THE BENEFITS OF LEARNING ADDITIONAL LANGUAGES

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CONTENTS

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EXECUTIVE SUMMARY

Scope and aims of report

This report examines the benefits of learning additional languages (Als) as documented in the research literature, focusing on learners from school as well as plurilingual language users in other settings. It aims to answer five broad research questions.

(1) What benefits are specified as goals and desirable outcomes in educational documents?
(2) What benefits do theories of learning and using additional languages claim?
(3) Which of the benefits are supported by evidence in empirical studies?
(4) What are the necessary conditions allowing these benefits to emerge?
(5) What lessons can be learned from the evidence?

Methodological approach

Section 1 clarifies all terms and presents the research method. The research literature database was compiled in three phases between October 2024 and May 2025. Compiling the database was an iterative process resulting in multiple pools. After several passes, we examined in detail 620 texts from applied linguistics, psychology, and education, ultimately synthesizing 311 sources:

- 114 reviews (systematic, scoping, critical, narrative),
- 21 meta-analyses,
- 82 empirical studies,
- 97 other sources (theories, key terms, surveys).

Educational documentation was also reviewed to identify the benefits that policy makers and advisors, internationally and nationally assumed or aspired to from AL learning.

Main findings

Here we summarize the key findings along the five research questions. Three levels of benefit were identified: macro (wider society), meso (institutional and local community) and micro (individual level).

RQ1: What benefits are specified as goals and desirable outcomes in educational documents?

Section 2 presents the results. A major objective of the report was to compare the aspirations in policy and advisory documents with the content and aims of research into this area and also to match aspirations with evidence from research. Improved international and global business relationships and social cohesion due to increased levels of intercultural understanding are anticipated to benefit national economies.

- Social justice improvements are expected as indigenous languages and their speakers gain recognition and respect.
- Individuals are anticipated to enhance their cognitive abilities, including problem-solving, health, language learning aptitude, and awareness, making learning more efficient.

- Empathy, sense of identity, and appreciation of diversity are expected to increase, while prejudices decrease.
- Plurilingual individuals are predicted to experience overall improvements in well-being through access to education in the language of instruction, international mobility for study and work, and new career opportunities. Their cultural capital is also expected to increase.
- Migrants who learn the host language are more easily integrated into their new communities.

RQ2: What benefits do theories of learning and using additional languages claim?

Section 3 reviews how individual learner characteristics, contexts, and languages interact. While theories discuss certain advantages beyond competence in an AL, they primarily focus on factors impacting AL learning in terms of measurable outcomes in the target language. Theories are less concerned with how individuals benefit from learning and utilizing their language repertoire.

RQ3: Which of the benefits are supported by evidence in empirical studies?

Section 4 reviews evidence on cognitive (4.1), educational (4.2), conative/affective (4.3), socio-economic and cultural benefits (4.4). The key findings are as follows:

Section 4.1 investigated cognitive benefits. Most studies support a slight cognitive advantage for bilinguals, particularly for children. However, the lack of detail in many studies prevents definitive conclusions about different types of programs and age groups. The cognitive advantages of knowing and using ALs include:

- Learning and using ALs can lead to sustained cognitive improvement over time.
- Knowledge of ALs may delay mental decline in old age.
- Bilinguals benefit from learning to control the languages not in use, which enhances executive function and general learning mechanisms.
- Recent research integrates working memory, distinguishing between language-specific and domain-general components, into aptitude studies. Aptitude is now perceived as a complex of malleable abilities shaped by experiences, thus improvable through AL learning.
- The impacts of AL learning and usage are bidirectional: practice enhances plurilingual individuals' ability to learn and use their language repertoire.
- Being plurilingual facilitates efficient learning of new languages and other skills.

Section 4.2 reviewed educational benefits associated with AL learning.

- Metalinguistic awareness develops from AL learning and improves further through explicit instruction focused on language form and systems.
- Critical language awareness also develops through instruction using specific techniques like translanguaging.
- In settings where students are plurilingual due to family circumstances or migration, this critical language awareness can promote social justice and community harmony.
- Activities fostering critical language awareness can also benefit majority language speakers and AL learners in privileged contexts.
- Plurilingual experience is associated with greater and varied strategy use, although being plurilingual alone may not always suffice to achieve this, especially among school-aged learners who require consistent reminders and practice.

- Conversely, students in schools promoting general metacognition and reflective learning across curricula are better positioned to achieve self-regulation, including strategic use in AL studies.
- Few publications document the extent to which content and language integrated learning (CLIL) and English as the medium of instruction (EMI) programs benefit learners in content subjects. Meta-analyses of empirical studies conducted over two decades generally show no or modest benefits in both domains.
- In tertiary education, statistically significant but consistently weak relationships were found between students' proficiency levels in the language of instruction and their overall academic success. Higher AL proficiency correlates with increased likelihood of academic success; whereas B1 and B2 levels often do not ensure success, advanced level (C1) proficiency allows students to follow curricula effectively.
- AL proficiency is merely one prerequisite for academic success; students' knowledge and skills in their chosen subjects and learner characteristics explain variations in outcomes.
- Most publications avoid asserting that CLIL/EMI programs provide privileged learners with better opportunities. Nevertheless, multiple authors express concerns that such programs cater to socio-economic elites rather than serving all students' interests.
- On a global scale, analysis by the British Council highlights drawbacks and potential risks EMI program students and universities encounter.

Section 4.3 reviewed how conative and affective characteristics benefit from additional language learning:

- Learner characteristics are dynamic and influenced by contextual factors and experiences.
- Conative and affective characteristics overlap, interact, and evolve simultaneously.
- These characteristics exhibit variability rather than clear trends.
- Studies across all age groups and program types typically measure constructs through self-reports based on learners' beliefs and perceptions.
- Differences in motivation are noticeable between learners of English and those studying languages other than English (LOTE). Motivation varies depending on whether learners study English or LOTE, if the target language is chosen or mandatory, and if it is a second or third language. No distinct advantage was found for L3 learning.
- A positive future identity promotes AL learning more effectively than external expectations. There are notable differences between Western and East Asian learners in this regard. Western learners tend to focus on their individual goals, whereas their East Asian peers are more concerned with what their communities expect and more conservative in their assessment of self-efficacy.
- L2 willingness to communicate, L2 mindsets, and L2 grit not only interact with AL outcomes but also evolve during learning and using a new language.
- Positive experiences boost individuals' grit, mindset, self-efficacy, and willingness to seek further practice opportunities. This often leads to enhanced AL development, improved self-perception, and overall well-being, demonstrating the cycle of success leading to further success despite minor setbacks.
- Conversely, challenges can undermine learners' confidence in their positive characteristics, heightening demotivation, anxiety, and negative beliefs about their goals and abilities.

Section 4.4 presents findings on the socio-economic and cultural benefits of plurilingualism

Given that most studies on *socio-economic benefits* were large-scale and some used representative samples, the following outcomes can be generalized as evidence-based benefits of knowing additional languages.

- There are clear advantages for plurilingual individuals in the job market, with higher proficiency in multiple languages correlating with better employment opportunities. However, distinctions exist between native residents and immigrants.
- The added economic value ranges between 10% and 20%. These outcomes significantly contribute not only to the well-being of individuals, but also to the betterment of their communities, and societies.
- Plurilingualism enhances career prospects and facilitates individuals in finding opportunities that match their needs, abilities, knowledge, and skills.

Regarding *intercultural competence*, the results are less conclusive due to ambiguous terminology and diverse research methods. Qualitative studies cannot be generalized, and quantitative studies use varied instruments that do not lead to uniform conclusions. While many authors express enthusiasm about their findings, there are critical concerns regarding the construct validity of intercultural competence.

RQ4 What are the necessary conditions allowing these benefits to emerge?

Section 5 synthesizes the findings about the conditions essential for equipping language learners with the autonomy and agency required to maximize the benefits that proficiency in ALs can provide.

- The aspirations articulated at the societal level within educational documentation were beyond the scope of the studies included in the database.
- Many desired outcomes were observed at the individual level. These include plurilingual advantages in cognitive and educational domains across all age groups, from children to older adults. The development of these abilities necessitates carefully designed, focused programs that are well-implemented.
- Findings regarding programs teaching subjects in the language of instruction in K-12 and tertiary education were discouraging. These programs were anticipated to yield the most clear-cut benefits by targeting both AL and curricular content simultaneously. It is likely that the necessary conditions for implementing innovative programs were not met (6.2). There was insufficient information provided to fully understand the prerequisites for such programs.
- Concerning individuals' conative and affective characteristics, the key finding is that local learning experiences shape students' perceptions of their goals, the outcomes of their efforts, their sense of agency, and their ability to cope with challenges. The conclusion is straightforward: high-quality teaching must ensure that learners are granted autonomy and agency in their learning, receive constructive feedback to enhance their competence, and feel supported by their teachers, peers, and the broader community.
- The value of different languages is not equally recognized across all societies but changing these situations is beyond the scope of the studies in the database. Proficiency in one's language repertoire is, however, viewed as valuable human capital.
- Social justice and equity are fundamental conditions at all levels and should be a concern for all stakeholders and decision-makers.
- The role of teachers was highlighted in only a few studies; however, it is widely acknowledged that they are critical stakeholders. To realize the benefits of AL learning, competent teachers are required at all levels of language education. They must be knowledgeable about teaching

practices, proficient in their students' language repertoires, and approachable and supportive individuals.

RQ5 What lessons can be learned from the evidence?

Section 6 discusses the quality of existing research, limitations of the study, and the way forward.

- Research designs in empirical studies varied significantly. A range of instruments was used, with very few longitudinal studies involving large groups of participants. The database contains few developmental studies, indicating a general weakness in research design. Few studies used data triangulation.
- Mixed or inconclusive evidence was found regarding the effectiveness of innovative language programs in enhancing proficiency, content learning, and conative/affective domains. The underlying reasons were not examined but may relate to program and teacher-related factors and the overall quality of instruction.
- Publications only in English were reviewed, learning difficulties were not considered, teachers were beyond our scope, and benefits to skills in using information technology was not included.
- Future studies should focus on the quality of teaching, increasing disadvantaged learners' cognitive and metacognitive abilities, conduct cost-benefit analyses, involve teachers as designers and participants, and triangulate data for more ecologically valid results.

Concluding remarks

- Individual learner characteristics are generally malleable to varying degrees and are shaped by processes and outcomes, including targeted curricular interventions and lived experiences related to learning and using additional languages.
- None of the studies collected data on the quality of teaching or its impact on learners' experiences.
- Similarly, none of the studies investigated the quality of syllabus content or teaching materials and their impact.
- No convincing evidence was found to support the claim that content-based programs involving millions of students are more efficient than other programs.
- The most compelling evidence concerns the long-term plurilingual advantage, which adds value to human capital ranging between 10 to 20%.

LIST OF ACRONYMS

AL	additional language
ALs	additional languages
B, B1, and B2	intermediate levels of language proficiency as defined in *CEFR*
C, C1, and C2	advanced levels of language proficiency as defined in *CEFR*
CEFR	*The Common European Framework of References*
CLA	critical language awareness
CLIL	content and language integrated learning
DET	Duolingo English Test
EACEA	European Education and Culture Executive Agency
EFL	English as a foreign language
EMI	English as the medium of instruction
FL	foreign language
GPA	grade point average
IELTS	International English Language Testing System
ISCED	International Standard Classification of Education
ISLA	instructed second language acquisition
LA	language awareness
L1	first language
L2	second language
L3	third language
LOTE	languages other than English
MLA	metalinguistic language awareness
N	sample size
n	sub-sample size
OECD	Organization for Economic Co-operation and Development
PISA	Program for International Student Assessment
PRISMA	Preferred Reporting Items for Systematic Reviews and Meta-Analyses
r	correlation coefficient
SAT	Scholastic Aptitude Test

SD	standard deviation
SES	socio-economic status
SILL	Strategy Inventory in Language Learning
SL	second language
SLA	second language acquisition
SSCI	Web of Science's Social Science Citation Index
TBLT	task-based language teaching
TOEFL	Test of English as a Foreign Language
TOEFL iBT	Test of English as a Foreign Language Internet-Based Test
WTC	willingness to communicate

LIST OF TABLES

LIST OF FIGURES

0 WHAT IS THIS REPORT ABOUT? AN INTRODUCTION

***"Learning is a maze where every turn reveals new paths to wisdom."* Proverb**

This study investigates the literature on the benefits of additional language learning in K-12 education and later in life. Readers may wonder why such a study is necessary. Aren't the benefits obvious? Language learners develop their knowledge and skills in their new language, become competent in using it to communicate with others, learn new things in the language and gain admission to tertiary education, and use it in their jobs or for personal purposes. Thus, the ability to use languages beyond one's mother tongue serves as a vehicle for achieving educational, social, and economic goals.

As the Latin saying goes, "Quot linguas calles, tot homines vales" [The number of languages you speak is the number of people you are worth.] It is widely assumed that learning languages offers not only the ability to use them but also other benefits. We aim to specify these advantages by finding evidence that plurilingual individuals think and behave differently than monolingual people. We explore if there is a multilingual advantage, if people using more than one language are more able and motivated to learn new things and to cope with challenges better, more open to new ideas, more sociable and self-confident, if they decline in old age more slowly, if they have better opportunities on the job market and can live a better life than monolingual people.

In 2025 more people are multilingual than monolingual on the globe. Millions are mobile, travel and explore the world, study and work abroad, have access to social media, and most K-12 learners and adults have increased opportunities and requirements to learn new languages. It is reasonable to ask the questions: What are the additional benefits of learning new languages beyond developing the ability to use them? How do millions of language learners benefit from being plurilingual? We seek answers to such questions.

The aim of this study is to answer five broad research questions.

(1) What benefits are specified as goals and desirable outcomes in educational documents?
(2) What benefits do theories of learning and using additional languages claim?
(3) Which of the benefits are supported by evidence in empirical studies?
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The text follows the logic of these questions. *Section 1* outlines the research methodology: we clarify the terms (1.1) used in the text to make sure we are on the same page. Then, we present what sources we relied on (1.2) and how they were selected.

Section 2 aims to answer the first research question. It presents what benefits educational authorities and policies specified as the goals of language learning, what outcomes they envisage (2.1), and how these vary in different contexts around the globe (2.2).

Section 3 gives a short review of trends in language learning theories (3.1), what their main assumptions are about how languages are learned, how learner-related differences (3.2) and contextual factors (3.3) interact in how people benefit from learning and using multiple languages. As will be seen, theories discuss some benefits beyond competence in additional languages. They are primarily concerned with factors interacting in the learning process and impacting language learning in terms of measurable outcomes in the target language. Less attention is paid to how individuals benefit from the process, which is the focus of this inquiry. We discuss how these learners' characteristics, contextual, and language-related factors are aligned with the goals and desirable outcomes in educational documents (3.4). Finally, we sum up the factors influencing additional learning and use, and what benefits we should look for in the dataset of publications (3.5).

Section 4 critically reviews the evidence supporting the benefits of plurilingual individuals' learning and using their language repertoire. First (4.1) we investigate what cognitive advantages characterize plurilingual individuals related to brain efficiency and healthy operation in old age, as well as the role of aptitude. In 4.2, we consider educational benefits associated with metacognition, language awareness, learner strategies, and specific advantages identified to result from learning and using additional languages (ALs) for students' general academic achievements in schools and in tertiary education. The third focus (4.3) is on the rich domain of conative and affective characteristics (related to people's intentions, efforts and emotions). Our interest is how these are shaped by experiences related to learning and using ALs and how they interact with one another. The last part of this section, (4.4) analyzes studies on socio-economic and cultural benefits. We analyze the added value to human capital and intercultural competence as a result knowing additional languages.

Section 5 synthetizes the findings of the previous sections to present the necessary conditions for plurilingual individuals, their communities, and society at large to benefit. It compares relationships between aspirations, conditions, and beneficial outcomes along five themes. The key conditions are related to teaching programs, plurilingual individuals' repertoire and proficiency, and their personal, social, and cultural characteristics.

Section 6 summarizes the lessons learned about innovative additional language programs (6.1) and the research methods used in empirical studies (6.2). It outlines the limitations of the overall study in (6.3) and suggests areas for future studies in (6.4).

We hope to offer new insights into what matters in learning new languages beyond the obvious. The findings are expected to be meaningful and thought-provoking for teachers of all subjects, parents, school administrators, curriculum designers, policy makers, and most importantly for language learners.

1 What research methods were used?

How people learn languages has been of interest to lay people and experts throughout history. Theories propose to explain how children acquire their mother tongue (L1), develop literacy, and socialize into ways of using it appropriately and effectively. Experts are also interested in how children, adolescents, and adults develop proficiency in new languages (L2). How they use them for various purposes, and why they maintain, further develop, or forget what they have learned. As this study focuses on the benefits of learning and using additional languages, before reviewing how they are learned, and what advantages are associated with being plurilingual, that is, being able to use multiple languages, we clarify the terms used in this study (1.1). Then, we explain how we chose which published documents are included in the datasets (1.2).

1.1 How are key terms defined?

In this section, we clarify how we use terms in this study, as there is no generally accepted distinction between some terms, and they are often fuzzy (see Table 1). *First language* (L1) or native language or mother tongue are used as synonyms; they are typically defined as the language children learn in their early childhood. Some children, however, grow up with more than one language from birth and become *simultaneous* or *balanced bilinguals* who can use both languages effectively. Their parallel language development in their two languages is defined as bilingual first language acquisition (e.g., De Houwer, 2021; Genesee, 1989). Others start learning a new language later in their life; they can also become plurilingual individuals and even balanced bilinguals.

The term *second language* (L2, SL) is often used as a general or umbrella term for any language learned after the first one. Second language acquisition (SLA), a field of applied linguistics, covers all contexts and topics on teaching and learning an L2. A narrower L2 construct is also widely accepted: this definition contrasts a second language to a *foreign language*. For example, OECD (2021, p. 25) defined a foreign language (FL) "as a language that generally has no direct link with the learner's immediate environment", whereas a second language "is a language that the learner can easily encounter in daily life". Other sources (e.g., Nikolov & Timpe-Laughlin, 2021, p. 2) defined foreign language slightly differently, based on where it is learned. An L2 is a FL in contexts where it is not an official language (e.g., French in Spain and Argentina, or Mandarin in European countries). Whereas for non-native speakers in, for example, Spain and the USA, their second language is the official and/or majority language of the host country - Spanish and English respectively. The above definitions are formulated from the language learners' contextual perspective: they reflect the amount of learning opportunities readily available to them over extended periods of time.

The European Commission / EACEA / Eurydice (2023, p. 148) uses *foreign language* as an umbrella term, but framed slightly differently and contrastively in an educational perspective:

> a language described as such in the curriculum set out by top-level education authorities. The description used is based on an education-related definition, unrelated to the political status of a language. Thus, certain languages regarded as regional or minority languages from a political perspective may be included in the curriculum as foreign languages.

Classical languages are also FLs in the same document: "an ancient language, such as classical Greek or Latin, that is no longer spoken in any country and is therefore taught for purposes other than communication." To distinguish FL from classical languages, the term *modern foreign language* (MFL) is proposed in the above document.

These distinctions have recently become blurred, especially in the case of English, as it has gained the status of lingua franca. It is widely available to many learners in their immediate and online environment, even though it is taught as a FL in schools. In daily life, digital technologies have offered easy access to authentic English in use to all age groups, including K-12 learners (OECD, 2024a).

Table 1: ***Definitions of First, Second, Foreign, Additional, Heritage, and Classical Languages***

Term (acronym)	Synonym(s)	Context	Purpose
First language (L1)	Mother tongue Native language	Family, local community, educational settings	Practical communicative use in daily life, studies, work
Second language (L2; SL)	Additional language Foreign language Majority language Destination language	Local community, school, workplace; majority society, target country	Practical communicative use in daily life, studies, work
Foreign language (FL)	Additional language Second language Third language Modern foreign language (MFL)	Educational settings	Future goals: travel, culture, job opportunity, communication
Additional language (AL)	Second language Foreign language Third language Modern foreign language	Local community, educational settings, workplace	All languages learned after L1 for practical uses
Heritage language	Minority language	Older generation in family or local community	Connect to culture, identity, family roots
Classical languages	Classical Greek or Latin	Educational settings	Access to great literary, historical and philosophical texts and metalinguistic knowledge

A *heritage language* is often a minority language, used in families and smaller communities by members of the older generation. For example, for Turkish children in Germany, Turkish is a heritage language they may hear at home, but they may not be proficient in it, as their families use German, except with grandparents or other relatives. A heritage language represents ethnicity, culture, and family relations.

Additional language (AL), a recently popular inclusive term, is used as a neutral synonym for all languages learned after L1. Thus, some publications mean to include all definitions of these terms

when using AL for FL, SL, L2, or third language (L3). One characteristic is common in these definitions: by teaching a new language, schools aim to develop learners' competences, their abilities, knowledge, and skills necessary for communication in an AL. Communication in real life contexts may not be among the aims of teaching heritage and classical languages.

Overall, there is agreement in the literature (e.g., Council of Europe, 2020a; Dixon, et al., 2012; Ellis, 2021; Murphy, 2014) that more similarities than differences characterize how ALs are learned in contexts where learners get most of the input from their teachers and peers in their formal FL classes and where learners have easy access to the L2 beyond the classroom. Therefore, we use AL and the other terms interchangeably, as findings tend to be valid across contexts.

However, we propose to think of AL as a continuum: at one end are learners in FL programs where limited input and opportunities to practice the target language are typical (e.g., two times 20 minutes per week of German at an Italian primary school). At the other extreme are L2 learners fully immersed in the target language (Spanish L1 adolescents at a U.S. high school). In between these two extremes are intensive, content-based, and partial immersion programs. As for the types of programs within the above categories, the most frequently implemented ones include content and language integrated learning (CLIL) and task-based language teaching (TBLT), typically implemented in primary and secondary schools, using the L2 as the language of instruction. A content-based program type in tertiary education is English medium instruction (EMI), where English is not the official language. In EMI programs academic subjects (other than the English language) are taught in English in settings where English is a foreign or second language to at least some of the learners and/or teachers (Smit, 2023) (see details in section 4.2.3).

Two other terms need to be defined: multilingualism and plurilingualism. *The Common European Framework of References* (*CEFR*, Council of Europe, 2020a, p. 8) "distinguishes between multilingualism (the coexistence of different languages at the social or individual level) and plurilingualism (the dynamic and developing linguistic repertoire of an individual user/learner)." The latter is defined as "an uneven and changing competence, in which the user/learner's resources in one language or variety may be very different in nature from their resources in another."

A slightly different, widely accepted definition is shared in the glossary of the Council of Europe (2018, no page): plurilingualism is "the capacity of an individual to use several languages receptively and/or productively, whatever level of competence that they have in each of them." Thus, plurilingual individuals include those who can use their two or more languages at the same level of proficiency (balanced bilingual) as well as people who can use their repertoire of languages to convey messages and interact with others at a low level where they can communicate to meet their needs.

Our aim is to outline what information can be generalized to most AL contexts, irrespective of the status of the target language and where it is learned. Thus, a specific focus concerns the setting where learning takes place. The term Instructed SLA (ISLA) concerns AL learning in (virtual or in-person) classrooms based on national or local curricula. In the case of English, in situations where authentic content and activities are easily available to learners through information technologies and social media, the terms *extramural* English (Sundqvist, 2024) and language learning *in the wild* (Pinter et al., 2024) refer to the benefits of informal, uninstructed, and self-selected autonomous learning.

1.2 What sources are included in the datasets?

In this section, we explain how we selected the publications included in the datasets for the present study. The text is an overview of published sources allowing us to answer the five research questions listed in the previous section. To find answers to them, we had to identify and compile multiple datasets of the most relevant sources. To answer the first research question, we specified which educational documents would give us the most ecologically and internationally valid picture of the goals and desirable outcomes. The sources we relied on to answer the second research question included books, chapters, and papers in flagship journals on applied linguistics and language education. The third research question required evidence supporting the benefits of AL learning and use. Thus, we compiled datasets of empirical studies, reviews and meta-analyses, but we had to limit the scope of inquiry in time and the volume of publications. The last two research questions required critical discussion and synthesis of the key findings, drawing on the datasets and additional publications.

This paper is a literature review: "a written summary of journal articles, books, and other documents that describes the past and current state of information on the topic". It is based on "research reported in journal articles … books, and government documents" (Creswell, 2012, p. 80). We followed the principles for literature reviews outlined in section 1.6 in the *Publication manual 7th edition of the American Psychological Association* (2020) and additional sources on how systematic and narrative literature reviews should be conducted (e.g., Alexander, 2020; Moher et al., 2015). First, we present the inclusion criteria and then the procedure used for building the datasets of publications.

1.2.1 What criteria were used for publication inclusion in the review?

The target population includes students in primary, middle and secondary/high school education (3- to 19-year-olds) grouped along four categories used by the UNESCO Institute for Statistics (2012): (1) children in preschool (ISCED 0), (2) lower primary and primary (ISCED 1), (3) upper-primary and lower-secondary (ISCED 2) and (4) upper secondary or high school (ISCED 3). However, where relevant, we included older age groups (ISCED 5-8) in tertiary education to make sure that the benefits claimed in studies for adults are also considered (Table 2). These categories are used to map age differences in various countries (e.g., where primary and secondary start or end).

1.2.2 How were the datasets built?

For the initial searches, we used two electronic research databases, bearing in mind guidelines in recent publications for studies in applied linguistics and language education (e.g., Alexander, 2020; Siddaway, et al., 2019; Singh et al., 2021; Vitta & Al-Hoorie, 2017; Zhang, 2020). We searched for texts published in refereed journals on the Web of Science's Social Science Citation Index (SSCI) and Scopus, another large database of peer-reviewed publications. These two are the most often used databases informing prestigious academic publications. They overlap to a certain extent, but Scopus comprises more journal papers. We focused on three types of texts: systematic/critical reviews, meta-analyses, and empirical studies not considered in the first two types.

Bearing in mind criticism concerning meta-analyses in applied linguistics (Boers et al., 2021), and how mechanical and biassed systematic reviews can be (Hampson & McKinley, 2024), especially against qualitative studies and concerning sample sizes, we critically evaluated all sources during screening.

After these initial searches, we hand-searched scholarly journals, websites, and lists of references in the publications in follow-up searches. Compiling the database was an iterative process resulting in multiple pools (e.g., Hiver et al., 2024). This snowball sampling of resources proved to be helpful using these strategies.

- We checked the lists of references in publications for new papers.
- We tracked citations *forward* using Google Scholar, Web of Science, and Scopus, by checking which recent publications cited previous ones.

Table 2: ***Criteria for Inclusion and Exclusion of Publications***

	Inclusion criteria	**Exclusion criteria**
Focus of study	Benefits of AL learning in addition to language competence	Outcomes are limited to AL, results concern no other benefits but learners' language repertoire. No meta-analysis on narrow topic
Age of participants	3-19 years + adults	Children aged 0 -3
ISCED level	All	
Language of publication	English	All other languages
Years	Empirical studies published between 2004 and 2025	Published earlier
Target languages	Chinese, English, French, German, Japanese, Spanish, Latin, Classical Greek, etc. included in publications	none
Type of program	• Language awareness, • Target language as subject (FL, L2) • Content-based • CLIL • EMI	• Special education • Heritage language • Study abroad • Teacher education programs
Type of publication	• Policy documents • Systematic and critical reviews, Meta-analyses • Empirical studies in refereed journals in Applied linguistics and language education • Publications on theories of second language acquisition, foreign language learning and teaching • Chapters in edited volumes • International surveys	• Theses • Conference presentations • Self-published texts • Unpublished reports

This iterative process continued until we reached saturation (no more new publications emerged). These inquiries resulted in datasets beyond the original systematic searches, and included publications

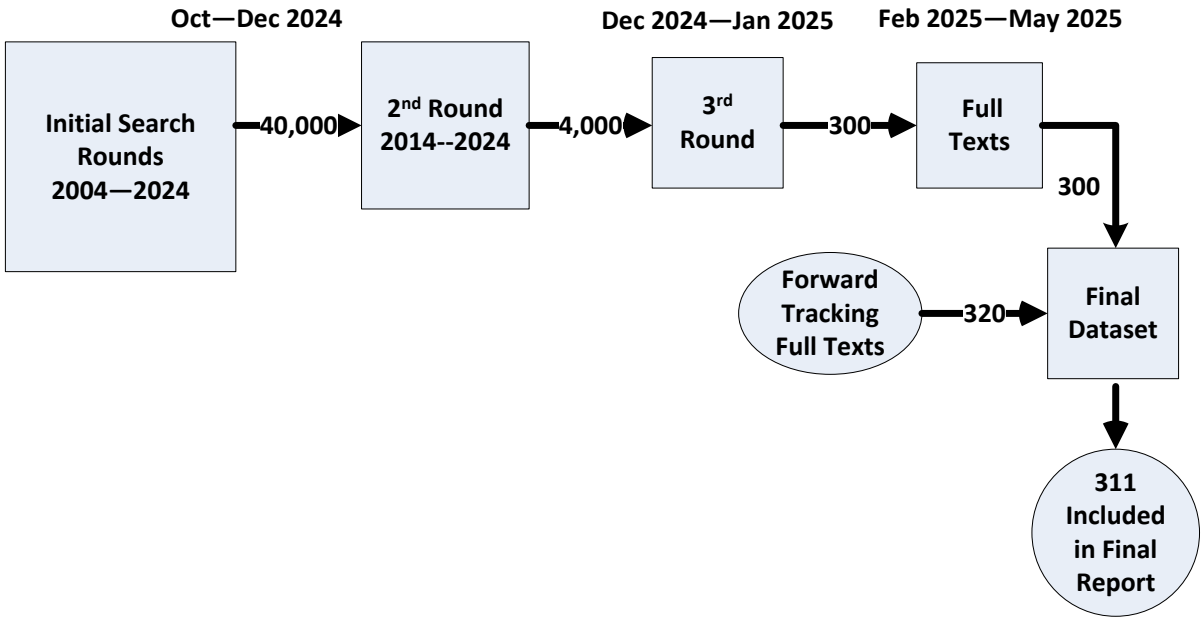
not found in the initial rounds. When more sources were needed, we occasionally consulted ChatGPT. However, so many references to publications were bogus that we gave up on this line of search.

In the initial searches, we followed the guidelines proposed in the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) statement (Moher et al., 2015), as they recommend a clearly defined process of literature search, selection, screening, and data synthesis (Table 2). Multiple rounds of search were conducted on the *Web of Science* and *Scopus* using varying search strings of keywords and Boolean operators (AND, OR, NOT) between October and December 2024. Separate searches were run for systematic / critical reviews, meta-analyses, and specific types of empirical studies (experimental, quasi-experimental, exploratory, case study, etc.). The main challenge was finding publications explicitly discussing *benefits* of AL learning beyond language outcomes.

Initial search rounds (Figure 1) resulted in over 40,000 hits published between 2004 and 2024. Narrowing the time to ten years still produced over 20,000 titles. In December 2024 and January 2025, the titles and abstracts of the first 4,000 entries were cross-referenced against inclusion and exclusion criteria. Their relevance was assessed if they discussed benefits of learning and using ALs beyond outcomes in the AL. All publications were carefully considered to make sure that ethical norms were met.

After the third round, a list of about 300 potential publications was compiled with full-text access and downloaded. These included book chapters, journal articles, and research reports. During February and May 2025, 320 new texts were forward tracked, downloaded, and screened. Thus, we read 620 full texts in the final dataset. Finally, going back and forth, we decided upon 311 sources, as shown in Figure 1.

Figure 1: ***Flow Chart of Building the Dataset***



In addition to the final list of 311 publications, the appendices include additional sources:

- Appendix A: 10 educational documents and
- Appendix B: 44 publications on classical languages.

In the main text we synthetized the following number and types of publications

- 114 systematic, scoping, critical, narrative reviews published in refereed journals, online, and in books,
- 21 meta-analyses published in refereed journal,
- 82 empirical studies published in refereed journals,
- 97 other sources (on theories, key terms, surveys, etc.).

These are the reasons why publications were eliminated from the final dataset:

(1) Findings were only about language learning outcomes,
(2) They were of poor quality,
(3) They overlapped with other publications, (e.g., by the same authors)
(4) Meta-analyses claimed that the field was not ready for generalizations due to fuzzy definitions (e.g., on task-based language teaching: Boers & Faez, 2023; Boers, et al., 2021; Bryfonski & McKay, 2019).
(5) We had to limit the number of texts to make our task feasible and the review readable. The final text is longer than we originally expected, but we think the content justifies the length.

What to include in the final dataset of 311 texts was decided by the two authors, with the help of an external reviewer (see second entry in *Acknowledgments*). The key criteria concerned the relevance of the publication to the overall aims of the study.

1.3 Summary of research methods

In the first part, we clarified how specific terms are used in the study. Then, we explained how multiple datasets were built to answer the five research questions. We outlined the criteria for choosing language educational documents in section (2) to examine what desirable goals they set and how they compare with what theories outline to be the main benefits of being plurilingual (3).

Then, we explained how the dataset for section (4) was compiled to present research evidence underpinning claims of various benefits. It was an iterative process resulting in multiple pools of studies found following the guidelines of PRISMA (Moher et al., 2015) and using snowball sampling of resources by checking the references in publications for new papers and by tracking citations forward using Google Scholar, Web of Science, and Scopus (as shown in Figure 1). Thus, we found publications citing previous ones. This iterative process resulted in 311 texts cited in the main text. This number includes not only review papers and meta-analyses, but also key publications related to the topics we discuss.

2 WHAT BENEFITS DO GOVERNMENTS AND EDUCATIONAL AUTHORITIES ASPIRE TO FOR THEIR STAKEHOLDERS?

This part of the study is based on document analyses. We examine the contents of educational and policy documents compiled and made public by decision-makers to guide stakeholders in their choices of priorities. These include specific advantages of multilingualism and plurilingualism in specific contexts, and the special cases of English as a lingua franca, languages other than English, and Classical languages.

2.1 What benefits are specified as goals and desirable outcomes in educational documents?

We thought it useful to precede the discussion of empirical research into AL learning by reviewing a selection of educational documents which were relevant to AL teaching in schools but published through official rather than academic channels. Documents published by bodies such as UNESCO or the Council of Europe with a policy or advisory remit or reports summarizing or contributing to policy and practice in particular countries or regions were scrutinized for the claims that they made about the benefits of language learning. The reasons for this review are twofold:

(1) Documents like these discuss the aims and purposes of language learning and some give advice or offer justifications for decisions concerning the investment of time, personnel and resources in the enterprise of school-level language learning. As such, they provide a useful framework for what theoreticians and researchers have to contribute. The authorship of such documents often includes academics, but the intended readership is broader. The range of concerns is possibly wider than those found in research published in peer-reviewed journals and other works of scholarship. They contain very valuable indications of the types of benefits that families, employers, learners, and other stakeholders want and aspire to from AL learning.

(2) Discussion of this sample of documents also draws attention to the differing linguistic landscapes that are found worldwide. This provides a useful reminder to the reader that the language learning research that will be reported in Section 4 is not context-free. The research participants come from different regions and cultures and their purposes in learning a language or languages may be equally diverse. This issue will be covered in section 2.2. The agendas of researchers will also differ according to circumstances. The tenor and content of the research reports may reflect some or all of these contextual features.

The inventory of documents consulted can be found in *Appendix A*, and they also appear in the References. We limited our choices to documents published in English over the past 20 years from 2005 onwards. The aim was to achieve as much geographical coverage as possible. None of these documents had the benefits of AL learning as their major theme but assumptions and claims about different types of benefits or desirable outcomes from AL learning were to be found embedded in the texts. The selection included some documents with world-wide reference, some with regional reference, and some with national reference (see list of references in Appendix A). This was to ensure that issues and claims at different levels of detail might be captured. Any claim regarding the positive outcomes of successful language learning was considered relevant to our topic and the terms referring to those outcomes were extracted verbatim from the surrounding text and later put into categories as can be seen in Figure 2. The details of verbatim claims made can be seen in Appendix A.

Because these documents were selected and scrutinized with the intention of extracting notions and beliefs about benefits that could then be investigated via the research literature, it was not appropriate to apply quantitative analysis (number of mentions that a particular concept received). It is also important, as discussed in section 2.2.2. to recognize that different values will be salient in different societies and settings.

Figure 2: ***Benefits to Society and to Individuals***

Societal: benefits to society as a whole

- Better international relations from intercultural understanding
- National economic benefits, fostering global business relations
- Social justice, e.g., giving indigenous languages recognition and respect
- Social cohesion from intercultural understanding

Benefits to individuals

- Cognitive
  - enhanced problem-solving abilities
  - better brain health
- Educational
  - greater aptitude for learning new languages
  - language awareness
- Affective
  - higher levels of empathy
  - affirming a sense of identity
  - appreciation of diversity, reduction of prejudice
- Individual wellbeing
  - access to education in the language of instruction
  - employability, better career opportunities
  - cultural capital
  - integration for migrants and new arrivals
  - international mobility for study and work

In spite of the diverse contexts referred to in the documents and the different needs of learners with diverse characteristics, there was a considerable amount of agreement at the higher levels of generality. For example, many documents referred to cognitive or affective benefits deriving from AL learning and most discussed the contributions of AL learning to social cohesion, intercultural understanding, equity and socio-economic prosperity. Sub-themes were more specific to the needs of particular situations, such as supporting migrants in learning the language of the host community or the benefits of knowing specific key languages.

The outcomes aspired to fall into two broad categories: benefits to society and benefits to different types of individuals. Some claims, for example those about intercultural understanding, were occasionally ambiguous as to whether they referred to individual or societal benefits but amongst the documents in their totality both cases were covered. Figure 2 shows the results of sorting verbatim claims from the selected documents into broad thematic groups, with some detailed examples also included. The broader themes will be used in the rest of this paper as a way of structuring the discussion of research into benefits of education for plurilingualism. They will be broken down further and elaborated with more details according to our findings from the research.

2.2 What role does context play?

The official documents summarized above have much to contribute to an overarching picture of the benefits that policy makers and stakeholders hope for in general and will help to structure our account of research. However, each region or nation will differ from others in the aspirations and concerns of experts and members of the public regarding the benefits of learning additional languages. It is important when reading research reports to bear in mind the educational setting, national context and historical background against which the AL teaching was conducted. Not all benefits are equally valued everywhere. Readers of this report will therefore be able to orient themselves regarding what matters in their own context.

2.2.1 Focus on the benefits of additional languages

Worldwide, linguistic landscapes are diverse. Geographical, economic and political factors may influence the importance given to particular languages, both national and foreign. This will determine which ones are offered on school curricula and, in the case of multilingual societies, which ones are selected to be the medium of instruction. Additionally, in countries with high numbers of new arrivals through migration or asylum seeking, school systems need to adapt to accommodate the need for school-aged children at all levels to learn the host language. This is crucial for accessing the curriculum as well as for social integration (Cummins, 2016; Kohler, 2017).

There is ample evidence that amongst policy makers and stakeholders there is close attention paid to the special value of particular languages. For example, Kohler (2017) cites support in Australia for a wide range of AL beyond the commonly taught European languages. These include Mandarin, Japanese, and Indonesian, which are given importance because of trade and other relationships in the South Pacific region. Collen and Duff (2024) while documenting the decline in foreign language learning in English secondary schools, cite economics-based research by Ayres Bennett et al. (2022) claiming a 2:1 cost benefit ratio if skills in languages are key to business - Arabic, French, Mandarin and Spanish - could be more widely learned (see 4.4.1). The English language is a special case, as discussed below, since in most contexts it is promoted as a key to benefits. These benefits will be seen differently according to the needs of the particular society, be it trade, global mobility or as the language of education.

2.2.2 The special case of English

English is currently the dominant language worldwide, in terms both of the numbers of its native users, and of its use as a lingua franca between users of different languages (Jenkins et al., 2018). Even some years ago, a report on the worldwide impact of the English language (British Council, 2013) estimated that as many as 1.75 billion people globally could speak English ‘at some useful level’ and emphasized the value to individuals of a good command of the language. This dominance is underpinned by

historical and geopolitical factors, including the past colonial expansion of the British Empire and the more recent global influence of the United States (Crystal, 2003). As a result, English has become the preferred medium for international communication, business, science, and technology. University courses in which English is the language of instruction are to be found in many countries where English is not the official national language (Macaro, 2018; Spolksy, 2018). It is the dominant language of social media, for internet use and publishing in international peer-reviewed journals.

Learning English is like traveling abroad because English is a language that can definitely be understood in all countries.
--Girl, age 11

This dominance can also be seen in research into AL learning where English is very often the sole language or one of the languages with which the research participants are engaged. Research into the experiences and achievements of learners of ALs other than English (LOTE) is less frequently found (Dörnyei & Al-Hoorie, 2017; Duff, 2017; Lanvers, 2024) and learning a LOTE "typically takes place in the shadow of Global English" (Dörnyei & Al-Hoorie, 2017, p. 457) (see section 4.3).

The widespread use of English has significant implications for school systems worldwide. In many countries, English is a compulsory foreign language on school curricula. In others where there is a choice of foreign languages to learn it is the preferred option for many students and their families (European Commission / EACEA / Eurydice, 2023). In others, it is an official language and the medium of instruction in schools (Lee et al., 2023). In this case, a good command of English may be seen as more than a benefit but as an essential, a bridge to education and social advancement. This point is underpinned by the decision by OECD (2021; see also Marconi et al., 2020) to integrate English into the international assessment program of *PISA 2025 Foreign Language Assessment Framework* for all 15-year-olds. However, in contexts in which, although official, it is not a language in which all school students are fully comfortable, educational outcomes may not be optimal (Williams, 2006). The reverse side of the coin of the high status of English raises questions about linguistic inequality and the marginalization of other languages within societies (Phillipson, 1992).

2.2.3 Multilingualism and plurilingualism

As discussed in section 1.1 on terminology, usages may differ slightly but, in this section, multilingualism refers to the co-existence in a country or region of many languages of daily use (Edwards, 1994). Plurilingualism (Spolsky, 2018) is the command of several languages by individuals.

Plurilingualism is currently much discussed in the literature as desirable for promotion in mainstream education (Council of Europe a, b; 2020; Ibrahim, 2022). The benefits of plurilingual education are represented in a number of national language policies but the reasons may differ. Social justice and inclusive access to education in a language that a student understands well, as promoted by UNESCO (2025), is a response to needs in multilingual countries in course of development where, as mentioned above (Phillipson 1992), community languages may have been overshadowed by English or another internationally used language. On the other hand, plurilingualism as a key to intercultural understanding and global mobility for learners in more affluent regions is represented amongst the education documents reviewed, for example in Kohler (2017), Marconi et al. (2020) and Birch et al. (2023)

Plurilingualism is a norm amongst populations in many countries of the world, albeit at different levels of proficiency and in different domains of use. An authoritative document on the subject (UNESCO, 2025) points out to stakeholders that the cognitive value of knowing many languages applies no matter what the languages may be. However, where some or all of the languages known within a population are strongly localized, used in restricted domains and acquired in naturalistic conditions, those languages may be of low status for public agency. Thus, the plurilingual skills of their users may not be highly valued and local and indigenous languages may become devalued, impacting cultural diversity and linguistic heritage (Pennycook, 2017; Spolsky, 2018). Policy documents in countries such as Canada and Australia make mention of language programs to support indigenous languages. This could be seen as a matter of affirming personal identity and social cohesion, although the programs appear to be small and not high profile. An individual's prospects in some contexts may thus depend more on their command of one or more official national languages rather than on their ability to use several other less prestigious community languages. For example, Roma children in 11 EU member states (European Union Agency for Fundamental Rights, 2014) are clearly disadvantaged.

Even when a country has a number of community languages with official status for all purposes including education, but one of them is English, there may be a bias in its favor. South Africa, for example, under its "One nation, many languages" mission, recognizes eleven official languages, including English, as potential languages of instruction (South African Republic, 2012). Despite the legally enforced equal status of each of these languages and attempts to ensure that equal effort and resources are dedicated to all, English remains highly sought after by parents as a medium of instruction. This, however, as we saw above, can hinder the academic success of children who start school less proficient in the language and fail to catch up (Alexander, 2000; Probyn, 2017).

2.2.4 Native speakers of English and Languages Other Than English (LOTE)

The dominance and known global viability of English affects many of its native speakers with regard to how they perceive the value of learning other languages. The UK, for example, has for many years been a multi-lingual country in which many citizens remain monolingual in English, an anomaly which has been pointed out by many (Lamb, 2001; Lanvers, 2011). There is currently a very low uptake of Modern Foreign Languages at ISCED Level 3 in state secondary schools in England, exacerbated by the fact that, currently, learning an MFL is not compulsory beyond the third year (Ofsted 2021). This is in spite of widely voiced views concerning the importance of foreign language skills to international relations, particularly in the business sectors (Collen & Duff, 2024).

Australia's language policies are reflective of its geopolitical position. Different states have varying approaches, but as mentioned above (Kohler, 2017) there is explicit support for First Nation languages and for languages important for trade and relations in the South Pacific region, e.g., Mandarin in Indonesia).

In Canada, the Action Plan for Official Languages 2023–2028, while offering some support for community languages, emphasizes national bilingualism in French and English as the two official languages, mandating extensive curriculum time for each but also making clear the need for more support for French learning compared with English, which has an ascendancy.

2.2.5 The special case of Classical languages

The case of Classical (so-called 'Dead') languages, Latin and Greek, is somewhat different. Where they are taught, the rationales given and the benefits claimed for their study are usually separately treated in educational documentation and this report will follow the same practice (See Appendix B). The references list for that topic will be part of Appendix B.

2.3 Summary of desirable benefits of learning and using additional languages

This section outlined the potential benefits included in educational and policy documents. Learning and using ALs are expected to contribute to better international and global business relationships, increase social cohesion and intercultural understanding. Social justice is served, as speakers of all languages are recognized and respected at the level of society.

Plurilingual individuals' cognitive abilities are expected to improve, leading to increased success in schools and opportunities on the job market. Improved cognitive characteristics and social interactions are expected to result in better health outcomes in old age. Higher language awareness and learning abilities make development in all areas more efficient. Individuals' cultural awareness and sense of identity increases the appreciation of diversity in their communities. As they gain access to education in the language of instruction, new opportunities open to participate in international mobility for study and work, and for new career options. Migrants gain access to integration opportunities in their new countries. As a result of all the above, individuals' cultural capital and overall well-being are expected to improve.

Overall, it is against this background of different linguistic landscapes, different political and economic interests and the views of stakeholders that the account of research into the benefits from AL learning which follows in section 4 should be considered.

3 WHAT DO THEORIES CLAIM ABOUT LEARNING ADDITIONAL LANGUAGES?

As a general theoretical framework, we rely on Bronfenbrenner's (1979) Ecological Systems Theory, and its adapted SLA model (Douglas Fir Group, 2016). We intend to outline how individual learners' AL development is impacted by a network of interconnected environments: their family (microsystem), their relationships with peers, teachers, local communities (mesosystem), the societal context in which they are embedded (macrosystem), and how these relationships change over time (chronosystem).

Thus, we want to give an overview of what theories claim about the ways in which learners' additional languages develop and are shaped by their individual characteristics in interaction with their educational, social, and cultural environment. We are interested in how these learner characteristics change as a result of learning languages in classrooms and informally beyond them. We are interested in such benefits not only for the individual learners, but also for their smaller and larger communities.

Overall, experts on SLA agree on many ideas, although there is no overarching theory to explain the complex picture of how people learn languages (e.g., Atkinson, 2014; Ellis, 2021; Hulstijn et al., 2014; Larsen-Freeman, 2018). Why are some learners successful in developing high proficiency in their new language, whereas others give up before reaching a level they could use for real-life purposes? Interestingly, there is no best language teaching method (Kumaravadivelu, 2001). Experts agree on important principles, but multiple methods have flourished in the post-method era.

It is challenging to pinpoint what theories claim about the benefits of learning new languages in addition to learners' achievements in the target language itself. They tend to focus on the processes and outcomes in terms of what learners can do in their AL. They are concerned with how well they can use them for various purposes, and what cognitive, conative, affective, social, demographic, and contextual factors impact their development. How their personal characteristics and self-perceptions about them develop because of learning and using one or more new languages is rarely integrated into SLA theories, especially in terms of measurable outcomes.

To test how theories work in various contexts, quantitative studies are designed and implemented. Researchers collect quantified evidence to draw a larger picture by finding out the extent certain variables are related to one another or predict outcomes in the AL and other domains. It is challenging to design and implement large-scale quantitative studies in education; such experimental studies are not available on language education, quasi-experimental studies with large samples are also hard to find. Few large-scale studies are longitudinal to offer insights into learners' development. Qualitative research does not presuppose predefined variables or relationships among them, but it explores learners' language-related lived experiences and trajectories through their own subjective perspectives (Creswell, 2012). In other words, they aim to document what it is like to learn and interact with others while learning and using ALs. Both types of studies help us understand how and why languages are learned, what is typical and what is unique. By combining these two types of research design, mixed method studies can draw a more detailed picture than can be obtained by using only one of them. Key findings from all these types of studies should be of interest to language policy makers and curriculum designers, as well as to parents and learners of ALs.

3.1 How did theories shift from cognitive to social, multilingual, and affective turns?

Over the past decades, focuses have shifted multiple times (Ellis, 2021) as various theories of SLA have been proposed, tested, supported, refuted, and revised. These focal shifts tended to result from new ideas emerging in related fields of inquiries on learning and human behavior in general, and linguistics in particular. They were marked by a sequence of "turns", as applied linguists drew on findings of other disciplines and integrated new constructs and approaches into their field of study. These include L1 acquisition, cognitive and social psychology, sociology, anthropology, and education, among some others.

Initially, SLA studies examined individuals' and groups' L2 development in narrowly defined linguistic domains (e.g., morphemes, word order, error analysis, acquisition sequences, transfer). Discussions during the *cognitive-interactionist* phase were primarily concerned with universals, the role of explicit (declarative) and implicit (procedural) knowledge, input and interaction in the target language (e.g., Krashen, 1982). Over time, cognitive theories were revised and further developed (e.g., Biedron & Pawlak, 2016; Ellis, 2019). However, as Atkinson (2014, p. 473) pointed out, "cognitivist approaches to learning seem to see it as the accumulation and structuring of knowledge in isolated cognitive space – a so-called competence view of learning". In other words, cognitive theories are concerned with linguistic phenomena rather than learners in their contexts.

To adopt a more balanced approach to integrating individuals' minds and the social world in which they live, researchers shifted their attention to how language users interact with speakers of the target language and their own L1. They *co-construct meaning* with others in specific social situations. Drawing on *sociocultural* theories (Vygotsky, 1978), a so-called *social turn* emerged (Block, 2003). As a result, learners were primarily seen as social beings who are autonomous participants, *agents*, in their learning and actively shaping their world around them. Thus, SLA was reframed as a social phenomenon, with interest in scaffolding, mediation, and community of practice taking central stage. In this socio-cognitive approach, "language is for social action. If so, then language learning means learning how to operate adaptively in our social environments, which have the primary role of mediating our relationship with nature" (Atkinson, 2014, p. 273). Thus, learning an additional language is seen as *language socialization* (Duff, 2019): a long process of learners becoming bona fide members of their plurilingual community through using their repertoire.

Yet another development emerged due to integrating social constructs into SLA models: a *multilingual turn* (Genesee & White, 2024). It was motivated by realizing biases of monolingualism and nativespeakerism, and an emphasis on *multicompetence* as a norm as opposed to being monolingual. As Ortega (2019, p. 24) pointed out, a monolingual bias was present in SLA research using "monolingual first language acquisition as the main point of reference, ignoring the directly relevant research contributed by the field of bilingual first language acquisition". In her summary of two *ideologies* characterizing the field, (1) the monolingual and (2) native speaker biases are associated with the nation state project: "owning a language from birth results in a form of linguistic competence superior to the competencies that may develop through any other means over the life trajectory".

Both biases work together to cast a deficit light on the object of study, portraying language learners as doomed to failure" (Ortega, 2019, p. 24). She pointed out that the same negative framing characterizes discussions of early versus late timing of learning ALs (see sections 5 and 6 on the role of age in SLA and the benefits of early start programs), and the focus on only learners' L2 rather than their repertoire. These critical reflections on who owns languages and what yardsticks should be considered for assessing development in ALs have shaped discussions towards seeing learners of ALs in a positive rather than in a negative light. In a positive framing, being plurilingual is added value, not

a deficit. Recent trends in positive psychology emphasize enjoyment, willingness to communicate, grit, and other qualities that make learners more resilient and motivated to learn (see section 4.3).

Clearly, these ideas concern not only languages, but also power relationships and societal issues associated with them and their speakers, pushing the boundaries from the micro- and mesosystem levels to the macrolevel comprising social, economic, and cultural values (see section 4.4). These values range from attitudes, beliefs, ownership, and identity, to inequity, social justice, and other concepts earlier not integrated into SLA theories. These recent constructs interacting with societal aspects of learning and using additional languages also include, for example, intercultural communicative competence (e.g., Byram, 2021; Byram & Wagner, 2018; Council of Europe, 2020a), global citizenship (e.g., Lütge et al., 2022), and translanguaging (García & Li, 2014). The approach integrating all these new aspects requires and benefits from a transdisciplinary framework for SLA in a multilingual world (Douglas Fir Group, 2016). Section 2 analyzed what aims and benefits educational and policy documents include from these theories and other sources, whereas section 4 examines empirical studies on them.

Translanguaging (García & Li, 2014) is a thought-provoking theory closely related to multilingualism, multilingual transfer (learners use what they can do in one language in another one) and code-switching (alternating between two or more languages) (Anderson, 2024; Cummins, 2022; Treffers-Daller, 2024a, 2024b). The underlying assumption goes against conventional understanding of what a language is and what role plurilingual individuals' languages play as their repertoire develops. Translanguaging theory emphasizes that multilinguals have a unitary underlying cognitive system in which either no separate languages exist, or if they do, boundaries between them are fluid. The theory has important implications for the benefits of learning languages. It concerns how individuals draw on what they already know and how the knowledge and skills in this *repertoire* benefit various domains within it (Anderson, 2024; Cummins, 2022; Li & García, 2022; Treffers-Daller, 2024a, 2024 b). This is an area where many empirical studies have been published recently, as is discussed in section 5.

Recent theories frame AL learning as language socialization (Duff, 2019) and contextualize it as embedded in *ecological complex social systems* where people live and act as autonomous learners and users of ALs. They are proactive agents (Larsen-Freeman, 2018; Papi & Hiver, 2025 a, 2025 b) as well as life-long learners of their repertoire of languages (De Houwer, 2021; Murphy et al., 2015). Other theories (e.g., Darvin & Norton, 2023; Kramsch, 2019) emphasize the role languages play in shaping their users' identity and frame language learning as an investment in their cultural capital. Thus, the ability to use multiple languages is seen as a component of human capital (Chiswick & Miller, 2015) (section 4.4). How cultural and human capital benefits plurilingual individuals as well as their communities and society where they live is also discussed in section 4.4.1. They are both seen as an added value to a commodity characterizing plurilingual individuals.

Thus, plurilingualism is to be considered as the norm (Herdina & Jessner, 2002; Ortega, 2019) not an exception. In line with these developments, inter- and multicultural competences emerged as key constructs among benefits of being plurilingual (e.g., Byram, 2021; Byram & Wagner, 2018; Leontjev & deBoer, 2022). They comprise new components of communicative abilities in AL, allowing users to apply their knowledge, skills and abilities in a range of cultural and social situations (4.4.2).

Attempting to integrate the key findings of SLA theories, Papi and Hiver (2024 a) proposed a proactive language learning theory. They placed the AL learner as a social being at the center with agency and outlined four proactive L2 learning behaviors that lead to measurable AL outcomes. "These behavioral dimensions include input-seeking behavior, interaction-seeking behavior, feedback seeking behavior, and information-seeking behavior" (p. 10). They assume that "the more a learner engages in one type of proactive learning behavior the stronger the effects of the given behavior will be on their target

language abilities" (p. 15). It is reasonable to assume that similar outcomes can be expected in other domains. In addition to L2 abilities, the underlying abilities and other learner-related cognitive, conative and affective variables also benefit from proactive learning behaviors over time (see sections 4.2-4.3). Great examples of these proactive learning behaviors are polyglots (see section 4.3.1.1); they practice them consciously and regularly.

In all discussions, English as a target language is seen as a special case due to its privileged status of lingua franca (see 2.2.2), the language of international communication (OECD, 2024 b). As a result, most publications are about English, whereas other languages get little attention. The same is true for the language of publications not only in applied linguistics, but in all areas of communication, ranging from science to politics and culture. As was discussed in section 2.2.2, and will be a recurring theme throughout section 4, the dominance of English pushes the learning of other languages than English (LOTE) to the background, although it is yet another area where special benefits are expected to be identified. It is a fact that not all languages are equal in terms of status. Societal demand has elevated English to an exceptional position in the hierarchy of languages, and it dominates many aspects of life (see especially section 4.4).

A transdisciplinary framework applied to SLA, the theory of complex dynamic systems (e.g., Hiver, et al., 2022; Larsen–Freeman, 2012), has also been found relevant to explain non-linear patterns observed in AL development and among other variables at multiple levels playing ever-changing roles. This model is suitable for describing not only the up-and-downs in AL development, but for explaining dynamic changes in learners' beliefs, motivation, emotions, identity, grit, etc. Section 4.3 will offer evidence that these factors fail to show linear increase. Their impact and development are both hard to grasp, as they are in constant interaction with other variables (Barcelos, 2015; Pavlenko, 2013). The constructs are also often fluid. It is an appropriate approach to viewing "the L2 learner as complex and heterogeneous" (Ellis, 2019, p. 215) which leads us to a focus on how learner-specific factors interact, shape and are shaped, in the processes and impact the outcomes of AL learning (see details in 4.3).

3.2 What role do learner-related factors play in learning additional languages?

The ways in which language learners' characteristics shape their AL development have been of interest in earlier *cognitive* theories. In fact, one of the aims of SLA theories is to explain what role individual differences play, and how they shape their trajectories, interact with one another, as well as with language-related characteristics and contextual variables. A primary research focus is how they impact the process of language learning and its outcomes over time (e.g., Dörnyei & Ryan, 2015; Li et al., 2022). In this study, we are interested in which learner factors are shaped by the AL learning experiences and their uses in favorable ways. In other words, we want to find out which learner-specific factors are positively impacted by AL learning and use, and how much empirical evidence underpins these benefits. As Bialystok (2017, p. 2) argued, "experience-related effects found for language use have the potential to generalize beyond language because the experience itself involves more than just language-specific processes." The aim of this overview is to pinpoint and discuss these.

In line with the emergence of various SLA theories, initially, researchers inquired into the role of cognitive abilities. Then, their interests shifted to social issues (*social turn*), leading to integrating multilingualism, translanguaging, and identity (*multilingual turn*), to be followed by affective issues (*emotional turn*).

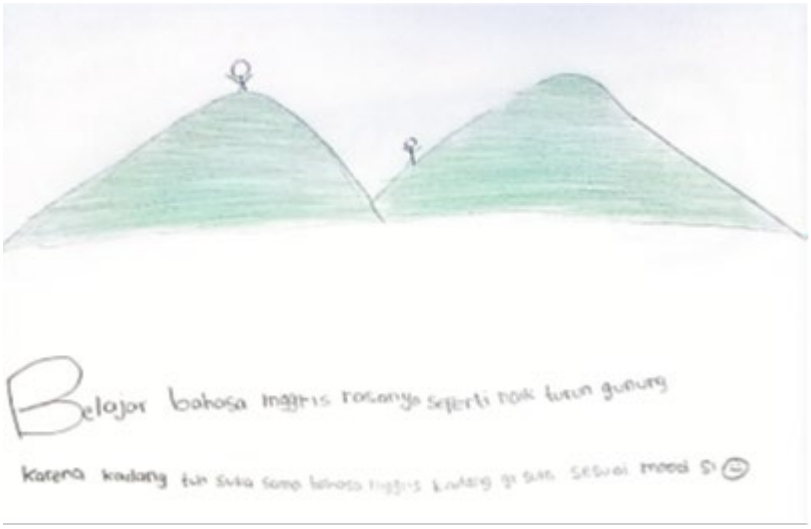
These shifts indicate two main trends:

(1) the learner characteristics included in theories and empirical studies have expanded; and

(2) the pendulum has been going back and forth between a focus on individuals and larger societal issues.

Learning English feels like going up and down a mountain because sometimes I like English and sometimes, I don't like it, depending on my mood.

--Girl, age 12



These trends can be traced in the types of research design adopted. Publications include exploratory qualitative and case studies, (quasi) experimental small and large case studies, and national and international surveys and assessments. To make sense of the huge number of studies, information technology has allowed researchers to conduct systematic reviews and meta-analyses on large datasets. These, however, paint only the larger picture in broad brush strokes. To capture and understand how and why things work for individuals in a specific context, a closer look is needed through a small lens (Ushioda, 2016). Qualitative studies can offer such insights (e.g., Darnault, 2025).

Over the decades, empirical studies on learner-related factors have included an ever growing list of constructs: language learners' cognitive characteristics (aptitude, working memory, strategies, metacognition), conative characteristics (motivation, mindset, goals, willingness to communicate), affective learner-related factors (anxiety, enjoyment, self-efficacy, beliefs), and socio-economic, cultural, and demographic characteristics (age, gender, socio-economic status, culture, identity) (Li et al., 2022; Dewaele & Li, 2020). Cognitive abilities concern thought processes and reasoning. Conative abilities allow learners to apply their knowledge and skills to act and achieve their goals, whereas affect impacts emotional behavior. They shape learners' feelings about learning situations, other people involved in the learning process, and how learners feel about interacting with them. Socio-economic and cultural differences include learners' socio-economic status (SES), which allows them to have access to educational opportunities, and identity, who they think they are, how they perceive themselves, what cultural values shape their behavior, etc. (see 3.4.1 and Figure 2).

The most frequently studied learner-related factor is language learning motivation, a conative characteristic often integrating emotional features in attitudes, etc. (discussed in 4.3). Its construct has evolved in phases (Dörnyei, 2019; Dörnyei & Ryan, 2015; Lamb et al., 2019) by borrowing constructs from social psychology and other domains. It is a popular topic as it integrates linguistic, social, emotional, and pedagogical aspects of language learning. It is seen as an area shaped by parents, teachers, and peers, as well as society at large. Overall, the best predictors of AL achievements tend to be learners' aptitude, motivation, previous language learning experiences, and level of proficiency at start (Dörnyei & Ryan, 2015; Dörnyei, 2019. All learner-related factors will be examined in sections 4.1 to 4.4.

3.3 What other factors interact in learning additional languages?

Clearly, there are important differences between students learning an AL, as was outlined in section 2.2. Many students learn the language of their choice at school as part of the curriculum (e.g., English or Mandarin or Japanese in a European country, or German in China) or at a language school where parents pay for extra AL classes. Their experiences are different from those of learners at a prestigious bilingual local school or international institution where they were selected based on their academic abilities and level of proficiency in the AL to ensure that they can follow subjects taught in the language of instruction. The situation of these elite learners contrasts with that of disadvantaged immigrant learners of all ages working towards proficiency in the official language of their host country. They may be seeking asylum or trying to find a footing where the ability to use the AL is a must to get educated or to find a job (e.g., English in the U.S. or Australia, German in Austria or Germany).

There are huge differences between these extreme learning situations and conditions further shaped by two types of language-related factors. These concern the status and ideologies related to learners' L1 and AL, and the linguistic distance between them. Others include learners' proficiency in their repertoire, their opportunities to learn and use them, and their experiences with learning and using their languages (see 3.4).

These points explain why it is challenging to depict a unified picture of learning and using ALs. As Kroll and Dussias (2017, p. 7) pointed out, in addition to contexts many other things also matter:

> Despite attempts to control or match as many factors as possible when comparing groups of people—for example, to examine the impact of bilingual or multilingual language experience apart from overall life experience—it is difficult to do this perfectly. Some individuals acquire a second or third language by choice and others as a consequence of the demands of immigration. Some live in an environment where everyone else speaks two or three languages, and others live in an environment that is strongly monolingual, like many locations in the United States.

In the next section we attempt to synthetize the main points discussed so far to outline what factors play key roles in learning and using ALs, and how and to what extent plurilingual individuals benefit from developing and using their repertoire.

3.4 What matters most in additional language learning?

3.4.1. Factors influencing additional language learning in plurilingual individuals

Theories tend to propose explicit or implicit models of AL learning. Based on short discussions on theories, we try to synthetize all factors interacting in AL learning that may impact the outcomes.
We identified three overarching categories of factors related to

(1) contexts,
(2) learner-related individual characteristics, and
(3) languages in learners' and users' repertoire.

First, we summarize contextual factors at three, sometimes overlapping, levels (see Figure 2).

3.4.1.1 Contextual factors

The societal (macro) level comprises values associated with languages, plurilingualism and multilingualism (Figure 3). For example, in societies where the use of multiple languages has been appreciated for a long time (e.g., Switzerland, Canada, India), their value is higher than in countries where the official language is considered more valuable and languages of ethnic minorities or immigrants are not (e.g., Roma languages in Europe). These values related to languages define access to educational opportunities in legally defined documents and language policies guiding what goals are set (see section 2), what types of AL programs are promoted and financed, what benefits are foreseen and acknowledged, and how teacher education programs prepare teachers to do their jobs efficiently.

At the community (meso) level (Figure 3), decisions are made about what target languages, types of schools, programs, and curricula are sponsored and what role additional languages play in them (e.g., awareness raising at ISCED 0, foreign language, content and language integrated learning, or immersion at ISCED 1-3, EMI type programs at tertiary ISCED 4+ levels). In these programs, the emphasis tends to shift from the target language to its role as the language of instruction. This shift occurs in two ways:

(1) As learners' proficiency increases over the years, curricula are enriched by more content.
(2) An increasing number of countries offer institutions opportunities to introduce content-based programs at the early or later stage of AL learning. As the most extreme case, the AL becomes the language of instruction for the whole curriculum.

Decisions also concern the time when AL learning starts and the ratio of AL classes in the curriculum, teaching methods, teachers' qualifications, etc. Variations may occur for urban vs. rural settings, local communities, and other contextual factors.

At the individual (micro) level (Figure 3), individuals and immediate social groups impact learners' AL learning, as they influence learners in choosing additional languages, schools and curricula. They also have a say in who has access to these. Family members, educators, immediate and social groups shape learners' goals, behavior, and development. These significant others include three groups of individuals:

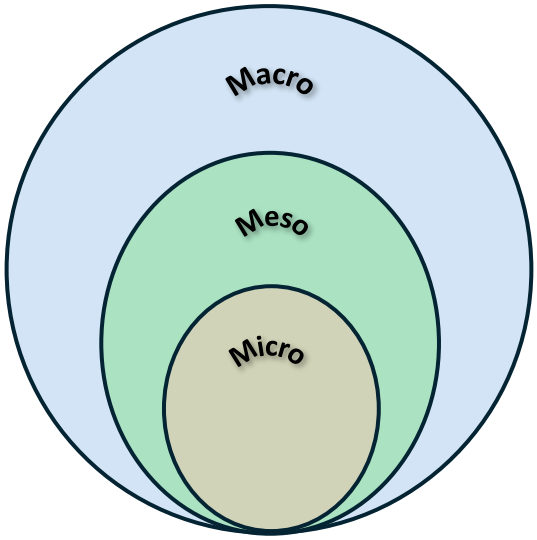
(1) The learners' *parents*, whose beliefs, aspirations for their offspring, and ability to invest in their human capital impacts learners' AL learning opportunities and journey.
(2) Their *teachers*, whose beliefs about and teacherly competences in the learners' language repertoire and teaching methods also impact how well learners can use their additional languages for their purposes and how motivated they are to become autonomous learners.
(3) Their *peers* and siblings whose attitudes, AL learning experiences, goals, motivation, strategies etc. also impact how much work learners invest into becoming proficient users of the target languages. This in turn will allow them to achieve their educational and other goals.

All additional factors related to the individual learner are also considered at the micro level. These include their demographic characteristics: age, gender, ethnicity, the place where they live and learn, and their socio-economic status (SES) and cultural background, as shown in Figure 2. Moreover, they include learner-related factors presented in Figure 3.

As Figure 3 shows, factors considered under micro, individual, and meso, institutional/community, levels overlap. The micro level is embedded in the meso level. This point is especially important concerning what types and quality of learning opportunities are available to learners, as what schools

offer is often complemented by other options. Learners tend to benefit from four types of learning opportunities. They may use all of them in parallel or only one or more or sequentially. These four options vary in how much agency learners have to engage in them. Some are mandatory, whereas others are chosen by learners to pursue them in their own time. Some are free, whereas others need investment.

Figure 3: ***Key Factors Interacting in Learning Additional Languages at Three Levels***



Societal
- values associated with languages and multilingualism
- access to educational opportunities
- language policies

Institution / community
- type of school, program, curriculum
- urban vs. rural setting, etc.

Individual
- parents', teachers', peers' impact
- demographics
- individual learner differences

(1) The first one concerns formal *classroom-based learning*. Depending on the school program and curriculum, instructed SLA programs include AL classes aiming to teach competences in the target language, as well as knowledge in certain content areas and academic subjects (as in content and language integrated, CLIL), where the language of instruction is a vehicle carrying knowledge. They all offer classroom-based learning opportunities as part of school curricula.
(2) Teachers can form a bridge between authentic AL use and classrooms by *integrating authentic resources*, games, and voluntary information-technology-enhanced activities. They may involve students in sharing their ideas.
(3) *Extracurricular learning* opportunities are organized by schools, language schools, or in the form of private tutoring. They may be sponsored by schools or parents. They include, for example, exam preparation courses, language clubs, and study abroad.
(4) Students may choose to engage in extramural, *autonomous learning* opportunities "in the wild", making use of authentic materials and activities outside pedagogical control. These activities are self-directed, freely chosen, and reflect their personal interests and intrinsic motivation. The boundaries of such learning opportunities are malleable.

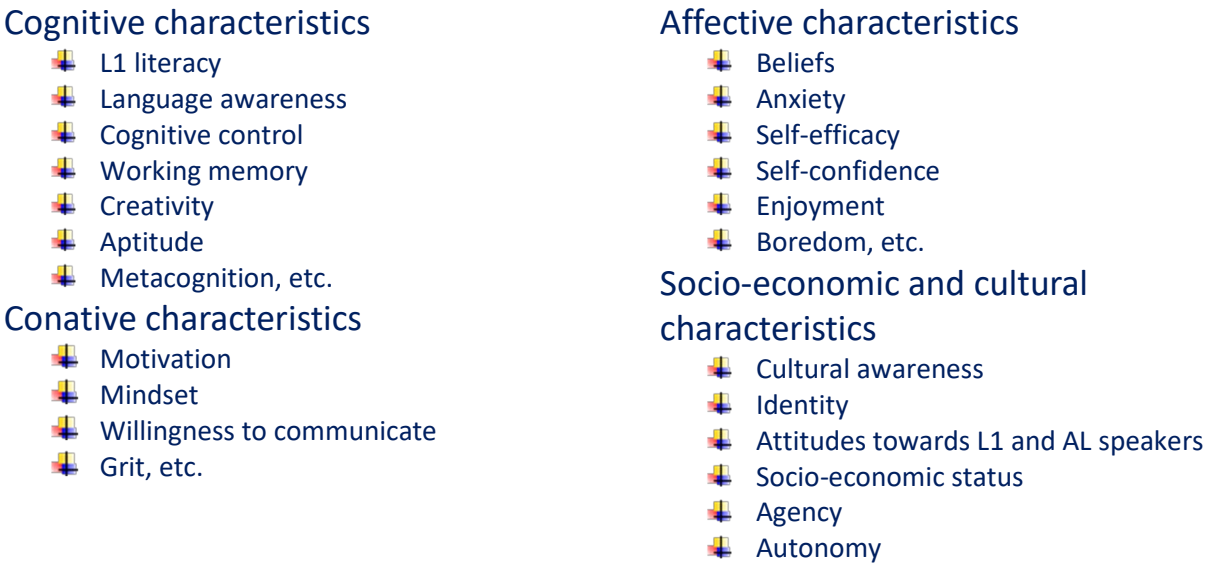
3.4.1.2 Learner-related factors as precursors of outcomes and possible benefits

As a second focus (illustrated in Figure 4), we zoom in on certain psychological and socio-cultural individual differences characterizing learners and users of additional languages. These are shaped by the contextual factors at three levels discussed above and presented in Figure 3. They also interact with one another.

Figure 4 presents these learner-related differences in four categories:

(1) *Cognitive* characteristics concern individuals' learning abilities. They include, for example, L1 literacy, cognitive control, working memory, aptitude, creativity, metalinguistic awareness, and other cognitive abilities.
(2) *Conative* characteristics include learners' motivation, self-regulation, and how much effort they are willing to put into working toward their goals related to their AL abilities over years. They include mindset, willingness to communicate, grit, etc.
(3) *Affective* variables concern how learners experience, express, and regulate their emotions and feelings related to learning and using their repertoire. They include, for example, anxiety, enjoyment, boredom, and self-efficacy. Learners' beliefs about their own goals and abilities, their repertoire, emotions, identity, etc. cover all four categories, and they are emotionally colored.
(4) *Socio-economic and cultural* learner characteristics include learners' beliefs, behaviors, and values shaped by their social and cultural background. They impact how they perceive themselves, their own identity, agency, autonomy, and culture, and those of others. They also influence how learners interact with others, how they perceive themselves and others, and they shape learners' attitudes to speakers of L1, L2, L3, and their cultures.

Figure 4: ***Learner-Related Factors Impacting Additional Language Learning and Use***



3.4.1.3 Learners' repertoire: language- and proficiency-related factors

Finally, all the languages in the learners' repertoire also matter. These language-related factors are illustrated in Figure 5 and discussed in this section along two lines. One concerns the relationships between the languages themselves; the other one is related to the learner's relationships with the languages in their repertoire.

Language-related factors include the status of recognition of L1 and AL. How highly they are valued by society and what language ideologies are associated with them. For example, local or heritage languages vs. English or German, in the world context and in Europe. Linguistic distance, the degree of similarity or difference between languages, also matters (see e.g., Chiswick & Miller, 2005; Lindgren & Muñoz, 2012). For example, if learners' L1 and AL use the same alphabet or their grammatical systems are close (e.g., Dutch and German), or they use cognates borrowed from one another (English

and French), they may be easier to learn. These factors may interact with language learning experiences and learners' proficiency.

Language proficiency, including literacy, in L1 and the additional language(s) are also key factors impacting progress and proficiency in the target language, as they are related to learners' abilities and opportunities to use the AL(s) and to interact with others. For example, learners' high level of language awareness in their L1 can make learning the AL faster and more efficient. Learners speaking an L2 well may be more motivated to learn an L3, as they can use their communication and learner strategies and rely on what they already know about languages and learning them. However, as will be shown in section 4.3, what seems to be reasonable to assume, may not be supported by evidence. Assessment of progress and proficiency at different developmental levels in the target language are the most typically measured outcomes in institutional settings. Proficiency in the AL, the ability to use it for gaining new knowledge, communicating and socializing with others are the most clearly defined benefits of learning a new language.

Figure 5: ***Language- and Proficiency-Related Factors***

Language-related factors

- Status of the learners' L1
- Status of the AL
- Linguistic distance between L1 and AL
- Language ideologies

Proficiency-related factors

- Proficiency in L1
- Proficiency in AL(s)
- Opportunities to learn and use the AL
- Language learning experiences

In this section, we summarized contextual, learner-specific, as well as language- and proficiency-related factors impacting how people learn and use their repertoire. In the next one, we look at what can be listed among the benefits of learning and using AL in addition to proficiency in the new language.

3.4.2 Assumed benefits for plurilinguals beyond proficiency in the additional language

So far, we have considered a range of factors influencing individuals' AL learning and use. All the factors visualized in Figures 3 to 5, and most importantly in Figure 4, are *precursors*. They exert their influence on how well and willingly plurilingual individuals can use their ALs over time. However, during the process of AL learning and use, these factors themselves, especially at the core individual level, not only interact with, but also *impact one another*. A good illustration is the proverb: "nothing succeeds like success". It implies that the most efficient motivator is when people feel that they have accomplished what they were trying to do, thus, they will try even harder. Thus, their bonus is their increased motivation resulting from previous experiences. This line of thinking is what positive psychology promotes.

As our aim is to outline the short- and long-term benefits of learning and using ALs, we want to know which learners' characteristics improve in addition to proficiency in the AL. Assuming bidirectional

relationships, we suppose that these include all variables included in Figure 4: language learners' cognitive, conative, affective, and socio-cultural characteristics. We assume that the learner-related factors, most probably, not only impact the processes and outcomes of AL learning, but they also change during AL learning and use experiences. Successful learning experiences can make individuals more aware of how languages work and make them better at using their memory and reasoning skills efficiently. Their willingness to communicate in new situations may increase. Their anxiety can decrease. Their self-efficacy and cultural awareness can improve. Ultimately, they may become better communicators, interested in people from other cultures, and their well-being may be boosted. This is a positive scenario, and we aim to find evidence to underpin these assumptions.

However, negative experiences may prevent benefits from emerging. Plurilingual individuals may be negatively impacted on their language learning journey by contextual and language-related factors or their own beliefs. Their abilities, strategies, motives, mindset, grit, social and cultural status, identity, etc. may be a hurdle. Thus, the proactive language learning model may be applied (Papi & Hiver, 2025a). As some of these variables (e.g., anxiety, boredom) tend to impact outcomes negatively, we expect these to decline, whereas the characteristics which are conducive to AL learning and use are expected to increase. Additionally, we also expect plurilinguals to be able to improve their knowledge and skills as well as their abilities to learn other things (e.g., other academic subjects, practical skills) by using their AL knowledge and strategies, more effectively than their monolingual peers.

By integrating all the above factors, we adopt what Larsen-Freeman (2018, p. 60) recommended for moving the field forward: "focusing on individual learners in context redirects research to a more person-centered frame of reference, which I expect to herald a new phase in SLA research that addresses what language learning affords for the transformation of self." In line with the *emotional turn* in SLA, if affect influences AL learning, then learning and using a new language can also influence emotions (Pavlenko, 2013). If language learning means socializing with people in new communities, then learners' social skills, willingness to communicate, self-image, self-efficacy, and autonomy may also improve and enrich their identity (Barcelos, 2015; Duff, 2019; Dewaele & Li, 2020). Along these lines, we assume that learning and using any AL can boost learners' abilities, knowledge, and skills in other domains. They offer them a wide range of learning opportunities to better meet societal needs and requirements. There is a key condition for all the listed benefits they attempts to acquire. Children, adolescents, and adults must have positive experiences when learning an additional language.

3.5 What are the main theoretical claims on learning and using additional languages?

Finally, let us summarize the key points so far concerning the precursors and the benefits of learning ALs. Our aim was to outline what benefits are specified in two types of publications. First, we presented the goals and desirable outcomes included in educational and policy documents. Then, we analyzed what theories found and proposed as benefits of learning and using additional languages. Here we "pull strings together" and compare the findings to show how these benefits overlap and where gaps are found.

Section 2 specified potential benefits at societal and individual levels. Societies are expected to have better international and global business relationships as well as better social cohesion due to increased levels of intercultural understanding, thus benefiting national economies. Social justice is improved as indigenous languages, and their speakers gain recognition and respect. Individuals are expected to improve their cognitive abilities, including problem-solving, better health, increased language learning aptitude and awareness making learning more efficient. Their empathy and sense of identity, as well as appreciation of diversity, are expected to increase, while their prejudices

decrease. Plurilingual individuals' overall well-being improves, as they gain access to education in the language of instruction, international mobility for study and work, and new career opportunities. Additionally, their cultural capital increases. Migrants have access to easier integration into their new countries. All these ideas frame the outcomes in a very positive light and imply that learners' characteristics are not fixed traits but flexible.

One of the main findings concerning theories on learning and using additional languages is that they explicitly emphasize the development of communicative competence in the target language as the main benefit. This proficiency enables plurilingual individuals to use their repertoire effectively with both native and non-native speakers. It offers a range of academic opportunities to learn new knowledge and skills in various subjects at school or in tertiary and vocational education. Beyond academics, ALs can be used for socializing, travel, and entertainment, allowing individuals to enjoy literature, films, the arts, sports, hobbies, and more. It also enables the development of practical and productive skills, such as writing, publishing, or producing content like podcasts in AL. While the range of possibilities is vast, many of these uses are only implicitly acknowledged in the literature we surveyed. Other variables, identified in section 2, are mostly considered as precursors rather than benefits. Also, as was pointed out earlier, the documents analyzed in section 2 did not specify benefits at the community/institutional level.

Most of the precursors in section 3, especially the learner-related factors, are clearly defined, operationalized, and measurable (or work in progress). Some of these were specified in the educational documents as well as in the reviews of theories (e.g., cognitive abilities). However, the entries in the first group (Figure 2) tend to include positive adjectives or nouns, whereas the applied linguistic literature uses nouns by themselves (Figure 4). In all sources, these are flexible and possible to develop. In this respect, all sources are aligned. Other constructs, most importantly at the societal level, are fuzzier and difficult to define or measure in both source types. Identity, cultural capital, or intercultural understanding vs. cultural awareness and intercultural communicative competence, tend to be widely used, but have been elusive to measurement.

The following points sum up what we consider benefiting learners and users of additional languages based on the theoretical sources analyzed in this section.

(1) Humans use languages to communicate with others, as they build and manage their relationships. In other words, language is a means of socializing with people. Languages open new opportunities to establish and maintain relationships.
(2) People use languages for cognition, for learning new facts and skills, to build their knowledge of the world. Languages are vehicles carrying content knowledge through meaning and form. The ultimate aim of learning AL is to enable people to enrich their lives.
(3) There is no endpoint to language development, it is a life-long process.
(4) Using more than one language is more typical across cultures than monolingualism. A lot of theorizing and research has had a monolingual bias. Plurilingual individuals and multilingual societies are the norm.
(5) Although there are many common features in the way language competences develop, learners' individual characteristics and contextual variables impact the processes and outcomes in important ways.
(6) People's life trajectories differ. Some learn languages as part of their educational journey, benefitting from structured support on their path to success. Others learn languages under pressure to adapt and survive, often encountering obstacles that impede their progress.
(7) Language learning is usage based. Learners benefit from a lot of rich input, inspiring learning opportunities in interaction with others, and supportive feedback during their journey. The more the better.

(8) There are many similarities and differences between L1 and L2 learning, and between the ways children, adolescents, and adults learn languages. The precursors can develop, as they are not fixed traits.

The above points concern learners and how they develop and use their additional languages. Four further points are about extra information we need to bear in mind to understand the field.

(1) English as the lingua franca has a prominent status in theories and empirical studies. Less frequently learned languages get less attention, although the main points also concern LOTE.
(2) Most theories and research focus on and measure outcomes in the target language. Other outcomes (content knowledge, learner characteristics, employability) tend to be documented less frequently.
(3) Two domains are rarely conceptualized as measurable:
    a. how language learning contributes to learners' well-being, and
    b. how much knowledge and skills learners gain by accessing content in the target language.
(4) Every benefit included so far is potential. Certain conditions must be present for them to emerge. These conditions have implications for teaching and curricula, teacher education, and for language policies.

In the next section (4), the most widely claimed and empirically supported benefits are reviewed. Its four subsections analyze what empirical studies have identified as advantages, how strong the evidence is, and how they can be generalized as added value for plurilingualism.

4 WHAT ARE THE BENEFITS OF LEARNING AND USING MULTIPLE LANGUAGES?

In this part of the report, we present the most important findings of empirical studies on the benefits to answer the research question guiding our investigation: What benefits are supported by evidence in empirical studies? These include cognitive, educational, conative, affective, socio-cultural benefits based on systematic and critical reviews, meta-analyses, and empirical studies published over the past decade.

Most findings concern the micro level, very few are related to the meso level, but some are relevant at the societal level. Wherever possible, we include empirical studies along the ISCED levels. As not only imminent but also long-term benefits are important, research findings on adults are also included. Overall, our aim is to outline what benefits are specified in addition to being able to use an additional language.

In the first section (4.1) we summarize specific cognitive benefits related to brain efficiency and how they may impact plurilingual individuals' health; in the second one (4.2) we consider educational benefits including metacognition, language awareness, and how learning and using ALs impacts learning languages, learning in general, and academic success over time. In the third section we present (4.3) conative and affective benefits, whereas the fourth one (4.4) focuses on socio-economic and cultural domains (economic, intercultural competence, etc.).

4.1 What are the main cognitive benefits of being plurilingual?

The analysis of the cognitive advantage in plurilinguals is based on the main findings discussed in the selected publications. These tend to use the term bilingual rather than plurilingual. The key points in this section concern in what ways and to what extent bilinguals' brains work more efficiently than those of monolinguals, and what age-related health benefits bilinguals may have, especially in their old age.

Most publications emphasize the advantages of being plurilingual based on the tenet that "bilinguals learn to control the languages not in use, and that control may produce benefits not only to executive function but also to learning mechanisms more generally" (Kroll & Dussias, 2017, p. 9). Two approaches are present: the first one concerns studies explicitly discussing in what domains plurilingual individuals may have an advantage (executive function and attention control, working memory, creativity, and age- and health-related benefits). The second one includes discussions on language aptitude: how it works and whether it is a fixed trait or it is malleable. The sources we draw on are different for these two focal points, as they tend to target different audiences. As we think all these points are of interest to our readers, we present the main findings on all points.

The sources on the first four focuses include systematic reviews (Bialystok, 2017; Degirmenci et al., 2022; Fox et al., 2019; Kroll & Dussias, 2017; Lehtonen et al., 2018; Nichols et al., 2020; Woll & Wei, 2019) explicitly analyzing cognitive benefits resulting from the demands that the individual's cognitive control system must cope with while using multiple languages. Meta-analyses were also included (Lehtonen et al., 2018; Lowe et al., 2021; Monnier et al., 2021; Woll & Wei, 2019; some publications included both systematic and meta-analyses). All reviews used narrative analysis. As they synthetized publications up to 2020 or so, we included recent empirical studies to see how they compare to the main findings of these syntheses.

All reviews discussed either one or multiple benefits, whereas the empirical studies focused on single areas. The results are presented along with the specific cognitive benefits: first, the most often mentioned executive function and attention control (4.1.1), working memory (4.1.2), creativity (4.1.3) and some age-related health benefits (4.1.4). As will be seen, the publications on multiple benefits are considered along their key points. Interestingly, the most important cognitive factor related to AL learning, language learning aptitude, is not mentioned in these reviews and meta-analyses. Therefore, we devote a separate section (4.1.5) to it, as we assume that learning and using ALs also benefit the ability to learn them.

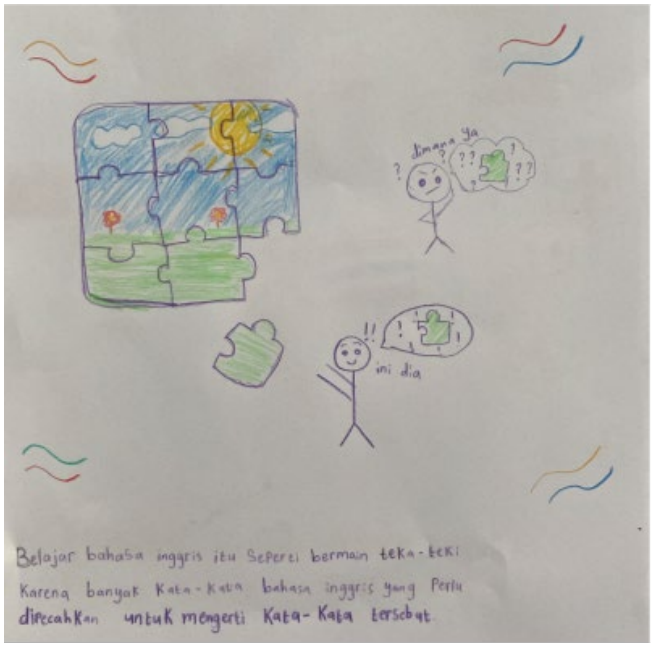
4.1.1 Executive function and attention control

These terms concern general learning abilities. "Executive function is a general term describing cognitive skills that are at the core of all human cognition, including attention, selection and inhibition processes" (Murphy, 2018, p. 118). The most extensive review (Bialystok, 2017) synthetized findings on infants, children, adolescents, young and old adults drawing on over 300 sources, although sample sizes are unclear. Most empirical studies were quantitative and published between 2000 and 2017. They compared monolingual and multilingual cohorts, including foreign language learners, using (1) behavioral and (2) neuroimaging methods offering evidence that bilingualism can impact cognitive systems because "a bilingual's repertoires are always active to some extent, even if one of them is not required for the current context" (p. 4).

The key finding based on brain studies is that "the experience of learning a second language leaves structural traces in the brain in those regions responsible for language acquisition and use" (p. 4). Specifically, bilingualism impacted executive function and attention control positively in the younger age groups compared to monolingual peers. Bialystok cited two longitudinal studies on learners in 5- and 9-month-long FL courses whose brain structures changed over such short time periods; therefore, even short AL learning was documented to result in changes in the brain.

In Bialystok's (2017) overview, the bilingual advantage was overwhelmingly supported by evidence in the case of children in both types of studies. Results from behavioral studies on adults could not be generalized. In contrast, neuroimaging studies consistently indicated that brain regions involved in language processing and attention to language systems were changed in bilingual adults' brains.

Learning English is like playing puzzle because there are many English words that need to be deciphered to understand them.
--Girl, age 11



A meta-analysis by Lowe et al. (2021) aimed to find out if bilingual children have an advantage in executive functions compared to monolingual children. They included data from published studies and unpublished data sets (equated to 1,194 effect sizes) from 10,937 bilingual and 12,477 monolingual participants between the ages of 3 and 17 years. They found a small overall positive effect on bilingual children's executive functioning (g = .08, 95% confidence interval = [.01, .14]), but the effect of language status (the values associated with the AL) on children's executive functioning was 0 after adjusting for publication bias. The authors concluded that the bilingual advantage in children's executive functioning is small, variable, and potentially not attributable to the effect of language status. Thus, their results cast doubt on the optimistic interpretations of findings in other reviews.

Lehtonen et al. (2018) also reviewed studies comparing monolinguals and bilinguals published during a similar period as Bialystok (2017), but the 152 publications involved only healthy adults. Using a narrative review and a rigorous meta-analysis of 891 effect sizes, Lehtonen et al. (2018) included six domains: inhibitory control, monitoring, shifting, working memory, attention, and verbal fluency. Their conclusion was less optimistic, but in line with Bialystok's (2017) findings: they found no consensus on the bilingual advantage for healthy adults. They pinpointed two issues: the sample sizes in most studies were small and a multitude of factors were likely to impact participants' cognitive abilities and controlling for all of them was difficult.

Woll and Wei (2019) analyzed peer-reviewed U.K. and international academic publications as well as grey sources (e.g., magazine articles) on cognition and cognitive functioning in relation to language learners and bilingual and multilingual language users across the lifespan. They included a wider range of topics than the previous reviews, in addition to executive function, literacy, health, creativity, social and affective cognition, and academic achievements (see also 4.2.1; 4.2.3). They considered specific cognitive effects of different kinds of language learning and language use on different age, gender and socio-economic groups. Their meta-synthesis included 20 publications from 2008 to 2017, all involving learners in dual language or two-way immersion programs mostly in English-speaking countries. The authors concluded that these programs exerted positive influence on general academic performances (see 4.2.3), English language learning, Literacy, and Mathematics & Science regardless of the participants' SES.

Fox et al. (2019) analyzed 100 studies published between 2012 and 2019, as an extension of their previous review. They examined the effects of "foreign language learning and bilingualism" on individuals' cognitive abilities, academic achievement, attitudes, and beliefs, and what other factors impacted individuals and society across the lifespan. Most studies involved bilingual children in North America and Europe. They discussed six emerging themes: cognitive abilities (e.g., cognitive control, working memory, language awareness; see 4.2.1), aging and health, employability (4.4.1), academic achievement (4.2.3), communicative and intercultural competence (4.4.2), and creativity (4.1.3).

The authors did not include the number of participants in all narrative descriptions and no statistical data on effect sizes. They reported on cognitive advantages especially for bilingual children in L2 contexts, but did not offer detailed evidence. Fox et al. (2019) concluded that the argument for the importance of language study and bilingualism was compelling. As they failed to consider contextual variables concerning how much input and opportunity participants had to learn and practice their repertoire, the valid conclusions are limited to bilingual children's cognitive benefits in educational settings where schools offered programs aligned to their needs over years. In such situations, many children's cognitive individual differences were higher than those of their monolingual peers', again underpinning the claims by Bialystok (2017) and Woll and Wei (2019).

Analyzing about 60 sources, Kroll and Dussias (2017) outlined the benefits of multilingualism to the personal and professional development of U.S. residents. They focused on vulnerable groups: young

bilingual children, for whom acquiring literacy skills in English is a must to achieve academic success, and older adults, who may develop dementia. They emphasized evidence supporting phonological awareness (see 4.2.1) and advantages in executive control—the brain's functions that allow humans to carry out complex tasks such as solving problems, planning a sequence of activities, inhibiting information that has already been perceived, directing attention to achieve a goal, or monitoring performance. In their view, bilinguals and monolinguals may recruit the same brain areas when they solve a problem, but bilinguals seem to use them more efficiently.

A large-scale study offered evidence against the bilingual advantage. Canadian datasets of 11,000 adults (age range = 18–87 years) were analyzed by Nichols et al. (2020) using a battery of twelve tests on executive functions to support or reject the bilingual advantage hypothesis. Advantages were found for bilingual participants on one test, whereas monolinguals performed better on four other tests. In conclusion, the authors explicitly stated that bilingualism affords no general cognitive advantages.

In a recent study, Xia et al. (2025) examined how language proficiency and age of acquisition affect executive control in 239 young adult bilinguals. They used two types of analysis to examine participants' inhibitory control. They divided their sample into dichotomous groups based on participants' L2 proficiency (high- vs low-proficiency) and whether they were early versus late bilinguals. They found significant group differences on multiple tests. Using continuous measures, however, they pointed out that higher level of L2 proficiency predicted better visual inhibition and earlier bilinguals had better auditory inhibition, that is they could better control these areas than participants who became bilingual later in life. The authors argued for conceptualizing bilingualism as a continuum.

These findings are in line with what other experts concluded (except for Nichols et al., 2020): bilingual participants tended to outperform those who were less bilingual on both behavioral and brain measurements. This general outcome underpins the overall conclusion that the amount of AL learning and use experiences result in continuous cognitive improvement.

4.1.2 Working memory

Working memory is the cognitive ability allowing people "to simultaneously maintain and manipulate a limited amount of information in [their] brain to complete some mental tasks" (Wen, 2023, p. 97). In her synthesis, Bialystok (2017) highlighted working memory capacity as the key evidence explaining the plasticity characterizing bilinguals across all age groups. Working memory allows people to control their attention to different representations. In other words, it allows or inhibits attention to one language or the other.

Focusing on the role of working memory, Berthele and Udry (2019) tested two theories explaining the multilingual advantage: one assumes that previous learning experiences in multiple languages are advantageous for AL learning (multilingualism boosts working memory), the other maintains that general cognitive abilities are better predictors of AL learning. Participants were 115 L1 German students in Switzerland. Their L2 French and German were tested in grade 7, and their L3 English a year later. In addition to language proficiency tests, participants' verbal and visuo-spatial working memory and general intelligence were also tested in grade 7. The authors concluded that both models fit their datasets on the three languages; therefore, both theories were supported by the results.

Using a narrower focus, Monnier et al. (2021) conducted a meta-analysis of 116 studies comparing monolingual and bilingual participants' working memory. They included 177 pairs of participants and 444 effect sizes. Their analysis had additional characteristics compared to previous reviews, as they

included task complexity and domain, participants' age of first exposure to L2, and their L2 proficiency as moderating variables. They found that a small bilingual advantage in working memory (g = .12, p = .054) was moderated by the language used in the verbal task. The bilingual advantage was stronger when participants did the verbal task in L2 compared to their L1.

In summary, working memory, similarly to attention control, has been found to be slightly better in the case of bilingual people, but the evidence is not clear cut. In section 4.1.5, we will return to the role of working memory in aptitude.

4.1.3 Creativity

Creativity comprises the ability to create new ideas and to use knowledge and skills in innovative ways. Few publications studied the relationship between creativity and AL learning. To examine the role of creativity, Woll and Wei (2019) reviewed six publications, including effect sizes, published between 1974 and 2015. They found strong positive correlations between creativity measures (creative flexibility, fluency, originality) and FL learning, with strongest effect sizes for measures of creative flexibility, still large for creative originality, and smallest for creative fluency (moderately large at .51). Effect sizes were larger on verbal than on figural measures of creativity, indicating that there is some meaningful relationship, but in only a handful of studies. Based on their review of three studies, Fox et al. (2019) concluded that being bilingual from an early age "can positively impact children's nonverbal development and can lead to enhanced creativity" (p. 716).

Another meta-analysis (Acar et al., 2024) included 39 studies (*N* = 4,917) to find out if bilinguals are more creative than monolinguals, as most studies showed a lot of variation. They analyzed 312 effect sizes and found a mean effect size of Pearson r = .181, 95% CI [.096, .263]. They concluded that bilinguals are indeed more creative than monolinguals, although the relationship is weak. They found a significant difference related to test types used in studies: numerical tests reported significantly larger effect sizes compared to other types of tests.

A recent study (Kharkhurin, et al., 2023) involved a random sample of 261 participants (ages 17 to 66) from 15 countries. The authors found that bilingualism had a weak relationship with participants' creative thinking, and it resulted from reduced fear of ambiguous situations.

Overall, few empirical studies examined if there is a bilingual advantage in creativity. The sample sizes, participants and the tests measuring creativity varied. The results are mixed, and the outcomes are hard to compare; therefore, it is challenging to conclude. As Acar et al. (2024) stated, the creative advantage may result from plurilingual participants' higher level of openness to experiences, cognitive flexibility, and tolerance for ambiguity, but these were not measured.

4.1.4 Cognitive benefits related to age and health

The relationships between AL learners' age and their cognitive individual differences have been studied in two main areas: (1) to examine if bilingual older adults may have an advantage against dementia and (2) how the critical period impacts learners' ability to learn ALs. The critical period concerns a specific time in early childhood that allows children to acquire languages to native-like proficiency. Its relevance will be discussed in section 5. Here we outline the results on the first area. The relationships between older bilingual and monolingual people's age-related decline and their cognitive characteristics have been of interest, as dementia impacts millions of older citizens around the globe (Pfenninger & Singleton, 2019; Ware et al., 2021).

Bialystok (2017) devoted a separate section to studies on the relationship between bilingualism and dementia in old age offering evidence both for and against the bilingual advantage. She concluded that bilingualism postpones the symptoms, but it does not prevent dementia. Along similar lines, Fox et al. (2019) found mixed support for cognitive benefits in older age groups for higher cognitive flexibility and delay in the onset of dementia. In contrast, Kroll and Dussias (2017, p. 6) claimed that studies in their review documented "a delay of four to five years in the onset of Alzheimer's symptoms for bilinguals relative to age and education matched monolinguals" and cited a study "in India on a very large sample of patients who were diagnosed with dementia reported that there was a 4.5-year delay in the onset of symptoms for bilinguals relative to monolinguals" (Alladi et al., 2013 cited in Kroll & Dussias, 2017, p. 6).

Ware et al. (2021) systematically reviewed nine studies on seniors, including a neuroimaging one. They found inconsistent results, but their interpretation suggested that AL learning is associated with better cognitive abilities. A systematic review by Degirmenci et al. (2022) analyzed 24 empirical studies on the role of bilingualism in executive functions in healthy older adults. Nine of the studies fully supported the idea of a bilingual advantage, whereas four studies included evidence for a bilingual disadvantage. The other eleven studies offered mixed results, depending on the tests the participants took. The authors concluded that inconsistent outcomes were caused by methodological challenges.

Two small-scale experimental studies examined how AL learning impacted monolingual elderly learners' cognitive abilities. Brouwer et al. (2025) investigated 43 Dutch monolinguals' (aged 65–78) cognitive functioning and psychosocial well-being (see 4.3.3). Participants took a three-month English course (*n* = 15), music training (*n* = 13), or a lecture series (*n* = 15). Their cognitive functioning and psychosocial well-being were assessed before and immediately after the courses, and four months later. Interestingly, all three groups developed significantly, but the magnitude of cognitive change did not significantly differ between the language learning and music training conditions, except for a larger positive change in cognitive flexibility for the language learners from pretest to follow-up. The authors concluded that AL learning in later life can improve some cognitive functions and fluency in the AL language to a limited extent.

Outcomes were less encouraging in Grossmann et al.'s (2023) study. It involved 34 German monolinguals (aged 65-80) and a control group of 34 people without any intervention. Participants learned Spanish for 90 minutes for five days a week over three weeks. All participants' executive attention, executive functions, verbal fluency, and attention were assessed before, after the course, and three months later. Learning Spanish did not significantly improve their performance on any of the test at any point of assessment. These two studies were unique in that they experimented with older monolingual AL learners. The courses were short and the outcomes were limited, especially in the shorter intervention.

Finally, a large-scale community study conducted in India (Venugopal et al., 2024) involved 1,234 healthy older people over age 60, previously not diagnosed with any cognitive disease. After testing them, dementia was higher in monolinguals (4.9%) than bilinguals (0.4%) (P = .001), and mild cognitive impairment was also higher in monolinguals (8.5%) than bilinguals (5.3%) (P = .001). The authors stated that "bilingualism had an independent effect on general cognition after adjusting for major social determinants of health in the group without cognitive impairment" (p. 2620).

In summary, findings on health benefits for older adults give reasons to be optimistic. However, it is difficult to separate the impact of experiences with learning and using ALs and other variables over a lifetime. Also, only a few studies included large samples and most used different research designs and instruments; thus, the jury is still out to offer evidence in what ways and to what extent the findings can be generalized. Most probably, engaging older people's minds in meaningful and challenging

activities (e.g., Lizuka et al., 2019) and involving them in social events with other people are all helpful in postponing mental decline.

4.1.5 Language aptitude

Aptitude, the key cognitive factor in AL learning, has been on the research agenda for many decades (Doughty, 2019, Li, 2015; Skehan, 2024); however, the sources included in the previous sections did not include it in their scope of inquiry. Language aptitude has been "one of the most important, intriguing, messy, and often controversial topics in second language research" (Doughty & Mackey, 2021, p. 1). The reasons why aptitude has been controversial are like the arguments for intelligence being seen as a fixed trait. If people are born with learning abilities and these are stable traits, we can do nothing about them. If, however, language learning abilities are malleable (see 4.2.1), they can be developed over time. The implications of these points will lead us to the next sections: first, we give a short overview of what we know about language aptitude, how it has been researched, and what the main findings are. Wherever relevant, we investigate if components of language aptitude develop.

4.1.5.1 Components of language aptitude: language-specific and general learning abilities

Language aptitude is multi-componential. Its traditional construct comprises four specific abilities: phonetic coding, grammatical sensitivity, inductive reasoning, and rote memory (based on repetition, when learning facts; Skehan, 2024). Interest in the role of aptitude has fluctuated over the decades and researchers have developed multiple tests (for overviews see e.g., Doughty 2019; Singleton, 2017; Wen, 2019; Wen et al., 2023). Most importantly, researchers have extended the construct of language aptitude to general cognition, specifically by adopting working memory (see 4.1.2). Wen et al. (2023) emphasized different roles of working memory, especially phonological working memory, and proposed, in line with others (e.g., Singleton, 2017), that it is a central component of language aptitude. Others (e.g., Biedroń, 2023; Huang et al., 2024) claim that working memory is a mediating variable. The key questions concern (1) what role general cognitive abilities and specific language-related abilities play in the process and success of AL learning, (2) to what extent language aptitude is a stable trait or it is shaped by learners' experiences over time, (3) how aptitude is related to one's L1 and AL learning abilities, and (4) which components develop. These points have important implications not only for research but also for learning and teaching ALs.

Overall, aptitude impacts the rate of learning languages: higher aptitude is related to faster learning, whereas lower aptitude tends to be associated with slower AL development. This means that learners with lower aptitude need more time and instruction to achieve the level their higher aptitude peers achieve in a shorter time. These points impact learners' motivation and other learner-related characteristics interacting in AL learning. Slower learners may need to maintain their motivation over a longer time (see 4.3); they may also need a higher level of grit, self-efficacy, growth mindset, and willingness to communicate to keep engaging with AL tasks than their peers with high aptitude.

The relationship between L1 and AL learning abilities (e.g., Cummins, 2016; Sparks et al., 2023) is also a key concern. Aptitude tests tend to assume that there is a single language aptitude underlying one's multiple languages and the relationships between aptitude and learning experiences are bidirectional. This also means that language aptitude impacts all learners' languages and vice versa. This point has important implications for educational advantages to be discussed in 4.2.

Recently, a distinction has been proposed between aptitude for explicit learning and aptitude for implicit learning. The traditional components of aptitude are seen as explicit aptitude, whereas

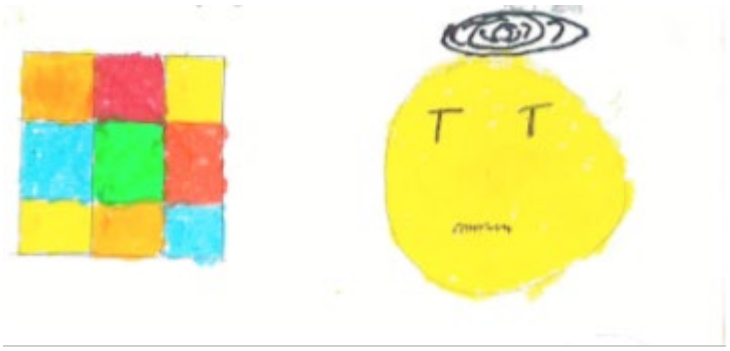
implicit aptitude includes cognitive abilities that facilitate implicit L2 processing and learning in the absence of conscious awareness.

Li and DeKeyser (2021, p. 474) characterized implicit language aptitude "as a cluster of cognitive abilities that (a) enable learners to conduct unconscious computation of the distributional and transitional probabilities of linguistic input, and (b) are predictive of learning rate and ultimate attainment". They claimed that it is distinct from cognitive abilities (working memory and cognitive language aptitude) and it is a trait. It predicts both the rate and ultimate achievement of AL learning, whereas cognitive aptitude, in their view, predicts only the rate of AL learning. Implicit aptitude includes domain-general cognitive abilities (supporting all kinds of learning) and AL domain-specific abilities. In their view, "explicit aptitude is involved more in initial learning and implicit aptitude more in advanced learning" (p. 477).

This point is supported by evidence (e.g., Sáfár & Kormos, 2008). How to tap into implicit aptitude is not clear, although multiple publications are focused on this area (e.g., Wen et al., 217; Li & Zhao, 2021).

Skehan (2016) explained how components of aptitude may be related to developmental stages in AL learning: (1) from analyzing incoming input, (2) to automatizing knowledge, and (3) achieving advanced AL proficiency. During this process, phonemic coding ability, related to auditory processing, can enhance the phonological buffer of working memory. As AL learners process input, they can hold more information on unfamiliar sounds, notice and analyze them better. Thus, L2 learners with high phonemic coding ability can focus on their speech and use their abilities efficiently. AL learners with high associative memory can develop strong, fast, and lasting form-meaning connections and can control large amounts of declarative knowledge while using their AL.

Learning English is like solving a Rubik's Cube because it's difficult to remember.
--Girl Age 10



4.1.5.2 Trainability of aptitude: fixed versus flexible

Chalmers at al. (2021) systematically reviewed 93 empirical studies published in journals and doctoral dissertations over sixty years. They found that most studies (62%) were conducted in the U.S., and over one third of the texts were published by about a dozen authors affiliated with American institutions. Most studies were longitudinal in the sense that participants' aptitude was measured at the beginning of the study, and after some intervention their AL proficiency was measured to calculate correlations.

The majority of inquiries were observational, but experimental studies were on the rise, indicating a shift from a predictive focus to explanation. The authors found reporting practices "patchy": for example, fewer than 60 percent of the publications reported on participants' previous AL learning experiences. Their conclusions emphasized: (1) the integration of working memory into the aptitude construct, (2) a need to inquire into how aptitude is amenable to training, and they confirmed (3) that

language aptitude has been identified as the single best predictor of AL achievement along with motivation (in line with Dörnyei & Ryan, 2015; Wen et al., 2017, discussed in 4.3).

As was pointed out in section 3.2, researchers have been concerned with the impact of aptitude on AL learning; more specifically, they have debated what role aptitude plays in instructed and naturalistic AL learning. Skehan (2024, p. 4), assumed that "aptitude is most relevant when teaching is less structured. The important conclusion to this, of considerable significance, is that quality and clarity of teaching has the potential to neutralise aptitude and equalise learning difficulties." An important thread in aptitude research concerns teaching ALs so that it matches learners' aptitude profiles, but it is difficult to stream learners with similar profiles into classes. Findings in this line of research are not convincing, due to small sample sizes and many variables interacting in the teaching process.

We assume that the abilities subcomponents of aptitude tests measure can develop as an outcome of learning an AL, although few such studies have been implemented, as researchers are more concerned with how aptitude impacts learning rather than with how aptitude can be boosted. Many recent special journal issues, reviews, and meta-analyses have investigated the role of aptitude (see e.g., Berthele & Udry, 2021; Doughty & Mackey, 2021; Li & Zhao, 2021; Wen et al., 2023). Few studies focused on stability vs. flexibility.

In a small-scale study, Sáfár and Kormos (2008) addressed the stability of aptitude with 61 Hungarian learners of English (age 15-16). They assessed language aptitude and short-term memory at the beginning and end of an academic year of two groups: 41 participants followed an intensive English dual-language program, and 21 students attended a regular English course. All participants' aptitude scores increased significantly in both groups, but students in the more intensive program developed more than their peers in the regular program. The authors concluded that students' language aptitude developed because of the AL learning experience.

In a large-scale longitudinal project, Udry and Vanhove (2021) examined the stability of language aptitude in young learners' language analytic abilities (among other variables see Berthele & Udry, 2021). They tested German-speaking 10-12-year-old children's (N = 636) aptitude (grammatical sensitivity and inductive ability) at three points over 1.5 years. Children learned two ALs: English and French. The datasets collected at the first (mean age: 10;5 years) and at the third point (mean age: 12;1 years) were strongly correlated at ρ = .74 (95% CrI: [.69, .79]). The results showed that participants' aptitude scores increased over time; thus, aptitude was not a stable interindividual trait, but it developed due to maturation and learning experiences. In both studies test familiarity may also have impacted outcomes.

Finally, Huang et al. (2022) investigated how Chinese students' language aptitude and working memory changed over a year. Participants were 79 English majors (71 female, mean age: 18.63, SD = 0.89) in their first and second year at a university in China. Some of them also majored in Japanese or Russian. All learners improved in certain domains of aptitude and working memory. Additionally, first-year students majoring in two ALs outperformed their peers majoring only in English on working memory tests. The results offer evidence that learning experience over a year significantly improved participants' cognitive abilities.

These findings on the malleability of aptitude are not surprising, and they are in line with developmental studies on, for example, inductive reasoning. A large scale (N = 29,453) longitudinal study (Molnár, 2024) on Hungarian learners in grades 1 to 11 (ages 6 to 17) found that participants' inductive reasoning abilities developed most significantly during two sensitive periods: between ages 6-8 and 13-15 with no gender differences. These findings imply that explicit training may be more

effective during these years. Parents' socio-economic status, as measured by mothers' level of education, had a significant impact on their children's level of inductive reasoning.

4.1.6 Summary of findings on cognitive benefits of learning and using additional languages

In the previous sections (4.1.1-4.1.5), we summarized evidence in a range of cognitive domains on how learning and using multiple languages benefits individuals and society due to "bidirectional influences that have been demonstrated within a highly interactive language system" (Kroll & Dussias, 2017, p. 8). The areas discussed in the studies in the first sections largely overlapped, whereas publications on aptitude considered only working memory drawing on different sources. The emerging picture is positive in that most studies supported a slight bilingual advantage, especially for children. Unfortunately, some of the reviews and meta-analyses failed to document where the studies on children were conducted; thus, we cannot draw conclusions on different types of programs and ISCED levels.

Overall, as is the case with all human experiences, it is difficult to control many variables when comparing participants of various ages along monolingual versus plurilingual lines. These groups include not only individuals who developed proficiency in one or more ALs voluntarily, but also people who were under pressure to do so. Some live in supportive multilingual communities, others in contexts using only one language. Some learned their AL in school, others grew up using their AL at home, at school, or at work for a range of purposes. This means that the ecological validity of these studies is either not considered or is so different that the findings can be compared only with a pinch of salt.

The research methods largely varied: cross-sectional studies used small samples, different tests, and no triangulation. Few longitudinal inquiries were conducted. Most studies are correlational and focus on relationships between a few variables omitting many others which, most probably, also play important roles. No causation can be assumed in most studies. Few authors of the reviews shared enough data to allow readers to understand how valid and reliable their findings are. Some authors sound enthusiastic about their findings, whereas others interpret them, often the same studies, more critically. A narrow circle of authors published many papers within a few years on the same topic, especially on aptitude.

There are some important lessons learned about the cognitive advantages plurilingual individuals have as a result of learning and using multiple languages:

(1) More experiences associated with learning and using ALs may result in continuous cognitive improvement over the years.
(2) They may slow down mental decline in old age.
(3) "Bilinguals benefit from enhancement to self-regulated processes. Bilinguals learn to control the languages not in use, and that control may produce benefits not only to executive function but also to learning mechanisms more generally" (Kroll & Dussias, 2017, p. 9).
(4) Language aptitude seems to exist independently from the other areas of inquiry on cognitive benefits of AL learning and use, except for one point. Recent rethinking of the aptitude construct is open to new claims: researchers integrate working memory and distinguish language-specific and domain-general components.
(5) Aptitude is not seen as a fixed trait, but more like a complex of malleable abilities shaped by experiences.
(6) Impacts during AL learning and use are bidirectional: practice makes plurilingual people more able to learn and use their repertoire.

(7) Additionally, being plurilingual is conducive to learning efficiently not only new languages but also other skills. These findings lead us to examining the educational benefits in the next section.

An additional point will be discussed in section 4.3 on how the cognitive advantages investigated above are related to emotional advantages of multilingualism. A relationship has been proposed between these as an outcome of learning and using ALs.

Learning English is like traveling around the world because it's easy to memorize
--Boy Age 10:

4.2 What are the educational benefits of learning and using additional languages?

The cognitive benefits discussed in the previous section lead us to reviewing the landscape of more general educational benefits. We investigate how plurilingual individuals' enhanced cognitive and metacognitive abilities, in addition to their proficiency in their additional language, make them better strategic learners of not only their first language and further ALs they engage with, but also of knowledge and skills in subjects in the school curriculum and academic fields in tertiary education.

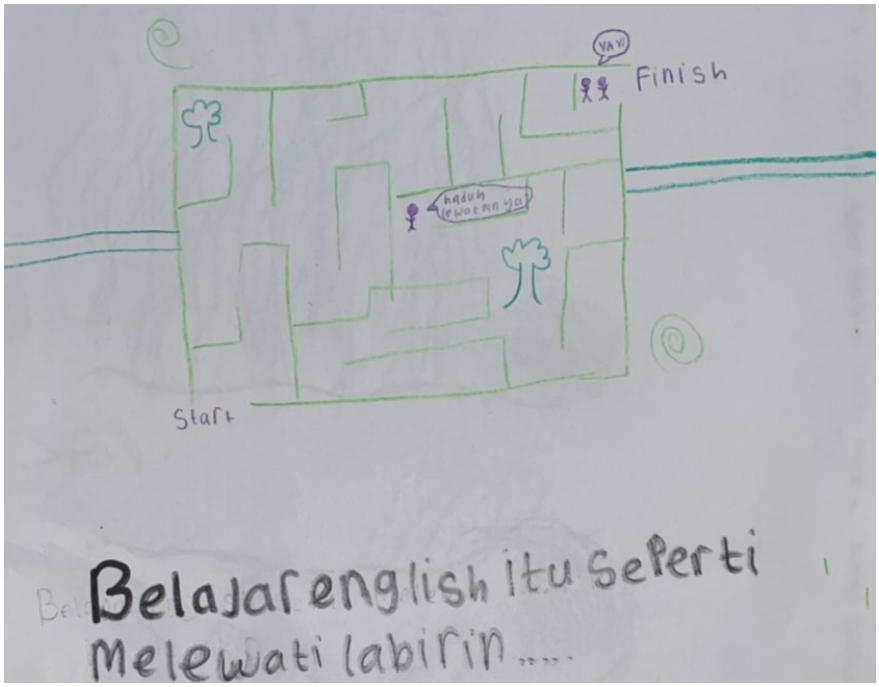
In this section, we review how plurilingual individuals benefit educationally from learning and using additional languages. Three key areas are examined:

- how language awareness is supported by language learning and how in turn it supports further learning related to first, second, third and subsequent languages.
- how learner strategies develop through AL learning and contribute to further effective learning.
- how proficiency in the ALs and overall academic achievement are related.

4.2.1 Language awareness: metalinguistic and critical Language awareness

Language awareness is a branch of metacognition. Metacognition allows learners to think about their thinking and reflect on and regulate their own cognitive processes (e.g., planning, monitoring, and evaluating success or failure). In language learning, it involves strategies (see section 4.2.2) as well as language awareness. The term language awareness (LA) indicates specific knowledge, capacities and outlooks that depend on the ability to focus consciously on language as it were 'from the outside' by reflecting on its structure, its component parts, how it is used, and how meanings are conveyed.

Learning English is like going through labyrinth, requiring a lot of thinking.
--Girl, age 11



Sources consulted for this section included a review by Wang and Liu (2024) of research since 2020. This reveals the diversity of the field in terms of scope, ways of operationalizing LA for research purposes and wide variety of research methods adopted. Much of the review concerns research into the impact of LA on language learning but a short section on ways in which language awareness may be cultivated fits our focus better. Most of the studies reviewed involve adults rather than school age learners. In the following section we will focus on the areas of *metalinguistic* and *critical language awareness* which are key in language learning.

4.2.1.1 Metalinguistic awareness

Metalinguistic awareness (MLA) enables learners to think about language as a system, reflecting on areas such as phonology, semantics and syntax. For example, learners can notice errors, understand that a word can have multiple meanings, detect rhymes, segment compound words like 'unbelievable' into separate meaningful components, and understand that different languages may work differently in word-order, pronunciation and grammatical systems.

Studies have shown that MLA abilities, as well as being important for L1 development, are positively linked with success in AL learning. These are not our focus in this report, since the priority is to consider whether there is also an inverse direction of influence, that AL learning benefits MLA. However, if research indicates that MLA skills derived as benefits from an AL experience can transfer to other learning, there is then a convincing argument for seeing them as benefits of AL learning.

This section is divided in the following way:

(1) We discuss whether there is an age-related developmental aspect to metalinguistic awareness.
(2) We discuss ML awareness advantages that bi- or plurilingual individuals of different learning backgrounds may demonstrate.
(3) We look specifically at studies of language programs involving overt teaching of MLA.

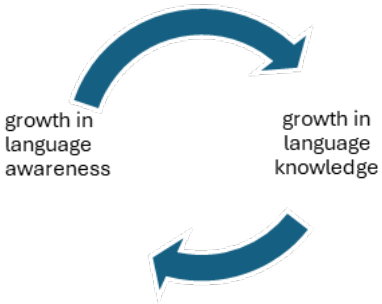
Metalinguistic awareness and development related to age

Metalinguistic awareness is seen as a higher-order skill, related to general cognitive development. Thus, as children mature, their metalinguistic awareness gradually develops and their ability to articulate this awareness explicitly also develops (Bialystok, 2001). The study by Daryai-Hansen et al. (2024a) reported on in more detail below (section 4.2.2.) shows students in different grades at school discussing language in different ways depending on their ages. There is, however, also agreement that as learners enter formal schooling, this may bring about an acceleration in the degree to which they can explicitly reflect on and discuss the language(s) they know or are learning.

Is there a plurilingual benefit?

Our purpose is to review research into metalinguistic awareness as one of the beneficial outcomes of successful language learning, rather than as a condition or a precursor. However, metalinguistic capacities are often seen to progress in parallel with language abilities and some research is ambiguous on the directionality of impact. A bidirectional relationship is therefore also a feasible hypothesis (Roehr-Brackin, 2024) with growth in language knowledge and growth in language awareness feeding off one another as visualized in Figure 6.

Figure 6: ***Bi-directional Relationship Between Language Knowledge and Language Awareness***



Simply knowing two or more languages without instruction may have a positive effect on a learner's metalinguistic awareness. It has been shown (Jessner, 2014, 2018; Jessner & Török, 2017) that a bi-lingual upbringing benefits the ability to make metalinguistic observations and judgements. Jessner argued that plurilingual learners possess distinct cognitive abilities that differentiate them from monolingual learners.

Knowledge of two or more languages leads to greater phonological awareness. Bialystok (2001) explained this as occurring because learners need to manage and keep apart the unique sound-system of each. This is particularly advantageous for learners needing to make phonemic distinctions in listening and speaking in a new language.

Antoniou et al. (2015) focused on the greater facility in handling phonological novelty in a third language that bilingualism brings. In an experimental study involving twelve bilingual users of Mandarin-English, twelve bilingual Korean-English speakers as well as twelve English monolinguals, participants were required to learn eight-word vocabulary lists in an artificial language – one with Mandarin-like and one with English-like minimal pairs. In this language, contrasts between words (four minimal pairs per language) were marked by phonetic contrasts foreign to all subjects. A further stage involved a list of Korean-like and English-like words. Novel word learning was tested by matching heard words to one of the eight pictures per language. The bilinguals outperformed the monolinguals in both measures. All bilingual participants were advantaged in distinguishing vocabulary items containing phonetic contrasts that were familiar from one of their languages.

Dolas et al. (2022) investigated the possible benefits of learning several languages for metalinguistic awareness, as well as working memory, and L1 lexicon size. Mono-, bi-, and multilingual children (N = 117; ages 11-14) and coming from regular (n = 81) and gifted (n = 36) education programs were tested on all three. Regression analysis of scores showed that for all measures, regardless of whether they came from the gifted or the regular group, bilingual children outperformed monolingual children and multilingual children outperformed both their mono- and bilingual peers. The researchers attributed this superiority to their managing two or more linguistic systems.

However, knowing several languages does not always support metalingual awareness since other factors may moderate outcomes. The bi-and multi-lingual students in the Dolas et al. (2022) study were language learners in relatively privileged settings (an IB school and a private school). However, Spellerberg's study (2016) of Danish lower secondary students was undertaken with a population of greater socioeconomic diversity. In this case, there was no metalinguistic awareness advantage found among the bi- and plurilingual students. An explanation lay in the poorer resources at the disposal of these students, who also tended to have lower overall achievement. They were mostly from migrant families who were less affluent than those of their native speaking classmates.

Having established MLA as a potential outcome of learning several languages, it seems fair to assess its detailed role in further learning of different kinds. Several studies show that phonological awareness developed while learning an AL can support L1 development. Taking the first steps in learning to read in one's own language involves working out relationships between the symbols and the sounds of the spoken language which they encode. It therefore requires metalinguistic attention (e.g., Koda 2005; Nagy & Anderson, 1999). In the case of alphabetically-written languages, phonemic awareness, the ability to recognize the meaningful sounds of a particular language, is fundamental.

Because of its 'deep orthography' (Frost & Katz, 1992) which means an exceptionally low grapheme-phoneme correspondence, English is a difficult language in which to establish fluent 'sounding out' decoding skills. Bilinguals learning to read in an orthographically transparent language seem to benefit with regard to their first steps in reading English. Bialystok et al. (2005) carried out a study of 5–7-year-old children learning to read in their L1 and in English. There were 29 Cantonese-English bilinguals, 20 Hebrew English bilinguals, 33 Spanish-English bilinguals, with 40 English monolingual children for comparison. They found that the children learning to read in the more orthographically transparent languages of Spanish or Hebrew outperformed others on English early literacy tasks of phonological awareness (phoneme counting) and non-word reading tasks. The Chinese-English bilinguals' performance was similar to that of the English monolinguals.

Young L1 speakers of English also stand to benefit if their phonemic awareness and flexibility can be boosted through knowledge of another language. A study by Murphy et al. (2015) supports the value of AL learning for English L1 early literacy. Children from a cohort of 150 year three (ages 7 to 8) UK primary school pupils were randomly assigned to two experimental groups and one control group. The experimental groups had 15 weeks of L2 instruction in either French or Italian. The experimental groups significantly outperformed the control group on post-intervention measures of reading accuracy and phonological processing in English. In addition, the group receiving instruction in Italian, a language with a very high grapheme-phoneme correspondence, performed better on these L1 reading measures than those learning French, which has a lower grapheme-phoneme correspondence.

Cognate vocabulary recognition and use

A high proportion of cognate vocabulary items, words used in two or more languages which share common roots and look and/or sound similar, may facilitate vocabulary learning. This may occur between an L2 and subsequent languages but, depending on the relationships between the L1 and the additional language(s) learned, learners may also improve their recognition and use of L1 vocabulary.

The study by Salomé et al. (2021) investigated whether 10-year-old native French-speaking children attending a bilingual French/German immersion program (n = 41) demonstrated a greater ability to learn vocabulary in a third language (English) compared with children receiving monolingual education (n = 48.) Half of the items to be learned were cognate words in German and English (L2/L3) while the other half were English (L3) words with no German cognates. On the first test, bilinguals outperformed monolinguals on all tasks regardless of whether the words were cognate English/German or not, except for the task involving spelling/writing. Delayed tests showed the same bilingual advantage even though the material had not been presented again. When the spoken material was re-presented, the bilingual advantage increased.

Support for L3 and subsequent language learning

A large-scale study reported by Jessner (2018) involved young adults in Austria and Italy, who had recently learned at least three languages, German/English/Latin and/or Italian or French, during their school days. The participants were set a challenging task, to decode a text in Romanian, a language which none of them knew. The think-aloud protocols revealed that they used compensatory strategies such as guessing from context. At the same time, they utilized metalinguistic knowledge and creatively drew analogies between Romanian and the languages known to them, from which they were able to identify and use various cognate forms and vocabulary. It is perhaps unsurprising that students who knew Italian or French, which, like Romanian, are Romance languages derived from Latin, could use their knowledge to support them in this task. However, some students also found analogies with German, which helped them.

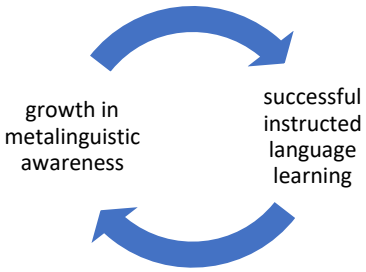
Does instruction in awareness make a difference?

As noted above, as with other forms of cognitive development, formal schooling can play a role in hastening and shaping metalinguistic awareness. As well as generating much research, language awareness has inspired a teaching movement, first for teachers of L1 in mainstream UK education (Hawkins, 1984), later for teachers of AL. A still influential framework (James & Garrett, 1991), saw it as operating in five domains which teachers might emphasize according to student characteristics and need:

(1) *affective*: concerned with developing learners' attitudes - sensitivity, curiosity, interest, enjoyment and aesthetic appreciation of language.
(2) *social*: concerned with interrogating language varieties and group, social and class differences in how people use language.
(3) *power*: concerned with how language is used in the exercise of power, aiming to foster close reading and listening, allied with critical thinking.
(4) *cognitive*: showing the importance of understanding language patterns and rules, as well as the ability to reflect on them.
(5) *performance*: enhancing learners' command of language and performance in speaking and writing through reflection on language.

Some language teaching programs contain not only language instruction but a deliberate set of activities aiming at developing language awareness. In these cases, enhanced metalinguistic awareness can be seen as an intended outcome of language teaching and is thus clearly one of its benefits. Again, studies suggest that the relationship may be reciprocal as visualized in Figure 7.

Figure 7: ***Reciprocal Relationship Between Successful Instructed Language Learning and Metalinguistic Awareness***



The survey article by Wang and Liu (2024) reveals the very diverse, and as they say, sometimes idiosyncratic, means by which awareness is fostered. A sharp contrast may be found between very explicit focus on form activities and lower-key implicit awareness activities. They may include playing with rhymes, or reflection and 'noticing' activities (Schmidt, 1990) taking place after students have completed a task like reading comprehension and look back over the text to find important linguistic clues to their answers. Roehr-Brackin (2024) makes the point that learners of all ages have the potential to move from explicit to implicit learning and vice versa although the default approach for younger learners tends to be less explicit and through game and puzzle type approaches.

The most convincing studies of the relationship between instruction and metalinguistic awareness are longitudinal, tracing development in relevant capacities over a significant period. Roehr-Brackin and Tellier (2019) set up a longitudinal study to investigate the relationship between metalinguistic awareness and the language-analytic component often associated with language aptitude. They also wanted to determine whether both or either should be seen as a fixed capacity or open to development over time. The study was undertaken with intact classes of 8- to 9-year-olds from UK primary schools (*N* = 111). In the first phase of 16 weeks for a total of 20 teaching hours, each class was taught French, German or Esperanto. There were two classes of Esperanto, one of which was taught with a focus-on-form orientation in which pupils were encouraged to notice phenomena such as ways of indicating plurals. In the second phase of the project of the same duration, all the children were taught French with the same focus-on-form orientation. Over the duration of the project there were significant improvements in the scores on both language-analytic and metalinguistic measures, suggesting that they were not fixed capacities. The authors declared, however, that the question remained unresolved of whether these improvements were due to children's L2 learning experience, to general cognitive development over time regardless of L2 learning, or to both in combination. This is an example of the confounding effects of so many factors to consider in real life educational settings.

Summary of findings on metalinguistic awareness

The above studies suggest that metalinguistic awareness is not a fixed attribute. It can develop over time; it benefits from overt instruction focusing on language form and systems but can also improve in relation to progress made in the language learned. As discussed above, metalinguistic awareness which has been enhanced though LA learning can in its turn then enhance other learning.

4.2.1.2 Critical Language Awareness

Critical language awareness (CLA) (Kumaravadivelu, 2001) enables people to understand or to challenge judgments, attitudes and norms about languages and language use. For example, there may be discussion of how people see standard and non-standard varieties of a language as manifested in accent, grammar or choice of vocabulary.

Critical multilingual language awareness was proposed by García (2017) as a subset of critical language awareness. Educators in this field intend to respond to the social and educational needs of plurilingual groups but also to show respect for their multiple languages. As we have seen above and in section 1.2.2 on linguistic landscapes, being plurilingual may not always be associated with a higher level of formal education or a privileged position in society.

The Council of Europe (2007, p. 15) states, with reference to Europe, but voicing a principle also applicable to all regions of the world:

> all language varieties, whether 'national', 'indigenous', '(im)migrant' or 'non-European' need to be recognised as 'languages of Europe' and their presence in whatever form in compulsory schooling and beyond assured.'

To have beneficial effects for users of non-dominant languages, who are often socially disadvantaged, recognition needs to take place not only at the official level but more widely in society (the 'beyond' in the above citation). One major objective of a language awareness approach for this category of language learner is to challenge deficiency-views regarding what they bring to the school situation and to respect languages they already know.

A study set in Sweden (Hedman & Fisher, 2022) following Garcia's tenets, although a small-scale pilot using qualitative approaches, nonetheless illustrates key concepts in this area. An intervention took place with ten secondary school aged students recently arrived in Sweden as migrants and at the time in a preparatory class to equip them to join mainstream schooling in the medium of Swedish. Tasks were designed to encourage curiosity about language and languages, with translanguaging and the support of plurilingual assistants key to the discussions.

Students were later interviewed about their responses to the program. The study presents evidence that investigation of one's own and others' plurilingual capacities promotes equity and pride in diversity as well as a more proactive approach to learning the host language.

In addition to the translanguaging work that was substantial in the affective domain, the languages known by the students were also used as a resource for cross-linguistic comparisons to be made, supporting a growing metalinguistic awareness. Discussions about how languages are learned also emerged, showing students gaining metacognitive benefits. In addition, examples of the performance domain were observed in language play when, for example, students described inventing words which were a 'hybrid' of their L1 and Swedish.

Krogager Andersen (2024) examined students' metalinguistic awareness, critical language awareness and practical language awareness in a Danish upper secondary school classroom, in the context of a compulsory plurilingual language awareness course. Analysis of data (observation, interviews, and collections of student work) showed these three dimensions of language awareness to be interlinked. Krogager Andersen noted in particular that practical language awareness and metalinguistic awareness might be closely related and perhaps even interdependent.

The students in the above two studies were in their teenage years and the abilities they showed are in line with the literature on how language learners become more capable of discussing language more

explicitly as they reach adolescence (Bialystok, 2001; Lichtman, 2016; Muñoz, 2013). It is therefore worth asking the question whether and how younger students can gain benefits from language learning with a critical multilingual language awareness emphasis.

The study by Daryai-Hansen et al. (2024b) explored how learners in Denmark at different ages and levels within school education in a plurilingual setting experience and express language awareness. It is important to note that the study was based within a project that had a deliberate policy to foster language awareness in a plurilingual setting. A key feature was that the project was designed to involve native speakers of the majority language. The aims were to encourage students to be receptive to linguistic diversity by making links between all the languages they already knew, as well as the languages learned in school.

Classroom data were collected and six students each in Grade 1 (age 7/8), Grade 7 (age 13/14) and Grade 11 (age 17/18) were interviewed. Grade 7 and 11 students were able to engage with critical language awareness, although the youngest learners did not. Evidence of metalinguistic awareness could, however, be found at all ages, albeit expressed in different ways. Grade 1 students found it more difficult to focus on linguistic form and tended to stray into discussing content and giving verbatim examples of what was learned. The Grade 7 children focused more on lexical and syntactic comparisons and also commented on pronunciation and orthography. The Grade 11 students were able to make metalingual comments using clear, though not always technical, metalingual language.

Summary of findings on critical language awareness

Critical language awareness has been studied mostly as a deliberately-designed curriculum item, making use of specific techniques such as translanguaging. As such, it is an intended beneficial outcome of a particular approach to language studies. In settings where students are plurilingual in minority languages because of family circumstances and/or migration, it speaks to the social justice and community harmony aspects of the aspirations found in some of the educational documents cited in section 2.2. However, as an approach it can also offer benefits to speakers of majority languages and learners of ALs in more privileged contexts.

4.2.2 Learner strategies

A strategy may be defined as a way of behaving which allows an individual to achieve a goal more readily, often in the face of some challenge. For a language learner, this may involve ways to facilitate learning or using the language. Successful strategy use is often seen as the mark of a 'Good Language Learner' (Rubin, 1975; Naiman et al., 1978), someone who can make effective use of whatever teaching is available but is also proactive, autonomous and able to make progress on their own, making the best use of whatever resources are to hand, whether that is other people or print or other media.

Multiple studies have shown that strategies enhance language learning and use. But, again, in order to maintain the focus in this report on the beneficial outcomes of AL learning rather than on precursors to its success, it was necessary to seek studies which investigate whether people who know more languages have more and/or better strategies or whether strategies can be improved through language learning experiences. These types of study are fewer but key recent ones are reported below. This section has been informed by one survey article (Rose et al., 2018) on research into learner strategies and a meta-analysis (Plonsky, 2011) of the effectiveness of strategy instruction. There is also a bibliometric study (Hajar et al., 2024) which reveals just how much research interest there is in the field, even after 50-odd years since its inception. Relevant single studies, as cited below, either fill in gaps or bring the record of research more up to date.

As Rose et al. (2018) relate, the era of greatest interest in language learner strategies was the 1980s and 1990s. Varying and overlapping taxonomies of language learning strategies were the result. One of the best established is Oxford's (1990) Strategy Inventory for Language Learning (SILL), a self-report questionnaire still much used in research. It contains six different categories of strategy: memory, cognitive, compensation, metacognitive, social and affective. Several other systems have been proposed (e.g., Corder, 1983; O'Malley & Chamot 1990; Wenden & Rubin 1987).

With so many overlapping systems, there has been controversy amongst scholars, especially since a seminal article by Dörnyei (2005) questioning the construct and suggesting that the established broader psychological field of self-regulation might be a more appropriate framework. The current consensus, however, seems to be that strategy use is a 'home-grown' construct, familiar to language teachers and researchers alike, and will continue to serve the profession well (Thomas & Rose, 2019). Currently, no overriding system has been established, so that different emphases and distinctions may be found in the research papers reviewed below.

Table 3 summarizes strategies under the headings commonly used. It does not completely reflect any one of the overlapping taxonomies mentioned above but is an attempt to show the types of behavior in which researchers might have an interest.

Table 3: ***Learning Strategies***

Strategies	Examples
Cognitive strategies	Analyzing grammar
	Translating between languages
Metacognitive strategies	Planning how to study
	Predicting the likely content of a listening or reading passage
	Monitoring own level of comprehension
Memory strategies	Oral repetition of a word or utterance
	Visualization
Compensation strategies	Guessing an unknown word from context
	Using knowledge of the world to make a guess at meaning
Social strategies	Working with other learners
	Seeking out opportunities to meet good users of the target language out of a formal learning situation
Affective strategies	Managing anxiety
	Encouraging oneself

Although most recent research focuses on strategies for learning languages, other strategies help learners to use a language to the best effect, especially in speech. This area of *communication strategies*, defined as actions taken by a learner to overcome a deficit such as not knowing a word or how to express an idea, was first found in models of communicative competence of the 1980s (e.g., Canale & Swain, 1980). It was elaborated by Corder (1983). He identified two types of behavior in learners, *risk taking* and *risk avoiding*. Risk avoidance often involves *reduction strategies* in which learners express less than they would ideally like to because they lack the language and do not want to make errors.

Table 4: *Communication Strategies*

Communication Strategies based on Corder's (1983) scheme	**Examples**
Achievement strategies	Paraphrasing, when a word or a structure is not known. Making use of 'filler phrases' such as 'You know what I mean' to buy time when speaking. The use of 'rote-learned chunks' of language (unanalyzed) to help build utterances. Eliciting language from a more competent interlocutor.
Reduction strategies	Saying something within your ability but which is less expressive than what you actually want to say. E.g., saying 'It's very nice' rather than using a more complex expression of appreciation. Code-switching into L1. Keeping silent, allowing others to take the responsibility of carrying forward the conversation or other talk.

Using these strategies can mean that the learners 'get by' and do not lose face but that they do not learn new language by talking with others. Risk-taking behavior involves *achievement strategies*. With these, the learner makes an effort to express their desired meaning even if it involves error or the need for circumlocution. This effort often leads to the learner adding to the language they can use, by, for example, eliciting the words they need from a more proficient talking partner. Table 4 summarizes the main points with examples. Successful communication strategy use may link with dispositions such as willingness to communicate (see 4.3.2). It seems a reasonable hypothesis that they could be transferable from language to language, including the L1.

4.2.2.1 Learning strategies

The discussion in this section is structured in a similar way to that on language awareness:

(1) We discuss whether there is an age-related developmental aspect to strategy use.
(2) We discuss advantages in strategy use that bi- or plurilingual individuals of different learning backgrounds may demonstrate.
(3) We look specifically at studies of language programs involving overt teaching of strategies.

How does age of language learners affect strategy use?

Nikolov and Mihaljević Djigunović (2019) concluded that the younger the learners are, the more they rely on the natural language acquisition processes and the fewer strategies they may use. The first strategies typically used are memory strategies such as repetition. As with metacognition in general, there is a maturation and development element**.** Kirsch (2012), surveying some classic studies of young children's strategy use, concludes that children as young as six can use language learning strategies and can explain what they are doing. Strategies become more complex and children use a wider range as they mature and become more proficient.

No longitudinal studies were found which directly investigated this developmental aspect of strategies in language learning although it will be noted that different repertoires and ranges of strategies are found in the students of different ages in the studies discussed below.

Is there a plurilingual advantage?

As Jessner (2018) points out, the learners of a third or subsequent language already know about the AL learning process. It is to be expected that from their L2 experience they will have developed individual techniques and strategies to support their further learning. Kemp (2007) researching young adults (university students) found from their self-reports that the more languages the participants knew the greater the number of strategies they used and the greater the frequency with which they used them. Pawlak and Oxford (2018) suggest that multilingual learners use language learning strategies more frequently than monolinguals or bilinguals.

A study by Grenfell and Harris (2015) resonates with Jessner's point about different strategy use in learners of an L3. In each of two London schools with a high proportion of bilingual pupils, two classes (12 -13-year-olds) were selected and received strategy instruction over a school year. When pre- and post-intervention reading and listening tests in French were carried out, it was noticed that the progress shown in bilingual students' listening comprehension test scores in French was significantly higher than that of monolingual English-speaking pupils. Semi-structured interviews and think-aloud activities were carried out with three bilingual students. They articulated different types of strategic use from the monolingual students also investigated. In particular, they used oral/aural based strategies such as repetition to help memory and inferencing by trying out different words in utterances where there were words they did not understand. These were similar to strategies used in the interaction of the students' two languages with family members in the home environment.

Kemp (2007) suggested that the greatest change in strategic behavior might appear between L2 and L3, when learners see how they can use their language-learning experience when learning a new language. In response, in order to check whether the same step-change occurred in school learners, Haukås (2015) conducted a study using an adapted version of the Strategy Inventory in Language Learning (SILL) in secondary schools in Norway. Participants were 127 learners of English and 104 learners who also studied English but had later added German as their L3. The results went against the grain of previous studies of older learners, with the self-reports of the L3-German school learners suggesting that they used significantly fewer strategies and applied them less frequently than L2-English learners. These findings seemed anomalous, also because the mean age of the German L3 students at 16.5 years was three years older than the English L2 students. In the discussion, Haukås makes the point that learners do not automatically reap extra benefits of strategy awareness simply through learning more than one AL. This might especially be the case when schools use traditional approaches to language education (as was the case in her study) and learning strategies and comparisons between languages are not overtly encouraged.

Anam and Stracke (2016) carried out a study with 522 sixth grade primary school children learning English in Indonesia, most aged approximately 11, using the children's version of the SILL and the Children's Self-Efficacy in Learning English Questionnaire. The self-reports by the children generated categories of cognitive, socio-affective and metacognitive strategies, with uses of socio-affective and metacognitive strategies somewhat higher than cognitive strategies. Preference was expressed for learning with/from others. Regulating their own learning while memorizing words was low in preferences and practicing outside the classroom very low. Some differences in preferences from those found in other studies of strategy use amongst young learners could be attributed to cultural and environmental differences. For example, there are few opportunities to use English in the world outside school and the collectivist nature of Indonesian society could explain the high use of socio-affective strategies. Students who scored highly on self-efficacy in performing English tasks and self-regulating their learning reported use of significantly more strategies than other students.

Kirsch (2012) carried out an in-depth qualitative study which extended over a period of 12 months in an English primary school. Data were collected throughout the period, using an ethnographic approach, mainly through semi structured interviews and non-participant observations. The six children followed were aged 8 -9 at the start of the study. From January to July, they learned French and Japanese in school, but also had a seven-week period, September – December of learning German. The following year, the children received another seven weeks of German.

The key finding was that children developed their own language learning strategies in spite of receiving no direct strategy instruction in their language lessons. The researcher suggests that the reflective general education across the curriculum that the children were receiving was an important factor. Many of the actions mentioned by the children were general learning strategies, such as using others for help, reading or writing to help memory rather than only those specific to language learning. Strategies reported by children were similar across languages although some said that some languages were more difficult to learn than others. In a few cases, a strategy (e.g., for memorizing words) could be shown to have developed in complexity alongside the child's ability to articulate it. It is also notable from the data that some children were using their metalinguistic knowledge as part of their strategy as when a girl described how she succeeded in a dominoes-matching game of French and English words when she chose the French word to match with the English by identifying the words ('chiens'/'dogs') that were marked as plural by having a final <s>. She also described using cognate or similar-looking words – 'enfant/infant'.

Does overt teaching of strategies make a difference?

In the studies above, in which there is no evidence of overt strategy teaching as part of language programs, there are contradictory results. It seems that learning more languages may not always be a guarantee of enhanced strategy use but that overall learning conditions could be important. This raises the issue of whether strategies need to be overtly taught and if so, with what degree of focus and insistence.

Plonsky (2011) made the following important points regarding the focus on strategy use as a beneficial outcome of AL knowledge and learning. Firstly, there were very few studies of strategy instruction that took a long-term view with regard to persistence of effects. That still seems to be the case. Secondly, the best strategy interventions start with an assessment of what learners currently do. The discussions which follow are of teaching programs or research interventions in which strategies were deliberately taught.

The list of commonly accepted teaching procedures below is taken from Kirsch (2021) and presented as a process of developing learners' metacognition in their ability to monitor, evaluate and control their own learning:

- Raising awareness of strategies and strategy use,
- Presenting and modelling strategies,
- Offering opportunities for focused and scaffolded practice,
- Promoting evaluation of the effectiveness of strategies and
- Monitoring strategy use.

The studies below, although also focused on the language outcomes of strategy use, are unusual in that they also give sufficient details of the nature of the strategy instruction for the reader to appreciate how pedagogy played its part in the interventions described.

Macaro and Mutton (2009) carried out a small-scale intervention-based study of year-6 children (ages 10–11) learning French using a literacy-based component to the course. One group of learners was given special reading materials designed to develop their 'inferencing strategies' when trying to work out the meaning of unknown French words from their contexts. Another group of learners were simply given a set of graded French reading books without any strategy instruction. A control group continued with their normal course. Both the group using the inferencing strategies materials and the graded readers group made significant advances in their reading comprehension. The inferencing strategies group outperformed the graded readers group in inferencing ability and in the learning of function words.

Graham and Macaro (2008) carried out a study in which the teaching of listening strategies played a central part and looked at effects in the long term. The study took place with 107 UK year-12 students (aged 16-17) who at the outset were at a B1 level on the CEFR scale and were on a path to Advanced Subsidiary level French examinations. The researchers investigated listening comprehension performance and strategy use before and after an intervention. A main theme of the research was the potential of strategy use to raise learners' listening proficiency. The results in this area were positive. However, more relevant to our focus on strategies as a benefit, the degree to which students used and appreciated the strategies taught in the intervention was also carefully tracked.

Two intervention groups were involved, one which would receive a basic introduction to listening strategies (Low Scaffolding Group – LSG, *n* = 39) and one which would receive the same introduction plus support and feedback on their performance during the whole research period (High Scaffolding Group – HSG n= 29). There was also one comparison group (CG *n* =39). By the end of the research period some students had decided to drop French, so the cohort dwindled to 59 (HSG = 20; LSG = 11; CG = 28).

The study focused on three points in time with a quasi-experimental, pre-test, post-test design at points 1 and 2, which were in October at the beginning of the school year and six months later. There was a follow-up activity the following October. At time 1 and 2 and 3, all the students were given a free-recall listening test and completed a short questionnaire designed to check their feelings of self-efficacy. All three groups were also given a questionnaire at time 2 in which they could indicate how much they felt they had improved their listening skills since the beginning of the study. The two intervention groups had additional questions about how useful they felt the listening strategies instruction had been.

Both intervention groups made greater gains on self-efficacy measures than the comparison groups, with the HSG group making significant gains over the LSG. The impact of teaching the strategies was, however, less than expected since students in both the HS and LS groups did not always follow the strategy advice given. Attrition of participant numbers and the small amount of feedback given to HSG during the intervention may further explain this.

This study shows not only how there could be a causal relationship between strategy use and improved language performance but also usefully investigates processes by which strategies could be positively fostered in language learners as part of a language program. Graham and Macaro made the point that strategies normally work best in clusters and sequences and that previous studies of single strategy use could therefore not model optimal behavior. For example, in the highly scaffolded intervention group, students were encouraged to predict the content of a follow-up listening passage but also advised to *monitor* and *confirm* those predictions against incoming information and be prepared to correct them against actual content. This type of study has implications for choices about how best to integrate strategy with language teaching.

4.2.2.2 Communication strategies

The research revealed only one study concerning the teaching or use of communication strategies with school-aged students. Gunning and Oxford (2014) working with French L1 speaking 6th graders in an intensive ESL course in Quebec, developed an intervention model responding to a problem identified by teachers. In oral interaction in English, children tended to use avoidance strategies, abandoning their messages or code switching into French. One intact intensive ESL class (*n* = 54) formed a treatment group, with a similar group (*n* = 54) as control group. The treatment group received teaching and scaffolding in strategies for speaking such as 'stall for time', 'ask for clarification' and 'say it in a different way'.

A mixed methods research design was used to explore the effects of this strategy instruction. Data were collected using a large number of instruments: three questionnaires (SILL, a background questionnaire and a task-based strategy questionnaire), pre and post intervention oral interaction tests, video recordings and field notes. The results were highly positive with statistically significant gains on test performance post intervention and copious qualitative evidence of growth in strategy awareness and appropriate effective strategy use to achieve the curriculum goals of interacting in English.

4.2.2.3 Summary of findings on language awareness and learner strategies

With strategy use one size does not fit all. Individual differences in language learning strategy use seem to be relevant in school-aged children for many reasons including current proficiency levels. Although the repertoire of strategies used develops with maturation in a similar way to metacognition in children, some studies suggest that experiences at school can affect the type and number of strategies adopted and therefore perhaps accelerate development.

While plurilingual experience can be associated with greater and more varied strategy use, the fact of being plurilingual does not by itself always seem to be sufficient to bring this about, at least with learners of school age. For learners to benefit fully from their AL learning experiences, it seems necessary for them to be enabled to see their knowledge and experiences as resources that can be called upon strategically. Research such as that by Graham and Macaro (2008) suggests that input for students on strategy use can be beneficial, but that input does not always equal uptake. School-aged learners may need consistent reminding and practice in order to use strategies to the best effect. On the other hand, students in a school with a policy of fostering general metacognition and reflective learning across the curriculum are in a good position to achieve self-regulation in their overall learning which can extend beyond the use of strategies in their AL studies.

4.2.3 What advantages emerged for general academic achievements?

While learning and using additional languages, learners gain new knowledge and develop their skills and abilities, as the AL serves as a vehicle for content learning. The main principle of AL programs in schools and tertiary institutions is to shift emphasis from the target language to function as the language of instruction. It is widely assumed that learners need to have a certain level of proficiency before they can learn school subjects in content-based CLIL and EMI programs. The threshold level is rarely specified, but typically students need to be minimum independent users (B2) to succeed in tertiary education; however, Macaro et al. (2018, p. 65) pointed out, "the concept of 'proficiency needed to teach through EMI' is underspecified either through empirical research or by institutional requirements".

In this section we investigate studies examining outcomes of CLIL and EMI programs to find out what they specify in terms of academic achievements. First, we rely on systematic overviews in general, then, we consider subject knowledge and skills in CLIL programs in primary and secondary education; then, we focus on academic knowledge gained in EMI programs. Wherever possible we also discuss relationships between proficiency in AL and general academic achievement. Some authors use CLIL and EMI interchangeably, but we try to follow the widely accepted definitions. Also, EMI covers only English; some universities use another language of instruction, such as Dutch in Spit et al. (2025).

Multiple publications synthetized the CLIL and EMI situation across the world. The first systematic review of 83 empirical studies on EMI in higher education conducted between 2000 and 2015 was published by Macaro et al. (2018). The authors looked for evidence on whether teaching academic subjects through the medium of English is of benefit to developing English proficiency "without a detrimental effect on content learning" (p. 36). A similar number of studies were conducted in Europe (33) and Asia (31), 17 in the Middle East and one in South America. Most programs were initiated by policy makers in a top-down fashion. The authors stated that "any cost-benefit evaluation of EMI is inconclusive at best and impossible at worst" (p. 56), as hardly any assessment was done in English or the subject domains to document gains. Thus, they found not enough evidence to assert that EMI benefits language learning nor that it is clearly detrimental to content learning. Students' low level of English proficiency was blamed by teachers and students for impacting content learning negatively. They voiced concerns about EMI creating socio-economic elites and anti-egalitarian outcomes for students, extra work and lack of teacher professional development and support.

Gilanyi at al. (2023) reviewed empirical research on Asian schools published between 2015 and 2022. Out of 61 studies, only five focused on primary schools, which they found low considering the increase in pre- and primary-school CLIL programs. Only 15 papers analyzed teachers' and students' experiences and none those of parents. More than half of the papers examined classroom interactions, focusing on translanguaging using case studies based on observations and interviews. The context of 32 publications was Hong Kong. The authors did not generalize any findings concerning the outcomes.

A review of 64 texts published between 2008 and 2018 focused on Latin America. Banegas et al. (2020) analyzed 41 empirical studies, 19 practice-oriented publications, and four reviews published in Argentina and Colombia. Most papers discussed small-scale qualitative projects conducted by teacher-researchers.

A critical review by Pun et al. (2024) included studies on science education in secondary and tertiary EMI contexts. It examined 66 empirical studies published between 2000 and 2021. The study focused on the challenges teachers and students faced from the perspectives of science education, language policy, and applied linguistics. Two thirds of the papers concerned secondary, the others tertiary education; 47 were about Asian contexts, including 27 in Hong Kong. The challenges included students' inability to cope with high-order questioning necessary for sense-making. Participants with lower entrance IELTS exam scores were at an academic disadvantage in science and math compared to students with scores between 6.0/7.0. Subject teachers did not consider language problems to be their task to manage. Overall, limited English proficiency was correlated with low science achievements.

The British Council published a comprehensive overview: *Global mapping of English as a medium of instruction in higher education: 2020 and beyond* (Sahan et al., 2020). It included 52 countries on the Official Development Assistance list developed by the Organization for Economic Co-operation and Development (OECD) to measure foreign aid. These African, Asian, and South American countries are

relatively less resourced, and EMI has been under-researched in their higher education. In addition to analyzing university websites, stakeholders at 227 universities in 42 countries completed an online questionnaire on their EMI programs. The main findings were these:

(1) Admission requirements varied and lacked standards: 64% of the universities had no proficiency requirements; undergraduate programs required minimum B1, graduate programs minimum B2 proficiency.
(2) Teacher development programs were limited; only 25% of institutions had English proficiency requirements for teachers.
(3) Most international students came from their own region.
(4) Their ratio was low in the student population.
(5) Universities aimed to increase students' job opportunities and their institutions' prestige.
(6) Women were underrepresented, especially at public universities.

The most frequent EMI programs are business, computer sciences, and social sciences; most typical are full degree programs. As for the reasons why institutions start EMI, internationalization is a way of attracting fee-paying international students and staff. The study did not find evidence that universities have become internationalized or managed to admit more students from abroad. The authors warned that uneven resources may induce a cumulative disadvantage, also called the *Matthew effect.* Rich Western universities generate tuition in their EMI programs from international students from these countries leading to further inequity, as these countries lose their brightest students to Western universities and attract international students only from their regional contexts.

4.2.3.1 Primary and secondary education

How much value is added to students' academic achievements may be analyzed by finding out how CLIL and non-CLIL learners' school achievements compare. Many studies use grade point average (GPA) or other general measures used in their countries for assessing the extent to which students meet assessment criteria. Countries may vary when AL programs start, how intensive they are, how well-prepared teachers are, and which ALs and subjects are taught. We failed to find studies answering such complex questions, as they are more often concerned with AL outcomes than their relationships with general academic achievements, reflecting stakeholders' stance. For example, the *Key data on teaching languages at school in Europe – 2023 edition* (European Commission/EACEA/Eurydice, 2023) states that CLIL programs are typical in half of the European countries, but it includes no data about knowledge gains in subjects learned in ALs.

Primary level CLIL programs lacked data on subject learning, as Nikolov and Timpe Laughlin (2021, p. 20) concluded their critical review of assessment, including six studies on primary and lower secondary CLIL learners in Europe. They pointed out that although thousands of children attend CLIL programs, no study offered insights into what young learners can do in the subjects they learn in English, how teachers assess them, and how content learning interacts with other variables. Two recent publications on this age group (Azpilicueta-Martínez & Lázaro-Ibarrola, 2023; Lázaro-Ibarrola & Azpilicueta-Martínez, 2024), both conducted in Spain, also failed to consider subject knowledge and skills.

In a systematic review, Goris et al. (2019) examined the effects of content and language integrated learning in Europe. They included 21 longitudinal experimental studies. Their findings concerned whether CLIL learners develop better proficiency in English than their peers in traditional EFL programs. The authors concluded that most studies produced null effects. They noted an interesting contradiction between Spain and the other European countries. In Spain, CLIL programs showed more significant effects, whereas the other contexts null effects. The authors pointed out that in Spain, CLIL

was introduced by educational authorities and was less selective (but see Lasabaster, 2019 in section 4.3.2). In the other countries, CLIL was introduced due to parental pressure, and in the Netherlands and Germany, where CLIL programs are elitist, students' scores did not increase over time.

A meta-analysis by Kaiypova et al. (2025) analyzed the effects of CLIL on secondary-level students' content learning to find out why results tend to be inconsistent in publications over 20 years. The authors identified 21 between-group CLIL studies on content learning and used a multilevel meta-analysis to estimate the overall effectiveness of CLIL programs. After analyzing 29 independent samples and 39 effect sizes (N = 36,905) they found that the general effectiveness of knowledge gains in content subjects was minimal: 09 (SE = .10, z =0.85, p = .40, 95% CI [.11, .28]). They concluded that "the overall effect of CLIL programs on secondary-level students' knowledge gains in content subjects did not differ from that of mainstream instruction" (p. 9). In other words, CLIL did not impact content learning negatively (p. 10). This framing of the findings is less enthusiastic than expected, but it indicates that CLIL did not disadvantage students in their content knowledge.

Another meta-analysis (Lee et al., 2023) synthesized the effects of CLIL also on secondary-level students, but they focused on their proficiency development in English. It included 44 samples (N = 7,434) from 38 empirical studies. Using similar methods to Kaiypova et al. (2025), it found that CLIL's overall effectiveness compared to the mainstream programs was (d = .73, SE = .06, 95% CI [.61, .86]) in the short term, and (d = 1.01, SE = .06, 95% CI [.88, 1.15]) in the long term. Specifically, CLIL outcomes were significantly higher for students with L1 linguistically related to English (see 3.4.1), lower for primary school students, lower in studies targeting productive skills of English learning, and higher on vocabulary tests. Overall, the datasets indicated that CLIL programs were "moderately beneficial for students' English learning in EFL contexts compared to other types of L2 interventions in general" (p.334).

CLIL programs using languages other than English (LOTE) were also systematically analyzed. Pittas and Tompkins (2024) included 29 empirical studies published over 30 years involving learners between ages 5–17. Participants in the studies ranged from 4 to 29,479 and the languages of instruction included minority and heritage languages (e.g., Basque, Gaelic, Maori) among others. They found that 26 papers analyzed academic and/or linguistic outcomes; some also addressed social/cultural, behavioral/ affective, and cognitive results. The findings varied a lot: results were positive in 25, negative in five, neutral in four, and mixed in eight studies. Out of the nine studies measuring outcomes in the content area, four were positive, two neutral and three negative. Only four publications identified factors influencing results. All studies used subjective measures on self-reported data and only four were longitudinal. Overall, parents and teachers reported more positive outcomes than the students themselves. "The findings on academic outcomes in CLIL in LOTE were highly context dependent, varying according to program type, geographical location and the typical profile of enrolled students. In the reviewed studies, majority language speakers seemed to fare better overall than heritage speakers of minoritized languages, but variation was observed within the latter group" (p. 10). Our understanding of the findings is that most probably, many students were socially disadvantaged, whereas others were elite learners, but the study did not elaborate on this.

The aim of a large-scale longitudinal study was to find out what role selection and preparation played in CLIL programs in Germany (Feddermann et al., 2022). The author assessed the English listening and reading comprehension development of a representative sample of German grammar school students of English (n = 448 CLIL and n = 4,191 non-CLIL). Learners' receptive skills were assessed over five years from grade five (age M = 10.38 (SD = .54) to grade nine between 2014–2019. Prior achievement and sociodemographic variables showed significant selection effects, and the longitudinal datasets indicated significant preparation effects of additional English lessons. When the authors controlled for selection and preparation effects, they found no significant additive CLIL effect. They concluded on

the benefits of CLIL, "given its small and non-significant additive effect, seems to be missing. Instead, CLIL students are a positive selected group and the results indicate that simply raising the number of English lessons for all could have a greater effect than CLIL" (p. 11).

4.2.3.2 Tertiary education

A few publications examined how proficiency in AL and general academic achievements are related in tertiary education. This is a key question allowing us to consider the added value AL proficiency represents in how students succeed in their university programs.

The only study not on English but Dutch was implemented in the Netherlands. Spit et al. (2025) investigated such a relationship using a causal inference approach. They analyzed a large historical registry dataset of examinees of the L2 Dutch state exam between 2011 and 2023 (N = 12,664). This exam is mandatory for all international students trying to gain admission into tertiary programs in the Netherlands. The authors found that test takers with higher scores at the B2 level exam were more likely to earn a degree. In contrast, in vocational education majors, students with higher exam scores at the B1 level exam were less likely to earn a degree. The explanations for the negative outcomes made sense in context. International students with high proficiency tend to be overqualified and less motivated, so they drop out or they may find jobs before graduation, especially in vocational programs. The findings underpin the claim that better proficiency is conducive to academic success as well as good currency on the job market.

Three publications approached the same question from the perspective of English assessment to examine the predictive validity of proficiency tests for admission to tertiary institutions, the aim of many students graduating from secondary schools. Ihlenfeldt and Rios (2022) conducted a meta-analysis of the predictive validity of two English language proficiency examinations. They included 132 effect sizes from 32 publications to establish to what extent different assessments predicted academic success measured by GPA. They found a weak positive correlation GPA (r = .231, p < .001) and no significant differences in the predictive power of the IELTS and TOEFL exams. The authors claimed that their findings could be generalized across types and levels of schools and publications. They warned that the weak relationships should discourage decisionmakers from using English proficiency tests as holistic measures for admission and they should not assign different weights to different tests.

Barkaoui (2025) conducted a longitudinal study comparing English language proficiency test scores and academic achievement on the same English examinations for non-English background students. The datasets included a total of 6,481 undergraduate students' total scores on the IELTS (n = 5,215) or the TOEFL iBT (n = 1,266) and their GPA in the first semester and their GPA trajectory over their first ten semesters at a Canadian English-medium university. Relationships varied across the two exams and the students' majors. Participants with different IELTS scores showed significantly different GPA trajectories over time, and the exam proved to be a better predictor of GPA than TOEFL. Test takers with lower IELTS scores showed a more substantial decline in GPA over ten semesters compared to their peers with higher scores, whose GPA declined less. In the author's view, this trend was due to their higher resilience. Interestingly, the longitudinal datasets revealed U-shaped curves across tests taken and majors: the initial decline was followed by an increase in GPA over the semesters, which, as the author emphasized, is typical for all students in tertiary education. This is the only study placing students' English proficiency in the larger picture of long-term academic outcomes. It offers important insights into typical trajectories independent of the knowledge of English.

An innovative and much more reasonably priced examination was analyzed by Isaacs et al. (2023). They examined the predictive validity of the Duolingo English Test (DET) for university entrance purposes at a major UK university. Participants were 1,881 DET test-takers (1,389 postgraduate, 492

undergraduate), whose academic attainment, degree level, academic discipline, and nationality were also considered. The authors compared students' academic results with those admitted using traditional proficiency tests. Participants' first-year academic grades were positively associated with DET scores for postgraduate participants (adj. r = .195) but not for undergraduate students (adj. r = −.112). This result was similar in correlational patterns for students admitted through IELTS (n = 2,651) and TOEFL iBT (n = 436). Students admitted with DET achieved lower academic scores than the IELTS and TOEFL iBT test-takers, thus, the predictive validity of DET was lower.

A recent small-scale longitudinal study (Aizawa et al., 2025) applied a more complex research design to examine the relationships between 27 students' levels of academic English literacy, prior content knowledge and their achievement in content knowledge in a chemistry course taught in English at a university in Japan. Participants took a chemistry test before and after the course and were interviewed about difficulties with academic English. Students' proficiency significantly predicted their post-test scores. The interviews revealed that lower proficiency students faced many difficulties, especially with vocabulary; however, participants with higher proficiency did not necessarily gain more content knowledge. Previous experiences with EMI and better content knowledge also played an important role in test results.

4.2.4 Summary of findings on educational benefits of learning and using additional languages

Three important findings have emerged concerning the advantages for general academic achievements.

- In content-based programs, despite the explicit aim to teach (parts of) school subjects in the language of instruction, few publications document to what extent CLIL programs benefit learners in the non-language subjects.
- Most researchers focus on advantages in the target language and less emphasis is on subjects in the curriculum taught in AL.
- Meta-analyses (Kaiypova et al., 2025; Lee et al., 2023) of empirical studies conducted over the past two decades documented mostly no or sometimes modest benefits in both domains.
- Despite these, in our view, discouraging general results, Lee at al. (2023) are optimistic: "our findings lend further weight to the argument that researching EMI-CLIL is worthwhile, given its potential contributions to English competence development among secondary-level learners, as well as its potential to serve as an alternative to traditional EFL instruction" (p. 337).
- In tertiary education, statistically significant positive but consistently *weak* relationships were found between students' level of proficiency in the language of instruction and their overall academic success. To put it simply, students whose AL proficiency is at a higher level are more probable to succeed. As for the threshold level of proficiency, B1 and B2 levels tend not to ensure success. It is more reasonable that the threshold level is advanced (C1) allowing students to follow curricula. This is what most prestigious universities require.
- AL proficiency is just one prerequisite of success. Students' knowledge and skills in their chosen academic subjects and their learner characteristics can explain variation in the outcomes as to why some excel whereas others struggle. Clearly, AL proficiency is one of many contributors to success in students' academic trajectories.
- Most publications avoid stating that CLIL/EMI programs give privileged learners better opportunities to further improve their AL abilities as well as their knowledge of the subject they learn. A few authors, however, point out that CLIL/EMI students represent special selected groups whose privileges are further advanced. Multiple authors wrote about

concerns that CLIL/EMI programs serve the needs of socio-economic elites and not the interest of all students. On the global level, the analysis by the British Council pinpointed drawbacks and potential dangers students and universities face.

4.3 What are the conative and affective benefits of learning additional languages?

In this part of the paper, we consider empirical studies on conative and affective learner-related factors to find out how they are impacted by learning and using ALs to pinpoint specific benefits. In other words, we want to analyze how learners' characteristics that are conducive to learning and using ALs are enhanced, and the features that prevent learners from developing to their full potential are reduced. Many of the factors are not unique to learning Als but are also typical in learning in general.

As was discussed in section 3.2, conative and affective characteristics overlap and interact with one another in complex ways. Some of the constructs, e.g., attitudes, motivation, grit, and mindset are emotionally colored, whereas self-efficacy is shaped by goals.

We pointed out in section 3.2 that most studies examine in what ways and to what extent these factors function as precursors and contribute to the success of AL learning and use. In contrast, we want to find out how these individuals' personal qualities change as they learn and use their repertoire. Thus, we search for evidence to support the assumption that these learner-specific factors are shaped as they constantly interact in complex dynamic systems. They are impacted by the learners' cognitive, metacognitive and other characteristics, as well as contextual factors, including parents, teachers, peers, and program-related features (outlined in section 3).

More specifically, the impact of conative and affective learner factors is *multidirectional*, ups and downs are typical, and these changes can be both beneficial and unfavorable over time. As was summarized in 3.2, conative abilities influence learners' behavior to set and achieve their goals. Motives and goals are malleable, as they are shaped by learners' AL learning experiences.

Along similar lines, emotional experiences also vary over time. Learners' feelings are impacted by others they learn from and with, the target language, situations, tasks, and successes, mastering tasks, as well as the challenges they face. All their *lived experiences* contribute to their identity and well-being as they figure out how they perceive themselves and how they think they are seen by others.

Learning English feels like playing on a seesaw because sometimes it makes me dizzy and sometimes it's exciting.
--Girl, age 12

Positive psychology has recently gained ground in language education studies (e.g., Gregersen, 2019; MacIntyre et al., 2016) suggesting that positive emotions, engagement, achievements, and relationships are involved in initiating and maintaining motivation, and shaping learners' identity and well-being. As Dewaele (2022, p. 192) explained, researchers using a positive psychology approach

> acknowledge the existence of difficulties and challenges in people's lives, but they want to complement them with concepts such as flow, hope, courage, wellbeing, optimism, creativity, happiness, flourishing, grit, resilience, positive emotions, life longings, emotional creativity, strengths, wisdom, health, and laughter.

The reasons why people embark on learning a new language may include opportunities to develop new or better intercultural relationships; how effort is maintained over time may be available through exploring positive emotions of achievements as learners move towards their goals. Mercer and Murillo-Miranda (2025, p. 1) pointed out that "positive psychology arose to serve as a counterbalance to the predominant lenses in psychology which concentrated on problems, deficits, weakness, and difficulties." Thus, the aim is to understand not only problems, but also strengths, how successes and failures, positives and negatives influence each other and contribute to well-being. Bearing these ideas in mind, we are biassed for positive outcomes.

These points underpin the decisive role of AL learning experiences shaping how learners benefit from being plurilingual in the short and long term. First, we look for evidence how motivation, willingness to communicate, mindset, and grit are impacted by AL learning experiences. Then, we present findings on how affective factors like anxiety, enjoyment, boredom, embarrassment, and self-efficacy shape learners' beliefs and identity through their emotions and vice versa, and how all these contribute to their well-being.

4.3.1 Language learning motivation

Language learning motivation is the most frequently researched conative factor. It is also one of the best predictors of success in AL learning (besides aptitude, previous language learning experiences, and proficiency at start, e.g., Dörnyei, 2019; Dörnyei & Ryan, 2015; Lamb et al., 2019; Wen et al., 2017) when its impact is measured over time. It concerns the goals and reasons why one wants to learn a new language, and how much effort and persistence one is willing to put into it over time. Motivation can be instrumental when learners want to get a good grade, gain entry to college, find a rewarding job, or use it for travel, gaming, social media, etc. It can be integrative, when learners intend to socialize into a group and become like other successful users, including native speakers and other AL users, most often of English as lingua franca.

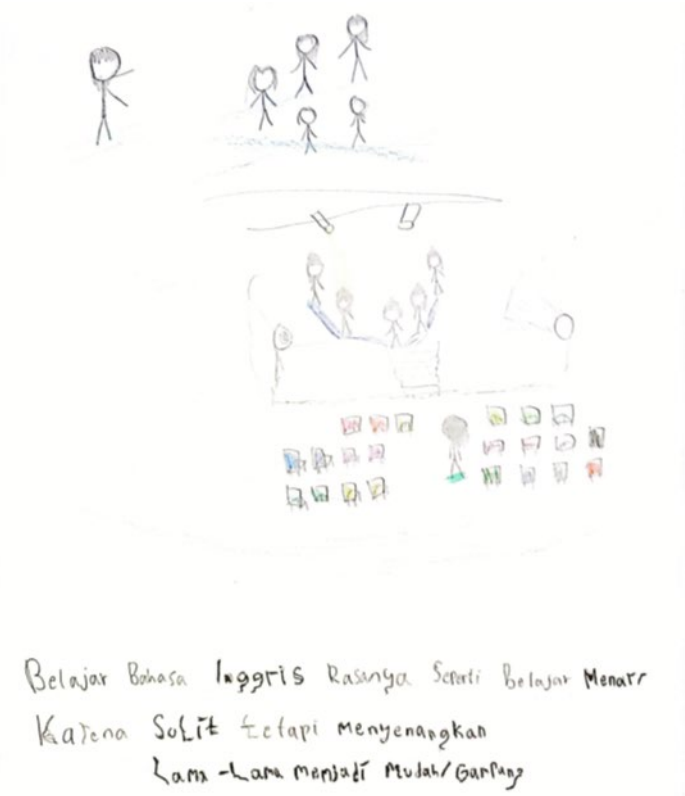
Integrative motives were re-conceptualized in the L2 motivational self-system (Dörnyei, 2009) as the ideal L2 self, how learners see themselves, and the ought-to L2 self, how others expect them to be like in the future. Both concern learners' visions of their identity and are measured by learners' self-reports on their intended effort. These factors do not guarantee that students engage with tasks conducive to AL learning.

A third component, the L2 learning experience concerns learners' evaluations of what learning the AL has been like for them. Dörnyei (2019, p. 26) defined it as "the perceived quality of the learners' engagement with various aspects of the language learning process". This idea of zooming in on engagement aims to illuminate learners' motivated behavior related to doing AL tasks. Engagement is related to willingness to communicate, grit, and perseverance: how much effort learners put into learning and using their repertoire and how long they persist. As learning experiences shape how

motivated students are, increased motivation to learn the AL and other languages is expected to be an important benefit.

Engagement is closely linked to *intrinsic* motivation when learners need no external feedback or evaluation, as their reward is in mastering a skill or solving a task while using the AL. They enjoy classroom activities, or they use AL autonomously for something of specific interest to them (e.g., listen to music, watch movies or videos on how to program or bake bread, read a scientific study or a novel). They engage in such activities in or outside AL classes.

Learning English feels like learning to dance because it's difficult but enjoyable and gradually becomes easy over time.
--Girl, age 12



4.3.1.1 Who are polyglots and what can we learn from them?

A few extremely positive examples are insightful. Polyglots are highly successful plurilingual individuals. Their case studies document why they stand out. In a detailed review, Hyltenstam (2021) defined them as people who learned and can use at least six ALs at intermediate (at least B1) or advanced level in oral interaction. He interviewed and tested ten polyglots' language aptitude, motivation, language awareness, and use of language learning strategies. All ten had above average or outstanding aptitude and a strong preference for explicit learning. They showed "a passion for actually learning new languages and mastering them in conversational practice" (p. 67). They chose a new language based on how it sounded and preferred less frequently used ones (e.g., Breton, Faroese, Galician, Irish, Welsh). They used explicit learning strategies and were very much interested in linguistic form.

In summary, the author pointed out that polyglots' strong motivation, high levels of aptitude and language awareness made them successful AL learners. He emphasized that language aptitude (see section 4.1.5) is a prerequisite for developing high levels of language awareness (section 4.2.1). As they overlap, it is hard to tell aptitude apart from awareness (see 4.2.1).

Other publications also discuss polyglots (e.g., Erard, 2019). A recent example, Noprival et al. (2025) explored how six Indonesian polyglots used their strategies and what we can learn from them. The main lesson was that they initiated creative practice opportunities by connecting with others. A few YouTube videos posted by enthusiastic polyglots are worth watching to experience their emotional engagement with their languages (e.g., https://www.youtube.com/watch?v=o_XVt5rdpFY&t=167s; https://www.youtube.com/watch?v=uIF4GMnqG6w; https://www.youtube.com/watch?v=t3H5D-XxPrI)

4.3.1.2 Factors impacting English learners' motivation

After this short detour on highly motivated AL learners, we need to address the other side of the same coin: amotivation, the complete lack of motivation, and *demotivation*, the loss of motivation, which can be reversed as *remotivation* (Mihaljević Djigunović & Nikolov, 2019). In their review of empirical studies on demotivation, Thurner and Kikuchi (2020) identified six main reasons for the decline in students' motivation:

(1) teachers' critical attitudes and/or low teaching and AL competences,
(2) course not tuned to learners' level or boring (e.g., grammar-translation),
(3) negative learning experiences, low achievement,
(4) peer pressure, compulsory AL,
(5) boring teaching materials,
(6) students' loss of interest.

The last point includes cases when students may not see AL as useful, or their goal is achieved, or they perceive speakers of AL as negative or a threat. In other words, a lack of learner agency, no role in what happens in classes and loss of motivation. For example, passing an exam, a positive milestone, can also demotivate students. These findings clearly show the strong link between motivation and emotions and lead us to what research says about these points. Studies on English and on other languages are considered separately.

An important benefit of learning and using ALs concerns motivation. Many publications inquire into motivation ranging from case studies to large-scale surveys using self-reported data. Most authors frame their inquiries using one or more theories; the most popular and recently most criticized model (e.g., Al-Hoorie, 2018; Hiver et al., 2024) is Dörnyei's (2009) L2 motivational self-system. As a multitude of publications are available on the topic, especially on learning English, we rely on overviews and meta-analyses to present the key findings.

How young learners' AL learning motivation changes over time was investigated by Mihaljević Djigunović and Nikolov (2019). They included studies involving children in primary and lower secondary schools. They found evidence that young learners' motivation was more strongly impacted by what they experienced in the AL classes day by day than in the case of adolescents or adults. Due to the children's slow progress and short attention span, maintaining their interest was often an issue. Tasks they found motivating earlier became less challenging and boring or childish. Recycling the same topics over time often led to demotivation. Emphasis on literacy skills tuned to children's level motivated them, but assessment induced anxiety and low grades and negative feedback led to demotivation. They claimed that children from favorable backgrounds were more likely to have an ideal L2 self, but their peers with lower SES were more characterized by ought-to L2 selves. Boys who gamed a lot in English tended to have more positive future L2 selves than girls but were often bored in English classes. Girls were more impacted by parents and teachers as motivators than boys. Over the years, teachers' and parents' influence declined, whereas that of peers increased. A general decline in motivation was typical across studies as the children aged.

Learning English feels like eating green mustard because English is bitter and difficult
--Girl, age 12

Similar trends were pointed out by Lamb (2017) in his analysis: girls tend to be more motivated, score higher on ideal L2 self and self-efficacy. In sum, studies did not provide evidence for increased motivation. These outcomes have important implications for early start AL programs (see 6.1).

Lasagabaster (2019) critically reviewed empirical studies published over 15 years on what role motivation played in CLIL programs. He analyzed them along three categories: papers based on (1) measuring students' motivation, (2) learners', their parents' and teachers' views, and (3) motivation related to multilingualism. The contexts included Finland, Sweden, Austria, Germany, Italy, Poland, Great Britain, and Spain where most learners attended lower or upper secondary schools and learned content in English. In studies measuring learners' motivation, in many cases, students in CLIL classes were selected. Thus, they were more motivated than their peers in non-CLIL classes. In a lower-primary project implemented in Poland, children developed negative attitudes towards learning math and science, as their English level was low. In contrast with previous findings showing a typical decline in motivation, a study comparing CLIL and non-CLIL students in two age groups did not document such loss of motivation in the CLIL groups. In the second group of studies, the author found that adult stakeholders were overall enthusiastic and considered CLIL programs motivating, but worried about low achievers. Students' motivation varied more. In multilingual contexts in Spain, CLIL did not negatively impact trilingual learners' motivation to learn Spanish, Basque, and English.

Lasagabaster (2019, p. 358) concluded that "it cannot be affirmed whether the positive results were caused by CLIL, conditions previous to CLIL (selection, higher motivation, etc.) or a mixture of both." Further evidence for selection bias was found by Jaekel (2020) whose study involved 9th-graders in CLIL and non-CLIL English programs in Germany (N = 378). CLIL students' cognitive abilities were significantly better than those of their peers in traditional AL programs.

This is a sobering outcome of the most popular innovative CLIL approach widely spread around the world. Most probably, the *quality of teaching* was also among the reasons why studies failed to document increased motivation as added value.

Multiple meta-analyses were conducted. Al-Hoorie (2018) included 32 studies using the L2 motivational self-system. He analyzed 39 samples and 32,078 language learners. The three components were significant predictors of subjective intended effort (*r*s = .61, .38, and .41, respectively), but weaker predictors of objective measures of achievement (*r*s = .20, -.05, and .17). He stated that the strong correlation between the L2 learning experience and intended effort was due to a lack of discriminant validity between the two scales, as many items overlapped. Another finding concerned a very weak relationship between intended effort and results on objective AL tests (*r* = .12). This outcome is important, as it offers evidence that how much effort students intend to invest in AL learning has very little to do with their success reflected in test scores. AL learning experience was previously considered the strongest predictor of intended effort, whereas Al-Hoorie found a weak correlation with achievement (*r* = .17). He explained why this was the case by pointing out that enjoying a course and liking the teacher do not necessarily mean that students develop their AL proficiency to the expected level. The author recommended experimental studies to make sure that causation can be supported by evidence.

Aryadoust et al. (2024) explored the state of research on motivation in AL learning by analyzing 37 publications between 2008 and 2022. Studies were conducted in 14 countries and included 17 languages. Only five were longitudinal inquiries. The authors found an average reliability of .84 (CI = .816–.856); 34% of reliability coefficients were below the lower bound of CI. A meta-regression analysis revealed that 16% of the variance in the reliability coefficients was predicted by the number of items in the instruments. An interesting finding concerned learners ideal L2 selves: Asian and non-Asian learners had ideas about themselves in the future, but East Asian respondents were more motivated by their ought-to L2 selves, indicating societal pressure linked to English. Additionally, the latter motive was often related to avoiding failure and not living up to others' expectations. This result is similar to those on young learners and lower achievers. Feeling pressured to achieve results is not conducive to AL learning. A positive outlook is more helpful, but teachers must develop and support it in their classes.

Studies on engagement, a popular construct related to motivated behavior (Philp & Duchesne, 2016), were analyzed by Hiver et al. (2024) who included 112 studies published over 20 years. Engagement refers "to the amount (quantity) and type (quality) of learners' active participation and involvement in a language learning task or activity" (p. 202). In line with findings on motivation, the authors concluded that engagement is also dynamic and multidimensional (comprising cognition, affect, and social interactions). These studies also rely on self-reports; longitudinal case studies documented dynamic changes in engagement and how teachers tried to involve and remotivate disengaged learners. Clearly, the more engaged learners are the more they benefit.

These are the lessons we can draw from these discussions on learning English:

- Studies on all age groups and program types document that motivation is fluid, its changes reflect how learners perceive their experiences.
- Students' responses to surveys did not show general increase in motivation as a result of learning and using AL.
- Most studies emphasize *variability* rather than clear trends.
- A positive future identity is more conducive to AL learning than external expectations. Differences characterize Western and East Asian learners in this regard.

4.3.1.3 Motivation to learn English vs. languages other than English

Learners' motivation depends on the target language: whether they learn English or another language. It is also important whether the target language is their choice or mandatory, in addition to other factors included in the previous section. English as a lingua franca has become a basic skill and more people learn and use it than other ALs. The term *languages other than English* (LOTE discussed in 2.2.4) indicates that compared to the popularity of English other languages are disadvantaged (Dörnyei & Al-Hoorie, 2017).

Issues related to LOTE concern two main contexts:

(1) Where English is an official language and the population may not see the value of learning LOTE.
(2) In other countries where English is either mandatory or the most desired target language, LOTE typically means learning a third language (L3).

To illustrate, in the U.S. "throughout all 50 states and the District of Columbia, 20% of K-12 students are enrolled in foreign language classes" (Devlin, 2015, p. 4), whereas in European schools, "in 2020, at EU level 59.2 % of students in the whole of lower secondary education were learning two foreign languages or more" (European Commission / EACEA / Eurydice, 2023, p. 20).

There is a third, dual approach to the above points: with an open mind and an optimistic outlook, plurilingualism is framed as an opportunity, "The more the easier"? (e.g., Festman, 2021) or as "a 'problem' in need of a resolution" (e.g., Hofer & Jessner, 2025, p. 2). "The latter holds particularly for Western countries and the Global North where monoglossic ideologies ascribe symbolic capital and value". Thus, these opposing views promote multilingual societies versus nation states with one nation language.

To offer evidence on motivation to learn LOTE, Lanvers and Chambers (2019) reviewed publications on students in Germany and the United Kingdom. They found that in Germany parents want their children to learn English as opposed to LOTE, whereas in the UK an unprecedented crisis characterizes learner motivation for any AL. Demotivation, in their view, is an issue due to less-than- optimal learning experiences in both countries. In the UK, teaching to exams is typical. In Germany, students are expected to learn two ALs and their motivation is reported to be relatively high, as learning languages is perceived as a desirable norm for all learners to achieve, although motivation to learn English is much higher than to learn French. Overall, in Germany more students are motivated despite global English, due to inclusive AL education, high-stakes, and shared values associated with AL learning. In the current UK education system, (a point concerning societal level) learner motivation is positive only in elite education, reflected in students' SES and the type of school they attend.

A recent analysis by the RAND corporation (Ayres-Bennett et al., 2022) estimated the significant added value proficiency in Arabic, Mandarin, French and Spanish would add to the economy in the UK (see 4.4.1). However, most probably low SES students are not aware of the high expected benefits of knowing these languages and they have no access to AL programs at their schools.

Most empirical studies use the same frameworks and self-reports for examining learners' motivation to learn LOTE, as discussed above. In contrast, Ushioda and Dörnyei (2017, p. 453) promoted "a less instrumentalist and more holistic view of language learning as a process of expanding people's meaning-making repertoires as multilingual (rather than L2 expert) communicators".

In other words, LOTE should be seen as a part of plurilingual individuals' identity. This is in line with what, for example, Duff (2017, p. 603) recommended: researchers should

adopt qualitative, interpretive approaches (such as longitudinal case studies, interview-based studies, narrative inquiry) or mixed-methods studies to generate salient themes based on vivid, personal, detailed biographical accounts from research participants of their experiences and desires with respect to language learning.

Such inquiries can document long-term advantages.

Three examples of such an approach, innovative qualitative studies, offer new insights into students' *lived experiences*. Li and Liu (2023) explored learners' motivational development by collecting written reports and semi-structured interviews with eight international learners of Chinese and used thematic analysis. Participants' LOTE learning experiences were full of emotions related to task engagement, relationships, and achievements which shaped their motivation in both positive and negative ways.

In a European study, Henry (2014) developed students' metalinguistic and crosslinguistic awareness to benefit L3 learning by cross-referencing (discussed in 4.2.1), that is drawing on their language awareness. He interviewed 21 Swedish 8th graders learning L2 English and L3 German or Spanish to find out about their learning experiences. Cross-referencing with English negatively influenced participants' L2 and L3 self-concepts. Nearly all students were aware of making comparisons, and some developed strategies to avoid their negative effect. However, the overall negative influence of the high-status English changed the learners' L3 self-concept. In other words, once learners can use English well, being a beginner in an L3 may not be motivating, especially if the L3 is less popular. Thus, the expected advantages failed to emerge.

The third qualitative study (Zhu, 2024) examined why 53 Chinese students at a secondary school dropped English as their L2 and started Japanese as L3. Multiple reasons were found to impact students' decisions. They assumed that a new college entrance examination would be easier in Japanese than in English, they were demotivated in the English classes due to their teachers' boring and demanding practices. They were intrinsically motivated by Japanese anime culture, found the teacher of Japanese dynamic and supportive of autonomous learning through anime.

4.3.2 L2 willingness to communicate, L2 mindsets, and L2 grit

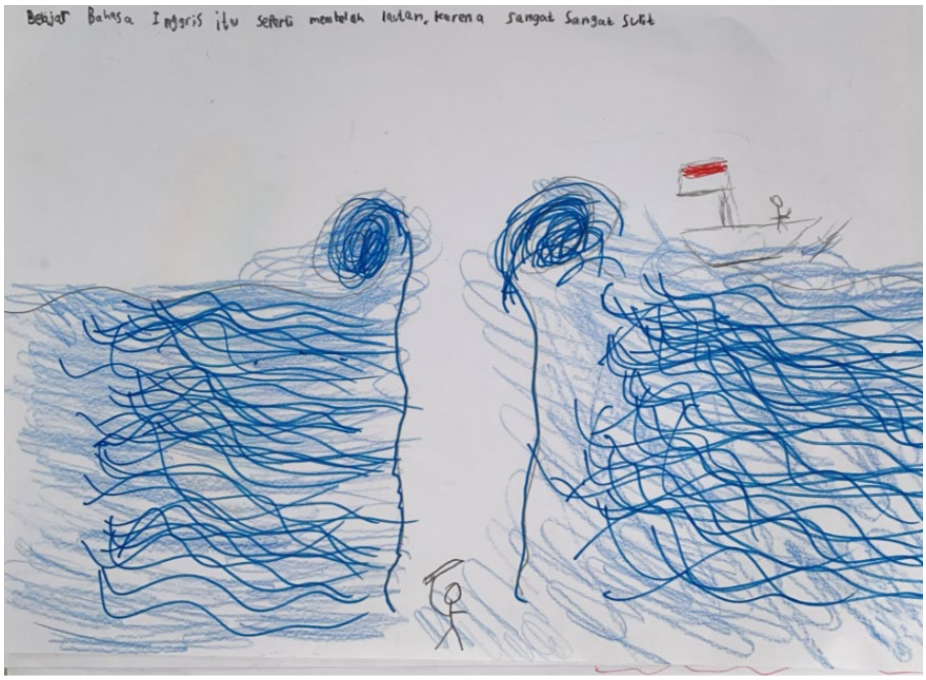
Willingness to communicate in AL (L2 WTC) is yet another factor interacting with motivation and outcomes. The construct was borrowed from communication studies to characterize how ready a person is to initiate conversations and interact with others in specific situations. Higher WTC offers more learning opportunities and can boost oral communication skills as well as self-confidence. (Polyglots, for example, are very willing to communicate and seek out opportunities to practice.)

Kirkpatrick et al. (2024) did a scoping review of willingness to communicate in language education analyzing 47 studies in L1, L2, and EFL contexts. They analyzed how WTC was defined, researched, and assessed in classroom and digital contexts. Very few studies targeted developing students' L2 WTC; the authors concluded that contextual and individual differences and participants' communicative competence enhanced or reduced their L2 WTC.

A comprehensive meta-analysis was conducted of the effect sizes (Elahi Shirvan et al., 2019) in studies published between 2000 and 2015 on L2 WTC and three variables influencing it: students' perceived communicative competence, language anxiety, and motivation. The sample included 22 studies comprising 60 independent effect sizes, 4,794 total participants, and 18,631 participants considering all the samples of independent studies. Only eleven focused on the three correlations producing 32 effect sizes and 8,219 total participants. The study found that the three factors were moderately correlated with L2 WTC; perceived communicative competence had the largest effect.

Fathi et al. (2023) examined how 601 intermediate-level Persian English learners' L2 WTC was predicted by AL enjoyment, ideal L2 self, and intercultural communicative competence. They found that participants' ideal L2 self and motivated behavior enhanced their AL learning enjoyment and intercultural communicative competence, which increased their willingness to communicate. These indicate clear advantages for these students beyond the classes in their repertoire.

A new perspective is offered in a recent study: Zheng et al. (2025) investigated how 58 native and nonnative English speaker students perceived one another and themselves in a paired task at a Canadian university. They found that participants not familiar with one another tended to underestimate how much they were liked by their partners, which in turn impacted their WTC. All participants showed a reliable *metaperception* bias: they underestimated their interpersonal liking, speaking ability, and interactional behavior. However, only L1 speakers' desire to engage in future interaction was associated with their metaperceptions of interpersonal liking. These findings show how complex the reasons may be why learners are proactive and willing to seek out new opportunities.



Learning English is like splitting the ocean because it's extremely difficult --Boy, Age 11

The idea that *mindsets* (Dweck, 2006), a motivational factor, may impact learning, and vice versa, is not new in educational research, but interest in how mindsets work in language education is recent. Mindsets concern learners' beliefs about their own abilities and goals. Learners with a fixed mindset believe that their abilities cannot change. Learners characterized with a growth mindset believe that their abilities develop with effort and persistence. The question is how learners' growth mindset is shaped by learning and using ALs so that they can be more efficient in their endeavor.

Lou and Noels (2019) overviewed what role mindsets play in learning Als and the extent to which it is malleable as a result of training learners to adopt a growth mindset. Students with a growth mindset believe that learning is under their control and their effort is effective, which may lead to positive emotions and increased resilience in the face of challenges. Although they found only a few, mostly small-scale studies, they concluded that mindset intervention helped struggling students to do better at school. However, the findings could not be generalized, as such interventions failed to change the learning environment. They changed only how students perceived their own AL learning and ability.

Fan et al. (2024) conducted a large-scale study involving 868 low- to mid-level first-year high school learners of English in rural China. They examined the relationships between their growth language mindset, *grit*, burnout, and engagement using serial mediation models. They found that learners' growth mindset was directly related to enhanced grit, reduced burnout, and increased engagement in learning. Grit led to reduced burnout, and enhanced engagement, whereas burnout was negatively associated with engagement. Their study offered insights into the ways in which learners' positive beliefs about their abilities, grit, emotions, and actions impact AL learning in positive and negative ways.

A large-scale study (Bai & Wang, 2023) examined the relationships between growth mindset, *self-efficacy*, and intrinsic value in self-regulated learning and English achievements of 690 4th graders in Hong Kong primary schools. Children's uses of strategies (monitoring, effort regulation, goal setting and planning, see 4.2.2) were correlated with their motivational beliefs (growth mindset, self-efficacy, and intrinsic value) in different ways. Monitoring and effort regulation contributed significantly to participants' English development, whereas goal setting and planning did not. Growth mindset was a stronger predictor of strategies than self-efficacy and intrinsic value. This makes sense, as learners who believe that they develop by trying harder and investing more work into tasks, will use strategies they find helpful. They found stronger relationships for girls than for boys. The authors concluded that their results with young learners were aligned with what Lou and Noels (2019) had found for older learners: university students with a growth mindset were more likely to persist when they faced failure.

L2 grit and perseverance have been identified as important predictors of success in various academic areas. Research has been conducted to examine their relationship with the amount of sustained effort learners invest into AL learning and outcomes. For example, Teimouri et al. (2022) involved 191 Persian learners of English at a university; they found that the influence of L2 grit on AL achievement was lower (r = .27–.35) than that of language aptitude but it was comparable to the impact of motivation and anxiety. In another example, Khajavy et al. (2021) involved 1,178 Iranian university students to examine their grit and language mindset as predictors of AL achievement. Findings underpinned the claim that mastery of AL is highly dependent on learners' sustained effort. Also, both studies found that participants' L2 grit and L2 mindsets were not static, but malleable. This means that participants' L2 grit and L2 mindsets increased which has important pedagogical implications: interventions raising students' awareness about their L2 grit and L2 mindsets can develop their level in these domains. Thus, higher L2 grit and a growth mindset may be among the benefits of learning and using an AL.

German as AL learners were involved in a large-scale study by Li and Yang (2024) who examined the role of their domain-general and domain-specific *grit*. Participants were 700 Chinese learners from six urban secondary schools. They filled out motivation and grit scales about their general and language-related grit, self-assessed their German, and their teachers also evaluated them, plus 289 students took a German test. The main motivation for the students to learn German was the instrumental value of advancing their further education and career. As for students' grit, both domain-general grit and L2 grit had a significant role; the latter was a strong positive predictor of German test scores.

A meta-analysis was conducted by Chen et al. (2025) on the relationship between *resilience* and AL learning achievement in publications between 2017 and 2024. Resilience, a similar construct to grit, concerns the ability to adapt to difficult situations effectively. The study included 35 correlation coefficients from 14 studies across countries, with a cumulative sample size of 20,576. It found that resilience (pooled r =.28; 95% CI:0.16, 0.40; SE =.06, t =4.65, p <0.01) positively correlated with AL learning achievement. Variations in these relationships across individual studies were explained by

country, AL type, learning environment, and skills included in achievements. These results add new insights into the role of resilience in AL learning.

The lessons we can draw from these discussions are again manifold:

- L2 willingness to communicate, L2 mindsets, and L2 grit work both ways: they impact AL outcomes as well as change during learning and using ALs.
- The jury is still out how systematic interventions over time can increase these learner-specific factors and thus contribute to becoming more successful learners and users of their repertoire.
- These conative variables comprise beliefs about learners' AL-related abilities and identity. They are malleable and interventions can develop them as part of AL education. In optimal cases, learners' conative characteristics improve and become advantageous for further AL learning and use.
- Although few studies have explicitly examined to what extent AL learning experiences shape learners' L2 motivation, L2 willingness to communicate, L2 mindsets, and L2 grit, there is enough evidence that all these characteristics change during learning. However, most studies used correlational analyses and only a few combined them with regression analysis or structural equation modeling. More such studies are needed to conclude which of these findings can be considered among long-term benefits. Most probably, if learners experience success, and feel that their efforts are supported and result in improvement, their L2 motivation, L2 WTC, L2 grit increases. In contrast, as with all learning, lack of success may lead to demotivation. In the case of AL learning, the results may be lower levels of willingness to communicate and grit, which may result in a vicious circle. Thus, studies document that learners' beliefs can change in positive and negative ways. These changes are further colored by emotions, the next focal point.

4.3.3 Anxiety

Let us investigate findings on learners' beliefs about anxiety, enjoyment, boredom, embarrassment and self-efficacy, as well as how all these emotions are "enmeshed with identity, agency, and power, all central in the learning and teaching of languages in today's multilingual world" (Douglas Fir Group, 2016, p. 36). As the short list of affective factors shows, some of them focus on negative, others on positive emotions.

Learning English feels like being swallowed by a whale because it's painful.
--Boy age 10

These discussions will lead us to the importance of well-being, a key construct of positive psychology. It concerns "the degree to which an individual feels well and is satisfied with their lives and can thus be thought of as flourishing or not". Researchers aim to find out "what resources and strengths people draw on to protect and nurture their well-being" as they face difficulties and manage to cope with them (Mercer & Murillo-Miranda, 2025, p. 1).

Tapping into affective factors is challenging, due to "the largely latent (not directly observable) nature of emotional variables" (Plonsky et al., 2022, p. 347). Studies tend to use surveys, but some innovative methods are also used (see Dewaele & Li, 2020).

Anxiety related to AL learning and use was the first affective factor in empirical studies. It has been on the research agenda for decades and the topic of varied discussions (e.g., Sparks, 2025). Anxiety is generally seen as a debilitating factor in AL learning and use; it can also have a facilitating effect, but we found no study on this.

Teimouri et al. (2019) implemented a meta-analysis of the relationship between AL *anxiety* and AL achievement on a sample of 97 reports including 105 independent samples (*N*=519,933) from 23 countries. The 216 effect sizes in the primary studies yielded a mean of r = -.36 for the relationship between AL anxiety and AL achievement. Moderator analyses revealed effects sizes to vary across different types of AL tests, educational levels, target languages, and anxiety types. The authors concluded that their study offered evidence for the negative impact of anxiety and the moderating effects of multiple non-linguistic variables. They found an increase in students' anxiety from lower to upper secondary to college students. Higher anxiety characterized learners of LOTE than students of English. Anxiety affected learners' listening comprehension more strongly than their speaking abilities; the lowest negative effect was found for reading comprehension.

Another meta-analysis (Zhang, 2019) also looked at the same relationships including 55 independent samples with over 10,000 participants. The overall correlation between AL anxiety and AL performance was r = −.34, very similar to that in Teimouri et al. (2019). In this study, correlations were stable across groups with different levels of proficiency and AL learners L1 family. Correlations for older participants were higher, indicating stronger relationships. Overall, if levels of anxiety increase or stay the same, its detrimental impact should be considered among the lessons learned (section 6).

4.3.4 Enjoyment, boredom, embarrassment

A meta-analysis of the relationships between AL *enjoyment*, AL anxiety, willingness to communicate, academic achievement, and self-perceived achievement were examined in 56 studies involving learners of English by Botes et al. (2022). The authors analyzed *k* = 96 effect sizes with an overall sample size of *N* = 28,166 in random-effects models with correlation coefficients. They found a moderate negative correlation between enjoyment and anxiety, and moderate but stronger positive correlations between enjoyment and WTC, academic achievement, and self-perceived achievement. Their findings serve as evidence that the factors included in these studies revealed meaningful relationships about AL learners' emotions in classrooms. However, they did not specifically establish how these were impacted by learning experiences.

A large sample of junior secondary students (*N* = 954) was involved in a study (Li & Wei, 2023) to examine how their anxiety, enjoyment, and boredom impacted their AL achievement. The mean age of the 954 participants was 13 (SD = .81), ranging from 11 to 17. Data were collected at four time

points over nine weeks with the help of questionnaires and English tests. Using structural equation modeling the authors found that the three emotions at start predicted English test results over five weeks. Only enjoyment predicted AL achievement nine weeks later.

When the three emotions were combined, the strongest predictor was enjoyment, followed by anxiety (negative impact), whereas boredom lost its predictive power over time. Overall, enhanced enjoyment predicted lower boredom, and increased anxiety predicted higher levels of boredom. The authors reported no significant correlation between enjoyment and anxiety; thus, enjoyment does not automatically mean low anxiety.

How *boredom* and AL achievement are related was the focus of a recent publication (Huang & Zhang, 2025). The multilevel meta-analysis included 47 effect sizes in 33 empirical studies involving a total sample size of 27,838 AL learners. A small negative effect ($r = -.24$, $p < .001$) was found. Interestingly, the effect sizes across different age groups and types of institutions weakened as participants grew older and more proficient. The highest effect size was found for middle school (lower secondary) age groups. The authors explained this by a typical shift from playful learning to more demanding AL learning. Also, the effect of boredom was somewhat higher in foreign language contexts than in second language programs. The impact of boredom tended to be stronger in online environments, most probably due to a lack of social interactions with peers.

Learning English feels like going to the library because it's boring and makes you sleepy
--Boy Age 10

University students were involved in another study on *boredom* in China. Li (2022) examined how boredom and *enjoyment* were related to learner and teacher factors by asking a large cohort ($N = 868$) studying English. A strong negative correlation was found between enjoyment and boredom; enjoyment had also positive relationships with self-perceived English proficiency, standing among peers, attitudes towards English, the teacher, and target culture as well as with factors related to the teachers (e.g., English use in class, enthusiasm, friendliness). Enjoyment was negatively linked to learner age: younger participants' enjoyment was higher, whereas older students' boredom was at a

higher level. A thought-provoking result concerned the age when participants started to learn English: earlier starters reported experiencing higher levels of boredom and lower levels of enjoyment. The strongest learner difference predictor of enjoyment and boredom was attitudes to English. Additionally, teacher *friendliness* was the strongest predictor of both emotions.

A recent longitudinal study examined the impact of CLIL on classroom *anxiety, enjoyment* and learning motivation (Mettewie et al., 2024) to analyze the added value of CLIL to socio-affective outcomes. Participants were 756 French-speaking students at 13 primary and 9 secondary schools in Belgium; they learned English or Dutch, in CLIL or in non-CLIL AL classes. They completed a questionnaire and several tests twice over 18 months. The questionnaire measured their anxiety, enjoyment, and AL motivation (perceived task value, expectancy for success, and perceived cost). Participants' initial vocabulary knowledge in their AL was also assessed. The group comparison between CLIL and non-CLIL (between-subject) showed that the CLIL students reported more favorable emotions and motivation for AL learning, in line with previous cross-sectional research. The longitudinal outcomes (within-subject), in contrast, showed limited effects of CLIL, especially when initial vocabulary knowledge was factored in.

These findings "contradict or moderate the (largely theoretical) claim that CLIL de facto would generate advantages in terms of socio-affective factors such as language emotions and learning motivation" (Mettewie et al., 2024, p .9). The authors also noted that CLIL students attended at least twice as many AL lessons as non-CLIL students over the years. The overall longitudinal effects of CLIL on emotions and motivation were limited and similar in the CLIL and non-CLIL groups. Possible explanations offered by the authors include varying quality of teaching, lack of standards, and heterogeneous CLIL classes. They concluded that "it is also possible that the CLIL approach simply fails to deliver the anticipated benefits" (p. 9). These outcomes are in line with Goris et al. (2019) and Lasagabaster (2019): most of the 21 longitudinal studies failed to document AL benefits of the CLIL programs. Similar conclusions were drawn in section 4.2.4.

4.3.5 Self-efficacy, personality, identity and well-being

Self-efficacy concerns learners' beliefs that they have the necessary abilities to complete a particular task and to succeed in specific situations if they put enough effort into working towards their goals. It is about learners' confidence in their ability to control their behavior and their environment to maintain their motivation. A related term, self-confidence, is a more general belief about learners' abilities; it is also related to emotions. Two meta-analyses explored the relationship between *self-efficacy* and AL proficiency. Wang and Sun (2020) included 493 effect sizes, ranging from small to medium, from 74 publications. Hierarchical linear models indicated 76.7 percent of variance in the studies. Overall positive relationships across the papers were aligned with what research found in other subjects. Interestingly, effect sizes in studies with East Asian and Middle Eastern students were larger than those in studies with students in Western cultures. Learners in Asian cultures consistently reported lower efficacy beliefs than Western participants.

Goetze and Driver (2022) conducted a meta-analysis of studies examining the relationship between learners' *self-efficacy* and AL achievement. They included 37 studies which involved 40 independent samples (N = 23,050). The average correlation in the sample was r = .46. A moderator analysis found systematic variations in the correlations for learners L1, AL, proficiency level, self-efficacy and achievement type. After comparing their findings to Al-Hoorie's (2018) meta-analysis of the L2 motivational self-system and AL outcomes, their mean correlations between learners' AL achievement and their L2 ideal self (r = .20), ought-to self (r= -.05), and learning experience (r = .17) were smaller.

In their conclusions, the authors wondered if success was most importantly about believing in one's abilities during the learning process.

Reading self-efficacy was the focus of Yang and Gan (2024) in their systematic review of 52 empirical studies. They examined correlations of AL reading self-efficacy, the impact of interventions and contextual factors. Most studies were cross-sectional quantitative inquires and found significant positive relationships. Most intervention studies reported positive outcomes in terms of learners' sense of their own self-efficacy, but some included mixed results. Ethnic identity, teacher support, and classroom environment played key roles in shaping learners' reading self-efficacy beliefs. The authors recommended interventions to boost learners' self-efficacy in their classrooms so that they can develop "more positive evaluations on their reading abilities, especially in Asian regions where students are prone to stay conservative and underestimate their capabilities" (p. 10).

To move to a holistic approach, let us examine the relationships between *personality* and plurilingualism. Dewaele and Botes (2020) implemented an exploratory survey. They invited 651 (471 females; 181 males, 9 did not state, mean age 25.6 years SD = 9.3) multilinguals from around the world to fill out an online questionnaire. They were asked about their language profile (multilingualism was measured as the languages respondents claimed to speak) and filled out scales from the so-called "Big 5" and other questionnaires. The authors ran correlation analyses between participants' level of multilingualism and their scores on five personality traits and other variables. They found significant positive path coefficients between the number of AL they used and Flexibility, Social Initiative and Open-mindedness. They claimed that their findings underpin the idea that multilingualism/multiculturalism shape personality profiles. In our view, although the idea is appealing, this study should be taken with a pinch of salt. Most participants in the self-selected random sample were educated women from Europe and North America. The effect sizes were "very small" (p. 820) and all data were self-reported. Additionally, the study did not consider at what level participants were able to use their repertoire.

A meta-analysis examined publications over 40 years on the relationships between Big Five Personality Traits and AL learning (Chen et al., 2021). It analyzed 137 correlation coefficients from 31 primary studies conducted in 24 countries published between 1982 and 2020 with a cumulative sample size of 8,853. The authors found that openness (pooled r = .23) and conscientiousness (pooled r = .18) were stronger correlates, extraversion (pooled r = .12) and agreeableness (pooled r = .10) were moderate correlates, and neuroticism (pooled $r = -.04$) was unrelated to L2 performance. What we can conclude from these studies is limited. The values were all low and no study used a representative sample. Although it is reasonable to assume that personality traits play a role in plurilingualism, there is no counterevidence that all people with all profiles on the Big Five questionnaire can be plurilingual.

A large-scale survey conducted in China (Wang & Wei, 2024) examined the relationship between bilingualism and *well-being*. Using data from a national survey (N = 12,582) the authors analyzed how proficiency in English and 13 socio-biographical variables (e.g., socio-economic status, proficiency in L1 Putonghua) impacted participants' well-being. Well-being was measured by a single 1 to 5 Likert item: 'Do you think you live a happy life?' Perceived social fairness, SES, and health emerged as important predictors of well-being from among the 14 independent variables. Interestingly, proficiency in both languages was highly appreciated, but English was more important than Putonghua. English proficiency explained 2.6% of the well-being variance (p. 551). The authors pointed out that English was a key indicator of a better life because it may lead to better job opportunities, and thus, to a higher level of well-being.

In this study, we have focused on the learners' perspective. However, *teachers' views* also matter a lot, as they are in charge of what happens in their classes. An insightful multiple-case study offers

insights (Beslagic, 2025) into teachers' experiences and emotional responses to their students' expectations. Participants were four teachers of German as L3, with over 20 years of experience, working with 7th graders (age 13) at a Swedish lower secondary school. They were observed and interviewed to explore their pedagogical practices and *emotions* about grammar teaching. The analysis revealed how time, workload, colleagues' teaching practices, and students' motivation and attitudes shaped the teachers' thinking, *beliefs* and classroom practices. They were passionate about teaching German grammar, but anxious about their students' emotions. They did not want to be too demanding but saw their potential contribution to their pupils' knowledge of German and language awareness (4.2.1). For example, a teacher pointed out that students learned about syntax, and terms like verb and subject in German earlier than in L1 Swedish. The author saw these teachers' positive emotions contributing to their role as bridges between teaching L1 and L3 grammar.

4.3.6 Summary of findings on conative and affective benefits of learning additional languages

- The range of studies analyzed in this section offer important insights into the ways in which AL learners' and users' conative and affective characteristics change. We interpret the evidence we found that all variables are flexible and shaped by plurilingual individuals' lived experiences. Although only a few studies used correlational predictive designs, and correlations do not mean causation, it is reasonable to assume that similarly to the bidirectional arguments put forth for educational benefits in section 4.2, success can breed further success. This outcome can be generalized across all age groups and languages. Some of the changes are favorable, others are discouraging in the long run. Our findings document all aspects that L2-related positive psychology aims to investigate.
- The encouraging findings support the claims that optimistic outlooks, experiencing progress, success, enjoyment, keeping an open mind about who one can aspire to be, and achieving one's goals all enhance not only AL proficiency. Positive experiences also boost people's grit, mindset, self-efficacy, willingness to seek more practice opportunities, etc. All these in turn can lead to further AL development, more positive self-perception of one's identity, and overall well-being. These findings show the power of success leading to more success, despite minor setbacks.
- Evidence was found on the other side of the coin. Difficulties and challenges may undermine learners' beliefs in their positive characteristics. They may enhance their demotivation, anxiety, and boredom, and contribute to their negative beliefs about their goals and abilities.
- Overall, these findings offer insights into how the advantages in learner-related factors could and should be enhanced to make sure that all learners and users of AL can experience success. It is up to teachers and other stakeholders to ensure that all have equal opportunities to enjoy the advantages of AL learning programs.
- These findings concern not only AL learning but are also valid for learning other things.

4.4 What are the socio-economic and cultural benefits of being plurilingual?

In this section we take a different perspective: the focus shifts from education to societies at large. We investigate three areas:

(1) findings on the socio-economic advantages characterizing plurilingual individuals,
(2) how they benefit from their higher intercultural competence, and
(3) in what ways these make societies better places to live in.

4.4.1 Socio-economic benefit of plurilingualism: Additional languages as human capital

To reveal the long-term economic benefits of learning and using ALs in adulthood, we place the plurilingual adult at the center of the microsystem. They compete to enter tertiary education (see 4.2.3) and the job market. Furthermore, they must interact with colleagues at their workplace, doing job-related tasks while using their repertoire to fulfill their job descriptions. Plurilinguals also need to function in their mesosystem with members of the larger community where they live. The way and extent to which their ability to use multiple languages is appreciated and honored is shaped by the broader society in which they live, at macro level. Thus, our aim is to examine how being plurilingual benefits individuals' opportunities to be valued on the labor market and in society a large. We include large-scale surveys on representative samples (e.g., ACTFL, 2019; Adamchik, et al., 2019; Gazzola & Mazzacani, 2019; Chiswick & Miller, 2015; Clifton-Sprigg & Papps, 2021; OECD, 2024b) to find out what can be generalized from them. Some surveys focus on all citizens, others on migrants integrating into their respective societies, and some include both populations.

4.4.1.1 What is human capital?

First, we need to think about plurilingual adults finding their place as productive members in their immediate and larger contexts. We must consider how the ability to use additional languages can benefit them as a key component of their human capital. "Human capital is defined by the OECD as the knowledge, skills, competencies and attributes embodied in individuals that facilitate the creation of personal, social and economic well-being" (Keely, 2007, p. 31). Knowledge, skills and competences in multiple languages are, by definition, part of the human capital construct (Chiswick & Miller, 2015).

Language skills function as human capital for three reasons: "they are productive, costly to produce, and embodied in the person" (Chiswick & Miller, 2015, p. 2). In the context where a person lives, especially in the case of migrants, proficiency in the official language is productive in the labor market. Those who can use the language will find a job more easily and will be able to be more productive than others without or with low language skills. Proficient individuals will also be more successful in finding more reasonable opportunities at better prices as consumers and they will not be limited to their local communities of other immigrants. Additionally, higher proficiency is the key to getting admission to tertiary education (see 4.2.3).

These potential benefits serve as economic and social incentives to learn the target language as well and as fast as possible. The language learning process, however, can be tedious, expensive, and marked by ups and downs. Learners must invest time, money, and energy into becoming fluent users within a reasonable time. The authors propose that three factors determine the level of success:

(1) exposure to the language,
(2) efficiency in learning the AL, and
(3) economic incentives for learning it.

These three factors impact how much access individuals, especially, immigrants, have to practice opportunities and can turn into development in the AL, how fast and how well they become proficient in the majority language. In turn, these also interact with the amount and quality of support individuals can get from their immediate environment and society at the meso and macro level, and how much they support their efforts and appreciate their achievements.

Before moving on, we need to clarify how plurilingual people are categorized in their contexts based on their legal status. Some citizens in all countries are plurilingual: they learned their AL in school or grew up with multiple languages, or both. However, many people may be newcomers in a country. The website of the United Nation (https://www.un.org/en/global-issues/migration no page or year) uses a neutral umbrella term for people on the move: 'an international migrant is any person who has changed his or her country of residence. This includes all migrants, regardless of their legal status, or the nature, or motive of their movement.'

The International Rescue Committee's website defines various terms (immigrant, migrant, asylum seeker, refugee to be found at https://www.rescue.org/article/migrants-asylum-seekers-refugees-and-immigrants-whats-difference). In this paper, we use the terms international migrants and immigrants interchangeably, as knowing multiple languages is equally important for all individuals in these groups on the move.

According to the latest World Migration Report 2024 (McAuliffe & Oucho, 2024, p. 4), there were 281 million international migrants in 2020, 3.6% of the world's population (135 million female and 146 million male). They included 28 million children and 169 million migrant workers. Therefore, their needs and language-related challenges are extremely important.

Publications on the relationships between plurilingualism and success on the labor market are embedded in the context where the studies were conducted. They tend to include two beneficiary groups: (1) the population at large (see also 4.2-4.3) or (2) immigrants. In the first type of studies publications focus on the workforce in countries where adults' employability is related to how well they can use additional languages which are not official in their contexts. Other surveys target societies where immigrants need to be able to use the official language of the country. Such large-scale studies have revealed that proficiency plays a key role in becoming bona fide members of their new home society.

We analyze a few recent studies of both types to see what can be generalized from them. The publications draw on huge datasets from representative national or international samples to outline the larger picture by choosing analyses of census or other survey datasets on language-related questions. These publications are not concerned with where respondents learned their languages; however, typically, public education tends to offer AL learning opportunities in the second type of studies and less is known about the language learning histories of immigrants.

4.4.1.2 Benefits of being plurilingual in one's own country

Challenges and benefits related to the economics of language have been analyzed in a few specific countries. For example, Gazzola and Mazzacani (2019) examined the relationships between, what they called, European natives' foreign language skills and their employment status in Germany, Italy, and Spain. They drew on the datasets of Eurostat's Adult Education Survey. They found significant positive relationships between the probability of being employed and proficiency in English, but not in LOTE. Knowledge of English increased the probability of men being employed in the three countries by 3.4, 4.3, and 5.2%, and for women in Germany and Italy by 5.6 and 5.7%, respectively, but not in Spain. Higher proficiency was associated with a higher probability of employment.

A survey involving about 600,000 employees (Adamchik, et al., 2019) analyzed wage returns to English proficiency in Poland over five years. It found statistically significant benefits for both men and women. Individuals' earnings with good or very good knowledge of English exceeded the income of respondents with no English proficiency by about 60% for men and over 50% for women. Another survey (Liwiński, 2019) involved a smaller sample (about 18,000) of working adults over three years in Poland. This paper painted a different picture, as it inquired into advanced knowledge of five foreign languages. Advanced-level proficiency, on average, resulted in an 11% wage premium. However, it varied a lot for five languages: Spanish (32%), French (22%), Italian (15%), German (12%), and English (11%). The author argued that the scarcity of people who are good at using LOTE results in higher wage returns than knowledge of the widely spoken English. Why the ratios in the two surveys are so different is unclear, but they may indicate that the added value of advanced proficiency is smaller than one would expect.

More recently, Hahm and Gazzola (2022) inquired into the value of English language skills on the German labor market. They reanalyzed datasets collected in two Socio Economic Panels surveys in 2012 and 2016. The authors found that native speakers of German with English proficiency earned, on average, 13 percent more than others with no English skills, indicating a clear-cut benefit for plurilingual individuals.

A study by Fabo et al. (2017) analyzed the value of foreign language skills in four Central and Eastern European labor markets by drawing on meta data in the most popular online job portals in the Czech Republic, Hungary, Poland and Slovakia. Their analysis of 74,000 job ads found that English was required for most professional and white-collar jobs, whereas German was necessary for artisan and nursing jobs. Only English proficiency was associated with a wage premium, but the amount was not specified.

A more recent OECD survey (Marconi et al., 2023) analyzed job vacancies for data on the demand for language skills in the European labor market. They found that (1) Europe is a linguistically diverse labor market; but (2) English offers advantages in many occupations. Knowledge of English was a must in 22% of the jobs and it was number six in the rank order of required skills. Between 1% and 2% of the ads wanted German, Spanish, French and Mandarin Chinese. Across all OECD and EU member countries, 50% of vacancies for managers and professionals required knowledge of English. The ratio was 10% in skilled agricultural, forestry and fishery workers and other occupations.

The impact of English proficiency in the Chinese job market was analyzed in two projects. In the first one, Wang, et al. (2017) examined the economic returns to proficiency in English in two waves of the China Labor-Force Dynamics Survey (2012, 2014 cited in Wang et al., 2017, p. 92). Based on data of 9,567 participants they found high heterogeneity in the results. Relationships between level of English proficiency and financial benefits varied across age groups, coastal and inland provinces, levels of education and occupation. The returns to English proficiency were higher in the coastal region, in urban areas, and for women, due to complementarity of education, skills, and L2. Significant differences were also found between rural-urban migrants vs. urban locals, favoring the latter group. For example, the benefit of knowing English well in the highly developed eastern region was 17%, compared to 5% in regions inland.

Zhang and Lien (2020) found similar results based on 2,521 respondents' data in the 2015 China General Social Survey. They focused on participants' English listening and speaking skills and their income. They found considerable heterogeneity in the returns to English skills and level of education, English, and work experience were complementary. Additionally, they documented a significant increase in the returns to English listening skills in the 30–39 age bracket and to English speaking for participants between ages 18–29 and 30–39.

Multiple studies examined how change in educational policy impacted the wage returns of plurilingualism over decades in multiple countries. The policy change in India resulted in negative outcomes, whereas in Spain the population benefited from it. Chakraborty and Kapur Bakshi (2016) and Nandwani and Sen (2025) examined the impact of a new policy change in the West Bengal region in India that abolished teaching of English in public primary schools in 1983. It deprived the population from starting English early and learning it over many years. The first study used national educational and employment surveys involving salaried individuals aged 17–45 to find out how this change impacted outcomes for this population. They estimated that a 10% decrease in the probability of learning English in primary school led to a decline in weekly wages by 8%, implying 26% lower wages for cohorts who had no access to early English. This is in contrast to the population in other regions of India where primary English was available. The second study found that wealthy parents' children attended private schools or private courses. Girls from the poorest households were less likely to be among these children.

The relationship between bilingual education and earnings was analyzed by Cappellari and Di Paolo (2018) in Catalonia, Spain. They estimated the wage effects of a new bilingual education program introduced in 1983 in Catalan schools, where the minority language Catalan became one of the languages of instruction in addition to Spanish. They found that bilingual education increased baseline returns to education by about 20% and benefitted individuals of non-Catalan background from low socio-economic status families, migrating from other parts of Spain. Proficiency in Catalan offered them opportunities in the bilingual local labor market where most employers are Catalans.

Only a single publication was found relating to the United States of America. An ACTFL (2019, p. 2) survey found that "nine out of ten U.S. employers report a reliance on U.S.-based employees with language skills other than English, with one-third (32 percent) reporting a high dependency. Moreover, demand is on a sustained rise". The report did not clarify how these people learned their AL, but most probably, in school as well as in their families.

A detailed cost-benefit analysis (Ayres-Bennett et al., 2022) quantified the economic value to the UK of speaking other languages. Using hypothetical scenarios, the authors estimated that introducing four additional languages to students aged between 11 and 16 (for 5 years), the investment "in languages education will most likely return more than the investment cost, even under conservative assumptions. Benefit-to-cost ratios of at least 2:1 for promoting Arabic, French, Mandarin or Spanish education are estimated, meaning that spending £1 could return approximately £2" (p. vii). They pointed out that "there are identifiable returns for investing in languages education, not just in the economic terms on which this report has focused, but also in producing the workers with the language skills needed for the UK to compete in an increasingly globalised world" (p. viii). Such analyses in other countries would most probably generate similar results.

4.4.1.3 Benefits to international migrants to a new society

Chiswick and Miller (2015) examined the economics of language in Australia, Canada, the United States of America, Israel, Germany, and other countries. They defined it as "the study of the determinants and consequences of language proficiency using the methodology and tools of economics" (p. 1). They synthetized findings on how international migrants choose their target country by weighing the pros and cons of their "destination language proficiency, and the labor market consequences of that proficiency, as expressed in their earnings" (p. 1). They argued that a microeconomics approach focusing on the behavior of individuals is appropriate to examine "language skills as a form of human capital" (p. 2). Their approach is in line with the OECD's definition of human capital concerning all the knowledge, skills, and competencies people bring to the job market as they try to find opportunities and integrate into their new society.

Some specific statistics are helpful to understand the trends in decades of research synthetized by Chiswick and Miller (2015). For example, the labor market associated a 15% benefit for speakers of German in Germany, 20% to 30% earnings advantage with proficiency in English or French in Canada. In Israel, male users of Hebrew as an L2 made 8% less, and with no proficiency in Hebrew 20% less than males with Hebrew as L1. In the UK, studies revealed that English language proficiency was associated with 15-20% higher earnings, whereas the ratio in the USA ranged between 10 to 20%. The studies analyzed by Chiswick and Miller documented that people living in ethnic enclaves were less proficient in the official language and earned less than immigrants settled in larger communities where the target language was easily available daily.

A recent study by the OECD (2024b) examined the relationship between equity in education and on the labor market, by drawing on the key findings of their international survey *Education at a Glance 2024*. The publication concluded that

> Foreign-born individuals can face systemic barriers that hinder their economic integration and ability to benefit from their educational qualifications. They may struggle more than their native-born peers to find employment due to issues such as unrecognised foreign credentials, insufficient skills, language barriers or discrimination. As a result, they are more likely to accept any available job, often leading to lower earnings than their native-born counterparts. (p. 35)

Underlying these challenges are immigrants' inadequate level of proficiency in the official language. They are less able to benefit from educational opportunities or to use their documented professional skills and abilities in their new home countries, as they lack the L2 to perform job-related tasks. Accepting lower-level jobs prevents them from socializing with people who would be able to help them integrate into their new larger communities.

Yet another large-scale study involving 40,000 households conducted in the UK (Clifton-Sprigg & Papps, 2021) surveyed native-born and bilingual adults to compare their incomes. They found that bilingual men earned similar incomes to monolingual men. However, bilingual women made significantly less money than monolingual women. After controlling for cultural background and other family background variables, they established that low incomes were typical of women using South Asian and other rarely used languages in places with few English speakers. These findings support the results of other studies. Limited AL skills may be part of a vicious circle for adults who are unable to socialize beyond their micro level context.

4.4.1.4 Key findings on how plurilingualism benefits individuals' success on the job market

In summary, some results can be generalized from the large-scale primary and secondary studies we analyzed in this section. They offered evidence that individuals seeking employment in their own countries as well as immigrants significantly benefit from being plurilingual. Thus, competences in additional languages, the ability to use them for earning a living, do indeed function as human capital, a commodity worth investing in for individuals and societies alike.

Higher level of proficiency tends to be more profitable, and English is the top winner not only in countries where it has official status, but also where it functions as the lingua franca. Thus, English is indeed a special category by itself. In contrast, the scarcity of knowing languages other than English may increase job seekers' value in specific labor markets, especially for highly educated individuals. So, there also are advantages for LOTE (see Marconi et al., 2023).

Proficiency in ALs tends to go hand in hand with where people live and work, who they socialize with, and how well they can turn learning, job, business, and social opportunities to their advantage. Seeking opportunities to socialize into larger communities beyond one's micro level community has clear advantages, whereas social activities limited to micro communities prevent individuals, mostly women, from becoming plurilingual at a level that would allow them to use their repertoire to their advantage. These studies framing the importance of plurilingualism as added value to human capital underscore what theories claim to be important for learning and using ALs. These findings support the ecological validity of the claims.

Results showed a lot of variability according to urban and rural areas, men tend to benefit more compared to women, higher level of professional education is associated with better proficiency as well as higher income, and disadvantaged individuals and groups may benefit from favorable language policies and special incentives.

The findings must be taken with a pinch of salt, however. The publications tend to rely on survey data, self-reports, and only a few items focus on language-related issues in datasets related to the labor market. No studies included fine-grained measures on self-assessed competence in various languages. The six-level scale for the four skills described in *CEFR* (2020) was not used, and comparisons between respondents' L1 and L2 proficiency are missing. Additionally, no large-scale study included validated proficiency exam results based on certificates. Such studies would offer more valid and reliable findings on the relationships between the level of competence in certain target languages and individuals' and groups' ratio of benefit from knowing languages.

The surveys did not consider respondents' attitudes, beliefs, experiences with learning and using their ALs in their jobs over time, and additional important variables impacting outcomes. What they did prove, overall, is that plurilingualism is advantageous on the labor market. Therefore, all people striving to be plurilingual are correct when they assume to be on the right track. The findings also highlighted that not all languages are associated with the same added value. The ability to use English for one's personal and professional purposes is now a basic competence, like L1 literacy and competence in information technology. But LOTE, depending on circumstances, can also play an important role in many people's lives.

The lessons we can draw from these studies on the economics of language are as follows:

(1) Being plurilingual enhances career prospects and allows individuals to find opportunities matching their needs, abilities, knowledge, and skills.
(2) The better individuals are at their AL, the higher the benefits tend to be not only at the micro and meso levels, but also at the level of society at large.
(3) Competence in an AL can open doors for millions of local and international job seekers.
(4) It is more probable to find jobs in line with one's level of education with good AL skills, whereas low proficiency may force individuals to take less rewarding jobs, or in the case of migrants, jobs below their professional qualifications and skills.
(5) The typical added value is between 10 to 20%. A significant contribution to well-being!

4.4.2 Cultural benefits of plurilingualism: Intercultural competence

Intercultural communication is "defined as communication where cultural and linguistic differences are perceived as relevant to the interaction by the participants or researchers" (Baker, 2024, p. 212). To be able to communicate in an additional language, communicative competence "needs to be enriched with deep intercultural competence" (Byram & Wagner, 2018, p. 140); this is a widely assumed benefit of learning and using ALs. Plurilingual individuals are thought to develop an additional

competence to language proficiency. Defining and assessing the ability to use an AL appropriately is more straightforward than the second concept. In broad terms, intercultural competence comprises attitudes, knowledge, skills, and critical cultural awareness (Byram, 2021; Dombi, 2021). These allow plurilingual individuals to understand, respect, and interact with others of different cultural backgrounds appropriately, effectively, and respectfully.

Additionally, interculturally competent people can understand and critically reflect on their own and others' cultures (Byram & Wagner, 2018), what others mean and why, and how they position themselves and others in specific situations (Kramsch, 2011). Building on their pluricultural repertoire (*CEFR*, 2020, p. 124), they can cope with ambiguity, different cultural practices and norms, interpret similarities and differences in perspectives neutrally and critically. These can facilitate interculturally competent plurilinguals to participate in intercultural citizenship (Byram & Wagner, 2018; Kramsch, 2011) and apply self-reflexivity (Liddicoat, 2024).

Intercultural competence can also contribute to global citizenship (UNESCO, 2015, p. 15), as there are some overlaps in the constructs. For example, global citizens are expected to "recognise and appreciate difference and multiple identities, e.g., culture, language, religion, gender and our common humanity, and develop skills for living in an increasingly diverse world" and "develop attitudes of care and empathy for others and the environment and respect for diversity".

Furthermore, "the development of intercultural competences facilitates relationships and interactions among people from various origins and cultures as well as within heterogeneous groups." They may, over time, promote "the culture of peace, sustainable development and knowledge societies" (UNESCO, 2013, p. 7). The challenge is to measure these constructs, as empirical studies show.

4.4.2.1 Benefits of intercultural competence in school contexts

Most publications include lengthy discussions on the construct, its relationship with communicative competence, and a similar concept, intercultural awareness (Baker, 2024). They also discuss how it can be taught and measured (e.g., Galante, 2022) and how it contributes to higher societal goals (Byram, 2021; Byram, et al., 2021; Dombi, 2021; Galante, 2022). Publications tend to focus on the role English as a lingua franca in various contexts. Empirical studies typically involve students in tertiary education programs in study abroad programs. They examine intercultural competence with other individual differences (motivation, anxiety, willingness to communicate). Research designs include surveys using self-reports and qualitative inquiries using interviews, diaries, etc.

Few projects involved younger learners. For example, Byram et al. (2021) overviewed a transnational longitudinal project in two primary English classes in Argentina and Denmark, involving children aged 10–11 and 12–13 years old. One of the findings concerned how children reflected on stereotypes and changed their views:

> For example, one Danish student said in group discussions at the end: "I thought they were very poor and didn't have computers and everything," "you also think they get beaten in school." After the end of the project they said: "It looked as if they have a fairly modern school, I was quite surprised about that," "I have learned some things about Argentina, about their school and how it looks and that they don't get beaten up." (Byram et al., 2021, p. 3)

The project raised ethical concerns, as teachers had to cope with controversial issues related to environmental "green crimes" triggering moral judgement. These outcomes resulted in opposition by parents and administrators. The authors wondered if schools should ask parents to sign informed

consent forms before their children are involved in such a project. This short summary of the findings illustrates the insights readers can get through a small lens.

Heinzmann et al. (2024) systematically reviewed how students benefited from exchange programs in primary and secondary education in terms of their AL gains, intercultural competence and language learning motivation. They included 60 publications covering the European continent. English was the target language in 31 studies, German in 27, and French in 26, whereas Italian and Spanish in three, respectively. Studies involving primary- and lower-secondary school learners resulted in varied, unclear or disappointing outcomes. More evidence was found at the upper-secondary level on the positive impact of student exchange on participants' intercultural competence, mostly because there were more and they were quantitative, rather than qualitative. The most impressive results were found in a large-scale quasi-experimental study (*N* = 2,000) on the impact of an exchange year sponsored by the American Field Service. Participants in the program "advanced to higher levels of intercultural sensitivity at nearly twice the rate of the control group. AFS returnees have a much greater intercultural awareness than their friends of similar backgrounds who did not go abroad" (Heinzmann et al., 2024, p. 21).

As for the overall picture, Heinzmann et al. (2024) concluded that due to small sample sizes, variations in research design, instruments, and time spent abroad, as well as differences between face-to-face and virtual programs, conclusions were hard to draw. The main finding was that longer face-to-face programs with older participants were more beneficial, but not in clearly defined outcomes.

Learning English is like meeting an English person, a real English person, because sometimes I understand a little bit, sometimes I don't understand at all.
-- Girl Age 10

4.4.2.2 Benefits of intercultural competence in tertiary education

A systematic review (Shadiev & Yu, 2022) included 53 studies published over the previous five years on intercultural projects using computer-assisted language learning. Most studies were longitudinal (4-18 weeks) and involved undergraduate students with advanced English skills. Datasets were collected in discussion forums, Facebook, email, Skype, and with questionnaires and interviews, as participants collaborated on projects, and reflected on their earning experiences. The overall findings documented how intercultural *telecollaboration* promoted both AL and culture learning. The authors of the studies were overwhelmingly positive about their results.

A meta-analysis (Çiftçi & Savaş, 2018) reviewed 17 studies published between 2010 and 2015 that researched language and intercultural learning through telecollaboration. Participants gave accounts of mostly positive telecollaborative experiences. Initial interactions were stereotypical and included both information-seeking questions and information sharing. Participants avoided critical comments. In later phases of the projects, some participants challenged stereotypes through discussions and these concerned power relations. They were polite and avoided pinpointing different viewpoints. Whenever researchers tried to take students out of their comfort zones, they managed to increase their intercultural awareness. Some studies documented how "successful intercultural communicators put greater effort into the depth and context of the exchanges and moved from information-seeking questions to contextualized topics" (p. 288).

Dombi (2021) proposed a new model and conducted a study to test it. She involved first-year (*N* = 379) university students in Hungary over six semesters and used multiple scales to measure their intercultural communicative competence, in addition to their AL learning experiences, frequency of intercultural contact, willingness to communicate, self-assessed proficiency, anxiety, and motivation. The findings indicated that students who spoke other languages in addition to English, had more frequent contact with foreigners and were less worried about communicating with others. They assessed their own English proficiency higher and also had higher intercultural competence.

Griffith et al. (2016) overviewed the literature on how intercultural competence was assessed in higher education. They found "the current state of the literature to be murky in terms of the clarity" of the intercultural communicative competence construct, as definitions vary considerably as to whether it is a trait, skill, or performance outcome" (p. 1). They pointed out that measuring instruments rely on self-reports and proposed a new complex framework.

4.4.2.3 Key findings on plurilingual individuals' intercultural competence

To sum up the findings in publications on intercultural competence, they are so varied in focus, number of participants, and research methods that they fail to offer clear trends. This is mostly due to the fuzzy definitions which are challenging to operationalize, tap into, and measure. Findings of qualitative studies are not meant to be generalized, whereas quantitative studies used a range of instruments which again do not lead to general conclusions. Most authors are enthusiastic about their findings, but critical voices are also present: they concern the construct validity of intercultural competence. Another issue concerns the fact that most models and publications are based on similar Western contexts and educational theories and practices (Awad & Trenchs-Parera, 2024).

We found no empirical study on how culture as content is learned, as this did not seem to be of interest to the research community. This is surprising, as knowledge about cultures is typically not only part of AL curricula, but it is also integrated into academic subjects as content delivered in the target language.

One clear trend emerged: a lot of work focuses on designing new instruments to allow researchers to quantify and measure the construct. This would make findings on intercultural competence similarly clearcut as the economic benefits of learning and using ALs. It is not surprising that the picture is complex, as cultures are extremely unique and varied. We are not sure quantifying intercultural competence is the way forward.

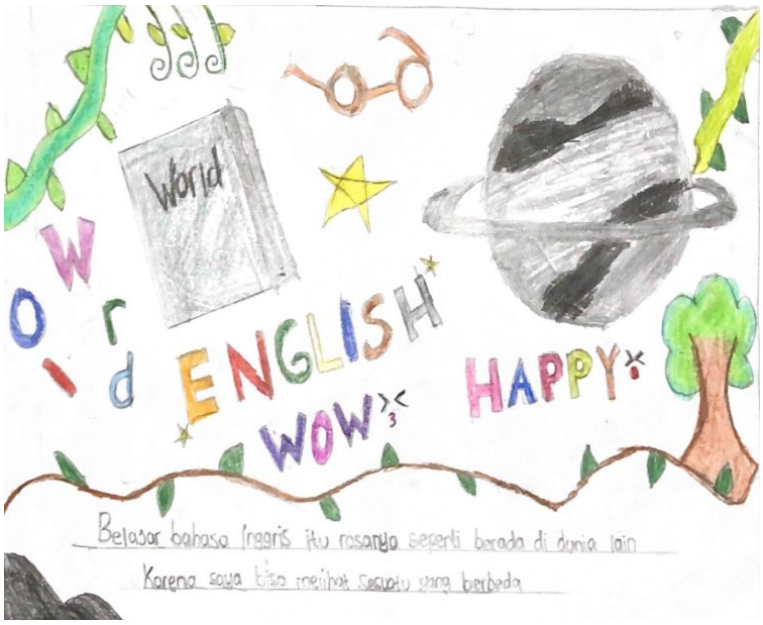
4.4.3 Summary of socio-economic and cultural benefits of knowing additional languages

The first part of this section discussed the economic advantages characterizing plurilingual individuals. The populations and their advantages are divided along the lines if native-born or foreign-born

participants are considered. The results based on multiple large-scale studies show a *clear advantage* for plurilingual individuals on the job market. Higher proficiency in multiple languages tends to result in better options. However, there are important differences in the cases of people living in a country vs. immigrants. The added economic value is between 10% and 20%, a convincing positive result.

The second part reviewed empirical studies to document the benefits learners and users of ALs enjoy in terms of another type of added value to their human capital: intercultural competence. The picture is hazier, mostly because of the fuzzy terminology and a wider range of research methods. As a third point, we wondered how studies on these two key topics make societies better places to live in and contribute to the well-being of all citizens. The economic benefits allow people to make a living, whereas cultures should serve as "new spices" added to local dishes. Overall, the studies we reviewed do not allow us to elaborate on how plurilingual people perceive these two aspects, as we had no data analyzing their own emic perspectives. Such case studies can shed light on such lived experiences in the forms of fiction and non-fiction, which are beyond our scope.

Learning English feels like being in another world because I can see something different.
--Girl, age 12



5 WHAT CONDITIONS ARE NECESSARY FOR BENEFITS TO EMERGE?

In this section we discuss what conditions can be found and deduced from the findings presented in section 4. Few authors were concerned about the conditions in which outcomes of their studies could be improved.

5.1 Conditions of meeting individuals' needs to grow

Most studies in our database focused on individuals as part of groups, classes, or larger communities. This is not surprising, as learning additional languages benefits first the person learning and using their repertoire. Their knowledge and skills can also benefit others in their smaller and larger groups where they live. This is true not only about language learning but also about the human condition.

All people move along their personal journey "toward psychological growth and integration, and thus toward learning, mastery and connection with others. However, these proactive human tendencies are not seen as automatic—they require supportive conditions to be robust" (Ryan & Deci, 2020, p. 1). These *general conditions* must be met to allow individuals to flourish based on their three needs:

- *Autonomy* concerns their sense of ownership in their actions, reflecting their interests and values.
- *Competence* concerns their feeling of success and mastery. It can result from coping with optimal challenges, getting helpful feedback, and opportunities for growth.
- *Relatedness* concerns their sense of belonging to a community where they are accepted and appreciated.

These general needs can be met if individuals have *agency* to apply proactive learning behaviors. They can seek input and information, have opportunities for interacting with others and for receiving helpful feedback (Papi & Hiver, 2025a). We proposed in section 3.1 that the benefits evidenced in learners' cognitive, conative, affective, and social domains need to be *nourished systematically*. As basic conditions, AL programs should explicitly state which of the abilities, beliefs, skills, and knowledge they aim to develop, and when and how. They need to offer learners opportunities to learn how to learn more efficiently, become autonomous learners who perceive themselves in a positive light as successful life-long users of their languages. If these general conditions are met, individuals become better at enriching and using their repertoire as well as confident and successful citizens.

5.2 Aspirations, conditions and beneficial outcomes

This section is in three parts:

- In the first part we revisit the aspirations that governmental and professional stakeholders express for the outcomes of AL learning and compare the dreams with the available evidence.
- Next, we give a more detailed account of what research has to say about conditions for benefits that are actually gained in the four areas discussed in section 4.
- The third part deals with what is needed to equip language learners with the autonomy and agency that they need in order to make the most of the opportunities that proficiency in ALs can bring.

5.2.1 Aspirations and evidence

Figure 8 shows, on the left, the range of aspirations for what AL learning could do for people, as discussed in section 2 and presented in Figure 2. These are set alongside the evidence that we were able to find in the research literature that these benefits were attainable or actually attained. It will readily be seen that particularly in the case of the ambitions at the macro-levels of society, there is a mismatch between hope and evidence. Frequently, this is simply because appropriate studies have not yet been carried out. This is understandable since studies on the requisite grand scale would require very significant logistical resources, quite apart from presenting issues of how to validly operationalize constructs such as international relations and intercultural understanding and how to decide on appropriately representative participant samples. These comments are in no way intended to denigrate the high ideals and aspirations that governments and educational authorities express regarding AL learning, but the fact remains that their achievability generally lacks evidential backing.

Most benefits for which research provides warranty are at the individual, micro-level. In Figure 7 we added the numbers of sections where findings were presented and discussed. The most celebrated studies showing benefits are those suggesting that bilingualism and plurilingualism are indeed good for the brain - that executive control is boosted and cognitive deterioration in old age is at least delayed. Intercultural understanding was not shown to be a direct consequence of AL learning. The studies which showed a growth in knowledge and understanding of people from other cultures were from programs of visits or contacts via internet that were set up alongside language programs.

Other studies, rather than revealing the benefits from AL learning, tended to reveal the penalties of not achieving sufficient proficiency in a key language. Where there were studies regarding equity, they tended to reveal problems with it such as the difficulties that plurilingual migrant workers may have in finding employment that matches their true skill sets. The position is similar with regard to access to education, particularly higher education, delivered in an AL as the language of instruction. Ideally, achieving sufficient proficiency in the language of instruction on a tertiary level course would be an expected benefit for most students graduating from secondary school education. However, this does not seem to be the outcome for many. Studies report the issues in terms of problems rather than successes.

Evidence for the Matthew effect documenting *social injustice* emerged in multiple studies. Learners with initial advantages benefit more, whereas those with lower abilities and resources fall further behind. These challenges are typical not only in studies on immigrants, but they were also found in native-born populations.

Figure 8: ***Evidence Found for Benefits to Society and to Individuals***

Benefits aspired to at societal level	Evidence found in research reviewed
Better international relations from intercultural understanding	No studies were found
National economic benefits, fostering global business relations	No studies were found
Social justice	No studies were found
Social cohesion from intercultural understanding	No studies were found

Benefits aspired to for individuals	Evidence found in research reviewed
Cognitive	
❖ enhanced problem-solving abilities	4.2.2 Some plurilinguals have enhanced ability to decode unknown languages No studies were found on general problem-solving
❖ better brain health	4.1 Enhanced brain efficiency and delay in deterioration in old age
Educational	
❖ greater aptitude for learning new languages	4.1.5. Language aptitude enhanced by AL learning
❖ language awareness	4.2.1. Variable results. Some learners need targeted instruction. Others develop awareness autonomously.
Affective	
❖ higher levels of empathy	4.4.2 Exchange visits support greater understanding
❖ affirming a sense of identity	4.3.3 Beliefs about one's abilities and future selves largely matter
❖ appreciation of diversity, reduction of prejudice	4.2.1 CMLA effectively raises awareness of diversity
Individual wellbeing	
❖ access to education in the language of instruction	4.2.3. Studies reveal serious problems if language proficiency is not adequate. 4.2.3 and 4.3 Elite students have better access to higher prestige programs
❖ employability, better career opportunities	4.4.1 AL knowledge enhances employability depending on the language(s) in demand in different contexts
❖ cultural capital	4.4.2 Appendix B, students win respect from knowing prestige languages such as Latin
❖ integration for migrants and new arrivals	4.2.1 CMLA promotes curiosity about others' languages and reality. Learning the host language is necessary but not sufficient
❖ international mobility for study and work	4.4.1.3 Studies reveal problems of equity for plurilingual migrant workers in the job market

5.2.2 Relationships between conditions and benefits

Despite some mismatches between official aspirations and results of research, from the discussion in sections 4.1 to 4. 4 it is clearly seen that there are indeed benefits from knowing more than one language, whether this is a result of upbringing and environment or of formal education and other kinds of learning. Within the research reviewed, benefits have been found in all categories investigated but not equally and with varying degrees of solid evidence.

The research leading to this conclusion differs widely as to the amount of information it yields about the conditions in which the participants learned their languages and in particular, whether the benefit investigated was deliberately pursued as part of the language learning experiences given to the learners. Partly, this is due to the different research traditions in which researchers were working. Large scale quantitative studies, for example, tend not to focus on detail of day-to-day learning conditions. Partly, however, the nature of the benefit investigated makes a difference.

Table 5 summarizes the key relationships between conditions and benefits as found in the literature reviewed. The conditions listed in the left-hand column are those derived from discussions in the studies themselves. The four categories of benefits in the top row reproduce the categories in section 4 of this paper. The table does not give a complete picture of conditions affecting benefits, as it is limited by what was found in the studies. Later on in this section, we will discuss how this list might be amplified.

It will be seen that the conditions affecting benefits in Table 5 belong to four larger categories related to teaching programs, languages, learners, and their cultures. All these are embedded in their specific contexts. The first four points in Table 5 concern features of the teaching program. These are followed by language-related and learner characteristics, and the rest concern contextual features.

5.2.2.1 Teaching program-related conditions

Learner characteristics and contextual features are the ones to which teachers and other professionals need to accommodate and respond to achieve the best outcomes. The conditions provided by the teaching program are the ones amenable to change in order to support these outcomes. However, hierarchies and levels of agency within any society will limit the extent to which adjustments can be made in the classroom. Chains of command from the macro-level to the micro-level are never perfectly effective and not all decision-making is top-down. It is true that initiatives and innovations at classroom level usually need resources of finance, people and training that are authorized or facilitated from above. Such resources are highly likely to come to teachers from the level of the school or the local authority, with coordinating organizations or central governments in more distant control of the bigger picture. Let us look at the program-related conditions on the table together to see how they may influence the benefits that come from AL learning.

Policy decisions in many contexts involve *duration and intensity* of AL learning, usually through measures to prolong the number of years of learning by lowering starting ages. The reasonable assumption is that more time will mean better AL achievement. This is not our focus in this report, but the same principle can be applied to innovations in AL teaching which *intentionally aim to foster other benefits*, such as a decision to focus on strategy use. Such interventions have the most convincing results when they take place over a substantial period and outcomes are checked again at a point after the end of the intervention, as in the study by Gunning and Oxford (2014). Additional examples were found in section 4.3 in studies developing learners' characteristics like grit, growth mindset and self-

efficacy. In this, research interventions are a mirror of good practice in normal teaching. Only a few of the studies reviewed focused on pedagogy in this way.

National ministries or international networks may stipulate how many hours should be made available per year for given programs and schools will determine how this is managed and allocated. How much curricular time programs devote to AL learning varies. Based on decades of studying how languages are learned in schools, Lightbown and Spada (2019, p. 422) concluded, “Time may be the single best predictor of outcomes in L2 learning in primary and secondary schools”. In K-12, AL programs use approximately 5-10 percent (an hour or two per week). Content-based programs such as CLIL devote between 10 to 30 percent, whereas immersion programs use between 50 to 90 percent of curricular time (Nikolov & Timpe-Laughlin, 2021, p. 2).

These approximate ratios indicate that teaching school subjects in the target language can double or triple the time of learning opportunities. CLIL programs were most often researched in publications over the past decade and claimed to offer linguistic benefits, as sections 4.2-4.3 showed. However, results concerning benefits within our remit, namely, grasp of the content matter taught, seemed not to be the focus of research. Thus, the potential key benefits, how much and how well students learn school subjects in the language of instructions, were hardly visible.

Decisionmakers should also consider when designing curricula in additional languages how long it takes children in bilingual programs to achieve native-like proficiency. A recent study involving a representative sample of 54,146 English learners in Michigan (ages 5-11; Zhang & Winke, 2024) found that half of the students attained proficiency in five years; the other half needed seven years.

At a macro level, national governments and international education networks may advise or require particular starting ages for AL learning. A commonly found policy of recent years has been to lower the age at which AL starts, first to lower primary years and most recently to preschools, thus extending the overall duration of the AL programs as well as potentially tapping into abilities to which young learners have access. While this may have an impact on overall success with the language(s) concerned, this is not discussed here (see section 6.1).

Since this report focuses on outcomes for students, studies of teacher education or preparation of carers did not figure largely in the corpus of research reviewed. Some studies were inherently more derived from an interest in pedagogy or childcare and were thus more informative on conditions. Some of these studies resulted in recommendations or advice about program design, teaching methods and the need for teacher education in the area investigated, but this was simply not the purpose of others.

There was little focus in the research on specific language teaching approaches, perhaps unsurprising in a post-method era (Kumaravadivelu, 2001). However, lack of this kind of background information in some studies in which a cohort of learners was surveyed concerning their attitudes or preferred ways of learning limited the insights that could be derived. Studies revealed very little about CLIL programs. The term CLIL can include the teaching of one or more, the same or different school subjects over one or more academic years. Teachers could be AL specialists, who are trained or not trained in the subject matter, or teachers of the subjects with a certain level of proficiency in the AL. Most probably variations along these themes impacted outcomes, but they were not detailed at all.

Similar problems emerged on EMI programs. A recent critical review of English medium instruction teacher development in higher education concluded that (1) formal training activities, (2) teacher collaboration, and (3) self-initiated practices were typical. However, “challenges were also identified regarding individual factors and contextual demands at institutional and socio-cultural levels” (Wang, et al., 2025, p. 28).

5.2.2.2 Language-related conditions

With regard to *specific languages known or learned*, linguistic distance was mentioned in terms of language awareness (4.2.1) and which languages students found easier or more difficult to learn (4.3).

English is the language most associated with employability world-wide, although geographical location may mean that other languages are also advantageous. Learners who are native speakers of English can often gain economic advantage from knowledge of Spanish, Arabic, French and Mandarin. There are equity issues when students cannot have access to a language they would prefer to learn.

Some studies also highlighted the situation of plurilingual learners who seemed not to be achieving as theory predicted they should, in terms of language awareness or generally across the curriculum. It was often important to look behind what the term 'plurilingual' meant in different studies. Often it was a proxy term for migrant students, knowing several languages, which might however be minority languages, and disadvantaged as regards socioeconomic status. Although the characteristics of existing groups of AL learners such as their ages, their socioeconomic status or their past academic performance cannot be altered, decisions might be made, for good or ill, as to which groups in future should receive special treatment or even which learners may be eligible for or excluded from AL teaching. For example, AL teaching may be extended to a wider age range, usually resulting in an earlier start, or pupils with migrant or lower socioeconomic status may be offered special support. Eligibility for some programs such as CLIL may depend either on a high level of academic performance in other school subjects or on reaching a threshold level in the language of CLIL instruction. Multiple authors voiced criticism about CLIL programs attracting elite students, but we found no data on how decisions were made for entry.

5.2.2.3 Proficiency-related conditions

First, we consider AL knowledge as a condition for academic achievement. In the case of school education conducted in a language not the students' L1, proficiency in the language of instruction is a clear and obvious condition for academic success. This, as was suggested in the study by Daryai-Hansen (2024a), applies to migrant learners who may not yet have come to grips with the language of the host country. However, as discussed in 2.2.2, it is also important to consider contexts where English medium is an option for school education and parents choose it because of its status even though their children are not proficient in it. While, as we saw above, the research for CLIL is unclear about whether a given proficiency level is needed for entry and yields no clear results for success in learning the subject matter for which the AL is a vehicle, at university level, proficiency in the language of instruction is a condition for success. Successful previous study on AL programs at secondary level is generally positively linked with superior educational outcomes in tertiary education across all subject areas regardless of the language, as was discussed in 4.2.3.

Conditions related to programs lead us to what realistic aims and *achievement targets* are set for learning AL over the years and by the end of K-12 education to allow learners to enter the workforce or tertiary education. In the case of entry to tertiary education, we found discrepancies between the dream and reality. For example, universities accepted students with intermediate-level proficiency in the language of instruction. A recent evaluation and benchmarking report by the International Baccalaureate Organization (2023) stated that B2 level is commonly required for university admission, whereas their students tend to achieve level C by the end of their secondary studies.

Findings discussed in 4.2.3 showed that students with B-level proficiency tended to drop out of tertiary education or their achievements were low. Most probably, academic standards had to be lowered to keep them in the programs. As Macaro et al. (2018, p. 65) pointed out, "the concept of 'proficiency

needed to teach through EMI' is underspecified either through empirical research or by institutional requirements".

Another language-related condition concerns relationships between choice of languages and learners' motivation. Issues emerged in multiple studies when students were not offered the language they wanted to learn, or they were not motivated to learn a third language. Lasagabaster's (2019, p. 359) critical comment summarized it well: "European institutions pay lip service to multilingualism" […] but "the overwhelming presence of English" has a negative impact on learning other languages.

Students were demotivated when they achieved their goals. They passed proficiency exams, gained admission to their desired institution and they did not want to invest more work into further developing their AL abilities. In such cases conditions must ensure that plurilinguals maintain their AL abilities, as attrition can impact on their hard-won knowledge and skills (Schmid, 2023). They must be equipped with strategies for autonomous learning and use.

5.2.2.4 Learner-related conditions

All benefits are related to individual learners' characteristics; thus, all conditions concern the four domains one way or the other. With regard to learner characteristics apart from those of age, sociolinguistic status and language knowledge discussed above, gender issues were not greatly discussed in the research reviewed. Authors rarely went beyond the observation that female learners tend to do better at language learning but to be more affected in their motivation by the type of learning experiences they undergo. Other gender-related findings showed that language policy decisions in India disadvantaged girls more than boys. Immigrant women from East Asia with limited target language knowledge were isolated in their new countries, as they lacked opportunities to socialize beyond their narrow circles of L1 speakers.

5.2.2.5 Culture-related conditions

A salient feature concerns differences in attitude according to cultural background, with learners from East Asia (China) tending to be more conservative in their assessment of self-efficacy than those from elsewhere and regarding motivation to be more driven by an 'ought-to' vision. Aryadoust et al. (2024) pointed out that while non-Asian students had a vision of their future ideal identity, East Asian learners were guided by how they thought others wanted them to be. They were keener to avoid failure and losing face than non-Asian students. Their motivational profile was closer to that of younger AL learners, whose goals were set for them by significant others rather than themselves. Cross-cultural differences were revealed in Asian students' self-efficacy (Wang & Sun, 2020; Yang & Gan, 2024). They underestimated their abilities, but their performances were typically good.

These examples of cultural values are typical in studies involving Chinese learners. They show why considering cultural differences is an important condition of successful learning and meaningful research. According to Fong and Yuen (2016), when interpreting survey results, a special cultural lens is necessary to understand how traditions and social-contextual factors impact outcomes. Chinese students tend to outperform their Western peers in international surveys like PISA and researchers using Western traditions consider learning conditions unfavorable to learning. The authors propose that learners' self-efficacy and connectedness should be interpreted along with their traditional cultural values acquired in their collectivist society. Students are guided by the Confucian value of working hard to overcome obstacles and achieving personal goals can only be realized if they believe they are able. This is what families foster in their children. The Western idea of growth mindset (discussed in section 4.3.2) has been instilled in Chinese children from an early age for centuries.

Parents are responsible for socializing them into adopting family expectations and social norms. “Chinese learners recognize that striving for academic excellence is a family obligation as much as a personal goal” (p. 163). If they fail to do well in school, they bring shame to the family. They are also taught to show modesty about their achievements. Additionally, however hard they may try, there are others who perform better. These are some of the reasons why Chinese students tend to underestimate their abilities.

The publications in the dataset included few findings on culture-related benefits, although it is widely assumed that knowing languages can open new horizons and insights into others’ cultures. For such benefits to emerge, the conditions include raising learners’ awareness and curiosity about other people’s cultures, developing their critical reasoning abilities to compare and contrast their own and other people’s lived experiences, cultural values and artifacts. These range from literature, history, visual arts, to science, etc. By offering intercultural exchanges in the form of collaborative online projects, cultural events, study and work abroad programs, people can understand and appreciate their own and others’ lives better.

Table 5: ***The Relationships between Conditions and Benefits Found in the Research Reviewed***

BENEFITS→ CONDITIONS ↓	**Cognitive**	**Educational**	**Conative and affective**	**Socio-economic and cultural**
Duration/intensity of experience	Short- and long-term exposures are both effective in brain alteration	Long-term teaching interventions are needed to establish strategy use Continuity of programs is necessary to build on what learners can do.	More intensive programs may increase motivation Positive learning experiences increase learners' favorable conative and affective characteristics	Slower learners need more time than higher aptitude peers The younger the learners are the slower they develop in their AL
Teaching/instruction intentionally aimed at fostering benefits of AL learning	Cognitive abilities are not fixed. They can increase with instruction Instruction must be age-appropriate Reasoning abilities can improve in line with AL learning and use	Language awareness may develop from simply knowing more languages, but it can be developed systematically by focused teaching Children can develop strategies without specific instruction, but instruction enhances efficient strategy use	There is a strong effect of learning experiences on motivation and emotions Quality of teaching is impactful Learner characteristics are malleable, and may change during learning and using ALs Many learner characteristics interact amongst themselves, not necessarily with AL learning	Critical multilingual language awareness teaching supports integration of plurilingual migrant learners Tele collaboration and study abroad can be successful in promoting intercultural awareness
Specific language teaching approach	Both implicit and explicit learning play key roles Teaching must be aligned with learners' cognitive abilities.	CLIL and EMI studies are inconclusive for language and/or content benefit In Latin learning, Grammar Translation teaching has a	CLIL interacts with motivation to varying degrees according to program	CLIL and EMI can contribute to social and geographical mobility

	Teaching must be age appropriate	different impact from The Reading Method, and Active Latin	CLIL has a low long-term impact on positive development of emotions and attitudes Teaching Interventions can increase grit and growth mindset.	
Specific language(s) learned	Linguistic distance between languages may impact cognitive challenge.	Translanguaging is helpful Latin studies are strong for metalinguistic awareness Related languages (e.g., Romance) are used in metalinguistic support of learning new related languages	Motivation to learn English is higher than for other languages. L1 English speakers are less motivated for LOTE.	Benefits of knowing particular ALs are variable according to the part of the world Good AL skills increase human capital in one's own country if the AL is English In English L1 countries ALs are less beneficial In some countries, LOTE command an extra rarity premium where English is widely known.
Bilingual and plurilingual	Plurilingualism brings old-age benefits re delaying dementia	Plurilingualism supports greater phonological awareness L1 literacy is enhanced through knowing ALs Plurilinguals may have more strategies but other factors like SES moderate this	Knowing English well may lessen motivation for learning an L3	Some plurilinguals know minority languages and may be disadvantaged Others knowing prestige languages may be more advantaged in socioeconomic status

		Simply knowing more languages is not sufficient for strategy development		
Proficiency level in ALs		It is unclear what level of AL is necessary for successful CLIL The ideal threshold for EMI is advanced (level C), but often level B is accepted Varied results. Advanced learners may use more or fewer strategies In school learners, low and medium proficiency are most associated with strategy use Secondary school level and school-leaving learners with higher language proficiency are more likely to succeed in tertiary education	Higher levels of motivation, willingness to communicate growth mindset and grit lead to higher proficiency Higher levels of enjoyment and self-efficacy lead to higher proficiency Higher levels of demotivation, anxiety, boredom, and embarrassment prevent learners from achieving their potential best levels	Higher proficiency results in higher economic rewards
Learners' ages	Sensitive periods exist for certain abilities Older learners are also capable of learning ALs	Metalinguistic awareness develops with age Age of learners affects strategy preferences.		Intercultural competence is less clear amongst younger learners Less impact found on younger groups

Learners' gender		Girls tend to be more efficient learners of ALs	Girls are more impacted than boys in motivation through learning experiences	Males in many contexts have more salary premium than females for AL including English (but not in some regions of China, females with other qualifications command a premium)
Learners' general ability or academic performance	General learning abilities can benefit from learning and using ALs	Plurilinguals outperform bilinguals and bilinguals outperform monolinguals in metalingual awareness regardless of general ability	Positive relationships between beliefs about one's abilities and achievement in AL	
Learners' socioeconomic status	Learners with lower SES tend to need more support to benefit	Plurilinguals with lower SES may achieve lower on all measures	Learners with lower SES may be more anxious and set lower goals	Benefits to migrants of learning the host language well vary according to region and laws Some migrants may not find jobs that match their abilities
Learners' cultural background			East Asian students are more strongly influenced by 'ought-to' future self profiles than Western students Chinese students' patterns of boredom and enjoyment differed from those reported for students in other parts of the world Learners in Asian cultures consistently reported lower self-efficacy beliefs than Western participants	

5.3 Summary of conditions for benefits to emerge

Finally, let us sum up what we learned about the conditions that must be in place to equip language learners with the autonomy and agency that they need to make the most of the opportunities that proficiency in ALs can bring.

- Conditions for the aspirations at the societal level are clearly beyond the scope of the studies in the database. Many of the desired outcomes were found for individuals. These include plurilingual advantages across all age groups, ranging from children to older adults, in the cognitive and educational domains. The conditions of developing these abilities include carefully designed, focused programs, implemented well. Few developmental studies were in the database – a weakness in general research design (see 6.2).
- Findings were discouraging about programs teaching subjects in the language of instruction in K-12 and in tertiary education. These were expected to deliver the most clearcut benefits, as they target the AL and curricular content at the same time. Most probably, the conditions of implementing innovative programs were not in place (6.2). Very little information was included to come to a good understanding of what the necessary prerequisites should have included.
- A lot of variation emerged concerning individuals' conative and affective characteristics. The most important finding is that local learning experiences shape how students see their goals, the outcomes of their efforts, how much is up to them, how they can cope with challenges, etc. The conclusion is simple: good quality teaching must ensure that learners are given autonomy and agency in their learning, they get helpful feedback to become more and more competent, and they feel supported by their teachers, peers, and the larger community. These conditions need to be in place not only in AL classes, but institutions should share these values and apply them in all other classes consistently.
- Evidence for added value of being plurilingual was overwhelmingly positive in terms of human capital, whereas less was revealed about cultural capital. Although the value of different languages is not appreciated to the same degree in all societies, proficiency in one's repertoire is seen as capital. Conditions for changing these situations are beyond studies in the database.
- Social justice and equity are clear conditions at all three levels. These should be everyone's concern at whichever level they are stakeholders of decision makers.
- The role of teachers emerged only in a few studies. However, it is common knowledge that they are key stakeholders. For the benefits to emerge, competent teachers are needed at all levels of language education. They must be knowledgeable about teaching as well as proficient in their students' repertoire.

6 WHAT LESSONS HAVE WE LEARNED AND WHERE SHOULD WE GO FROM HERE?

Finally, it is time to summarize what lessons can be drawn from the findings. First, we reflect on what the studies in our datasets revealed about innovation in language education. Then, we discuss some emerging issues about research methods used in the empirical studies in the datasets. Finally, we provide critical remarks on what the limitations of the research project are, before we outline how the field could move forward.

6.1 Lessons learned about innovative language education programs

An unexpected outcome of sections 4.2 and 4.3 concerns the overall lack of evaluation studies involving representative samples of participants and the controversial efficiency of CLIL and EMI programs. Such AL programs are widely spread around the world at all school levels (see section 4.2.3 on evidence on advantages in CLIL and EMI programs). They are framed as an efficient program type benefiting learners in AL and content domains – a panacea. However, we found hardly any evidence to support these claims. In most publications, hardly any added value was documented for CLIL learners' AL development and motivation, when compared to non-CLIL groups (e.g., Kaiypova et al., 2025; Lee at al., 2023). In most cases learning the subjects in the language of instruction was not even measured. In the studies showing advantages, they were often due to selection of more able and more motivated learners, not the superiority of CLIL as a program type (see sections 4.2.3 and 4.3.1; e.g., Goris et al., 2019; Feddermann, 2022; Lasagabaster, 2019; Macaro et al., 2018). The general conclusion about CLIL programs was that they added no or hardly any value to learners' repertoire or their content knowledge.

This in fact is a disappointing outcome, as using the language of instruction in K-12 and tertiary education is the most promising area where we expected evidence on the amount of added value in different age groups' knowledge of the subjects. The whole idea of content-based programs is "to kill two birds with one stone". Save time by integrating AL with content learning and ensure meaningful topics for discussions. Notably, teachers' competences in using and teaching the language of instruction and the school subject were not examined.

There is a thought-provoking parallel with early AL programs. In the first few years when such programs were introduced, hopes were high that the earlier AL learning started, the better the long-term outcomes would be. Then, the hope faded that young children would develop native-like proficiency, especially in the domain of pronunciation and intonation, as most teachers were not native speakers and many had intermediate rather than advanced proficiency in the language they taught (see Nikolov & Mihaljević Djigunović, 2011). In the meantime, striving for native-like proficiency (nativespeakerism) was dropped as a goal of AL learning during the multilingual turn (discussed in 3.1) and attention shifted towards appreciating plurilingual learners' repertoire (Ortega, 2019).

Comparative studies of early and later starters indicated that later starters either caught up with their peers who had started years earlier or even surpassed them (e.g., Jaekel et al., 2017, 2022; Pfenninger & Singleton, 2016, 2017, 2018; Porsch et al., 2023; Singleton & Pfenninger, 2019). Among the reasons why this was the case was that young learners were getting bored in later years due to transition problems. They were merged with beginners or teachers failed to build on what they could already do. Another reason was that the myth about children learning fast was not supported by evidence. The amount of input and opportunities to practice the AL was so minimal that children's development was slower than the rate at which teenagers progressed. The third reason concerned teachers'

competences and motivation. Many teachers, despite focused pre- and in-service teacher education programs trying to meet demand, were not well-versed in age-appropriate classroom methods, task types, and scaffolding practices. Others insisted on English only but failed to implement efficient meaning making practices and this induced learners' anxiety.

The most recent wave of expanding time has recently reached preschools, where the challenges are similar to those characterizing early AL programs in primary schools. The outcomes of preschool programs are discouragingly minimal. Many teachers lack expertise in early childhood education and /or in the AL and the children's L1. However, language teaching history repeats itself: parental pressure forces preschools to launch AL programs without conditions in place (see critical overview by Nikolov & Mihaljević Djigunović, 2023).

Two interesting outcomes related to the long-term impact of early English learning was found in a study on boredom and enjoyment among Chinese university students (Li, 2022). Participants who started English early had less positive attitude to English and tended to be more bored and less happy than their peers who started English later. The other outcome concerned the teachers' friendliness. It strongly predicted both boredom and enjoyment. These were also among the reasons in Zhu's study (2024) exploring the reasons why Chinese high-school students dropped English and started Japanese as L3.

These findings resonate with what studies have found about the key role teachers play in the process and success of AL learning (Mihaljević Djigunović & Nikolov, 2019). Researchers must bear in mind that AL classes offer opportunities to socialize into AL learning practices as well as to socialize with peers and teachers. These aspects were not present in the dataset among the benefits; however, the impact of significant others, the social group in which learning takes place, tend to be significant (Dörnyei & Ryan, 2015, Nikolov, 1999).

In summary, we cite Ortega (2019, p. 25), whose ideas are supported by others' conclusion (e.g., Nikolov & Mihaljević Djigunović, 2011, 2019; Pfenninger & Singleton, 2016, 2017, 2018). Her points concern not only age-related findings, but also the decisive role of learning experiences impacting AL learners' motivation, positive and negative emotions, and ultimately what they can achieve in their AL: "across diverse contexts and timings, the best predictor of bilingual outcomes is experience with each language. Once quality and/or quantity of input have been included in studies and pitted against age, it has become clear that experience of language trumps starting age."

6.2 Lessons in research methodology

Although we were faced with a plethora of studies within which to seek evidence of benefits beyond proficiency in an additional language, these proved to be more limited in scope and approach than full and optimally informative coverage of the field would require.

One manifestation of this limited scope is the predominance of quantitative studies on small convenience samples under 100 participants designed and led by academic researchers. Large-scale studies are also present, but they tend to use only surveys or test results and no other types of data. These are, of course, of great value for many purposes but are impacted by issues that restrict both their scope, and the depth of insight obtained.

- The samples are typically not representative of the population and they often include volunteers; therefore, findings cannot be generalized to other populations.

- Few studies are longitudinal. Funding and time for such studies of substantial duration are more rarely available than other types of support. Many benefits might emerge later than the length of data collection.
- Conditions of tenure in the modern university put pressure on academics to publish often and research topics yielding speedy results may be a favored choice. What is publishable impacts what researchers invest their time and energy into.

These factors mean that there is a *bias* in favor of faster though sometimes less reliably informative and ecologically valid studies. An example is the use of cross-sectional studies of different age groups within a school rather than longitudinal studies to provide evidence of developments over time. Another example is the widely used questionnaires without any data for triangulation of the findings.

An additional issue is the low incidence of stakeholder voices in the research reviewed. Firstly, few studies fully involved practitioners, as principal researchers, co-researchers, co-authors or even collaborators in the implementation of interventions or collection of data. There were some notable exceptions such as the study by Gunning and Oxford (2014), in which the problem investigated was raised by teachers and it was the teachers who implemented the potential response, but in general, research was led by academics from outside the institutions.

Perhaps even more markedly, there was very little heard of learner voices. Many studies involved questionnaires, and although these were often appropriately adapted for use by young people, no questionnaire can of itself reflect the lived experience of respondents.

The instruments used in empirical studies are all based on self-reports (typically by Likert scale items). Questionnaire-based studies not only suffer from issues concerning reliability of responses but also restrict the categories of information sought from participants. The role of learners' beliefs is a recurring theme in many studies. The title of a meta-analysis of studies on self-efficacy (Goetze & Driver, 2022) summed it up: "Is learning really just believing?" After investigating learners' characteristics, we realize that the answer is yes, or almost always, but good detailed data on this is lacking. Although academia in many contexts is still suspicious of qualitative research, there are areas of extreme interest and relevance such as the above for which well-designed and implemented qualitative research is the only effective instrument for revealing what needs to be known.

No publication analyzed *the quality of teaching*. This is a serious weakness in the dataset, as the main conclusion of section 4.3 analyzing students' conative and affective characteristics is that they are definitely shaped by learning experiences. Studies on students' motivation, willingness to communicate, mindset, grit, anxiety, enjoyment and boredom, self-efficacy and identity offered insights into their levels, and sometimes their changes, but not into the reasons why. Teachers and teaching are thus a main category in our analysis of conditions supporting benefits in section 5 above but there is less detailed research-based evidence currently available than is optimal.

Similarly, none of the studies investigated the quality of syllabus content or teaching materials and their impact on learners' experiences.

Publications, possibly limited by space constraints, sometimes failed to reveal contextual information that could have been explanatory of mediating or moderating factors. For example, multiple review papers and meta-analyses (4.2.3 and 4.3) concluded that CLIL programs failed to add the value they promised. This was pointed out against the fact that (e.g., Goris, 2019; Mettewie et al., 2024) CLIL students had access to twice as many AL classes as non-CLIL learners. None of the publications offered explanations as to why.

The final issue, which will affect any reader of multiple research papers, is conflicting and overlapping terminology. This is partly a matter of date of publication. Concepts become refined over time and terminology evolves. Important examples for this report are the terms *bilingual, multilingual* and *plurlingual*. *Bilingual* is used in different papers either to refer to individuals who by upbringing or circumstances have acquired knowledge of two languages by 'natural' means without instruction or (particularly in mainstream UK and US educational settings) to refer to learners who are learning an L2 in school or elsewhere. Twenty years ago, the term *multilingual* served to describe both people and regions but refinements since Spolksy (2018) mean that the term *plurilingual* tends to be used for human beings and *multilingual* for regions. Some of the key works of earlier, and some of later, dates still use *multilingual* to refer to individuals. A case in point is the field of *critical multilingual language awareness* (section 4.2.1). A particular source of confusion is when the term 'plurilingual' is used as the main way of referring to groups of people who are indeed plurilingual but who have other characteristics, such as migrant status or low socioeconomic status which are more salient for the purposes of the research. We have tried in our discussions to disambiguate these and other overlapping terms, but readers are advised to be on the alert.

6.3 Limitations of our study

We must mention important areas that we did not include in the report.

- AL learners with learning difficulties were beyond our scope. Their trajectories and challenges are widely discussed in excellent publications (e.g., Kormos, 2017). They deserve separate study.
- Texts only in English were analyzed and, except for inclusion of some key 'classic' papers outside the time-range, we limited our investigations to the past decade. A wide range of earlier publications were included in the reviews and meta-analyses. In some cases, we analyzed earlier key publications.
- We did not focus on teachers, their competencies, beliefs, motivation, and the roles they play in AL learners' lives. As mentioned above, the research papers we reviewed tended to omit extensive coverage of their roles. Teachers are, however, included in the discussion of conditions in section 5, as they are key players in students' AL learning journey.
- Another area not included is the role information technology plays in learning and using ALs. No study mentioned how students' skills and abilities to use the internet and electronic devices developed as a side-product of AL learning and use, although most probably they do. This area is definitely worth exploring in the future.
- Finally, we acknowledge that we had to limit the number of sources, as there were more than we could include without getting lost in detail and testing readers' span of attention. Our choices were guided by our knowledge of the field, and we did our best to offer a balanced critical review of the benefits of learning and using additional languages.

6.4 The way forward

There are multiple areas where further research is needed:

- First, most studies represented researchers' views on their findings. There is a need for all stakeholders' voices to be heard either as participants or as part of member checking.
- Very few studies focused directly on the benefits that learning an AL brings in addition to the ability to use one's linguistic repertoire. This area needs targeted developmental projects using multiple types and sources of data for triangulation. Case studies conducted by teachers with their students could offer important context-embedded insights into the emergence of the kinds of benefits the review revealed.
- Cost-benefit analyses are badly needed to find out how efficient innovative programs are before many more thousands of learners and teachers become involved in them. No recent large-scale evaluation studies were found on CLIL or EMI programs. The research methodology of evaluation studies is straightforward (e.g., Hyland & Wong, 2013; Norris, 2016). Data should be collected on what achievement targets such programs set, if they are defined separately or integrated into AL learning and the subject areas, and to what extent learners perform at the expected levels on tests integrating the AL and subject domains.
- Additionally, stakeholders must ensure that all AL programs, including CLIL/EMI, do not further disadvantage students who need more support by excluding them or failing to cater to their needs. There should be incentives to invest in teaching and researching less able learners and to document how they cope and benefit from scaffolding and developing their cognitive abilities, self-efficacy, and beliefs about their strengths and weaknesses.
- Studies are needed involving learners who are disadvantaged with learning or physical disabilities. It is reasonable to assume that AL programs developing their cognitive abilities, language awareness, social and emotional skills would benefit not only them, but also society at large.
- Large-scale longitudinal studies are also necessary to examine the long-term benefits of AL programs. Such studies should analyze student-, teacher- and context-related factors as they contribute not only to the outcomes, but also how they are shaped by the conditions in which they emerge.
- Case studies and retrospections in narrative form can reveal how individuals' language learning experiences evolved. These will stand well alongside studies in different traditions which focus more readily on attainment.

6.5 Closing remarks

We set out on this exciting journey investigating the benefits as "by-products" of learning and using additional languages beyond the ability to communicate, learn new knowledge and skills, and socialize with people whose repertoire and cultures are different from ours. The idea of looking for such advantages has been illuminating, and academically as well as personally enriching. We hope readers benefit from reading our findings.

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APPENDIX A: EDUCATIONAL DOCUMENTATION SCRUTINIZED FOR CLAIMS ABOUT BENEFITS OF AL LEARNING AND PLURILINGUALISM

The documents summarized here are grouped according to breadth of reference, with a paper from UNESCO with global reference first and a number of papers relevant especially to Europe next. These are followed by papers with regional or national reference. It is hoped that some of the benefits from AL learning or knowledge extracted from each one may also have resonance outside the particular geographical region for which the document was written.

(1) **UNESCO. (2025).** ***Languages matter: global guidance on multilingual education*****. UNESCO** https://doi.org/10.54675/MLIO7101. https://www.unesco.org/en/articles/languages-matter-global-guidance-multilingual-education

This guide for policy makers and curriculum planners, explains the principles and practicalities of multilingual education as a means of **ensuring equity and inclusion** by giving every child the chance to learn in a language that they understand. The focus is thus on education provision in already known languages rather than on teaching new languages either as a medium for instruction or for use outside the school. However, the benefits of knowing several languages, even if they are not languages commonly taught in schools, are stressed in this document in ways that are relevant to this report.

> These advantages are evident regardless of the specific languages spoken, meaning that fluency in endangered Indigenous languages offers the same cognitive benefits as fluency in global languages. (Foreword).

According to the Foreword, multilingual individuals, compared with their monolingual counterparts, tend to exhibit:

(1) higher levels of empathy
(2) enhanced problem-solving abilities
(3) a greater aptitude for learning new languages,
(4) better recovery from brain injuries

(2) **European Commission / EACEA / Eurydice. (2023).** ***Languages in education: A comprehensive analysis*****. Publications Office of the European Union.** https://eurydice.eacea.ec.europa.eu/publications/key-data-teaching-languages-school-europe-2023-edition

Statements of the aims of language learning within the European Union are to be found within the Introduction and the Executive Summary of this document.

Language learning is seen as having 'an essential role to play in making the European project come true'. The underlying principles are those of multilingualism, respect for linguistic diversity and, within this, promoting plurlingualism through school learning. Language learning within this framework is presented as a means by which:

(1) a democratic society is fostered
(2) both individual and collective identities are formed

(3) a European identity is fostered that is inclusive and open to other cultures
(4) intercultural skills are developed
(5) greater understanding across borders can be promoted
(6) meaningful relationships can be supported
(7) opportunities are built for European citizens to benefit from study, employment and mobility within the Union
(8) citizens are equipped to use their languages effectively for social, learning and professional purposes
(9) the development of language awareness amongst educators can be promoted

(3) **Marconi, G. et al. (2020). *What matters for language learning? The questionnaire framework for the PISA 2025 Foreign Language Assessment*. *OECD Education Working Papers*, No. 234, OECD Publishing.** https://doi.org/10.1787/5e06e820-en.

This Working Paper discusses the proposed content of the questionnaire to be completed as part of the PISA 2025 global survey of 15-year-olds engaged in foreign language learning. This is the first time PISA has undertaken such a study and is a rare occasion on which stakeholders' voices will be heard in the discussion of school language learning. The overview to the document makes a number of claims for the benefits of the ability to speak more than one language. Unusually, research evidence for each claim is cited in the document.

Language Learning:

(1) is associated with better career opportunities
(2) has important economic benefits for individuals and economies
(3) allows individuals to understand the complexity of cultures and languages, and to learn about other world views
(4) [can enhance] students' appreciation of cultural and linguistic diversity through exposure to foreign language content (e.g. literature, news) related to other cultures
(5) [can enhance] intercultural skills and global co-operation
(6) leads to new and innovative ways of thinking and working across cultures.

(4) **Council of Europe. (2018). *Competency reference framework for democratic culture* (Volumes 1–3). Council of Europe Publishing.** https://www.coe.int/en/web/reference-framework-of-competences-for-democratic-culture

This document is not about language learning in itself but indicates the potential contribution of foreign language learning to the ideals it promotes. The framework identifies four key domains of competence: values, attitudes, skills, and knowledge and critical understanding, which align closely with some often-expressed objectives of modern foreign language education, as discussed in the rest of this report.

Within the skills domain in particular, there is an explicit reference to **linguistic, communicative and plurilingual skills** but other capacities relevant to foreign language learning are also to be found, for example in the values section, **valuing cultural diversity** and in the attitudes section, **openness to cultural otherness**.

(5) **Beacco, J.-C., & Byram, M. (2007). *From linguistic diversity to plurilingual education: Guide for the development of language education policies in Europe.* Council of Europe.**

https://www.coe.int/en/web/language-policy/from-linguistic-diversity-to-plurilingual-education-guide-for-the-development-of-language-education-policies-in-europe

This guide sets out the policy in the European Community that all individuals should be supported, whether at school or in later life, in becoming plurilingual and intercultural citizens. Benefits of knowing several languages are stated as:

(1) mobility
(2) intercomprehension
(3) economic development
(4) maintaining European cultural heritage

(6) **Kohler, M. (2017).** ***Review of languages education policies in Australia: Report commissioned by the Multicultural Education and Languages Committee (MELC)/*** **Government of South Australia, Flinders University.** https://www.education.sa.gov.au/docs/sper/melc/melc-review-of-languages-education-policies-australia.pdf?utm

This report summarizes the differing language policy documents of each of the states of Australia. The picture is very diverse, determined by the different demographics and linguistic landscapes in each state. The status of indigenous languages is a prominent strand, as is the wide choice of foreign languages, many of which reflect Australia's geopolitical status as a nation in the South Pacific and its strong links with ASEAN countries. The dominant presentation of the value of language learning is for social and economic benefits, although some policies also highlight intercultural understanding.

There is some mention (Tasmania) of the need to foster linguistic diversity for a cohesive society, although this seems focused mostly on the support of migrants. The policies emphasise communication and the ability to interact with native speakers of the target language as the principal goals of languages education. Language learning within this framework is variously presented as a means by which:

(1) primary school children can develop **language awareness, how to learn a language and intercultural understanding**
(2) **capability in Asian languages** (e.g., Indonesian, Japanese, Mandarin) can be built
(3) **A number of European languages can be promoted**: French, German, Italian and Spanish)
(4) **the teaching and learning of Indigenous languages** can be supported)
(5) **the intercultural capability of students, teachers and school leaders can be built**
(6) **Language and Culture could be studied**
(7) **linguistic diversity could be supported to** e**nable an inclusive, anti-discriminatory and socially cohesive society**.
(8) **Migrant communities might be assisted in integration**
(9) A specific program of the Victorian government (Department of Education and Early Childhood Development [DEECD], 2013) aims to promote a **'globally ready student [who] speaks two or more languages'**
(10) and is **'competent in diverse settings and can engage with different beliefs and cultures in meaningful and purposeful ways.'**

(7) American Council on the Teaching of Foreign Languages. (2014). ***World-readiness standards for learning languages.*** **Alexandria, VA: ACTFL.**

This document outlines several benefits of language learning across different levels:

Micro Level (Individual Learner):

(1) Enhances cognitive abilities, including problem-solving and critical thinking.
(2) Improves communication skills and cultural awareness.
(3) Fosters personal growth and self-confidence.

Meso Level (Educational Institutions and Communities):

(1) Promotes inclusive and diverse learning environments.
(2) Encourages collaboration and mutual respect among students.
(3) Supports interdisciplinary connections across subjects.

Macro Level (Societal and Global):

(1) Prepares students for global citizenship and multicultural understanding.
(2) Contributes to economic competitiveness by developing a multilingual workforce.
(3) Strengthens national security through improved communication and cultural insights.

These benefits align with the framework's five goal areas: Communication, Cultures, Connections, Comparisons, and Communities

(8) **SEAMEO QITEP in Language (SEAQIL) & Universitas Pendidikan Indonesia (UPI). (2023, November). Policy brief: Language policy in ASEAN countries.**
https://www.qiteplanguage.org/assets/files/dokumen/Policy%20Brief%20Inggris-Final-Rev2.pdf

This paper reports on the results of a joint study between SEAMEO QITEP in Language (SEAQIL) and Universitas Pendidikan Indonesia (UPI), conducted from 2021—2023. The study, based on a questionnaire to 4,219 young people aged 15-25 from all ASEAN countries, as well as consultation with senior officials, academics and educationists, explores the language policies of ASEAN countries. The focus is on national, local, and foreign languages with particular reference to the many local languages used. Few established policies were found in individual countries and the need for a common ASEAN policy was identified. Benefits of learning AL were not overtly discussed but the hegemony of English in school education in the region was recognised and reasons were given for why people might choose to learn particular languages as well as English:

(1) the popularity of a culture (e.g., Korean)
(2) cultural roots and heritage. The need for protection of minority linguistic rights was recognised
(3) identity and values of a community
(4) education
(5) travel or tourism purposes
(6) instrumental needs of a global society. (including the ASEAN community)
(7) job prospects in the region (Indonesian and Malay were popular for this).

(9) **Ofsted Research Review, Languages 2021.**
https://www.gov.uk/government/publications/curriculum-research-review-series-languages/curriculum-research-review-series-languages

This is a review by the UK school inspection authority of the state of modern foreign languages teaching in England and Wales. It documents the low uptake of language learning in schools and sets

this against a series of claims for the benefits of language learning. These are outlined in the Introduction as follows. Language learning provides:

(1) a liberation from insularity
(2) an opening to other cultures
(3) the **knowledge** and **cultural capital** [learners] **need to succeed in life**
(4) [encouragement for pupils to] **appreciate and celebrate difference**
(5) the **foundation for learning further languages**
(6) the ability for pupils to study and work in other countries
(7) a potential positive impact on business and the economy

(10) **Collen, I., & Duff, J. (2024). Language trends England 2024. British Council.** https://doi.org/10.57884/PAFA-TF94 https://www.britishcouncil.org/research-insight/language-trends-england-2024

This edition of the British Council annual report on foreign language teaching in England documents the decline in modern language teaching in the country. At the same time, it claims that economic benefits could accrue to the nation if more of the population was skilled in the use of foreign languages. It cites research (Ayres Bennett et al., 2022) in which a benefit-to-cost ratio of at least 2:1 for languages education was claimed for the study of specific languages. Benefits would derive from:

(1) overcoming trade barriers
(2) fostering global business relations worldwide
(3) Use of key languages for business: Arabic, French, Mandarin and Spanish

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APPENDIX B: THE SPECIAL CASE OF CLASSICAL LANGUAGES

B.1 How do classical languages differ from additional languages in teaching, learning and research?

The study of classical languages possesses unique characteristics that differentiate the experience from that of learning other ALs. According to The Eurydice Document of the European Union (European Commission / EACEA / Eurydice., 2023 p. 147), a classical language is:

> an ancient language, such as classical Greek or Latin, that is no longer spoken in any country and is therefore taught for purposes other than communication.

This definition eliminates a major reason for learning a modern language—social or transactional use with other people. There are also powerful prejudices and beliefs concerning the role of classical languages in education, which will be discussed below. The rest lies with the cultural and moral baggage that they have accrued over the centuries. Why, therefore would school students decide to study either Latin or Ancient Greek? What can research tell us?

The research position regarding the study of classical languages is also unlike that for other languages. It has only recently become the subject of rigorous investigation. Survey articles by Holliday (2012), Bracke and Bradshaw (2020) and Vereeck et al (2024; 2025a; 2025b) have informed this appendix. All focus on historical perspectives as well as more recent research and demonstrate how long-accepted beliefs may depend on flawed older studies. Single research studies reviewed in this report come mainly from the USA and Europe, particularly Flanders, Austria, Italy and the UK. No research from outside these areas was found.

Some research topics found for other AL learning are missing. Issues such as the 'bilingual advantage', using ‘bilingual’ in the sense of children brought up with two or more languages in the family repertoire, clearly do not apply to classical languages. Research focuses on learners who have studied Latin or Ancient Greek in educational settings. Although some tertiary level qualifications such as law or medicine may require some study of Latin, economic or job-related benefits of knowing classical languages have not been explored here, since they will only be needed day-to-day in specialist fields like teaching, archaeology or religious studies. Most available research concerns Latin, the more frequently taught language. No recent empirical studies were found on the benefits of learning Ancient Greek alone, although arguments for Latin can often extend to Greek.

The structure of the rest of this paper is as follows:

- How did we get here? A brief history of teaching classical languages in modern times
- What does educational documentation have to say about aims and benefits?
- What does empirical research have to say about benefits?

B.2 How did we get here? A brief history of teaching classical languages in modern times

This is a relevant question in the case of classical languages because the teaching methods associated with them are still very distinctive from those used with AL. Indeed, some researchers attribute part at least of their effect to the ways in which they have been and are taught. From the era of Humanism to the early 20th century, Latin and Ancient Greek were central to school and university education in Europe. Until the 16th century, they could be treated as living languages, at least for some elites, with Latin in particular the lingua franca for science, philosophy, diplomacy, and public discourse, in addition to its use in Catholic liturgy.

When their use as common linguistic currency ended, Latin and Greek became objects of study, rather than languages for use, raising the question of how learning them benefited learners. The answers differed to some extent, depending on the national story. In countries such as Italy, Spain, Greece and Romania with a linguistic and cultural heritage from either civilization, a special position for either or both languages was assured. In 19th century Europe in general, and Germany in particular, where a main function of education was seen as building the moral and intellectual character of individuals, the study of Latin and Greek was an essential core. Because the languages were challenging, achieving mastery of them was seen as fundamental to building resilience and discipline, while study of the classical texts built critical thinking, intellectual rigor and understanding of human nature and culture. See section 4.3 for a comparison with modern research on these areas.

Less congenial to modern thinking is their association with European white (usually male) privilege. In the 19th and early 20th century days of empires, classical studies were seen as essential preparation for administrators abroad as well as for future leaders. In the UK, for example, classical studies were central to the curriculum of the most prestigious schools. Language study came with a large dose of ancient history and study of Roman military and governance strategies thought to be essential grounding for a career in politics or the colonies (Bradley, 2010). Latin and Greek were even exported to colonies for elite education of the children of governors and governed alike (Blouin & Akrigg, 2025; Goff, 2014; Vasunia, 2013). More positively, in the USA, classical civilization, especially Ancient Rome, had a profound influence on independent American identity and governance, with Latin and Greek as part of school curricula from early on (Winterer, 2002).

These historical resonances remain, with both positive and negative connotations. A survey of German parents of secondary school students (Gerhards et al., 2021) found that the majority considered knowledge of Latin to be a marker of culture and high status, more so than a knowledge of French. In some societies, studying Latin and Greek is still intellectually prestigious, as reflected in institutions like the Italian Liceo Classico or the German Gymnasien. However, Latin and Greek are also seen by some as too difficult for most students (Weeds, 2007), a badge of entitled social privilege (Gately, 2022) and, in spite of the popularity of 'sword and sandals' epics at the cinema, irrelevant to most modern people. Vereeck et al. (2024; 2025a) have provided historical reviews of the shifting and often ambivalent public perceptions of classical studies internationally.

B.3 Methodology matters: From the Grammar-Translation Method to the Reading and Active Methods

As with other ALs, the methodology used can significantly impact student success, skills, and motivation, something of which many researchers seemed very well aware, although there were no studies directly investigating this area.

The *Grammar-Translation method* has been associated with teaching Latin and Greek since the 19th century. This rule-based deductive approach is seen nowadays by most language teaching experts (Richards & Rodgers, 2001) as arid, unrewarding and fundamentally ineffective if a language is to be taught for use. However, with its emphasis on memory work, on analysis and grammatical parsing of sentences and the very high value given to accuracy, it is still often represented, when coupled with Latin or Greek, as a means of sharpening mental faculties and developing resilience. It remains popular with classics teachers in many contexts (Bulwer & Hunt, 2025). To make the same point, Piantaggini (2020) reported on the National Latin Exam survey of USA Latin teachers carried out in 2018, in which the number of respondents who primarily used Grammar-Translation (n = 478) was far greater than those using the two more modern approaches described below: *The Reading Method* (n = 202), and *Active Latin* (n = 27).

The Reading Method marked what (Paul, 2013) has called the 'democratic turn' of the past 50 years, which emerged to diversify classical language education. In the UK in the 1970s, for example, the introduction of non-selective comprehensive secondary education came with the principle of giving access to all subjects to all students. The need to motivate young people who by background and range of abilities were not the traditionally expected students of Classics was recognized.

The Reading Method was innovatory in both methods and content. Grammar is introduced gradually and inductively through example and lexical items are met in context. Both are first encountered embedded in readily comprehensible text. Vivid narrative, copious illustrations, interesting cultural information on daily life and even some humor are main features. The focus is on comprehension with a very limited requirement for learners themselves to create text in Latin or Greek. *The Cambridge Latin Course* (Cambridge Schools Classics Project, 2022) now in its 5th edition and including digital resources (https://www.clc.cambridgescp.com/clc-5th-edition), was a pioneer in this approach, and is used in the UK and numerous other countries. Its soap-opera-like story-line in the opening volume, about a family living in Pompeii on the eve of the volcanic disaster, proved very popular with students and teachers. Reports in Bulwer and Hunt (2025) show that in recent years textbooks and digital materials following these principles have been created in a number of other countries. *Reading Greek* (Joint Association of Classical Teachers, 2007) follows a similar pattern. Primary school Latin teaching also benefits from child-friendly resources like *Minimus* (Bell, 1999). See Holmes-Henderson and Kelly (2022) for an international review of Latin for primary school learners.

Recently, the democratic turn has developed further with a more questioning approach to the cultures of the classical world. Interest in its ethnic diversity and discussion of the moral issues raised by conquest, the institution of slavery and the limited roles accorded to women have been introduced by teachers to some language programs (e.g., Barnes, 2018; Sawyer, 2016).

Active Latin (see e.g., Hunt, 2022) and *Active Greek* (Manolidou & Goula, 2024) prioritize oral interaction, similar to the Direct Method once in use for teaching modern languages (Richards & Rodgers, 2001), promoting fluency in daily interactive language and requiring specially skilled and trained teachers able to use Latin or Greek to conduct lessons.

B.4 What claims for Latin and Ancient Greek are made in educational documents?

The documents summarized below highlight the objectives and assumed benefits of studying classical languages that find agreement in many contexts. These will inform the review of research in the following sections.

1. ***The Eurydice document of the European Union*** **(European Commission / EACEA / Eurydice, 2023):**

The objectives cited (p. 147) are

- acquiring knowledge of the roots of modern languages derived from the classical language
- understanding original texts in ancient literature
- becoming familiar with the civilization that used the language.

2. **Bulwer, J., & Hunt, S. (Eds). (2025).** ***Teaching Classics worldwide: Successes, challenges and developments.*** **Bloomsbury Academic:**

This international survey covers a wide range of objectives and benefits across different countries. Key examples are:

- Respect for the classical and religious heritage of one's country Italy, (Romania, Greece, Cyprus)
- Access to religious texts in their original language (Croatia)
- Latin is a prerequisite for some university subjects in some countries (Austria, Germany, Hungary).

3. **Pelling, C., & Morgan, L. (2010). *Latin for language learners*. POLITEIA:**

This pamphlet from a UK think-tank in support of including Latin in primary school curricula in England and Wales was written by two Oxford academics and endorsed by a list of public figures. Its claims are:

- Latin provides insights into the roots of Western culture.
- Learning Latin supports the development of intelligent learning and reasoning strategies.
- Studying Latin improves achievement in formal domains such as mathematics and the sciences.
- Transfer effects to competencies in other languages are expected.

Figure B1 draws together these claims and those from the historical review above in a similar way to Figure 1 in the main text.

Figure B1: *Benefits claimed for the study of classical languages*

Benefits to society as a whole

- Social justice: opening up classical studies to less privileged students
- Respect for cultural and historical heritage in countries which were part of the Ancient Greco-Roman world

Benefits to individuals

Cognitive:

- Enhanced reasoning abilities (especially from Latin)

Educational:

- Understanding the roots of some European languages
- Transfer to competence in other languages
- Language awareness
- Understanding the roots of Western culture
- Access to ancient texts with inherent value
- Transfer to competence in other subjects, especially mathematics

Affective:

- Affirming a sense of identity
- Appreciation of diversity, reduction of prejudice

Individual wellbeing:

- Access to some tertiary level courses requiring Latin
- Cultural capital

The claims made will resonate with the experience of many but empirical research is needed for validation.

B.5 What can empirical research tell us about the benefits of learning Latin and Greek?

Research themes are discussed here in the same order as that in which they appear in the main text of this report. In the next section, however, cognitive and educational benefits are taken together since studies crossed boundaries into both areas.

B.5.1. What are the cognitive and educational benefits?

Vereeck et al (2025b) surveyed how educators in Latin and Greek from the early 1900s to present times, have tried, with varying degrees of rigor and success, to present evidence that learning classical languages benefits students cognitively and educationally. In the sections below, we look at some specific aspects of this topic as investigated in recent years

B.5.1.1 Cognitive transfer

As discussed by Hauspie et al. (2024a), supporters of Latin often justify its study by referring to cognitive transfer. This is defined by Barnett and Ceci (2002) as the ability to apply prior learning in new contexts. This concept involves *near transfer* (e.g., grasping the principles of grammatical cases from Latin or Greek and applying this knowledge to another language) and *far transfer* (applying learning to other subjects, such as mathematics). Hauspie et al. (2024a) conducted a large-scale cross-sectional study with 1,731 Flemish secondary school students across three grades in order to test two hypotheses: pre-selectivity for Latin studies and that Latin studies would correlate with positive development in other areas over a school career. Three measures: intelligence, native language proficiency, and metalinguistic awareness were the focus. Data on attitudinal variables and socioeconomic status were also collected.

It was found that students choosing the Latin program generally came from better-off families. First-year Latin students were at the outset superior in all three measures compared with their non-Latin peers and also scored higher on attitudinal measures. The gap widened in second year students but narrowed in those in the final year, except for vocabulary within the native language proficiency area. The researchers suggested that the initial superiority was due to cognitive pre-selection for entry to the Latin program, but that in year 2 ongoing Latin study might have enhanced performances. However, by the end of secondary schooling, transfer benefits were less apparent. As well as the issue of pre-selectivity, it should be noted that no account was taken of how well the Latin students had mastered the language. Additionally, this was a cross-sectional study and a longitudinal study would provide more reliable evidence.

Hauspie et al. (2024a) questioned whether any transfer effects could be specifically linked to Latin, pointing out differences between Latin teaching goals and methods and those in modern foreign language instruction. Latin teaching in this context focused on a receptive understanding of its complex vocabulary and grammar and used often very different, highly analytic, learning procedures. Thus, if transfer effects exist, they may be as attributable to teaching methods as to the language itself.

B.5.1.2 Metacognition

A recent study supports the view that learning classical languages can improve students' overall attitude and strategies for learning. Canfarotta et al. (2022) conducted a multiple case study with

teachers and students from upper secondary schools in Spain and Italy, investigating how learning Latin and Greek could develop key competences for Lifelong Learning as specified by the European Commission: Directorate-General for Education, Youth, Sport and Culture. (2019) with regard to metacognition.

A mixed research design was used, involving convenience samples of 173 students (125 Italian and 48 Spanish) and 25 teachers (13 Italian and 12 Spanish) in the questionnaire-based quantitative part. For the qualitative part, semi-structured interviews were used with 40 students (20 Italian, 20 Spanish) and 18 teachers (9 and 9). The student questionnaire comprised:

- 15 questions aimed at identifying different concepts of learning.
- 20 questions on a 5-point Likert scale, identifying students' use of metacognitive strategies, including planning, monitoring, cognitive strategies, and awareness.

Interviews with students elicited their views of the key competences they developed through studying Latin and Greek, the amount of interest they felt during classes, and perceived links between life and study. Most students were happy to be studying Latin and Greek and agreed that learning these languages helped them develop metacognition to plan and prioritize their tasks. They specifically mentioned the ability to find their own errors and find connections with other subject areas.

Although teachers in this study were shown to possess metacognitive skills, they did not explicitly teach metacognition but seemed to employ overall metacognitive methodology involving evaluation, feedback, and interactivity. This aspect of the study echoed findings by Bracke and Bradshaw (2020) and the study of primary school MFL learners by Kirsch (2012) discussed in 4.2.2, both of which emphasized the influence of teachers' overall teaching approach on students' conceptions of learning.

B.5.1.3 Metalinguistic awareness

Although other terms may be used such as 'understanding the roots of modern languages' or 'understanding how inflected languages work', metalinguistic awareness (see section 4.2.1) ranks high amongst the claimed benefits of learning classical languages.

In a small study related to the research projects with multilingual students in Austria and German-speaking Italy discussed in section 4.2, Jessner et al. (2018) looked specifically at the role of learning Latin in the use of metalinguistic and cross-linguistic strategies. Two groups of young adult students (17-18 years old), all native speakers of German, were investigated. Group A (n = 30) had an English/Italian repertoire of AL learning. Group B (n = 20) had an English/Italian/Latin repertoire. Participants were given written question cues requiring them to draw information and consider the language in a text in a language (Romanian) unknown to them, while carrying out a think-aloud protocol. They were later interviewed.

Participants with Latin referred relatively little to using it as a 'helpful language' for cross-linguistic analysis, preferring their AL Italian for this. However, differences in problem-solving strategies were observed between the groups, with a more analytical approach and far less guessing from the Latin students. They were also better at articulating their thought-processes. The researchers stated that the passive/receptive focus of their Latin studies and the concentration on the analysis and translation of texts could account for these differences, both in their recourse to a more communicatively available living AL (Italian) for cross-linguistic support and in the more analytic processes used.

B.5.1.4 Support for additional language learning

Despite popular belief that learning Latin is especially good grounding for learning other languages, particularly Romance languages, reviews by Bracke and Bradshaw (2020) and Holliday (2012), found no up to date evidence to support this view. The often-cited study by Haag and Stern (2003) also goes against the grain of wide-spread belief. They investigated whether prior school learning of Latin or of French was associated with more successful learning of Spanish. Fifty female first year university students with German as their L1 were tested on their attainment via a German into Spanish translation task after a one-semester beginners' course in Spanish. All had studied English at school as their first foreign language. During their secondary school years, half had taken French and half Latin as their second foreign language. The students who had studied French scored significantly higher on the translation test, making significantly fewer errors in both Spanish vocabulary and grammar. It was also noted that students with a Latin study background made errors associated with 'false friend' confusions between Latin and Spanish words and produced erroneous Latin-like formations of some verb forms. Latin was therefore not seen to be as good a preparation as French for learning Spanish.

In the discussion, the authors pointed out that modern Romance languages had moved away from Latin in shared ways. By contrast with Latin, a highly inflected language in which attention to word endings is crucial, Romance languages operate with a system in which grammatical functions of words tend to be disambiguated by prepositions and word order rather than inflected endings. Knowing one modern Romance language before starting another was therefore seen as better grounding than knowing Latin.

B.5.1.5 Benefits to first language

Although there is support in the literature for a positive relationship between studying Latin and higher achievement levels in aspects of the L1 such as vocabulary knowledge (see Hauspie et al., 2024a) as well as reading comprehension and spelling, many of the relevant studies are vintage, dating to the 1970s and 1980s. Regarding more recent studies focused on the USA, Holliday (2012, p. 12) points out

> there is evidence to support that the study of Latin has several benefits, including increased English vocabulary and grammatical knowledge. […] However, research does not indicate that Latin is unique in this regard. Indeed, scholarship suggests that the study of Latin [is] like that of Spanish or French.

In the USA, Cooper et al. (2008) revisited the relationship found much earlier by Wiley (1984) between high school Latin study and overall college academic success, but particularly in verbal ability as measured by the Scholastic Aptitude Test (SAT), confirming that Latin study in high school is associated with higher verbal scores on the SAT, although the issue of pre-selection also remains a factor in these findings and German was also found to be beneficial.

B.5.1.6 Links with general academic attainment

Hauspie et al. (2024b) found that students who had studied Latin for six years in secondary school achieved better academic performance in all subjects in higher education, but particularly in non-STEM subjects, compared with those with shorter or no Latin study. This correlation was observed using end of first year GPA data from 1,898 students following twelve Bachelor level programs at Ghent University. However, the potential socioeconomic advantages of the cohort choosing Latin at school should be considered.

B.5.2. What are the conative/affective benefits of learning Latin?

As Hauspie et al. (2024a) point out, where Latin study is optional, cognitive pre-selection may influence the student dispositions found on these programs, with those choosing Latin studies already having different academic and attitudinal profiles. What do learners say?

Three studies that emphasize student perspectives on Latin were found: one from the USA, one from Canada, and one from the UK. These studies offer valuable insights, even if they are not generalizable to other contexts.

A questionnaire-based survey of Latin teachers and of over 10,000 middle and high school students of Latin in the USA was conducted online by Goodman between 2013 and 2014 (http://www.nationallatinsurvey.com/).

Many student respondents seemed instrumentally focused on Latin as a way of improving their English skills. Popular reasons for learning Latin included, 'learn vocab for SATs' (29.90% agree; 47.33% strongly agree,) 'learn how to translate well' (40.31% agree; 36.24% strongly agree), and 'improve my English skills' (34.49% agree; 41.64% strongly agree). However, in their critique of this study, Katz et al. (2020) note that the questionnaire format constrained students from freely expressing their reasons or enthusiasms.

By contrast, Katz et al. (2020) in a small-scale in-depth study explored the motivation of Canadian students committed to Latin for long enough to become proficient. The twelve participants were recent graduates or current university students with at least two years' experience of learning Latin. The mean age at which the participants had started learning Latin was 15.08 years old. All reported that they had been taught by the Grammar Translation method although a few had experienced some teaching from *The Cambridge Latin Course* and *Active Latin.*

From semi-structured interviews with twelve advanced Latin learners, the researchers identified nine main motivational themes, which reflected very high levels of agreement (in brackets how many respondents listed it): intrinsic interest (12), transferable language benefits (12), mastery and achievement (11), methodical approach to learning (11), interest in languages (10), program requirements [needed for e.g. law or medical courses] (9), unique aspects of Latin (9), learning for its own sake (8), and sense of prestige (7). Some themes aligned with modern language learning motivation theories, e.g., 'intrinsic interest', which fits with Self Determination Theory (Ryan & Deci, 2020), 'transferable language benefits' and 'program requirements' (instrumental orientation). Comments, such as 'a methodical approach to learning' and that Latin was a particularly good match for learners who had an affinity for mathematics reflect widely shared beliefs about benefits of learning Latin. The researchers comment on the influence that the analytical approach of Grammar Translation may have had on these views.

Bennett (2021) reported on research with younger, in some cases less enthusiastic, Latin learners in England - Year 9 students (ages 13-14) using *The Cambridge Latin Course*. The class was a mixed ability group of 24 of which eight were boys and 16 were girls. In the school involved, Spanish was the first foreign language, with Latin as one of the second foreign language options. The study was carried out when students were choosing which school subjects to continue with for their 16+ GCSE examinations. Some students seemed disgruntled and wished to drop Latin. The researcher wanted to find out why.

An anonymous questionnaire was followed by group interviews. Students' answers in the questionnaire about whether they intended continuing with Latin or not allowed the researcher to correlate their decisions with views expressed. Of the 24 students, 13 had decided not to continue with Latin. Groups of continuers and non-continuers were interviewed. The main reason emerging for

non-continuation was the perceived difficulty of the language. In the questionnaire, 58% overall said Latin was more difficult than other school subjects and 42% said it was of the same difficulty. Most, (77%), of those dropping the subject said that it was more difficult. Attitudes to grammar were ambivalent in that it was disliked even by 42% of continuers with only 13% of continuers positive. On the other hand, grammar study was seen as a necessary key to understanding and progress. Translation activities were also unpopular. The decision to continue seemed to depend on a balance between pupil confidence and perceived difficulty. It was notable that 21 out of the 24 expressed interest and enjoyment in the background information on life in Roman society accompanying the language work.

B.5.3 What are the cultural benefits of learning Latin?

Where there is an accompanying component of cultural and historical information, this is appreciated by learners, as we saw in Bennett's study. Such a component offers valuable cultural capital even to linguistically less successful students.

Cultural capital as a benefit, however, needs careful consideration. Research in Flanders (Hauspie et al., 2024a) indicates that students choosing to study Latin still tend to belong to families with higher socioeconomic statuses. In a polemic article, Gatley (2022) argues against the premise, expressed by a now defunct Minister of State for Education, that teaching Latin in less privileged schools in the UK would be a means of 'levelling up' students' life chances. In Gatley's view, there are good educational reasons for teaching Latin but merely providing access to high-status content does not of itself bring social justice.

On the other hand, access to entertaining, illuminating, or inspiring texts was emphasized in the educational documents in section B.4 as a fundamentally important reason for opening up the study of classical languages to students. Anomalously, though, no recent empirical studies addressing this benefit were found. The focus seemed to be on benefits from linguistic studies. However, the 'set books' content of national examinations, for example of the UK GCSE Latin exam, for pupils of around 16 years old, as specified by the OCR (Oxford, Cambridge and RSA) examination board (https://www.ocr.org.uk/qualifications/gcse/latin-j282-from-2016/) suggests that after two to three years' study some young people can be expected to reach the proficiency level required for comprehending and appreciating both prose and verse. Selections from Cicero, Virgil, Homer and the Greek historian Herodotus are on the current UK menu for exams in Latin and Greek at this level. Pupil voice on such choices and other aspects of their response to original works would be extremely useful to have.

B.6 Conditions for benefits to emerge and lessons to be learned

Compared with studies in modern foreign language learning, empirical research into learning classical languages is in its early stages, while public debate about their utility or intrinsic worth in education continues. Many older studies supporting common beliefs are limited and flawed. Where recent empirical research exists, findings concerning benefits are often less clear-cut than proponents of classical languages might wish and are often clouded by pre-selectivity effects.

The contextual information given with some studies suggests that choices about teaching methodology very significantly impact learning outcomes as well as motivation. More detailed research in this area would be useful to inform future approaches and clarify ways in which students of diverse backgrounds and abilities can flourish through classical studies.

Some findings are already encouraging with regard to metalinguistic awareness, particularly in supporting development in students' first languages and ability to problem-solve, for example in making headway with comprehension of an unknown language. However, as a basis for further AL learning there does not seem to be a distinct advantage from knowing Latin above other languages.

Research with students using a language course with significant cultural and background content and including comparative cultural and moral considerations seems to show only positive responses from learners (Barnes, 2018; Bennett, 2021). In that context, the glaringly obvious lack in current empirical research concerns the encounters afforded to students with the texts which have made 'The Classics' classic. Research into how such choices are made, how texts are made linguistically and culturally accessible and above all, what the learners' responses are to reading what different classical authors have to say could greatly inform a way ahead for approaches to classical language teaching that are based on real interest and genuinely experienced benefits.

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