



Public Report: A scoping review into the teaching and learning of Arabic as an Additional Language

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1. Rationale

In recent decades, the demand for teaching Arabic as an additional language (AL2) has expanded due to globalisation, shifting economic powers, and geopolitical events (Tinsley, 2015). However, despite its prominence, Arabic is often considered to be very difficult to learn as an additional language, in particular for speakers of English as a first language (Belnap, 2006). It has been categorised by the US Foreign Service Institute as one of only five ‘Category IV’ languages, which are described as ‘super-hard languages’ to learn for native English speakers, requiring over three times as many class hours as languages such as Spanish and French (US Department of State, n.d.). Arabic is further complicated by the language’s ‘multiglossic’ nature, consisting of standard, classical, and colloquial varieties, each with its own realms of application.

The pedagogical challenges presented by this unique and complex linguistic and sociolinguistic situation are significant (Nielsen, 2015). Debate continues in the Arabic practitioner and research community over the most appropriate approaches for teaching Arabic in order to equip students with the tools to function in authentic contexts.

We believe that research into the teaching and learning of AL2 can and should make a crucial contribution to this debate. However, in order for this to be possible, it is important for research findings to be appraised, synthesized and distilled into clear and usable implications for teachers and policymakers.

As a first step towards this goal, we have conducted a systematic scoping review, which aims to provide a clear picture of the extent and nature of existing research into the learning and teaching of AL2. Our review provides a ‘map of the landscape’ of research published in English, signposting teachers and researchers to publications that may be relevant to them, and identifying gaps in the existing literature which highlight the need for further research.

2. Methods

2.1 Scope

The term Arabic as an additional language (AL2) is here adopted to refer to the teaching and learning of Arabic as anything other than a first language (L1; i.e., a language learned in infancy through naturalistic exposure). Our use of the term ‘additional language’ includes both ‘foreign language’ and ‘second language’, the traditional categories used to refer to languages learned or acquired in addition to a learner’s L1 (Ellis, 2015, p. 18):

‘Second language acquisition’ refers to the learning of another language in a context in which the language is used as a means of wider communication—for example, the learning of English in the United States or the United Kingdom. The assumption is that

learners will ‘pick up’ the language as a result of the everyday communicative situations they experience. ‘Foreign language acquisition’ refers to the learning that typically takes place in a classroom through instruction where there are no or only limited opportunities to use the second language in daily life. [Emphasis added].

Our use of the term AL2 also includes heritage learners of Arabic in non-Arabic-speaking countries: e.g., students in England who have acquired a dialect of Arabic in their home, are attending an English-medium school and who are learning Arabic either as part of the school curriculum or in a complementary school setting. Our definition further includes students who are learning Classical Arabic for religious purposes either in or outside school. However, it does not include native Arabic dialect speakers learning Modern Standard Arabic (MSA) in Arabic-speaking countries.

2.2 Review Questions

We devised the following questions to guide our scoping review.

Overarching question:

What is the extent and nature of the empirical evidence, published in the English language, on teaching and learning Arabic as an Additional Language?

Sub-questions:

1. Where have studies been published?
2. Which topics have been researched?
3. In which learning contexts have studies been conducted?
4. Which methodological approaches have been used?

2.3 Procedure

We began by designing a ‘review protocol’, outlining the proposed steps in our study and how they would be completed. We were assisted by an Expert Advisory Panel (see appendix B for membership) in designing and refining our protocol.

The protocol included our ‘search strategy’, which comprised the list of electronic databases we used, and the ‘search terms’ that we entered into these databases to identify potentially relevant studies. The protocol also included: our ‘inclusion criterion’, which we used to determine whether or not the studies identified by our search were in fact relevant for inclusion; the steps by which we screened the search results and selected studies for inclusion; and the methods of ‘data extraction’, detailing how we obtained the information needed from the included studies to answer our review questions. The full protocol can be viewed at

<https://idesr.org/article/IDESR000054>¹; its main elements are summarised in the following sections.

2.3.1 Search Strategy

The following databases were searched in an effort to ensure comprehensive coverage of relevant material:

- Web of Science (Social Sciences Citation Index (SSCI))
- Education Collection (including ERIC)
- Scopus
- Linguistics Database (including LLBA)
- British Education Index
- PsycInfo
- ProQuest Dissertations and Theses Global
- EBSCO

We formulated a comprehensive set of search terms designed to capture all research relating to the teaching and learning of Arabic as an additional language published in English. No date range for publications was specified. The search terms can be found in our protocol.

2.3.2 Inclusion Criterion

The following inclusion criterion was adopted to determine whether or not publications identified by our search would be included in the review:

- *Does the paper present one or more empirical studies reporting data on the learning, teaching or use of AL2?*

Publications which did not meet this criterion (e.g., descriptive or reflective pieces; publications relating only tangentially to AL2) were excluded. Due to resource constraints and other practical issues, only studies published and available in the English language were included in this scoping review².

¹ A number of modifications were subsequently made to this protocol during the review process, due to issues and challenges arising during the search and screening processes.

² We initially intended to include Arabic-language publications as well. However, having identified a number of Arabic-language databases, we found that they all lacked one or more of the key characteristics needed to support the systematic searching and screening processes specified in our protocol. We intend to work further on Arabic-language research in the future, but at the current point, we are only able to present findings in relation to English-language literature. Our searches also identified a number of texts in other languages (e.g., French, Hebrew), which we also excluded due to resource constraints. We acknowledge that this is a limitation of our review.

2.3.3 Screening process

All publications identified in the databases were downloaded. Their titles and abstracts were screened manually against our inclusion criterion to decide whether they should be included or excluded in our review. 300 publications (6% of the total) were screened by both authors independently and our judgments compared ('interrated'), to ensure that the inclusion criterion was being applied reliably. Interrater agreement was 96%. Publications which did not meet the inclusion criterion were rejected; those which met the criterion, and those for which the title and abstract provided insufficient information to make a decision, were included at this stage.

Following the title and abstract screening, the full text of each included article was located, and we screened the publications again against our inclusion criterion. Inclusion decisions for 51 items (5% of the total) were interratered to ensure reliability. Interrater agreement was 92%.

2.3.4 Data Extraction

Once a complete list of relevant records was determined, each individual publication was examined, and all relevant data extracted and collated in an Excel spreadsheet³. Data extraction was also interratered to ensure reliability; interrater agreement was again very high at 94%. The data was then analysed in order to answer the review questions.

3. Results

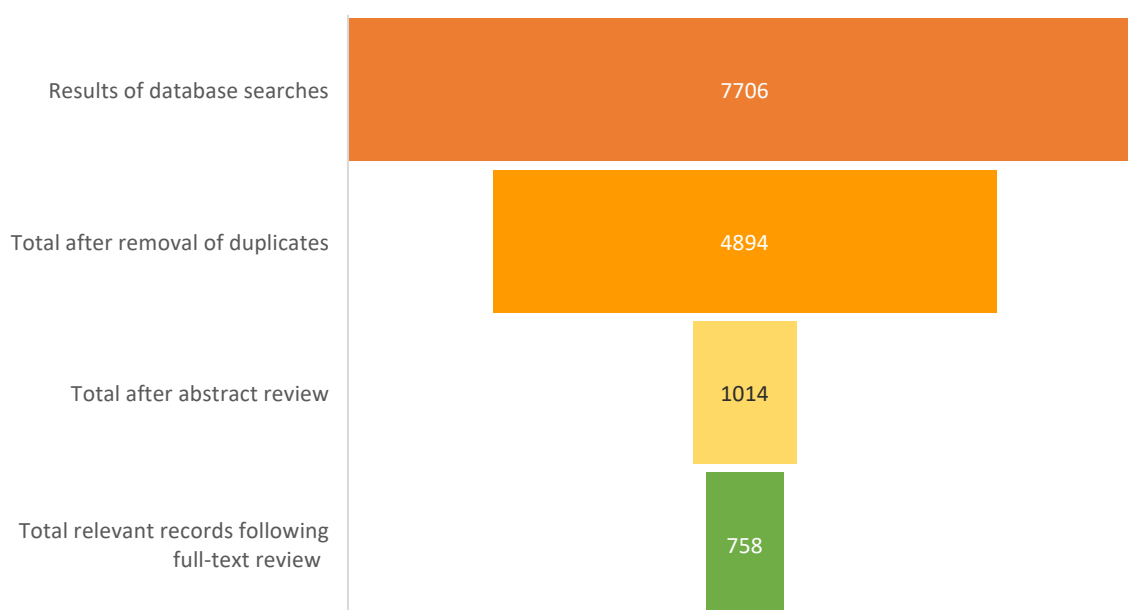
3.1 Records

The database searches generated a list of 7706 potentially relevant publications, of which 2812 were found to be duplicates and therefore removed, leaving 4894 unique records. The title and abstract screening determined that 1016 of these met, or might meet, our inclusion criterion. During the full-text screening, 178 of these records were rejected as irrelevant on the basis of the inclusion criterion, or because the publication was not written in English. For a further 80 publications, the full texts could not be accessed in time to be included in this review⁴. This left 758 relevant full-text records from which data was extracted. These steps in the screening process are shown in Figure 1.

³ For a full list of data extraction items, please refer to the review protocol: <https://idesr.org/article/IDESR000054>.

⁴ We are continuing to seek full-text access to these publications for inclusion in future phases of this review.

Figure 1. Results of database search and screening processes



3.2 Review Questions

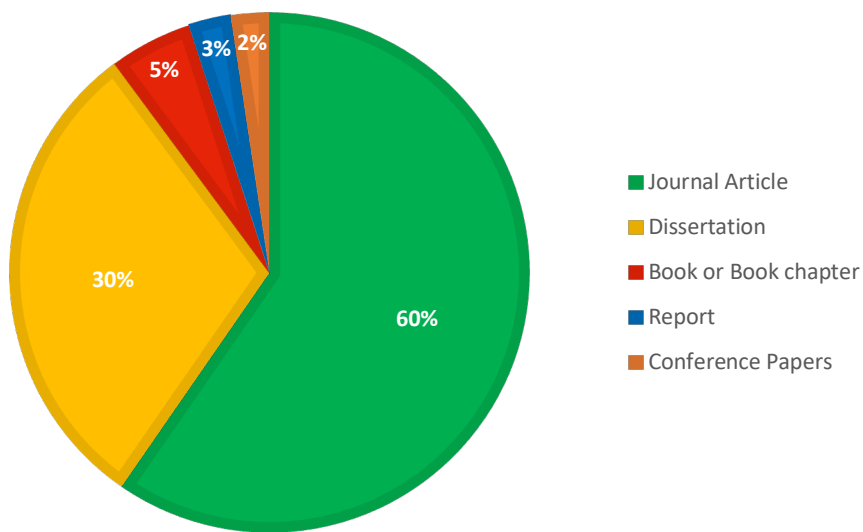
Question 1. Where have AL2 studies been published?

Empirical research on the teaching and learning of AL2 has been published predominantly in journal articles (see Table 1; Figure 2). However, research has also been published in both dissertations and book chapters, as well as reports and conference papers.

Table 1. Frequency of publication type

Publication Type	Frequency	Percentage of our overall sample
<i>Journal Article</i>	452	59.6
<i>Dissertation</i>	229	30.2
<i>Book or Book chapter</i>	39	5.2
<i>Report</i>	20	2.6
<i>Conference Papers</i>	18	2.4

Figure 2. Distribution of publication types



Further analysis was conducted to determine in which journals articles have been published. In total, articles have been published in 210 different journals. Journals in which we found 10 or more articles on AL2 are presented in Table 2.

Table 2. Most Frequent Journals for Articles on AL2 Teaching and Learning

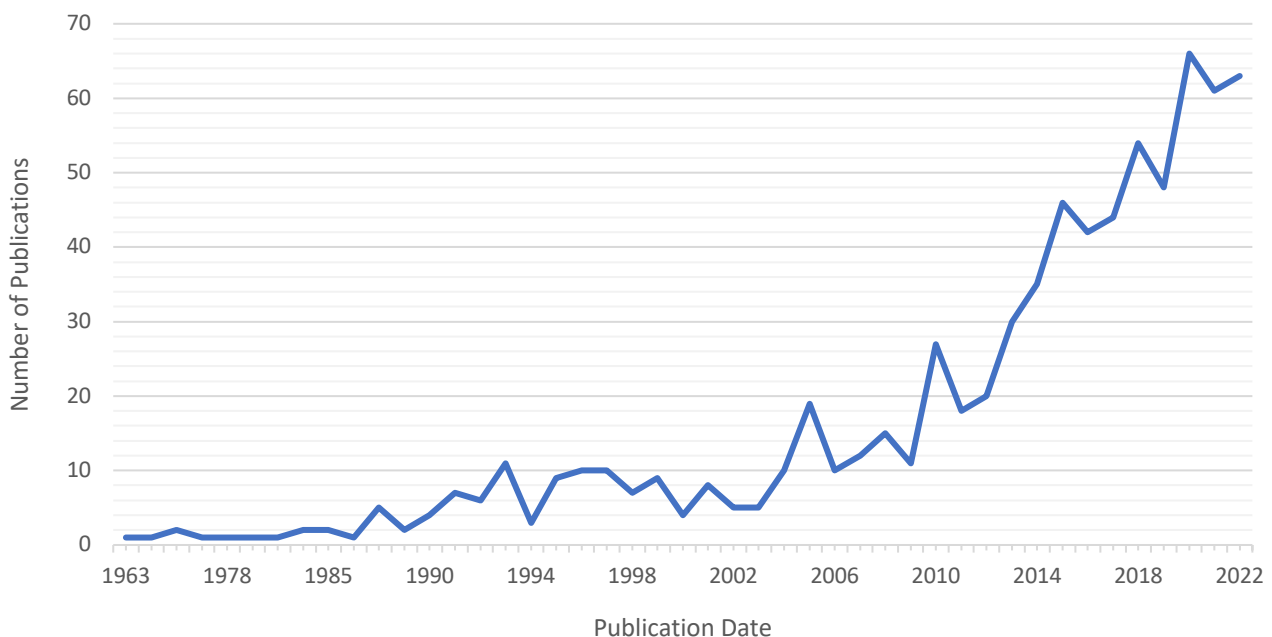
Journal	Frequency
<i>Foreign Language Annals</i>	42
<i>Al-'Arabiyya</i>	26
<i>Journal of Multilingual & Multicultural Development</i>	12
<i>System</i>	11
<i>Journal of Language and Linguistic Studies</i>	10
<i>Journal of the National Council of Less Commonly Taught Languages</i>	10

Of the 229 dissertations in our sample, 83% were doctoral theses, with the remainder being Master's dissertations. These were published at 114 different institutions. Table 3 presents the top 10 institutions in terms of AL2 research output, based on the data in our review. Of these, 9 are located in the United States.

Table 3. Top 10 universities for dissertations on AL2 research

University	Frequency
<i>University of Arizona</i>	13
<i>Brigham Young University</i>	9
<i>Ohio State University</i>	8
<i>University of Wisconsin</i>	8
<i>Georgetown University</i>	7
<i>Argosy University</i>	7
<i>University of Leeds</i>	7
<i>University of Kansas</i>	5
<i>Indiana University</i>	5
<i>Southern Illinois University</i>	5

In addition to the type of publication, we also investigated publication trends over time by examining publication dates. As is evident from Figure 3, there has been a rapid increase in the number of publications on the teaching and learning of AL2 over the past two decades. (A further 8 studies published in 2023 up until the time of writing this report are not included in Figure 3.)

Figure 3. Trend of AL2 study publications between 1963 and 2022

Question 2. Which topics have been researched in AL2 studies?

The topics of the studies in our sample were determined through analysis of the title, abstract and research questions of each publication. The codes emerging from the records themselves were then analysed and categorised into larger topic groups, which were discussed and agreed by both authors working together. Our full ‘coding book’ – detailing the topic

categories, individual topics subsumed under each, and their definitions – appears in Appendix A.

Table 4 lists the topic categories which the studies in our sample focused on.

Table 4. Frequency of Topic Categories

Topic Categories	Frequency	Percentage of Total ⁵
<i>Affective factors</i>	215	28.4
<i>Pedagogy</i>	173	22.8
<i>Learning through Technology</i>	113	14.9
<i>Curriculum and Materials</i>	108	14.3
<i>Heritage language learning</i>	101	13.3
<i>Cross-linguistic influence</i>	85	11.2
<i>Multiglossia</i>	75	9.9
<i>Phonology</i>	68	9.0
<i>Learner factors</i>	61	8.1
<i>Language learner strategies</i>	48	6.3
<i>Assessment</i>	47	6.2
<i>Religion</i>	37	4.9
<i>Study abroad</i>	32	4.2
<i>Bilingual learning contexts</i>	30	4.0
<i>Learner challenges</i>	30	4.0
<i>Multilingual learning contexts</i>	29	3.8
<i>Literacy</i>	28	3.7
<i>Learning environment</i>	27	3.6
<i>Orthography</i>	25	3.3
<i>Psychological factors</i>	24	3.2
<i>Language practices</i>	23	3.0
<i>Pragmatics</i>	22	2.9
<i>Teacher factors</i>	22	2.9
<i>Developmental stages</i>	20	2.6
<i>Error analysis</i>	18	2.4
<i>Translanguaging</i>	17	2.2
<i>Teacher education</i>	13	1.7
<i>Enrolment and Provision</i>	12	1.6
<i>Informal language learning</i>	12	1.6
<i>Art and Literature</i>	7	0.9

The most frequent category across the studies was *Affective Factors*, which included topics such as attitudes, motivation, identity, and beliefs. This was followed by *Pedagogy*, which included topics such as approaches to teaching AL2 and pedagogical challenges. Other

⁵ Many studies focused on more than one topic; hence the percentages add up to more than 100.

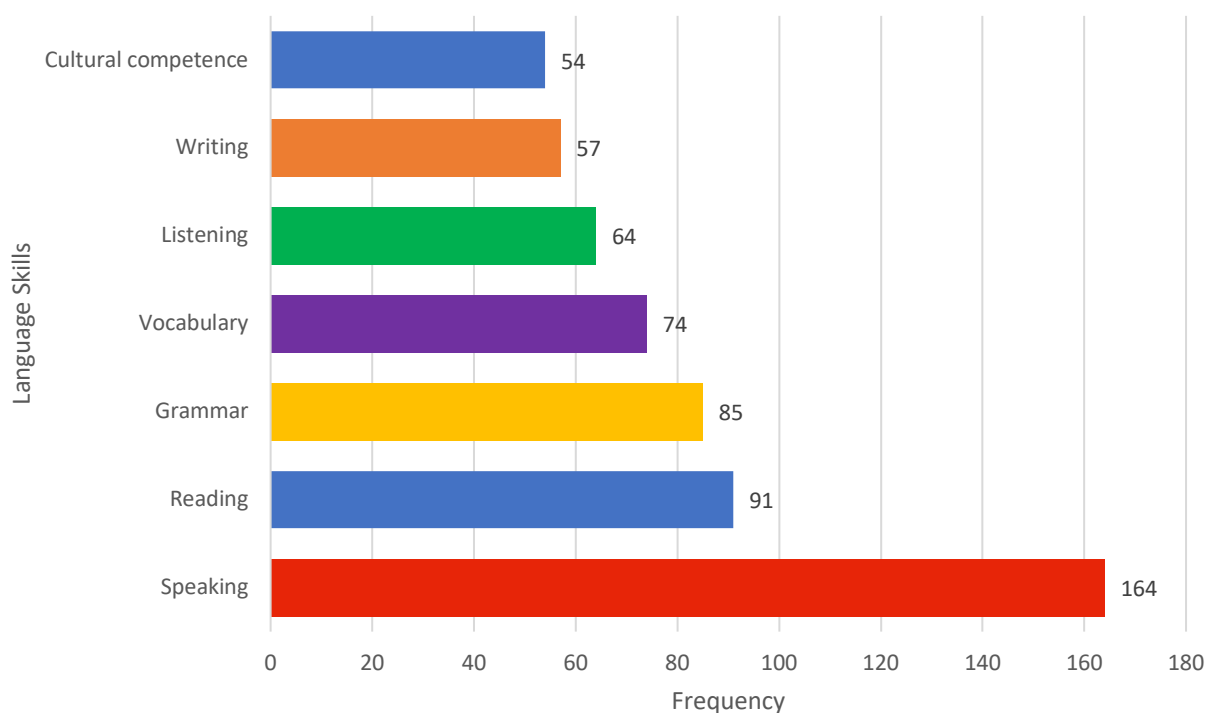
categories which featured prominently were: *Learning through Technology*, which included topics such as computer-assisted language learning (CALL), online language learning, and mobile-assisted language learning (MALL); *Curriculum and Materials*, which included the evaluation of Arabic teaching programmes and the development of pedagogical materials; *Heritage Language Learning*; and *Cross-linguistic Influence*.

Where applicable, studies were also coded according to the language skill they focussed on or measured. The most common skill analysed in the dataset was speaking, as shown in Table 5 and Figure 4. (The percentage column in the table represents the percentage of all studies in our sample. Since some studies did not focus on a skill, the percentages add up to less than 100. Some studies also focused on more than one skill).

Table 5. Frequency of language skill focus in AL2 studies

Language Skill	Frequency	Percentage of Total
<i>Speaking</i>	164	21.6
<i>Reading</i>	91	12.0
<i>Grammar</i>	85	11.2
<i>Vocabulary</i>	74	9.8
<i>Listening</i>	64	8.4
<i>Writing</i>	57	7.5
<i>Cultural competence</i>	54	7.1

Figure 4. Distribution of language skill focus in our sample



Question 3. In which contexts have AL2 studies been conducted?

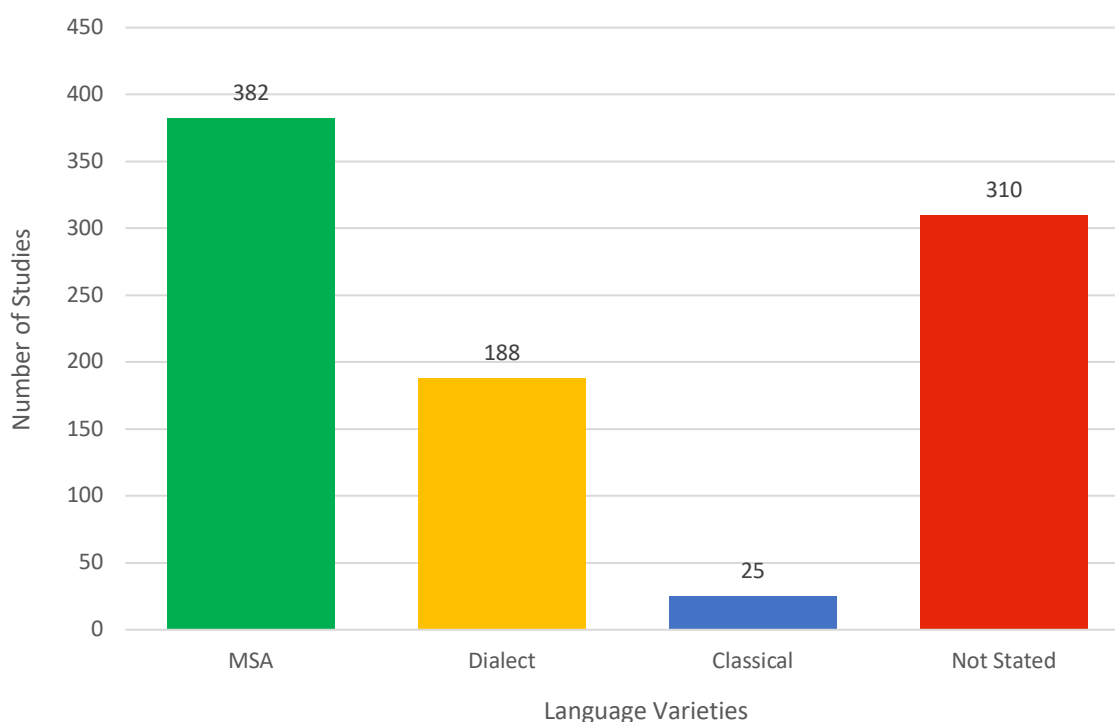
Language contexts

Given the complex multiglossic situation of the Arabic language, which consists of classical, standard, and colloquial varieties, each study in our sample was examined to determine the language variety (or varieties) on which it focussed (Table 6; Figure 5). However, over 40% of the studies did not indicate explicitly which of the language varieties was being learned or taught, and nor was it possible to determine this unambiguously. Of those studies which did identify one or more varieties, a large majority (85.3%) focussed on Modern Standard Arabic (MSA), either alone or in conjunction with another variety.

Table 6. Arabic Language Varieties Focussed on in our Sample Studies

Overall	Freq	Percentage of Total ⁶
<i>MSA</i>	382	50.4
<i>Dialect</i>	188	24.8
<i>Classical</i>	25	3.3
<i>Not Stated</i>	310	40.9

Figure 5. Distribution of language varieties in our sample



⁶ Some studies focussed on more than a single variety; hence the percentages add up to more than 100.

Educational contexts

The following variables were examined in relation to the educational context covered by the research: the countries in which studies were conducted; the nature of the participants (learners, teachers or parents); learners' ages; and learning context (e.g., foreign language versus second language; type of institution). The findings for each of these variables are presented below.

In terms of research locations, studies were conducted (i.e., data was collected) in 55 countries worldwide (Figure 6 below). By far the most popular research location was the United States, as shown in Table 7.

Table 7. Top 10 Country locations for AL2 research in our sample

Overall	Freq	Percentage of Total
<i>United States</i>	337	44.5
<i>Malaysia</i>	57	7.5
<i>United Kingdom</i>	45	5.9
<i>Israel</i>	44	5.8
<i>Saudi Arabia</i>	39	5.2
<i>Indonesia</i>	31	4.1
<i>Jordan</i>	25	3.3
<i>Egypt</i>	21	2.8
<i>Canada</i>	17	2.2
<i>Morocco</i>	16	2.1

Of those studies which included human subjects (as opposed to corpus studies, for example), participants fell predominantly into three categories: learners, teachers, and parents of learners. As evident in Table 8 and illustrated in Figure 7, the majority of studies focussed (either entirely or in part) on learners.

Table 8. Participant Types

Overall	Freq	Percentage of Total ⁷
<i>Learners</i>	633	83.5
<i>Teachers</i>	139	18.3
<i>Parents</i>	45	5.9
<i>Other (e.g., head teachers; faculty members)</i>	32	4.2
<i>Not stated</i>	44	5.8

⁷ Some studies focussed on more than one category of participants; hence the percentages add up to more than 100.

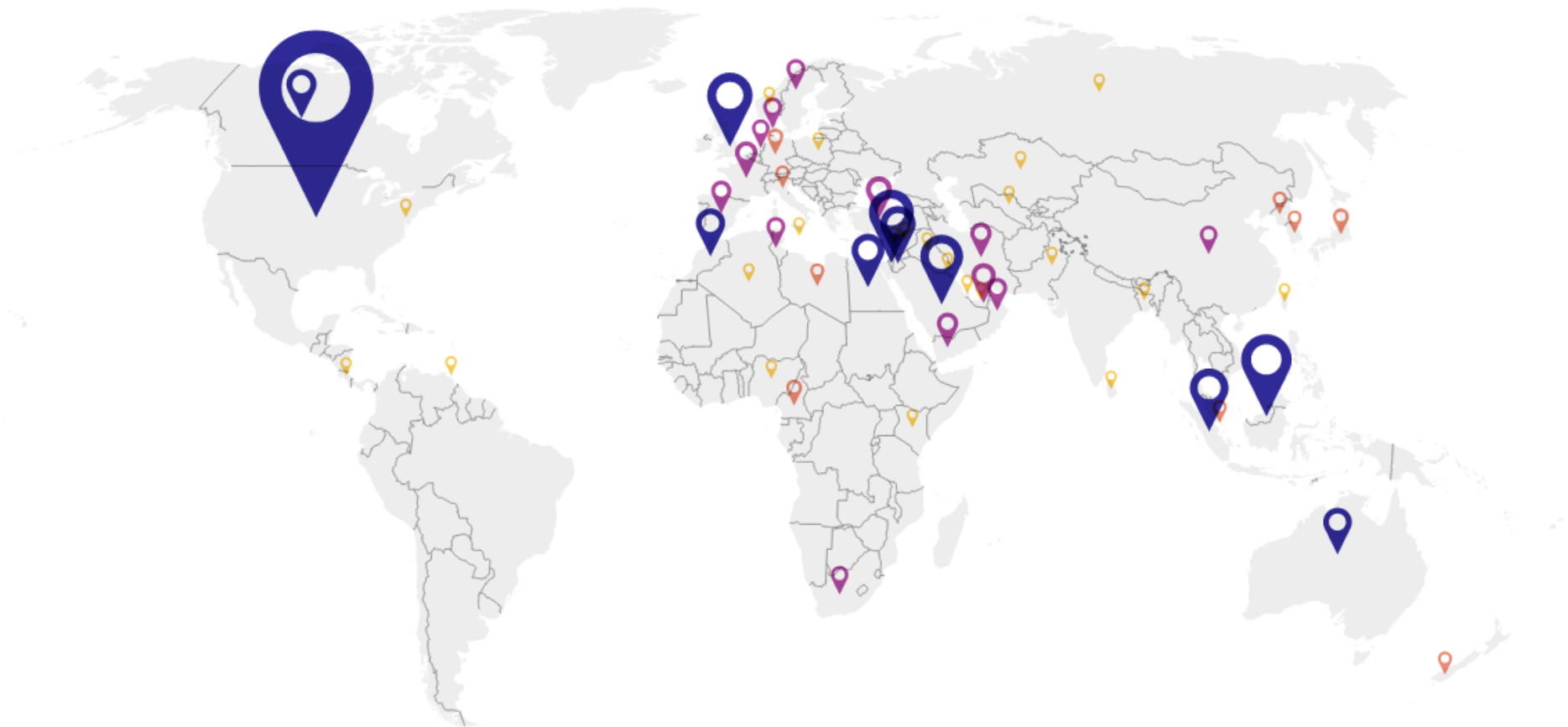
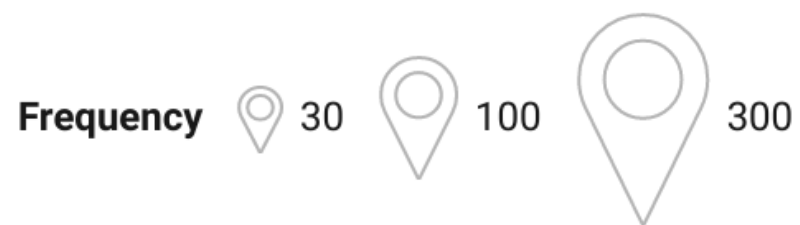
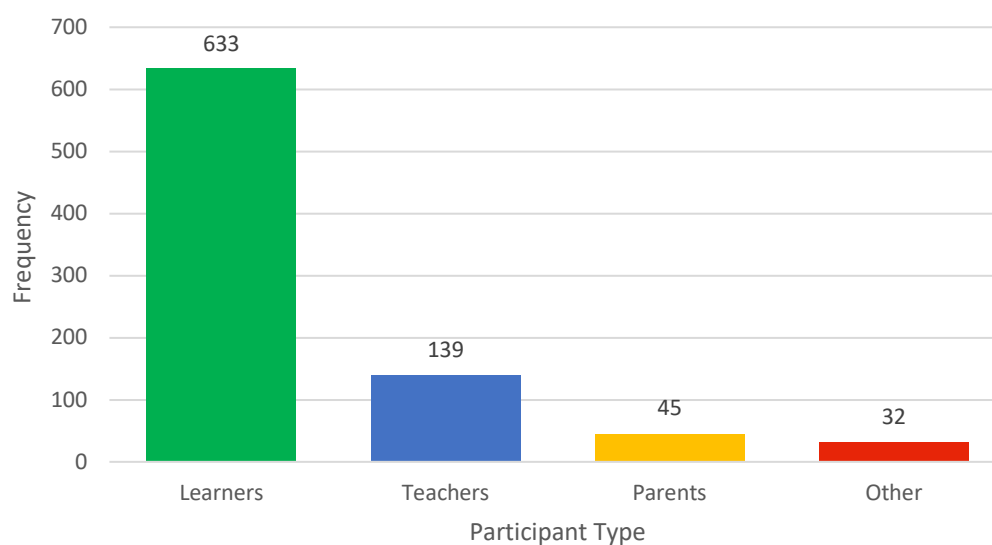


Figure 6. Geography of AL2 study locations included in sample
(Higher frequency is indicated by larger size and darker colour of marker)
Generated by <https://app.datawrapper.de>

Figure 7. Distribution of participant types in our sample



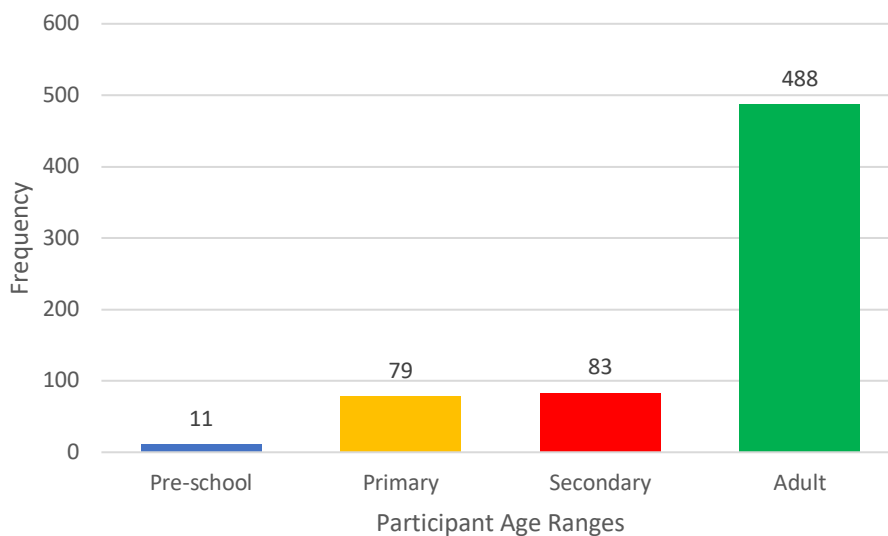
Participants' ages were coded using four categories: pre-school age; primary school age; secondary school age; and adult. Table 9 and Figure 8 show the number of studies focussing on each of these age groups (either solely or in combination). As can be seen, the vast majority of studies involved adult participants.

Table 9. Participant Age Ranges in our sample

Overall	Freq	Percentage of Total ⁸
<i>Pre-school</i>	11	1.7
<i>Primary</i>	79	12.5
<i>Secondary</i>	83	13.1
<i>Adult</i>	488	77.1
<i>Not stated</i>	11	1.7

⁸ Some studies focussed on more than one age category, hence the percentages add up to more than 100.

Figure 8. Distribution of Participant Age Ranges in our Sample



Four different AL2 learning contexts were identified as falling under the umbrella of ‘additional language learning’:

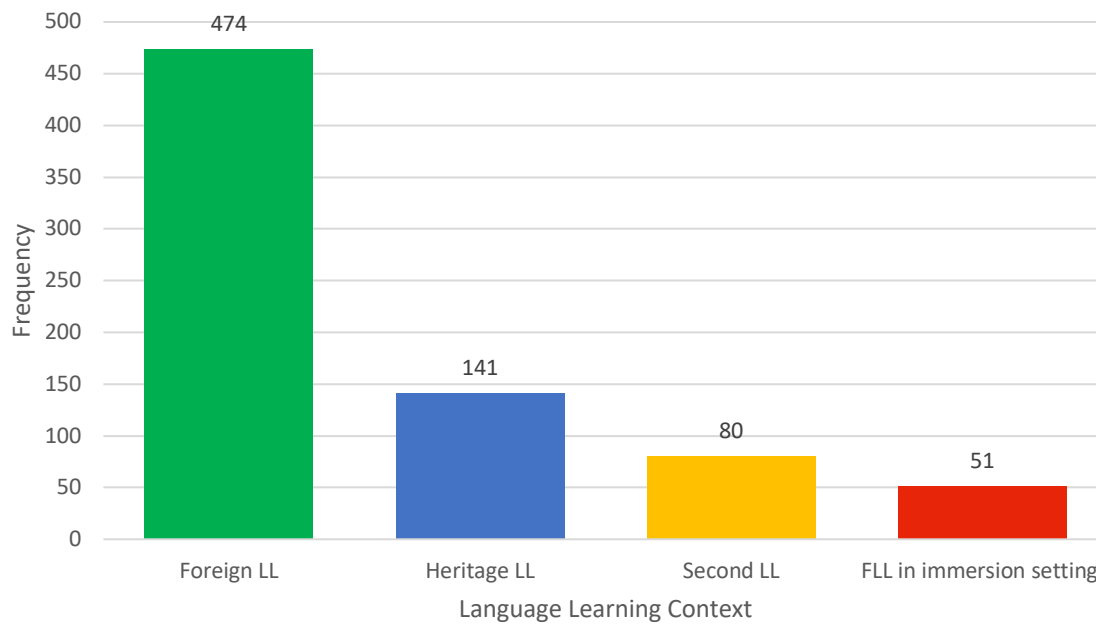
- **Foreign Language Learning (FLL):** the learning of Arabic as an L2 in countries where Arabic is not an official language, for example English-L1 participants learning Arabic in the United Kingdom.
- **Second Language Learning (SLL):** the learning of Arabic as an L2 in countries where Arabic is an official language: for example, Hebrew-L1 participants learning Arabic in Israel.
- **Heritage Language Learning (HLL):** learners from Arabic-speaking backgrounds studying Arabic in a non-Arabic speaking country: for example, participants from Arabic-speaking backgrounds learning Modern Standard Arabic in a FL program in the United Kingdom.
- **Foreign Language Learning in an immersion context:** participants learning the language as an additional language, while temporarily residing in a country where Arabic is spoken as an official language. This would refer primarily to Study Abroad contexts, summer schools and so on.

The most frequent learning context investigated by studies in our review was Foreign Language Learning (Table 10; Figure 9).

Table 10. Language Learning Contexts in our sample

Overall	Freq	Percentage of Total ⁹
<i>Foreign LL</i>	474	62.5
<i>Heritage LL</i>	141	18.6
<i>Second LL</i>	80	10.6
<i>FLL in immersion context</i>	51	6.7
<i>Not stated</i>	25	3.3

Figure 9. Distribution of language learning contexts in our sample



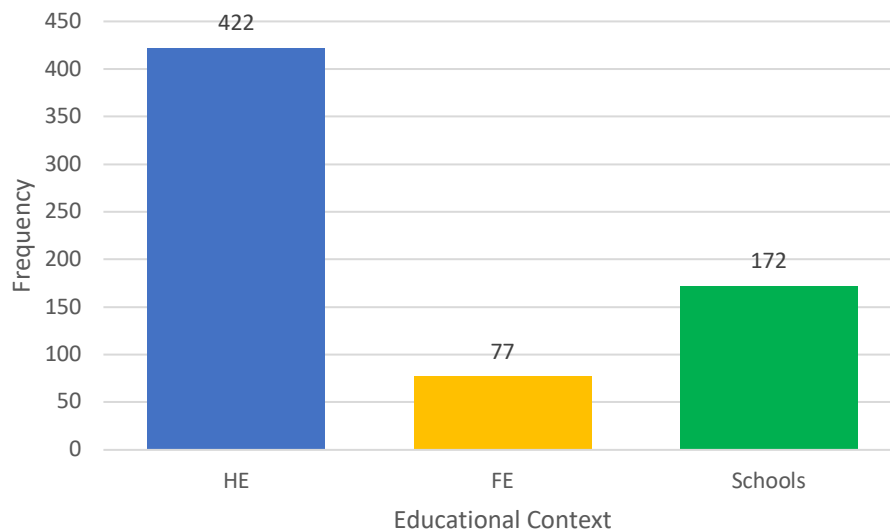
The large majority of participants in the studies in our review were engaged in the formal study of AL2 in a range of institutional contexts, which fell into three main categories: institutions of higher education (HE), further education (FE), and schools (Table 11; Figure 10).

⁹ Some studies focussed on more than one context; hence the percentages add up to more than 100.

Table 11. Participants' Ages

Overall	Freq	Percentage of Total ¹⁰
HE	422	55.7
<i>University</i>	359	47.4
<i>Study abroad</i>	60	7.9
<i>Domestic immersion program</i>	3	0.4
FE	77	10.2
<i>FE language learning program</i>	35	4.6
<i>Military academy</i>	42	5.5
Schools	172	22.7
<i>Mainstream school</i>	74	9.8
<i>Complementary school</i>	39	5.1
<i>Islamic school</i>	25	3.3
<i>Bilingual school</i>	22	2.9
<i>International school</i>	6	0.8
<i>Madrassa</i>	6	0.8

Figure 10. Distribution of educational contexts in our sample



¹⁰ Some studies focussed on more than one institutional setting; hence the percentages add up to more than 100.

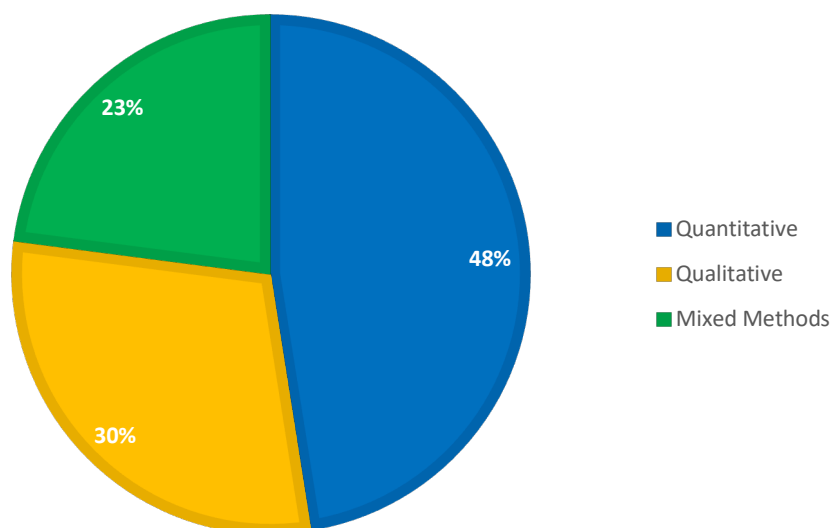
Question 4. Which methodological approaches have been used in AL2 research?

Studies have employed a variety of methodological approaches in conducting empirical research. As shown in Table 12 and Figure 11, the most frequent methodological orientation was quantitative, accounting for almost half of the studies included in our review. Qualitative designs accounted for almost a third of the studies, and mixed methods for almost a quarter.

Table 12. Methodological Orientations in our Sample

Overall	Freq	Percentage of Total
<i>Quantitative</i>	360	47.5
<i>Qualitative</i>	224	29.6
<i>Mixed Methods</i>	174	23.0

Figure 11. Distribution of Methodological Orientations in our Sample



Within the broad categories of qualitative and quantitative designs, a variety of approaches were used. Table 13 provides definitions for each of these approaches, along with their frequency of occurrence.

Table 13. Methodological approaches

<i>Approach</i>	<i>Definition</i>	<i>Frequency</i>
Quantitative	Study designed to elicit numerical data	
Exploratory	Studies which examine relationships between variables (e.g., correlations)	280
Descriptive	Studies which describe variables	152
Experimental	Studies which manipulate variables in controlled settings and measure outcomes (includes quasi-experimental and regression discontinuity designs)	81
Census study	A wide-reaching empirical study of enrolment figures or demographic data	5

<i>Approach</i>	<i>Definition</i>	<i>Frequency</i>
Qualitative	Study eliciting non-numerical data	
Survey study	A study which broadly surveys and describes a sample (e.g., through interviews and questionnaires)	222
Case studies	‘Analyses of persons, events, decisions, [...] or other systems that are studied holistically by one or more methods’ (Thomas, 2011 p. 513)	70
Ethnography	‘An account of someone’s observation of and experience with a community and their cultural practices in specific contexts’ (Wei, 2020: p. 154)	37
Corpus study	Empirical review of existing (non-elicited) corpus data	22
Content analysis	Analysis of the content of existing documents	10
Autobiographical study	Narrative account of author’s learning trajectory through an empirical lens	1
Language analysis*	Analysis of participant language output (e.g., error analysis). *Note: Depending on the methods of analysis, studies in this category could be either qualitative, quantitative or mixed methods.	104

4. Conclusions

Our scoping review has shown that there is a considerable body of existing research, published in English, investigating the teaching and learning of AL2, which is a positive finding. The research appears in book chapters, conference proceedings, and dissertations, but most frequently in articles, which are spread across more than 200 journals. Our review further shows that research activity in AL2 has risen sharply in the last 20 years. This may reflect an increased awareness of the strategic importance of Arabic and a rapid growth in its provision globally. However, it is also possible that this trend is not specific to AL2, but reflects an increase in Second Language Acquisition research more generally.

We framed our literature search in very broad terms, encompassing learners of all ages and in all educational contexts. We also included the teaching and learning of AL2 as a Foreign Language, Second Language and Heritage Language. Whilst we discovered a wealth of literature overall, some learning contexts are much better represented than others. For example, the vast majority of studies in our sample investigated adult participants (77%). Many focussed on foreign language learners (63%), learners based in university contexts (47%), and/or learners located in the USA (45%). Conversely, we found relatively sparse research on primary school and secondary school learners (13% in each case). The second most frequent research location after the United States was Malaysia, but this accounted for only 8% of studies in our review.

Turning to the multiglossic nature of Arabic, the majority of studies (just over half) explicitly focussed on learning or teaching Modern Standard Arabic, which is understandable given its traditional status as a pan-national variety. However, a significant proportion of studies in our review (41%) did not specify the variety of Arabic that was being learnt or taught.

AL2 research has addressed a broad range of topics, the most frequent falling within our category of 'affective factors' (28% of studies in our review). This category includes some topics which are strongly represented (e.g., attitudes: 90 studies; motivation: 79 studies), as well as various other, less frequently-covered topics (e.g., learners' investment and learners' sense of agency: 5 studies each). The second most frequent category of research topics related to 'pedagogy' (23%), covering topics such as teaching approaches and pedagogical challenges.

There are numerous topic categories which the AL2 literature has begun to explore, but which remain to be investigated more thoroughly. For example, we found only 12 studies on informal language learning, and only 13 on teacher education, despite the obvious importance of the latter topic for developing the extent and quality of Arabic teaching.

Almost half of the studies (48%) took a quantitative approach, and of these, by far the most frequent research design was 'exploratory', i.e., involving statistical examination of the relationship between variables. 30% of the studies were qualitative, and of these, a large majority were survey studies, which offered broad qualitative descriptions of teaching and learning Arabic.

In sum, our scoping review has provided a map of the landscape of AL2 research to date, published in English. We hope that this will be valuable for researchers, teachers, and policymakers who seek empirical evidence relating to particular topics or contexts. Our review has also highlighted gaps in the existing evidence, which indicate a need for further

research. For example, it is evident that relatively little research has focussed on school-aged learners, who may differ in various important ways from the adult university students who have more often been the focus of study. Finally, we hope that our review provides solid foundations for further, in-depth systematic reviews of particular topics in learning and teaching AL2, from which recommendations for policy and practice can be drawn.

Acknowledgments

We are grateful to Qatar Foundation International (QFI) for funding this project, and in particular to Dr Carine Allaf for her advice and support. We would also like to thank our Expert Advisory Panel, who gave their time freely to improve our study and made a valuable contribution to it.

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Appendix

Appendix A: Main Topic Category Labels

Table A1. Category Labels, Definitions, and Sub-Categories

Category label	Definition	Sub-category labels	Frequency
Affective factors	Factors referring to participants' affective domains (e.g., emotions, feelings, or attitudes) in relation to the learning or teaching of AL2	Attitudes	90
		Motivation	79
		Identity	37
		Beliefs	27
		Anxiety	14
		Engagement	10
		Self-efficacy	6
		Learner expectations	6
		Investment	5
		Agency	5
		Language ideologies	3
		Self-determination	1
Art and literature	The use of art and literature in the teaching and learning of AL2	Literature	2
		Visual arts	2
		Musicality	2
		Performing arts	1
Assessment	Assessment methods and materials used in testing participants' skills and proficiencies	Assessment	47
Cross-linguistic influence	The influence of participants' language backgrounds on the teaching and learning of	Cross-linguistic influence	85

	AL2, as well as the influence of learning AL2 on the process of learning other languages		
Cultural competence	The teaching and learning of skills relating to cultural awareness and the ability to interact competently within Arabic-speaking cultures	Cultural competence	42
		Socialisation	11
		Acculturation	2
Curriculum and materials	Topics relating to the development and evaluation of teaching and learning materials	Program evaluation	38
		Materials development	29
		Materials evaluation	25
		Textbook analysis	18
		Program development	6
		Readability	3
		Corpus development	2
Developmental stages	Studies investigating the stages of development in a learner's knowledge or use of AL2	Developmental stages	20
Enrolment and provision	Studies focusing on enrolment in Arabic courses and national and departmental policies on Arabic language provision	Enrolment	9
		Census study	4
		Language policy	3
Error analysis	The analysis of errors in participants' output	Error analysis	18
Heritage language learning	The learning of AL2 by participants with Arabic-speaking heritages. The definition of a heritage language learner varies by study.	Heritage language learning	101
		Language maintenance	21
		Family language policy	12
Language practices	Studies focussing on the Arabic language practices, use, and habits of participants in formal and informal settings.	Language practices	23
Translanguaging	Studies relating to the practice of switching between languages or language variants. This is	Translanguaging	17

	also referred to in AL2 literature as 'code-switching'.		
Learner challenges	Studies relating to challenges faced by participants in the learning of AL2.	Learner challenges	31
Psychological factors	Factors relating to participants' cognition in relation to the AL2 learning process	Metalinguistic awareness	7
		Noticing	7
		Working memory	5
		Metacognitive abilities	3
		Self-regulation	3
		Episodic memory	1
Learner factors	Studies investigating learner characteristics and their relationship with the acquisition of AL2	Gender	23
		Age	14
		Aptitude	6
		Learning experience	6
		Critical thinking	3
		Autonomy	3
		Ethnicity	1
		Personality	1
		Learning styles	1
		Learner needs	7
Language learner strategies	Studies which focus on the use or acquisition of strategies employed by learners in relation to the language learning process	Language learner strategies	48
Learning environment	Factors relating to the environment in which AL2 teaching and learning takes place which impact upon the teaching and learning processes.	Learning environment	26

Learning through technology	The use and integration of technology into the teaching and learning of AL2	Computer-assisted language learning	104
		Online language learning	45
		Mobile-assisted language learning	5
		Video captions	4
		VR experiences	1
Orthography	Topics relating to study of the writing system of Arabic and its integration into AL2 teaching and learning	Orthography	21
		Diacritics	4
		Spelling	4
Literacy	Topics relating to literacy (the ability to phonetically decode the Arabic script)	Literacy	19
		Word recognition	5
		Word formation	3
		Transliteration	1
Multiglossia	Relating to the integration of diglossic elements into the teaching and learning of AL2. The term 'multiglossia' is adopted over the use of 'diglossia', since the Arabic language consists of multiple variants (MSA; classical; colloquial), all of which can be taught independently or in combination	Diglossia	75
Bilingual learning contexts	Contexts in which Arabic is being learned as a second or foreign language in locations in which Arabic is an official language	Bilingual learning contexts	33
Multilingual learning contexts	Contexts in which Arabic is being learned as a second or foreign language along with other languages	Multilingual learning contexts	29
Study abroad	Studies which focus on a study abroad context	Study abroad	32

Informal language learning	Studies which examine the learning of AL2 outside of a classroom or formal setting	Informal language learning	13
Pedagogy	Topics relating to the teaching of Arabic language. This includes various pedagogical approaches and pedagogical challenges	Pedagogical approaches	142
		Pedagogical challenges	19
		Game-based learning	11
		Feedback	9
		Arabic for specific purposes	4
		Humour	2
Phonology	Topics relating to the phonological system of Arabic and its integration into the teaching and learning of AL2	Memorisation	2
		Phonology	50
		Pronunciation	32
Religion	Studies which examine the role of religion in relation to the teaching and learning of AL2	Religion	38
Teacher factors	Factors relating to teacher characteristics and affective factors, including beliefs, expertise, and backgrounds	Teacher factors	22
Teacher education	Studies focusing on the education of AL2 teachers	Teacher education	13
Grammar	Studies which focus on the learning or teaching of Arabic grammar. This includes morphological knowledge and morphological awareness	Grammar	85
Listening	Studies which focus on the learning or teaching of listening skills	Listening	64
Reading	Studies which focus on the learning or teaching of reading skills	Reading	91
Speaking	Studies which focus on the learning or teaching of speaking skills	Speaking	164

Vocabulary	Studies which focus on the learning or teaching of Arabic vocabulary	Vocabulary	74
Writing	Studies which focus on the learning or teaching of writing skills	Writing	57
Pragmatics	Studies which focus on the learning or teaching of pragmatic skills	Pragmatics	22

Appendix B

Membership of Expert Advisory Panel

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