided focus on all four aspects of LLEBs. This could partly account for instructional effectiveness as measured by LDEI; however, the construct of LDEI could have created a washback effect on the instructor's selected aspects of task outcomes. In other words, the instructor focused on those aspects of LLEBs contained in LDEI. In addition, from an activity theory perspective (Leontiev, 1978), LLEBs' development as the object of instruction was facilitated by instruction as "activity" embedding CWTs and interaction, aimed at transforming reality [seen from an absolutist perspective] into a form of subjectivity [inherent in context-contingent evaluatism]; however, given the predominance of learners' LLEBs-related statements related to linguistic competence, it seems that instruction as activity and learners as subjects mutually determined one another. This is while the instructor tried to also focus on discourse, intercultural, and strategic competences, as well. In this regard, Bagherkazemi (2024) showed the

predominance of absolutist LLEBs among EFL learners, which she attributed to the epistemic climate of orthodox English language classes in Iran. In addition to the effect of this epistemic climate on the instructional content and learners' noticing (evident in their diaries), the nature of tasks could also have acted as a mediator of their noticing. Formal constraints in CWTs paired with live interaction with native and nonnative EFL teachers are likely to have induced doubts regarding linguistic competence. Tin (2010) referred to the advantage of CWTs involving formal constraints (e.g., the similes, acrostics, and poetry writing tasks) in creating both form and meaning focus. On the other hand, narrative writing with less formal constraints housed a greater potential for raising epistemic doubts regarding such discourse features as speech act strategies and generic features of texts.

Participants' diaries showed that unresolved doubts were related to L2 knowledge simplicity and justification. It can be argued that EFL education in Iran has long promoted the idea of the distinctness of skills in its audiolingual underpinnings. Accordingly, learners' views of L2 knowledge simplicity might have been so hard-grained in their minds that they remained unresolved despite the instructor-provided resolution strategies. Moreover, unresolved doubts related to L2 knowledge justification rotated around the significance of intelligence, instruction, and achievement of native speaker competence. As for intelligence and instructional vitality, this observation is explicable with reference to the significance placed on learning aptitude and teacher-fronted education, including language education, in Iran (Asakereh et al., 2019). Nativespeakerist provenance could also be attributed to the promotion of communicative language teaching (CLT) at private language institutions, which itself is an embodiment of nativespeakerism (Piaseka, 2011). Rahmani et al. (2023) found LLEBs and domain-general EBs to be only moderately related;

however, how general education-related EBs are related to and can impact LLEBs stands in need of further research.

Last but not least, the predominance of statements indicating a linear development from absolute knowing to contextual knowing in student diaries can be taken as validity evidence for LDEI. Diaries, however, embedded a few examples of regress from independent knowing to transitional knowing. This is in line with the research finding that epistemological development is not always forward-directed (see Bendixen & Rule, 2004). Although instruction aimed at resolving epistemic doubts inherent in transitional and independent knowing, learners might have resolved the doubt by regressing to a less advanced stage of development. This alludes to the inefficacy of instruction to resolve doubts in a few cases, which can be attributed to learners' failure to notice the strategies' aims, or the mediating effect of learners' individual differences on instructional effectiveness (see Dornyei & Ryan, 2015). Furthermore, given the presence of belief change statements from both transitional and independent knowing to contextual knowing and the absence of belief change statements from absolute to contextual knowing in student diaries, a prerequisite for development to contextual knowing seems to have been "epistemic doubt." Coincidence of independent and contextual knowing could be taken as an indicator of instruction's effectiveness. In other words, successful development-focused instruction should provide effective resolution strategies before learners choose to backfire on transitional knowing to reach epistemic equilibrium.

6. Conclusion and Implications

Based on this study's findings, it is possible to facilitate L2 learners' LLEBs' development through an instructional module that aims at raising epistemic doubts and offers resolution strategies. More specifically, an epistemic sensitization phase can contribute to the effectiveness of any LLEBs'

development-focused instructional treatment. Moreover, CWTs in their full range house the potential to induce epistemic doubts and the prerequisite volition for their resolution. Such tasks are particularly suitable for learners' epistemological development as their dynamics are open to manipulation by the teacher. As a further component of instruction, resolution strategies can be devised online by the instructor given the contingencies of task accomplishment and the dimensions of LLEBs involved; however, the specific features of such tasks, including formal constraints involved in their accomplishment, can be a main determinant of the content of doubts and resolution strategies. More formal constraints tend to induce doubts on grammatical competence, while less formal constraints allow for instructional focus on discourse and pragmatic aspects of L2 knowledge and knowing. Two components of instruction could viably lead to development to context-contingent evaluatism: (a) resolution strategies spanning live interactions with native and nonnative EFL teachers, and (b) teacher's example provision and whole-class context awareness-raising discussions regarding converging or non-converging conflicting information. Instruction that promotes independent knowing, where learners see L2 knowledge as largely relative, should capitalize on context awareness-raising resolution strategies. On the other hand, ineffective doubt resolution can result in learners' regression to transitional knowing, wherein only few areas of L2 knowledge are viewed as relative. Learners' diaries also showed the predominantly staged nature of LLEBs as conceptualized in LDEI.

The study's implications are manifold. Theoretically, within an activity theory framework, the content of doubts and resolution strategies are largely mediated by the epistemic climate (involving syllabi and stakeholders) haunting the educational system. Predominant views regarding the central role of grammatical competence in Iran's EFL education could gear resolution strategies away from pragmatic competence (as a main aspect of linguistic

competence). The point is exemplified by Vettorel (2015) in relation to nativespeakerism (an aspect of L2 knowing beliefs): Language learners need to be exposed to various English varieties, which demands a radical change of absolutist beliefs. This implies that for facilitating L2 learners' LLEBs' development, first teachers themselves should develop advanced LLEBs. The practical implication follows that teacher education courses should aim at (a) facilitating student-teachers' LLEBs' development and (b) providing them with the pedagogical apparatus for facilitating their students' LLEBs' development. The first aim could be achieved through epistemic sensitization and development workshops, while the second aim can be realized through their equipment with research findings regarding the potential of various language learning tasks (e.g., CWTs in this study) and viable resolution strategies. They themselves can also contribute to this aspect of the teacher education course through participatory action, and share their lived experiences in this regard with teacher educators. Another practical implication relates to the embodiment of resolution strategies in posttask discussions and activities. It might not be too ambitious to suggest that LLEBs' development be set as the context, rather than content, of all L2 classrooms. In other words, teachers can seize opportunities in the classroom, no matter what the task type is, for LLEBs' development. While some tasks like CWTs might lend themselves more effectively to raising epistemic doubts on the nature of L2 knowledge and knowing, all L2 instruction can be implemented in a way to advance learners along the epistemological development continuum.

The study's limitations need to be admitted. First and foremost, questionnaires are not the best option in beliefs research. About three decades ago, Horwitz (1987) stated that the qualitative investigation of beliefs can be more illuminating than its report as an aggregate score on a questionnaire. As for LDEI, a scrutiny of individual participants' change scores showed cases, of

regress to an earlier stage of LLEBs' development, and development from transitional or absolute knowing to contextual knowing. Accordingly, a score on LDEI cannot fully capture the nature of LLEBs' development; this said, LDEI can be used for exploratory purposes to unearth LLEBs' relationship with learner variables and the effect of various development-focused instructional approaches on development. It is advisable to complement LDEI results with qualitative analyses of students' attitudes towards instruction to gain a full picture of development. Secondly, the analysis of learners' diaries showed they did not notice all the aspects of LLEBs covered in each session. While instruction in this study was all-encompassing (covering all the dimensions of LLEBs), it might be a better idea to provide focused instruction on each of the core dimensions of LLEBs, and capitalize on that dimension in the pretreatment epistemic sensitization phase. In addition, an explicit epistemic sensitization phase, rather than an implicit one, as operationalized in this study, could potentially contribute to more noticing and subsequently a higher level of instruction-induced awareness. Further research is needed to find out which of the implicit and explicit LLEBs' development-focused instructional approaches would more effectively produce the desired effect. Finally, all the resolution strategies were investigated together in this study, which makes interpretations about the effectiveness of each difficult. Further studies can be designed to investigate the effectiveness of various L2 knowledge and knowing doubt resolution strategies in view of (a) their suitability for each of the dimensions of LLEBs, and (b) potential for general LLEBs' development.

References

- Afzali, K., & Salehi, S. (2022). Collaborative reflection through blogs: Discoursal patterns and Iranian EFL pre-service teachers' comments. *Teaching English Language, 16*(1), 141-166. <https://doi.org/10.22132/tel.2022.149558>
- Akbari, R., & Karimi, M. N. (2013). EFL students' proficiency outcomes: What do epistemological beliefs have to offer? *Asian EFL Journal, 15*(3), 10-37.
- Asakereh, A., Yousofi, N., & Weisi, H. (2019). ELF in the Iranian education system: Exploring teacher trainers' and pre-service/in-service English teachers' attitudes. *Cogent Education, 6*(1). <https://doi.org/10.1080/2331186X.2019.1622625>
- Bagherkazemi, M. (2024). The epistemic climate of a high school English language classroom in Iran: An ethnographic case study. *Language Related Research, 15*(2), 95-130. <https://doi.org/10.29252/LRR.15.2.4>
- Baleghizadeh, S., & Dargahi, Z. (2016). What aspects of creativity environment do EFL textbooks take into account? In B. Tomlinson (Ed.), *SLA research and materials development for language learning* (pp. 185-197). Routledge.
- Baxter Magolda, M. B. (1992). Knowing and reasoning in college: Gender-related patterns in students' intellectual development. Jossey-Bass.
- Baxter Magolda, M. B. (2001). Making their own way: Narratives for transforming higher education to promote self-development. Stylus.
- Baxter Magolda, M. B. (2004). Evolution of a constructivist conceptualization of epistemological reflection, *Educational Psychologist, 39*(1), 31-42. http://doi.org/10.1207/s15326985ep3901_4
- Bendixen, L. D., & Rule, D. C. (2004). An integrative approach to personal epistemology: A guiding model, *Educational Psychologist, 39*(1), 69-80. https://doi.org/10.1207/s15326985ep3901_7
- Bernat, E. & Gvozdenko, I. (2005). Beliefs about language learning: Current knowledge, pedagogical implications, and new research directions. *TESL-EJ, 9*(1), 1-21.
- Carter, R. (2004). *Language and creativity*. Routledge.
- Dai, F. (2010). English language creative writing in mainland China. *World Englishes, 29*(4), 546-556. <https://doi.org/10.1111/j.1467-971X.2010.01681.x>
- Ding, L., Wei, X., & Mollohan, K. (2016). Does higher education improve student scientific reasoning skills? *International Journal of Science and Mathematics Education, 14*(4), 619-634. <https://doi.org/10.1007/s10763-014-9597-y>

- Dornyei, Z., & Ryan, S. (2015). *The psychology of the language learner revisited*. Routledge.
- Esmacili, S. Z., Kuhi, D., & Behroozizad, S. (1999). Developing intercultural sensitivity through interculturality-laden tasks: Male vs. female Iranian EFL learners. *Teaching English Language*, 16(1), 1-34. <https://doi.org/10.22132/tel.2022.143868>
- Fazilatfar, A. M., Rayati Damavandi, R., Harsej, R., & Kia Heirati, J. (2014). Learners' belief changes about language learning. *International Journal of English Language Education*, 3(1), 1-19. <https://doi.org/10.5296/ijele.v3i1.6654>
- Fitzgerald, S., & Schutte, N. S. (2010). Increasing transformational leadership through enhancing self-efficacy. *Journal of Management Development*, 29(5), 495-505. <https://doi.org/10.1108/02621711011039240>
- Frostig, K. (2011). Arts activism: Praxis in social justice, critical discourse, and radical modes of engagement. *Art Therapy*, 28(2), 50-56. <https://doi.org/10.1080/07421656.2011.578028>
- Golino, H., H.amer, R., Almers, E., & Kjellstrom, S. (2019). The structure of the epistemological development in teaching learning questionnaire. *Cogent Education*, 6(1). <https://doi.org/10.1080/2331186X.2019.1655211>
- Geranpayeh, A. (2003). A quick review of the English Quick Placement Test. *University of Cambridge ESOL Examinations Research Notes*, 12, 8-10. Available online at: http://www.uniss.it/documenti/lingue/what_is_the_OPT.pdf
- Hoey, K. C. (2020). *Building student development through creative writing workshops*. [Unpublished PhD Dissertation]. University of New England. Available online at: <https://dune.une.edu/theses/324>
- Hofer, B. K., & Pintrich, P. R. (1997). The development of epistemological theories: Beliefs about knowledge and knowing and their relation to learning. *Review of Educational Research*, 67(1), 88-140. <https://doi.org/10.3102%2F00346543067001088>
- Holmes, V. L., & Moulton, M. R. (2001). *Writing simple poems: Pattern poetry for language acquisition*. Cambridge University Press.
- Horwitz, E. (1987). Surveying student beliefs about language learning. In A. Wenden & J. Rubin (Eds.), *Learner strategies in language learning* (pp. 119-132). Prentice Hall.
- Howitt, S. M., & Wilson, A. N. (2016). Reflecting on the use and abuse of scientific data facilitates students' ethical and epistemological

- development. *Science Education*, 102, 571-592. <https://doi.org/10.1002/sce.21333>
- Kerwer, M., & Rosman, T. (2018). Mechanisms of epistemic change - under which circumstances does diverging information support epistemic development? *Frontiers in Psychology*, 9, 1-22. <https://doi.org/10.3389/fpsyg.2018.02278>
- King, P., & Kitchener, K. S. (1994). *Developing reflective judgment: Understanding and promoting intellectual growth and critical thinking in adolescents and adults*. Jossey-Bass.
- Klopp, E., & Stark, R. (2020). Learning to argue from others' erroneous arguments - Fostering argumentation competence through learning from advocacy errors. *Frontiers in Education*, 5, 1-18. <https://doi.org/10.3389/educ.2020.00126>
- Kuhn, D. (1999). Metacognitive development. In L. Balter & C. Tamis LeMonda (Eds.), *Child psychology: A handbook of contemporary issues* (pp. 259-286). St. Francis.
- Kumaravadivelu, B. (2006). *Understanding language teaching: From method to postmethod*. Routledge.
- Lantolf (1994). Sociocultural theory and second language learning. *The Modern Language Journal*, 78(4), 418-420. <https://doi.org/10.1111/j.1540-4781.1994.tb02058.x>
- Lee, S. (2019). Her Story or their own stories? Digital game-based learning, student creativity, and creative writing. *ReCALL*, 31(3), 238-254. <https://doi.org/10.1017/S0958344019000028>
- Leontiev, A. (1978). *Activity, consciousness, and personality* (M. Hall, Trans.). Prentice-Hall.
- Marlina, R. (2014). The pedagogy of English as an international language (EIL): More reflections and dialogues. In R. Marlina & R. Giri (Eds.), *The pedagogy of English as an international language: Perspectives from scholars, teachers, and students* (pp. 1-19). Springer.
- Moon (2008). *Critical thinking: An exploration of theory and practice*. Routledge.
- Mori, Y. (1999). Epistemological beliefs and language learning beliefs: What do language learners believe about their learning? *Language Learning*, 49(3), 377-415.
- Nikitina, L., & Furuoka, F. (2018). Dimensionality in language learners' personal epistemologies. *International Journal of Instruction*, 11(1), 269-282. <http://doi.org/10.12973/IJI.2018.11119A>
- Ortega, L. (2013). SLA for the 21st century: Transdisciplinary progress, transdisciplinary relevance, and the bi/multi-lingual turn. *Language*

- Learning*, 63(s1), 1-24. <https://doi.org/10.1111/j.1467-9922.2012.00735.x>
- Perry, W. G. (1970). *Forms of intellectual and ethical development in the college years: A scheme*. Holt, Rinehart, & Winston.
- Piaseca, L. (2011). Sensitizing foreign language learners to cultural diversity through developing intercultural communicative competence. In J. Arabski & A. Wojtaszek (Eds.), *Aspects of culture in second language acquisition and foreign language learning* (pp. 21-34). Springer.
- Porsch, T., & Bromme, R. (2011). Effects of epistemological sensitization on source choices. *Instr. Sci.*, 39(6), 805-819. <https://doi.org/10.1007/s11251-010-9155-0>
- Rahmani, M., Bagherkazemi, M., & Ameri, A. (2021). A qualitative investigation of language learners' epistemological beliefs: Core dimensions and development in focus. *Issues in Language Teaching*, 10(2), 61-93. <https://doi.org/10.22054/ilt.2022.63944.642>
- Rahmani, M., Bagherkazemi, M., & Ameri, A. (2023). Developmental L2 learning epistemology: The construct and its relationship with general epistemological beliefs. *Journal of Language Horizons*, 7(3), 35-62. <http://doi.org/10.22051/lghor.2022.39368.1636>
- Richardson, J. T. E. (2013). Epistemological development in higher education. *Educational Research Review*, 9, 191-206. <https://doi.org/10.1016/j.edurev.2012.10.001>
- Robinson, P. (2011). Task-Based language learning: A review of issues. *Language Learning*, 61(s1), 1-36. <https://doi.org/10.1111/j.1467-9922.2011.00641.x>
- Schiefer, J., Golle, J., Tibus, M., Herbein, E., Gindele, V., Trautwein, U., & Oschatz, K. (2020). Effects of an extracurricular science intervention on elementary school children's epistemic beliefs: A randomized controlled trial. *The British journal of educational psychology*, 90(2), 382-402. <https://doi.org/10.1111/bjep.12301>
- Schommer, M. (1994). An emerging conceptualization of epistemological beliefs and their role in learning. In R. Garner & P. A. Alexander (Eds.), *Beliefs about text and instruction with text* (pp. 25-40). Lawrence Erlbaum.
- Schommer-Aikins, M. (2004). Explaining the epistemological belief system: Introducing the embedded systemic model and coordinated research approach. *Educational Psychologist*, 39(1), 19-29. https://doi.org/10.1207/s15326985ep3901_3
- Shava, G. N., Hleza, S., Tlou, F., Shonhiwa, S., & Mathonsi, E. (2021). Qualitative content analysis, utility, usability and processes in

- educational research. *International Journal of Research and Innovation in Social Science*, 5(7), 553-558.
- Shirzad, S, Barjesteh, H., Dehqan, M., & Zare, M. (2021). The interplay among EFL students' epistemic beliefs, language learning strategies, and L2 motivational self-system: A structural equation modeling approach. *Journal of Modern Research in English Language Studies*, 8(1), 169-195. <https://doi.org/10.30479/jmrels.2020.12621.1562>
- Sifakis, N. C. (2019). ELF awareness in English language teaching: Principles and processes. *Applied Linguistics*, 40 (2), 288-306. <https://doi.org/10.1093/applin/amx034>
- Smith, C. A. (2013). Creative writing as an important tool in second language acquisition and practice. *The Journal of Literature in Language Teaching*, 2(1), 12-18. Available online at: https://www.researchgate.net/publication/263203531_Creative_writing_as_an_important_tool_in_second_language_acquisition_and_practice
- Smith, S., & Martin, J. (2014). Practitioner capability. *Higher Education, Skills and Work-Based Learning*, 4(3), 284-300. <https://doi.org/10.1108/HESWBL-04-2014-0009>
- Tin, T. B. (2010). Language creativity and co-emergence of form and meaning in creative writing tasks. *Applied Linguistics*, 32(2), 215-235. <https://doi.org/10.1093/applin/amq050>
- Vetorrel, P. (2015). World Englishes and English as a lingua franca: Implications for teacher education and ELT. *Iperstoria: Journal of American and English Studies*, 6, 229-244. <https://doi.org/10.13136/2281-4582/2015.i6.302>
- Waters, A. (2012). Trends and issues in ELT methods and methodology. *ELT Journal*, 66(4), 440-449. <http://doi.org/10.1093/elt/ccs038>
- West, E. J. (2004). Perry's legacy: Models of epistemological development. *Journal of Adult Development*, 11, 61-70. <https://doi.org/10.1023/B:JADE.0000024540.12150.69>
- Ziegler, N. E. (2015). English language learners' epistemic beliefs about vocabulary knowledge. [Unpublished Ph.D. Dissertation]. University of Toledo.

Appendix: Creative Writing Tasks' Features and Epistemic Focus

Session	Task Description	Task Features				Epistemic Focus	
		Input	Conditions	Processes	Outcome	Epistemic Doubt	Resolution Strategies
1	Similes (Tin, 2010); a six to 10-line simile on the "English class;" average whilst-task time: 25 minutes; posttask discussion time: 37 minutes	Model written text	Dialogic, two-way, single	Opinion exchange, reasoning, moderate formal constraint	Written, open, descriptive	<ul style="list-style-type: none"> •certainty: word meaning (e.g., heartening) •Source: pronunciation (e.g., accentuate) •Justification: native-speakerist provenance; intelligence 	<ul style="list-style-type: none"> •Dictionary check; Net check with reference to contextual variables •Emphasis on comprehensibility (rather than accuracy) through live interaction with a native English speaker •Highlighting the strengths of the least effective outcome to counter intelligence/aptitude impediments of language learning tasks' accomplishment
2	Acrostics (Tin, 2010); a six-line simile on "mother" with individual letters set as line starts; average whilst-task time: 23 minutes; posttask discussion time: 40 minutes	Model written text	Dialogic, two-way, single	Opinion exchange, reasoning, high formal constraint	Written, open, descriptive	<ul style="list-style-type: none"> •Certainty: morphology (e.g., tophy, meaning being at the top) •Simplicity: speaking-writing relatedness •Source: strategies for pinpointing features to include; culture regarding mom's position in L1 and L2 •Justification: inherent difficulty of appropriate word choice 	<ul style="list-style-type: none"> •Provision of examples, with reference to contextual variables •Brainstorming of mom features, that helped writing and intercultural discussions •Evaluation of task outcomes as more or less western •Brainstorming strategies for word choice, and selection based on individual features and context variables •Provision of guidance on how to select a word on "google" through developing context awareness
3	Story ending (Lee, 2019); a 100-150 word ending paragraph; average whilst-task time: 23 minutes; posttask discussion time: 38 minutes	Model written text	Dialogic, two-way, single	Opinion exchange, reasoning, low formal constraint	Written, open, narrative	<ul style="list-style-type: none"> •Certainty: lexical bundles to start an "ending" paragraph (in the end, at the end, ...) •Simplicity: reading-writing relatedness •Source: length of the paragraph; content of paragraph moves •Justification: need for instruction or independent learning regarding moves and steps 	<ul style="list-style-type: none"> •Provision of several ending paragraphs as non-diverging conflicting information with reference to context variables; •Provision of a related story about one of the characters; •Provision of information different from (non-diverging) and opposed to teacher-provided instruction; •Provision of websites containing instruction on conclusion paragraphs and modelling text search on the net
4	Picture-based story writing (Tin, 2010); a three-paragraph story (250-300 words); average whilst-task time: 35 minutes; posttask discussion time: 30 minutes	Model oral text	Dialogic, two-way, single	Opinion exchange, reasoning, low formal constraint	Written, open, narrative	<ul style="list-style-type: none"> •Certainty: context-based word meaning, verb tense in stories •Simplicity: speaking-writing relatedness •Source: moves and steps; culture-related content (chronological/flashback) •Justification: inherent writing difficulty; nativespeakerist provenance 	<ul style="list-style-type: none"> •Dictionary check; Net check with reference to contextual variables; •Emphasis on features of the oral model to boldface integratedness of L2 skills; •Online stories' evaluation by a native and a Chinese EFL teacher; Emphasis on joint task accomplishment possibility by accentuating the strengths of uneven pairs to oppose attribution of failure to L2 skills and areas' inherent difficulty

5	Narrative reconstruction: Setting (Lee, 2019); rewriting a given story in a different cultural setting (250-300 words); average whilst-task time: 40 minutes; posttask discussion time: 40 minutes	Model oral text	Dialogic, two-way, single	Opinion exchange, reasoning, low formal constraint	Written, open, descriptive	<ul style="list-style-type: none"> •Certainty: lexical bundles to open a story (Once upon a time, ...) •Simplicity: speaking-writing relatedness; vocabulary knowledge and fluency relatedness •Source: speech act performance; importance of vocabulary and grammar knowledge over other L2 skills and components •Justification: intelligence/aptitude as a determinant of L2 learning success 	<ul style="list-style-type: none"> •Provision of several opening paragraphs as non-diverging conflicting information with reference to context variables; •Requiring whole class oral story telling prior to task performance; emphasis on the adequacy of one of the outcomes accomplished by a learner with a wide vocabulary repertoire •Online stories' evaluation by a native English and a nonnative Chinese EFL teacher with particular attention to the efficacy of speech act (request, apology, ...) strategies in story-contained dialogues; •Bringing to the forefront the outcome accomplished by those admitting their low language learning aptitude
6	Narrative reconstruction: Point of view (Lee, 2019); rewriting a given story from one of the characters' point of view (250-300 words); average whilst-task time: 40 minutes; posttask discussion time: 40 minutes	Model oral text	Dialogic, two-way, single	Opinion exchange, reasoning, low formal constraint	Written, open, argument	<ul style="list-style-type: none"> •Certainty: speech act strategies (request, compliment); use of an archaic word (beforementioned) •Simplicity: reading-writing relatedness •Source: peers' grammar and word knowledge •Justification: nativespeakerist provenance in relation to cultural associations of speech act performance 	<ul style="list-style-type: none"> •Discussion of speech act strategies in relation to power, distance, severity, and identity •Emphasis on the significance of the close reading of the source text for successful task performance (i.e., narrative reconstruction) •Urging peer feedback, and encouraging oral self-evaluation based on that feedback with reference to one's intentions •Live interaction with a native English and a Chinese EFL teacher to evaluate randomly selected speech acts produced as part of the task's outcome
7	Advice letter writing to one's younger self; writing a 200-word letter of advice to one's younger self based on one's experiences and ambitions; average whilst-task time: 30 minutes; posttask discussion time: 40 minutes	Model written text	Monologic, one-way, single	Independent reflection, low formal constraint	Written, open, instructions	<ul style="list-style-type: none"> •Certainty: use of modal verbs to hedge and boost statements •Simplicity: relatedness of linguistic competence and pragmatic competence (appropriacy in focus) •Source: peers' knowledge of letter beginning and ending strategies •Justification: instruction necessity 	<ul style="list-style-type: none"> •Discussion of metadiscourse markers with reference social context variable and perlocutionary effects •Provision of model advice sentence with different forces and implied meanings, and their evaluation based on social context variables and their L1 and L2 cultural underpinnings •Net check for letter beginnings and endings with reference to formality and recipients' features •Net check for instruction on how to write letters, and how to offer advice to boost autonomy
8	Imaginary autobiography; writing a 250-300 word imaginary autobiography in view of wishes and ambitions; average whilst-task time: 37 minutes; posttask discussion time: 47 minutes	Model written text	Monologic, one-way, single	Independent reflection, low formal constraint	Written, open, narrative	<ul style="list-style-type: none"> •Certainty: pronunciation (American, British, Chinese English) (e.g., pure); use of formal/informal words and slangs •Simplicity: significance of generic knowledge for successful task performance •Source: peer strategies for finding out about autobiographies •Justification: instruction necessity 	<ul style="list-style-type: none"> •Provision of examples of different pronunciations by native and nonnative speakers; •Dictionary check for words and expressions' contextual appropriateness •Guided discovery of dynamic generic features of biographies through reflection over provided samples •Reflection over own and peers' strategies and their evaluation with reference to one's learning and study habits •Net check for instruction on how to write autobiographies

9	<p>Poetry writing with a given first line (Holmes & Moulton, 2001; Smith, 2013); writing a 10-15 line poem; average whist-task time: 30 minutes; posttask discussion time: 45 minutes</p>	Model written text	Monologic, one-way, single	Independent reflection, moderate formal constraint	Written, open, descriptive/argument	<ul style="list-style-type: none"> •Certainty: word coinage, comprehensible in context (tearer, for one who sheds tears; or tearology) •Simplicity: inefficacy of memorization as the sole approach to language learning •Source: ungrammaticalities as put forth in books •Justification: nativespeakerist provenance 	<ul style="list-style-type: none"> •Net and dictionary check for appropriateness reflections with reference to social context variables; online interaction with a native English and a Chinese EFL teacher; •Reflection over learners' memorized vocabulary repertoire vs. inventiveness for task accomplishment •Provision of examples of ungrammaticality in poetry written by English native speakers (for rhyming purposes); online evaluation by a native and a Chinese EFL teacher (leading to discussions of comprehensibility vs. communicative competence)
10	<p>Pattern poetry; writing a quatrain; average whist-task time: 40 minutes; posttask discussion time: 49 minutes</p>	Model written text	Monologic-one-way, single	Independent reflection, high formal constraint	Written, open, descriptive/argument	<ul style="list-style-type: none"> •Certainty: archaic words (thou, thee); archaic conditional (with "lest") •Simplicity: inefficacy of memorization as the sole approach to language learning •Source: ungrammaticalities as put forth in books •Justification: nativespeakerist provenance 	<ul style="list-style-type: none"> •Net and dictionary check for appropriateness reflections with reference to social context variables; online interaction with a native English and a Chinese EFL teacher; •Reflection over learners' memorized grammar repertoire vs. inventiveness for task accomplishment •provision of examples of ungrammaticality in poetry written by English native speakers (for rhyming purposes); online evaluation by a native and a Chinese EFL teacher (leading to discussions of comprehensibility vs. communicative competence)



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