‘The Language of the Future’?

Exploring Motivations for Learning Chinese in English Secondary Schools

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Abstract

The last decade has seen significant investment in Chinese language learning in English schools. This investment carries with it an expectation of future economic benefits for individuals and society. However, anglophone learners often find Chinese more difficult than European languages and take longer to reach professional competence. The ability of school provision to motivate sustained learning is therefore key to its success. The present study aims to investigate the motivations of Chinese as a Foreign Language (CFL) learners in English secondary schools after several years of instruction. Motivation is examined in the context of upcoming examinations and related to pupils' beliefs about difficulty and enjoyment. Self-determination theory (SDT) was chosen as the primary motivational framework. A total of 122 participants were recruited from five schools in southern England. A mixed-methods design was used to allow a full, nuanced understanding of learner experiences and beliefs. Quantitative data on student motivation and beliefs were collected using a questionnaire and supplemented by qualitative data from group interviews. Self-determination theory appeared appropriate for measuring Chinese learning motivation in the English secondary school context. Results suggested a strongly self-determined pattern of motivation among participants. Learners appeared to enjoy the process of learning a typologically different language despite its challenges. However, instrumentalist beliefs were also a strong motivator, and interview participants found repetitive or compelled activities demotivating. These findings suggest that current approaches are generally effective, and confirm Mandarin as an attractive MFL subject for English schools. Given that all participant schools were affiliated with the Mandarin Excellence Programme, the findings of the present study also provide encouraging evidence that direct investment may be having positive results.

Keywords: CFL, Chinese, Mandarin, language learning, motivation, difficulty, GCSE choices, self-determination, secondary education, England

Statement on use of AI

ChatGPT 4o (https://chat.openai.com/) was used to aid with writing, refining and troubleshooting R code used for statistical analysis. AI was not used to perform statistical calculations, make material changes to my work or to generate any content. I am aware that I am responsible for all content of this dissertation, including the parts where AI tools were used. I take full responsibility for ensuring that this dissertation complies with ethical rules for privacy and publication.

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1. Introduction

The United Kingdom has long experienced declining rates of language learning, leading to claims of a 'language crisis' (Bowler, 2020). The UK's vote to leave the European Union in 2016 amplified concerns that low language uptake would lead to increased xenophobia and insularity (Lanvers et al., 2021). In schools, language study post-14 has remained low despite policy interventions by each devolved nation (Bowler, 2020).

This has sparked anxiety about the UK's future. Although English is likely to remain a global language, an increasing proportion of global trade, diplomacy and research is predicted to use languages such as Chinese, Spanish or Arabic (Bowler, 2020, Tinsley & Board, 2017). Poor language skills may affect Britons' careers, as international employers increasingly expect applicants to speak more than one language (Hagger-Vaughan, 2016). The 'cultural agility' gained from language learning would also allow the UK to fully celebrate and take advantage of its existing linguistic diversity (British Academy et al., 2019).

Chinese is a priority language for policymakers, who have framed investment in school Mandarin provision as part of the UK's post-Brexit global repositioning (Tinsley & Board, 2017; Natzler, 2022; Gibb, 2017). The most prominent initiative has been England's Mandarin Excellence Programme (MEP). Launched in 2016, this collaboration between the British Council, University College London's Institute of Education and the Chinese Ministry of Education currently includes 76 secondary schools (IoE, 2025). The privately funded Swire Chinese Language Foundation (SCLF) additionally supports learning in 147 primary and secondary schools via 12 language centres across the UK (SCLF, 2025). Taken together, this represents around £50 million in public-private investment (Natzler, 2022). As a result, Mandarin is now the most taught foreign language in English schools after Spanish, French and German (Collen, 2023).

The long-term impact of this investment is still unclear. Some teachers have questioned whether Chinese is too challenging for lower ability pupils or those without the means to aspire to travel to East Asia (Xie, 2013). The first cohort of MEP pupils entered university in 2023, and the programme's effect on longer term trends is therefore unknown. However, entries to undergraduate courses with Chinese or Mandarin in their titles dropped by over 25% between 2019 and 2021 (British Academy & UCML, 2022). School-level Mandarin provision post-GCSE remains limited and inconsistent, and MEP teachers have acknowledged that sustaining pupil motivation is a challenging aspect of the programme (Impact Stories, 2024).

Motivation is described by Schunk et al. (2014, p. 5) as 'the process whereby goal-directed activity is instigated and sustained.' Ryan and Deci (2000, p. 69) claim that motivation involves 'energy, direction, persistence and equifinality'. Motivation is not, therefore, simply an impetus to begin learning a second language but also drives learners to persevere until they reach their desired proficiency (Dörnyei, 2005). School-level initiatives can only improve the UK's language skills if they motivate pupils to continue learning in adulthood. If such initiatives raise proficiency in the short term but erode longer term motivation, any gains made at school will quickly be lost.

The current environment is noticeably different from my experience learning Chinese as a Foreign Language (CFL) at university over 25 years ago. In 2001, only around 100 people graduated in the UK with a degree in Chinese every year and the subject was not widely offered in schools (Higgins & Sheldon, 2001). Throughout my career as a Chinese translator, I have noticed growing interest in CFL in the UK. However, relatively few learners appear to persist with Chinese long-term or reach advanced proficiency. While the idea of learning Chinese at school was immediately appealing to me, I was unsure about whether this approach would be effective in encouraging long-term learning. This prompted me to investigate CFL motivation in secondary classrooms.

The present study aims to gather evidence concerning the experiences of CFL learners in English secondary schools. It will examine the motivational profile of learners and how pupils' beliefs about difficulty and enjoyment affect their experiences and opinions about language learning. The study focused on older year groups to allow insight into the effect of sustained learning and preparation for examinations on motivation. A mixed-methods design was adopted to ensure that nuance around perceptions of Chinese was adequately captured. The study seeks to inform future language policy and ensure that Chinese is taught in a way that engages and inspires learners.

2. Literature review

This chapter provides a review of selected literature related to Chinese as a Foreign Language (CFL) motivation in English secondary schools. Section 2.1 provides definitions of 'Chinese' and 'Mandarin' for the purposes of this study. Section 2.2 outlines social and policy discourses relating to Chinese as a school subject, community language and source of economic and social capital. Section 2.3 explores difficulty and ability beliefs as they relate to Chinese learning and motivation. Section 2.4 explores the role of enjoyment as an affective factor. Finally, section 2.5 assesses the suitability of self-determination theory (SDT) for measuring motivation in this context and identifies current research gaps.

2.1 Terminology

'Chinese' can refer to a number of varieties forming an independent branch of the Sino-Tibetan language family and spoken predominantly in China, Taiwan, Hong Kong and Singapore (Zhu & Li, 2014; Higgins & Sheldon, 2001). 'Mandarin', on which Standard Chinese is based, refers to a standard form of a range of northern dialects (Zhu & Li, 2014). In alignment with the broader literature, this discussion will refer to Chinese as a Foreign Language (CFL) learning but specify Mandarin for the English curriculum subject.

2.2 Chinese as a foreign language (CFL) provision in English schools

This section will provide an overview of the social and policy context surrounding language learning and CFL in English schools. While the issues discussed may be generalisable across the UK, each devolved nation has its own education policy and should be understood as a distinct environment (Parrish & Vernon, 2022).

2.2.1 CFL learning in England

A trend of monolingualism across anglophone nations is often attributed to the rise of Global English as an international lingua franca (Dörnyei & Csizér, 2002). English L1 speakers often struggle to identify which additional language will bring the most instrumental benefit and encounter limited opportunities to practice speaking. This can encourage a monolingual mindset that holds that 'English is enough' (Ushioda, 2017; Lanvers & Coleman, 2013; Lanvers et al., 2021).

Despite official recognition of the strategic importance of language skills, politicians rarely explicitly challenge 'English is enough' narratives or highlight the individual and community benefits of multilingualism (Bowler, 2020). Instead, official arguments are heavily instrumentalist and emphasise the economic benefits of language learning (Parrish, 2019; Lanvers et al., 2021; Parrish, 2021). This

approach can be categorised as neoliberal due to its framing of language skills as a form of economic and social capital: objective skills that can be measured and monetised in a globalised trade and employment market (Ayres-Bennett & Hafner, 2022; Ushioda, 2017; Codó & Sunyol, 2019). Neoliberal ideologies appear to privilege 'prestige' languages such as standard varieties of the 'Big Three' (French, Spanish and German), and devalue, 'other' or render invisible the many community languages spoken in the UK (Ushioda, 2017; Lanvers, 2020).

Within this discourse of language as capital, Chinese as a Foreign Language (CFL) is often valorised as important and economically useful (Pan, 2023). China's rising economic and geopolitical power has led to concerns about the UK's limited China expertise and language skills (Natzler, 2022). Tinsley and Board (2017) calculated that Chinese was the second most valuable foreign language for the UK in terms of business and trade, education, diplomacy, and tourism. CFL is also heavily supported by the Chinese government as a means of increasing trade ties and soft power (Zhu & Li, 2014; Lu, 2013; Xie, 2013).

2.2.2 The English secondary school context

Languages other than English are referred to collectively as 'Modern Foreign Languages' (MFL) in UK schools. Referring to certain languages as 'foreign' is arguably problematic in the modern context, as globalisation and technological advances erode the connection between named language and nation-state (DFG, 2016; Hagger-Vaughan, 2016). Nevertheless, this discussion will retain the term, as it allows direct reference to classroom language learning.

Mandarin has been a mainstream MFL subject since 2013 and is the most widely taught behind the 'Big Three' (Lam, 2020; Tinsley & Board, 2014; Collen, 2023; Collen & Duff 2024). The 2025 Language Trends Survey reported that 7% of responding state schools and 15% of independent schools taught Mandarin as a curriculum subject at Key Stage 3 (aged 11-14) (Collen & Duff, 2025).

English school qualifications are awarded via summative examination: General Certificate of Education (GCSE) exams are taken at the end of Key Stage 4 (aged 15-16) and Advanced Level (A-level) exams at the end of Key Stage 5 (aged 17-18) (Tinsley & Board, 2014). Uptake of MFL GCSEs declined sharply after being made optional in 2004, beginning a vicious cycle of chronic teacher shortages and lack of curriculum time (Bowler, 2020). MFL GCSEs are also perceived as relatively difficult and harshly graded, leading many schools to restrict MFL entries to higher-attaining students (Parrish & Lanvers, 2018; Parrish, 2021; Hagger-Vaughan, 2016).

Against this backdrop, however, Chinese GCSE[1] entries have risen from 3,132 in 2014 to 7,854 in 2024 (JCQ, 2018, 2024). This is likely driven by both an increase in Chinese heritage entrants and the growing popularity of the Mandarin Excellence Programme (MEP) (Impact Stories, 2024). Under the MEP, students are guaranteed 8 hours per week of instruction, four of which are face-to-face, and have the opportunity to take part in a two-week study trip to China (British Council, 2025). This approach has been broadly successful, with MEP schools providing 28% of state school GCSE Chinese candidates in 2023 (Impact Stories, 2024). There is also evidence that MEP students outperform other candidates in GCSE attainment after adjusting for heritage status (Impact Stories, 2024).

2.2.3 Heritage learners

Due to historical ties with Hong Kong, the majority of the UK Chinese population are Cantonese speakers (Li & Zhu, 2012). Migration from Mainland China and the growing status of Standard Chinese are likely to have influenced the linguistic balance of the UK's Chinese community (Tsung & Cruickshank, 2011). However, methodological limitations in census data make it impossible to capture this accurately for England (Sebba, 2017). While heritage learners traditionally attended Chinese community schools, funding issues and growing CFL provision in mainstream schools are making this increasingly uncommon (Li & Zhu, 2012; Tinsley & Board, 2014).

'Heritage learner' (HL) is difficult to define and covers a wide range of proficiencies and identities (Bale, 2010). Valdés (2001, p. 2) defines the HL student as 'raised in a home where a non-English language is spoken, who speaks or at least understands the language'. Other definitions focus on ethnic origin or parental L1 (Comanaru et al., 2009). For the purposes of this study, HL is defined as any child who was exposed to a variety of Chinese in the home, regardless of proficiency.

2.2.4 Mandarin as an elite academic subject

Parrish (2021) argues that MFL is coded as a middle-class, academic subject suitable only for those who aspire to university and international travel. Mandarin provision in particular is highly skewed towards the independent sector, higher attainment and higher socio-economic status children (Tinsley & Board, 2014; Parrish, 2019; Research Stories, 2022). Independent schools entered 33% of GCSE Chinese candidates in 2019 despite only educating 7% of the English school population (Impact Stories, 2024).

School leaders who choose to offer Mandarin often describe it as a form of elite education that will boost pupils' prospects and give their school a competitive edge (Xie, 2013; Tinsley & Board, 2014;

[1] Official GCSE figures conflate Mandarin and Cantonese qualifications.

Codó & Sunyol, 2019). However, the definition of elite education and its overlap with middle class aspiration are often fuzzy (Ball, 2015). Since 2021 the MEP has aimed to improve participation from disadvantaged groups, and the proportion of participants eligible for Free School Meals (FSM) rose from 16% in 2016 to 19.9% in 2023 (Impact Stories, 2024). However, Xie (2013) found that MFL subject leaders in schools in less affluent areas expressed doubts about the value of Mandarin for their pupils.

In summary, the expectation that school leavers will be able to 'converse and do business' (Truss, 2014) with Chinese counterparts is a key instrumentalist driver of government investment. There is evidence that pupils have also absorbed instrumentalist messages, with Parrish (2019) finding that pupils in English schools believed Chinese to be economically useful. However, it is not clear whether this expectation is realistic. As Milton (2022) points out, limited curriculum time rarely allows MFL learners to move beyond basic proficiency by GCSE. In addition, some features of Chinese may pose an additional challenge and increase acquisition time. These features are explored in the following section.

2.3 Difficulty and CFL

The United States Foreign Service Institute defines Chinese as a category IV 'super-hard' language based on average acquisition time for English L1 speakers (DoS, n.d.). While difficulty is likely the result of complex interactions between linguistic, psychological and pedagogical factors (DFG, 2016; Stevens, 2006), Chinese can be said to have a higher number of linguistic elements that are unfamiliar or challenging for anglophone learners.

2.3.1 What makes Chinese 'difficult'?

The basic speech unit of Chinese is the syllable, represented in written form by logographs, or characters. These syllables can act as monomorphemic words or can be combined as bound or free morphemes to make longer words (Yang, 2015; Ruan & Medwell, 2019; McBride et al., 2022; Xu & Chen, 2022). There are only 420 possible syllables compared with several thousands in English (Barker, n.d.). This leads to an unusually high number of homophones: the average syllable in Standard Chinese has 11 different meanings (Yang, 2015).

One way of distinguishing syllables is by their pitch contour, or tone (Higgins & Sheldon, 2001). Tones happen at the suprasegmental level and affect semantic meaning (McBride et al., 2022). Standard Chinese has four tones plus an unstressed, 'neutral', tone. English speakers often struggle to distinguish or reproduce tones (Lam, 2020; Tinsley & Board, 2014).

Homophones can also be distinguished using written characters. Although more than 30,000 characters exist and L1 speakers know around 8,000, only around 3,500 are needed for everyday comprehension (Lam, 2020). Although some characters are ideographic, over 80% are formed by combining elements or 'radicals' (McBride et al., 2022). Many characters look extremely similar to beginner learners (e.g. 未 *wèi* 'not yet' vs 末 *mò* 'end') (Yang, 2015). A lack of grapheme-phoneme correspondence allows mutual intelligibility between language varieties, but means that learners must memorise pronunciation, form (including written stroke order) and meaning separately. Finally, combining characters in multimorphemic words can change their meaning or pronunciation (Yang, 2015; Lam, 2020; McBride et al., 2022).

Various transliteration systems have been developed, of which the most popular is pinyin (Yang, 2015). Although easier for English speakers than character learning, pinyin can also cause confusion due to L1 transfer (Lam, 2020). For example, the c in 'can' is pronounced [ts^{h}] in Standard Chinese but [k] in English. The alveolo-palatal sibilant consonants q [tɕ^{h}], j [tɕ], and x [ɕ] are particularly challenging for English L1 speakers to recognise, produce and decode (Ruan, 2025).

Chinese grammar has been variously described as meaning- rather than form-based (Tinsley & Board, 2014) or discourse- rather than sentence-oriented (Lam, 2020). In other words, grammatical function is heavily dependent on context, and rarely involves morphological markers. While this has led to a perception that Chinese grammar is 'easy', a number of features are non-intuitive for European L1 learners. For example, the aspect marker *le* 了 is often confused as a marker of past tense, when in fact it is a perfective marker that is not limited to past statements (Tinsley & Board, 2014; Lam, 2020; Hu, 2010).

Aside from linguistic features, a lack of historical contact between China and the West means that English L1 learners have limited cognates or shared cultural references to draw on (Higgins & Sheldon, 2001; Wang & Higgins, 2008). Pedagogically, Chinese has also traditionally relied on rote memorisation, which is not heavily featured in English schools (Yang, 2015).

While none of these features prevents English L1 speakers from successfully learning Chinese, it is common to find that progress is slower than for European languages. If learners have unrealistic expectations a perceived lack of success can prove demotivating (Lam, 2020). To understand learners' feelings of competence, it is therefore important to explore beliefs about difficulty and ability.

2.3.2 Beliefs about difficulty and ability

The linguistic features described above shape learner beliefs about the difficulty of Chinese. Beliefs are a form of metacognitive knowledge that relate to an individual's subjective reality (Yang, 2015). These are shaped by personal experience and are socially mediated. Beliefs do not have to be objectively true or internally consistent and can be affective or cognitive in nature. They may influence learning behaviour and strategies, but not always in predictably linear ways (Yang, 2015).

Hu (2010) measured perceptions of difficulty among 164 British undergraduate CFL learners using a Chinese Language Learning Difficulty Survey. Six factors were identified as particularly challenging: grammar, aural reception, words, oral production, pronunciation and recall. Surprisingly, grammar was the most frequently mentioned difficulty factor. While perceptions of difficulty were shown to vary by self-rated proficiency, this was only significant for aural reception and oral production. However, self-report data was not correlated with objective measures of proficiency, and respondents were relatively inexperienced: over 40% had studied Chinese for less than a year. This suggests that self-reported proficiency may in fact capture a distinct construct such as confidence.

A related concept is beliefs about ability to learn Chinese. These are referred to as self-efficacy when relating to an individual's belief about her own ability (Bandura, 1982). However, individuals can also hold more abstract beliefs about the abilities or aptitudes needed to successfully learn a language (Horwitz, 1988).

The most commonly used instrument for measuring beliefs is Horwitz's (1988) Beliefs About Language Learning Inventory (BALLI). This instrument measures student beliefs about a range of aspects of learning including aptitude, difficulty, strategies and motivation. This scale was designed based on consultation with teachers and is mostly used in descriptive studies (Yang, 2015; Nikitina & Furuoka, 2006).

2.3.3 Difficulty and CFL motivation

Beliefs about difficulty can affect enrolment rates, dropout rates, and teacher and parental support (Wang, 2009; Tinsley & Board, 2014; Zhang & Li, 2010). However, studies of young CFL learners report a nuanced picture. Tinsley and Board (2014) found that while Chinese was rated as difficult overall, pupils who had learned Chinese believed it to be less difficult than those who had not, and some learners reported enjoying the challenge. Similarly, Higgins and Sheldon (2001) found that learners reported feeling proud when others recognised that they were learning a difficult language.

Yang (2015) used a modified version of the BALLI to measure beliefs among CFL learners and teachers in English secondary schools. She found significant differences between teachers' and

children's beliefs about the relative difficulty of Chinese and innate ability to learn. Confidence increased and difficulty ratings decreased as learning progressed. Teachers expressed a belief that hard work and memorisation were important, but did not feel empowered to expect them from pupils given limited contact time. This study gives the fullest picture in the available literature of English secondary pupil beliefs about learning Chinese. However, measurement of motivation was limited to integrative and instrumental reasons for learning. This limited the study's ability to explore how difficulty beliefs interact with motivated behaviour.

Lam (2020) carried out a qualitative case study of teachers' motivational strategies in four English schools. Consistent with previous studies, Lam found that motivation among pupils was high despite perceptions that Chinese was difficult and the teachers strict. In fact, children relished the challenge: many described character writing as demanding but not boring, and one even found it therapeutic. Similarly to Higgins and Sheldon (2001), pupils derived a strong positive sense of identity from the perception that they were learning something difficult. However, Lam (2020) also found that beliefs about the difficulty of Chinese and the GCSE led to low self-efficacy among some learners.

2.4 Enjoyment and CFL

Enjoyment of learning is a positive affective factor shown to influence SLA attainment (Guo & Qiu, 2022). Increased interest in enjoyment in SLA research is reflective of the discipline's 'affective turn', as well as the influence of positive psychology, which seeks to explain the positive factors that enable learners to flourish (Al-Hoorie, 2017). Fredrickson's (2001) broaden-and-build theory posits that positive experiences help learners to broaden their repertoires of possible thought and action, build resources and counter negative experiences.

Dewaele and MacIntyre (2014, 2016) coined the term Foreign Language Enjoyment (FLE). They argued that while enjoyment is negatively correlated with anxiety, the two are not opposites: when undertaking a challenging activity, participants are likely to feel both anxiety and enjoyment. In their 2014 study of 1,746 language learners from across the globe, they found that FLE was more prevalent than anxiety, particularly for more experienced learners. While North American learners experienced the most enjoyment relative to anxiety, the relationship was reversed for Asian learners. FLE can change over time based on internal factors and outside influences, and can even be contagious (Guo & Qiu, 2022). Guo and Qiu (2022) suggest that, due to the subjective and transitory nature of emotions, qualitative methods are particularly appropriate for FLE research.

While only a limited number of studies have measured CFL FLE quantitatively (e.g., Zhao et al., 2023), enjoyment is a common emergent theme in CFL motivation research. Beginner learners often report

high enjoyment and feelings of novelty (Xie, 2013). However, competence is a moderating factor: more proficient learners report higher enjoyment and those who struggle report that their frustration reduces enjoyment (Smith & Li, 2022).

In summary, a combination of unfamiliar linguistic factors is likely to contribute to increased acquisition time for anglophone CFL learners. However, high perceived difficulty can be demotivating or enjoyable depending on learner beliefs and proficiency. This balance is likely to fluctuate over time. Due to the optional nature of Mandarin as a school subject, any shift towards demotivation is likely to result in discontinuation (Xie, 2013; Parrish & Vernon, 2022). It is therefore important to explore how motivation is built and sustained in a classroom environment.

2.5 Theorising CFL motivation

Historically, second language acquisition (SLA) motivation research has favoured theoretical frameworks that recognise the unique aspects of language learning. For example, Gardner's (1985) Socio-Educational Model (SEM) centres the learner's relationship with the L2 speaker community through its concepts of integrative and instrumental orientations. Integrative learners wish to be accepted by the L2 target community, while instrumental learners hope to gain external benefits from learning. A later model, Dörnyei's (2005) Second Language Motivational Self System (L2MSS), theorises integrative orientation as part of a broader vision of the future self as a successful language learner. While the L2MSS does not need learners to relate to specific L2 target community, its core concept of the 'ideal L2 self' does assume that learners have built language learning into their identity.

Recent years have seen calls to move away from SLA-specific models in favour of theories from general educational psychology (Al-Hoorie & Hiver, 2020). This can allow for greater dialogue across disciplines and better visibility of SLA studies (McClelland & Larsen-Hall, 2025; Oga-Baldwin et al., 2019). Self-determination theory (Deci & Ryan, 1985) is often suggested as a theoretically and empirically robust option due to its focus on learner experience and flexibility to describe the interplay between internal and external factors (Al-Hoorie et al., 2025).

2.5.1 Self-Determination Theory (SDT)

SDT defines motivation as a combination of desired goals and regulatory processes (Deci & Ryan, 2000). The more an individual determines her own motivation, the more she is theorised to have power over her own activity. Ryan and Deci (2000) argue that humans are driven by intrinsic motivation, i.e. interest, curiosity, or appetite for challenge. Extrinsic motivation derives from external compulsion or expectation and can undermine intrinsic motivation. While intrinsic

motivation is theorised to be a more effective long-term motivator, SDT posits that extrinsic motivation can be gradually internalised to become self-determined (Deci & Ryan, 1985). Finally, 'amotivation' or absence of motivation, occurs when individuals do not value an activity or feel incompetent to perform it (Noels et al., 1999). Several 'sub-theories' have been developed within SDT, with organismic integration theory (OIT) and basic psychological needs theory (BPNT) the most commonly used in SLA research (Al-Hoorie et al., 2025).

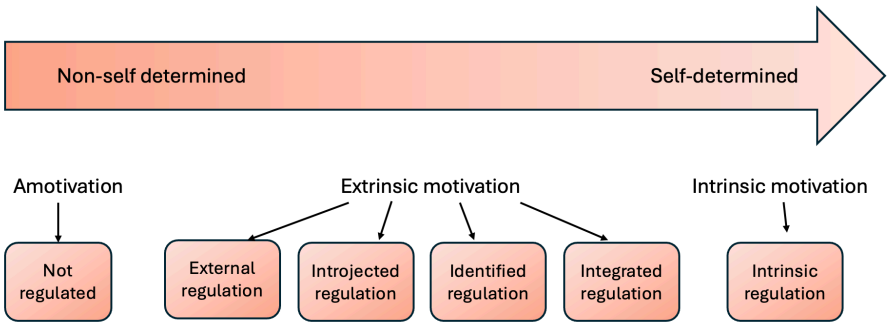
2.5.2 Organismic integration theory (OIT)

OIT (Deci & Ryan, 1985) describes motivational regulation on a continuum from amotivated to fully intrinsic. Regulation refers to the process of controlling motivation to direct behaviour, with self-determined motivations being more autonomously regulated (Deci & Ryan, 2000). The different types of regulation and their relationship to motivation constructs is illustrated in Figure 2.1. *External regulation* is determined by external reward or sanction. *Introjected regulation* refers to external influences that are experienced internally as guilt or a desire to please. *Identified regulation* is driven by a belief that a task is important. *Integrated regulation* reflects that external forces have been fully incorporated into a learner's value system and self-image. This regulation type is excluded from most quantitative instruments due to high observed intercorrelations with identified regulation or intrinsic motivation (Noels et al., 2000; Pelletier & Rocchi, 2023). Finally, *intrinsic regulation* involves tasks which are undertaken for inherent challenge, joy or interest.

OIT posits that intrinsic, integrated and identified regulation are all self-determined, and can be summarised as a learner performing a task because they find it interesting (intrinsic orientation) or important (extrinsic orientation). While all learners are expected to move dynamically across the regulation continuum, successful sustained learning is more likely for individuals who display more self-determined regulation (Deci & Ryan, 1985, 2000; Noels et al., 1999).

Figure 2.1

The self-determination continuum (Deci & Ryan, 2000).



2.5.3 Basic psychological needs theory (BPNT)

BPNT posits *autonomy*, *competence* and *relatedness* as preconditions for intrinsic motivation (Deci & Ryan, 1985, 2000; Oga-Baldwin et al., 2022). *Autonomy* refers to a clear sense of purpose and ability to make unimpeded choices. *Competence* is related to ability beliefs, novelty and optimal challenge (Deci & Ryan, 2000). *Relatedness* measures learners' connections to others through cultural ties and classroom experiences (Noels et al., 1999).

2.5.4 SDT in second language acquisition (SLA) research

Noels et al. (2000) were the first to validate an SDT questionnaire for SLA. Their Language Learning Orientations Scale (LLOS) was administered to 159 Canadian learners of French as a second language. The researchers found that the LLOS measured the seven theorised OIT constructs reliably and distinctly, and that correlations were consistent with a one-dimensional continuum. As expected, amotivation correlated negatively with positive outcome variables (perceived competence, freedom of choice and intention to continue) and positively with anxiety, while non-self-determined subscales (external regulation and introjected regulation) did not correlate strongly with any variables. Within self-determined regulations, however, identified regulation unexpectedly outperformed intrinsic regulation. The authors hypothesised that both regulation types may need to interact during sustained performance: i.e., tasks should ideally be perceived as both important and interesting.

Al-Hoorie et al.'s (2025) systematic review found that a large number of studies have successfully used Noels et al. (2000)'s LLOS instrument, demonstrating generalisability beyond the Canadian context. However, Al-Hoorie et al. (2025) raised concerns that these studies were predominantly descriptive, focused solely on OIT and BPNT sub-theories, and were reliant on a single instrument to measure independent and dependent variables, raising the possibility of common method bias. Al-

Hoorie et al. (2025) challenged researchers to move beyond descriptions of individual differences to identify ways to boost motivation outcomes: in other words, to focus on 'motivating' rather than 'motivation' (Dörnyei & Ushioda, 2021).

2.5.5 MFL motivation in English secondary schools

A number of researchers have advocated for the use of self-determination theory to study MFL motivation in English schools. They argue that SDT's ability to capture the dynamic interaction between internal and external influences makes it well suited to anglophone school contexts, where language learning is seen as an optional academic subject and disconnected from L2 speaker communities (Parrish & Vernon, 2022; Lanvers & Graham, 2022). In this way it has an advantage over Gardner's (1985) SEM, which focusses on relationships with an L2 community, and Dörnyei's (2005) L2MSS, which assumes that learners build language learning into their self-concept (Parrish & Lanvers, 2018). SDT has also been suggested as an appropriate framework for assessing the impact of English MFL education policies, assessment standards and attainment targets on teacher and learner autonomy (Lanvers & Graham, 2022).

Parrish and Lanvers (2018) surveyed 70 headteachers, 119 department heads and 666 Year 10 pupils in England to explore the relationship between MFL GCSE choice and organismic integration theory (OIT). The study combined student motivation data gathered using Ryan and Connell's (1989) Academic Self-Regulation Questionnaire (SRQ-A) with school-provided data on MFL GCSE choices. The authors found that learners in schools which restricted MFL GCSEs to higher-attainment candidates showed the highest levels of external regulation. Intrinsic motivation was higher in schools with either free choice or compulsory enrolment, while identified regulation was higher for free-choice students. The study's decision to use individual school policy as the core independent variable, combined with the wide range of schools surveyed, gave its authors insight into how schools' interpretation of national policy influences that policy's effectiveness. The authors concluded that schools which encourage only high-attainment pupils to take MFL GCSE may inadvertently undermine these pupils' autonomy. They were able to make clear recommendations against the use of such policies, thereby fulfilling Al-Hoorie et al. (2025)'s requirement to focus on what was motivating rather than simply describing motivation. Other studies on SDT and English MFL classrooms include Parrish and Bailey's (2024) study on the effect of pupils' multilingual exposure on MFL motivation and Parrish et al.'s (2024) study of autonomy frustration among MFL students. The latter study built on Parrish and Lanvers (2018) to analyse the wider role of autonomy on MFL motivation in English secondary schools. It found that autonomy frustration increased as learners progressed through year groups.

2.5.6 SDT and CFL motivation

The seminal study using SDT to explore Chinese learning motivation was carried out by Comanaru et al. (2009), who administered an amended version of the LLOS to 145 Canadian adults and analysed the results according to heritage status. The study adopted a mixed-methods approach, combining quantitative measures of motivation, regulation and basic psychological needs with qualitative analysis of open-ended questionnaire responses. The research concluded that heritage learners (HLs) had significantly different motivational profiles to non-heritage learners (NHLs). HLs were more likely to report that Chinese was an important part of their identity and to value autonomy, while NHLs reported higher levels of intrinsic motivation. This study is widely cited as the first to use SDT to examine Chinese learning and differences according to heritage status. However, its sample of adult learners in Canada, a country with a much larger Chinese community, makes it difficult to generalise to the UK secondary classroom context.

No published studies have been identified that used SDT to measure CFL motivation directly in English secondary classrooms. Yang et al. (2013) applied SDT to English CFL learners' after-school social-network use, finding that teacher intervention boosted learners' autonomy, competence and relatedness. While the study's narrow focus on the effectiveness of a single pedagogical approach in informal settings limits its relevance to the present study, it may provide a useful template for future intervention studies using SDT in English classrooms.

Higgins and Sheldon (2001) carried out a two-year case study of three Mandarin cohorts in one English secondary school. Their methods were exploratory and descriptive, combining qualitative survey data with quantitative comparison of Mandarin and French learner personality traits. This was one of the first studies to explore Chinese learning in English schools and gave useful preliminary insight into the unique motivational characteristics of CFL learners. Although SDT was not directly referenced, interest and perceptions of difficulty emerged as prominent themes. However, the study's focus on a single school and changes in social attitudes to CFL since it was published limit its applicability to a modern population. Very few parents or students identified Mandarin as economically useful, and GCSE qualifications were assumed to be suitable only for L1 or heritage speakers.

Wang (2009) carried out a qualitative study of current CFL learners, former learners and teachers in two London schools. The researcher chose to frame motivation in terms of Gardner's Socio-Educational Model (SEM; 1985). However, the most commonly reported reason for learning was neither integrative nor instrumental, but 'because it is something different' (Wang, 2009, p. 88). Difficulty and boredom were the main reasons for discontinuation. These findings appear consistent

with SDT concepts of intrinsic motivation, autonomy and competence, and reinforce arguments that SDT may be a better fit for English classroom learning (Parrish and Lanvers, 2018).

Interest was also a core theme of Xie's (2013) mixed-method thesis on headteachers and pupils' reasons for choosing Mandarin in five English secondary schools. Headteachers and pupils reported that interest in Mandarin was initially high but dropped off when pupils failed to make expected progress. This finding relates to the concept of competence as a basic psychological need as defined by SDT.

In summary, while prior research on CFL motivation in English schools does yield useful insight, the breadth and depth of coverage remains limited. Despite growing evidence of the potential for self-determination theory to capture the complex and evolving dynamics of MFL motivation in English schools, this framework remains under-used in CFL research (Parrish & Lanvers, 2018).

2.6 Conclusion

Chinese learning in the UK has received significant investment that carries the expectation of long-term economic benefits. As a relatively difficult language for anglophone learners, however, Chinese learning must be sustained for significantly longer than European languages if learners wish to reach professional competence. The ability of school provision to inspire sustained motivated behaviour is therefore key to its success.

There are some encouraging signs. Uptake of Mandarin in schools is rising steadily, thanks in part to the Mandarin Excellence Programme. Early research suggests that young learners are not put off by the image of Chinese as a difficult language, find it less difficult than imagined, and even enjoy the challenge and prestige that learning Chinese brings.

However, the long-term picture is unclear. Mandarin provision at Key Stage 5 is highly inconsistent and investment at school level has so far not increased uptake in the tertiary sector (Impact Stories, 2024). There is a need for research into motivation beyond the initial years of study. The present study aims to fill this literature gap and provide an enriched picture of CFL motivation. It will do so by measuring motivation using the SDT framework across multiple year groups and combining qualitative and quantitative lenses during analysis.

3. Methodology

This chapter will describe and justify the present study's methodological approach. A cross-sectional, mixed-methods design was chosen to capture interactions between constructs. Quantitative data on student motivation and beliefs were collected using a questionnaire and supplemented by qualitative data from group interviews. In accordance with the findings of the literature review, self-determination theory (SDT) was chosen as the study's primary theoretical framework.

The mixing of methods followed a convergent parallel design: quantitative and qualitative data were collected and analysed in parallel, and results were interwoven to allow the fullest possible picture to emerge (Ivankova & Creswell, 2009; Cohen et al., 2018). Quantitative analysis was conducted using statistical methods while qualitative analysis followed reflexive thematic analysis (Braun & Clarke, 2021).

3.1 Research questions

Four research questions were designed to fully capture the motivational profile of secondary school learners, as well as the interaction between motivation and difficulty/enjoyment.

> RQ1: What is the nature of motivation to learn Mandarin among secondary-aged learners in English schools?
> - 1a: Are there differences in the motivational profiles of those who want to continue learning and those who do not?
> - 1b: Does motivation vary according to year group, heritage language status or school?

This question aimed to build a motivational profile of the sample. It was hypothesised that intrinsic motivation would correlate significantly with intent to continue, and that, as reported by Comanaru and Noels (2009), heritage learners would report lower intrinsic motivation and higher extrinsic motivation than non-heritage learners. School-level analysis was added to the research questions during fieldwork in an attempt to capture the effect of different classroom environments.

> RQ2: How difficult do pupils find Mandarin?
> 2a: Does this differ by skill (listening/reading/writing/speaking)?
> 2b: What are pupils' beliefs about their ability to learn Mandarin?

This question measures pupils' beliefs about the difficulty of Chinese and learner ability. It was hypothesised that linguistic elements that are unique to Chinese languages (e.g. tones and characters) would be perceived as more difficult than elements shared with European languages.

A further sub-question ('What are pupils' beliefs about the difficulty of Mandarin compared to other Modern Foreign Languages?') was removed during the course of analysis. Fieldwork and questionnaire responses suggested that relatively few participants had had significant experience of learning other Modern Foreign Languages, and the majority of responses appeared to be based on respondents' knowledge of Chinese. As a result, it was decided that this sub-question did not contribute sufficiently to overall understanding to merit inclusion.

> RQ3: How enjoyable do pupils find learning Mandarin?
> 3a: Does this differ by skill (listening/reading/writing/speaking)?

This question examines pupils' experience of enjoyment while learning Chinese.

> RQ4: What is the relationship between pupils' motivation and a) perceptions of difficulty? b) enjoyment?

This question examines the relationships between motivation, difficulty and enjoyment.

3.2 Rationale

3.2.1 Mixed methods

There have been increasing calls for wider use of mixed methods in SLA motivation studies (Boo et al., 2015; Dörnyei & Ushioda, 2021). In the broader social sciences, some have even claimed that a strict dichotomy between qualitative and quantitative insight is 'useless and dangerous' (Mayring, 2007, p. 28). However, the two paradigms often adopt very different ontological and epistemological frameworks, leading some scholars to argue that they are fundamentally incompatible or that mixing methods inevitably results in a dilution of qualitative insight (Braun & Clarke, 2021; Elliott, 2023).

This study adopts a pragmatic stance in line with Creswell and Plano Clark (2011), who argue that combining different worldviews can be justified if it is the most effective and insightful way of answering a given research question. Quantitative analysis adopted a post-positivist standpoint that assumes that it is possible to understand learner motivations and beliefs through objective observation (Cohen et al., 2018). In contrast, reflexive thematic analysis holds that meaning is created rather than observed (Elliott, 2023; Braun & Clarke, 2021). Care was therefore taken to ensure that qualitative and quantitative analyses were carried out according to their respective worldviews, and that any insight gained from combining data remained mindful of their differing attitudes to objectivity.

This approach is somewhat unusual in Applied Linguistics, which tends to adopt a more positivist overall paradigm for mixed-methods research and treats bias reduction as an explicit condition for

validity (Mackey & Gass, 2012). My choice of reflexive thematic analysis, however, allowed my subjective insight and experience as a lifelong CFL learner to fully inform my analysis of young CFL learners' experiences. As a theoretically flexible approach, it allowed me to adopt an experiential orientation that sought to centre student voices, while also making use of critical analysis to explore apparently contradictory or counterintuitive statements (Braun & Clarke, 2021).

One common purpose of mixing methods within a more positivist paradigm is *triangulation*: examining the same concepts from different angles in order to verify them (Cohen et al., 2018; Ivankova & Cresswell, 2009). This is, however, problematic when combining positivist methods with a fully qualitative approach which does not claim to produce objective or unbiased findings (Braun & Clarke, 2021). It is nevertheless possible to weave data from different worldviews together to tell a deeper, richer story. Morgan (2018) refers to this as finding points of *convergence*, *complementarity*, and *divergence*. Similarly, while qualitative methods do not seek to be generalisable in a positivist sense, they can yield insight that is transferable to other settings (Braun & Clarke, 2021).

3.2.2 Motivation framework

Deci and Ryan's (2000) self-determination theory (SDT) was chosen as an appropriate theoretical model for the UK secondary school context (Parrish & Vernon, 2022). The sub-theory organismic integration theory (OIT) provided the basic framework for quantitative analysis (Deci & Ryan, 1985, 2000). This includes measurement of three elements of intrinsic motivation: IM-Knowledge (exploring and developing knowledge), IM-Accomplishment (mastering tasks and achieving goals) and IM-Stimulation (positive sensations such as fun or excitement) (Noels et al., 2000). OIT also measures Amotivation and three extrinsic regulation constructs: external regulation (externally prompted behaviour), introjected regulation (internal awareness of external pressure) and identified regulation (external pressure internalised as personal beliefs or values) (Deci & Ryan, 1985).

3.3 Instruments

Motivation is a latent variable, meaning that it cannot be measured directly and must be inferred based on observable variables. The choice of variable and instrument is therefore important (Woodrow, 2015; Strauss & Smith, 2009). Both quantitative and qualitative instruments covered the same topics to better identify areas of convergence and divergence.

3.3.1 Questionnaire

Participants were asked to complete a 64-item questionnaire (Appendix B). A five-point Likert scale was used to measure key variables, with 1 corresponding to the most negative answer and 5 to the most positive. An 11-point scale (0-10) was used for self-reported proficiency.

Consideration was given to the ideal number of points for the Likert scale, particularly the inclusion of a middle 'neutral' option. Removing this option might prompt respondents to think more carefully about their answers but may also cause annoyance or prime participants to answer positively (Dörnyei & Dewaele, 2023; Cohen et al., 2018). Finally, a neutral point was retained, as pilot feedback suggested that some participants held neutral opinions or were unsure of their answers.

The questionnaire was divided into four sections:

Demographics and language learning (14 items)

- Age (months), gender and school year (3 items).
- Heritage status: L1, home languages, language learning history (3 items).
- CFL experience: Chinese learning history, self-reported proficiency, intent to continue learning Chinese, intent to take Mandarin GCSE (Year 9s only) (8 items).

Motivation (21 items)

Motivation was measured using an adapted version of the 'Language Learning Orientations Scale (LLOS) —Intrinsic Motivation, Extrinsic Motivation, and Amotivation Subscales' designed and validated by Noels et al. (2000). Three items related to each OIT construct as shown in Table 3.1:

Table 3.1:

Motivation items by construct

Construct	**Items**
Amotivation	12_3, 12_9, 12_15
External regulation	12_12, 12_17, 12_19
Introjected regulation	12_1, 12_2, 12_11
Identified regulation	12_5, 12_6, 12_13
IM-Accomplishment	12_4, 12_14, 12_20
IM-Stimulation	12_7, 12_16, 12_18
IM-Knowledge	12_8, 12_10, 12_21

Item wording was amended to increase clarity and adapt to the target population:

15 items were amended to change 'second language' to 'Chinese'.

15 items were amended to simplify and clarify meaning. For example, 12_9: 'Honestly, I don't know, I truly have the impression of wasting my time in studying a second language' became 'I don't know why I learn Chinese, it feels like a waste of time'.

Three items (12_10, 12_11, 12_12) were broadened to increase relevance to secondary school learners. For example, 12_10: 'For the pleasure that I experience in knowing more about the

literature of the second language group.' became 'Because I enjoy knowing more about Chinese culture'. This revised wording reflects the breadth of Chinese cultural products available to modern learners.

Experience of difficulty and enjoyment (20 items)

Participants were asked to rate the difficulty of Chinese using an adapted version of Yang's (2015) difficulty belief scale. Items were added to measure reading, writing, listening and speaking directly, and to differentiate between character recognition and production. An item measuring vocabulary was removed. An enjoyment scale was created by adapting the difficulty scale.

Ability beliefs (9 items)

Ability beliefs were measured using nine items selected from Yang's (2015) difficulty and language learning belief scale (p.322). Items relating to the relative difficulty of Chinese (13_1 and 13_2) were excluded from analysis following the removal of their related research question.

3.3.2 Group interviews

Qualitative data were gathered through group interviews in a school setting. This approach was chosen to allow efficient recruitment and provide a naturalistic environment for participants. While it was hoped that this would result in more relaxed and spontaneous discussion, there was also a risk that group settings might intimidate or limit individual participation (Gaskell, 2000). The researcher accordingly maintained an awareness of group dynamics and encouraged contributions from quieter pupils.

Interviews followed a semi-structured format, with an open interview protocol (see Appendix C). The researcher prepared open-ended questions and follow-up prompts relating to participants' reasons for learning Mandarin and experiences of interest, boredom, enjoyment and difficulty (Morgan, 2018).

3.3.3 Piloting

A modified questionnaire was piloted on six young people aged 13-16 studying French and Spanish in England and Scotland. References to Chinese were changed to French or Spanish and demographic questions were amended to include the Scottish education system. As a result of pilot feedback, a number of minor changes were made for clarity:

- 'Pleasure' was changed to 'satisfaction' or 'enjoyment' throughout
- A question about time spent in-country (Q9) was removed.

- 12_5: ‘I don't know why I learn Chinese, and I don't care’ became ‘I don't know why I learn Chinese, and I don't care about learning it.’
- 15_6: ‘Everyone can learn to speak a foreign language’ became ‘Everyone has the ability to learn a foreign language’
- 15_7: ‘Everyone can learn to speak Chinese’ became ‘Everyone has the ability to learn Chinese’.

The revised questionnaire and interview protocol were piloted with a Year 10 student who had recently completed Mandarin GCSE outside of school. Following this pilot, no changes were made to the questionnaire and two questions were added to the interview protocol:

- What other people in your life have had an influence on your decision to learn Chinese? How important is their influence for you?
- How much time do you spend on Chinese study compared to other subjects? How does that make you feel?

3.4 Participants

3.4.1 Inclusion criteria

The target population was CFL learners in English state secondary schools offering Mandarin at Key Stage 3 and 4. Data was collected from Year 9 and 10 pupils. GCSE choices are usually made at the end of Year 9, before which an MFL subject is compulsory. However, many MEP schools ask pupils to make their GCSE choices early, and most Year 9 learners in the sample expected to continue to GCSE.

The sample included both heritage (HL) and non-heritage (NHL) learners of Chinese. HLs were defined as any learner who had been exposed to a variety of Chinese in a family setting (Song & Turner, 2024). Any participant who specified a Chinese variety as their L1 or home language (Q4 and Q5) or self-identified as a native speaker in interviews was classified as a HL. While expected to form a minority of participants and have a distinct motivational profile (Comanaru et al., 2009), HLs were included in the present study to improve ecological validity and avoid erroneous exclusions based on ethnicity or proficiency.

3.4.2 Recruitment

Eligible schools were identified based on published lists of Mandarin Excellence Programme (MEP) or Swire Chinese Language Foundation (SCLF) participants and research on individual school websites. Schools were contacted iteratively using convenience sampling based on distance from the researcher’s home, with the closest schools contacted first (Cohen et al., 2018). After gaining the

agreement of the subject lead and headteacher, dates were agreed for data collection (see Appendix A). Initially, data collection was planned as two stages, with interview participants identified after the questionnaire stage. In the event, no visits were possible before the second half of summer term, making two stages impractical. As a result, two schools were randomly selected in advance for interview recruitment and consent materials were adjusted accordingly (see Appendix F).

In total, five schools were recruited:

School A is a boys' 11-18 non-selective school in South East England. 1,212 pupils are on roll, with 16.6% eligible for free school meals (FSM). School A is rated Good or Outstanding against Ofsted performance measures and joined the MEP in 2018. Pupils are asked to commit to Mandarin GCSE in Year 8. School A has one Mandarin teacher (male, non-native speaker (NNS)). Mandarin classes are small (<20 students).

School B is a mixed 11-18 selective school in South West England. 1,288 pupils are on roll, with a below average proportion of FSM (3.6%). School B has a reputation for high academic standards and is rated Outstanding against all Ofsted performance measures. A participant in the MEP since 2018, School B recently dropped the requirement that pupils commit to GCSE before Year 9. School B has one Mandarin teacher (female, native speaker (NS)). Mandarin classes are small in Year 10 (<20) but large in Year 9 (c. 30).

School C is a mixed 11-16 non-selective school in South East England. 1,500 pupils are on roll, with 22.7% eligible for FSM. It is rated Outstanding against all Ofsted performance measures. School C opened in 2020 and joined the MEP in 2022. Not all Mandarin learners participate in the MEP, and the first MEP cohort is currently in Year 9. School C has two Mandarin teachers (one male, one female, both NS). In addition, the Head of Languages is learning Chinese as part of his professional development. The school makes it mandatory to take either Spanish or Mandarin to GCSE unless given an exemption by teaching staff. As a result, Mandarin classes are large (c. 30).

School D is a mixed 11-18 non-selective school in South West England. 1,367 pupils are on roll, with 13.6% eligible for FSM. School D is rated Good or Outstanding against Ofsted performance measures. It joined the MEP in 2019, with students making their GCSE choices in Year 9. School D has one Mandarin teacher (female, NNS). Mandarin classes are small (<20).

School E is a mixed 11-18 non-selective school in South West England. 1,848 pupils are on roll, with 18.8% eligible for FSM. School E is rated Good or Outstanding against all Ofsted performance measures. It joined the MEP in 2020 and has two Mandarin teachers (both female, one NS, one NNS). Information on MEP recruitment, GCSE enrolment policies and class sizes was not available.

3.4.3 Questionnaire

A total of 122 participants were included in analysis (57% male, 39% female). Two respondents declared a non-binary gender and three preferred not to say. Demographic information is included in Table 3.2.

Table 3.2

Demographic information by school

School	Total	Mean age	Year 9	Year 10	Male	Female	Heritage learners	Taking Mandarin GCSE
A	30	14y 9m	16 (53%)	14 (47%)	30 (100%)	0 (0%)	1 (3%)	30 (100%)
B	34	14y 7m	25 (73.5%)	9 (26.5%)	15 (44%)	17 (50%)	14 (41%)	27 (79%)
C	34	14y 9m	22 (65%)	12 (35%)	12 (35%)	20 (59%)	2 (6%)	33 (97%)
D	21	15y 1m	6 (29%)	15 (71%)	10 (48%)	10 (48%)	1 (5%)	20 (95%)
E	3	14y 1m	3 (100%)	0 (0%)	2 (67%)	1 (33%)	1 (33%)	3 (100%)
Overall	122	14y 9m	72 (59%)	50 (41%)	69 (57%)	48 (39%)	19 (16%)	113 (93%)

Due to small sample size (n = 3), School E was included in overall analyses but excluded from school-level comparisons.

44% of the total sub-sample of boys attended School A, a boys' school. Removing School A would reduce the overall proportion of boys from 57% to 42%.

74% of the total sub-sample of heritage learners (HLs) attended School B. Removing School B would reduce the overall proportion of HLs from 16% to 6%. While not explicitly adjusted for in the analysis, this disparity introduces a potential source of bias and should be considered a possible confounding factor.

3.4.4 Interviews

27 learners participated in interviews from School C (n = 16) and School E (n = 11). Ten pupils were in Year 10, and 17 in Year 9. Only one pupil (C8) was not planning to take Mandarin GCSE. Only one of the seven groups (Group 4, n = 6) was eligible for the MEP-sponsored trip to China.

Two heritage learners participated in interviews (C13 and E2). While attempts were made to collect HL experience as a sub-theme, this was eventually abandoned as the observations did not relate

coherently to the research questions. Instead, HL differences will be reported under the relevant themes.

3.5 Procedure

3.5.1 Recruitment and consent

Eligible pupils and their parents/guardians were sent information sheets and consent forms at least one week in advance of data collection. Opt-out procedures were followed for questionnaire-only schools, and full consent was sought in schools selected for interviews (see Appendix F) (Elliott, 2023). Pseudo-anonymisation processes and withdrawal procedures were fully explained to both students and parents/guardians. Students were also asked to sign assent forms on the day of data collection.

3.5.2 Data collection

With the exception of School E, questionnaires were administered in class time with the researcher present. Most questionnaires (108/124) were completed on paper, with the remainder completed online. School E requested that class teachers administer the questionnaire online prior to interviews. This approach reduced response rates considerably, with only three of the 11 consenting participants completing a questionnaire.

Interviews were conducted in a private room during class time. School C groups had between four and six participants, while School E groups had between two and four participants. School E groups were smaller than planned due to low consent rates and a small interview room. In School C, high consent rates prevented the researcher from interviewing all children, and participants were instead nominated by the Head of Languages. To ensure a balance of responses, the researcher requested that students with a wide range of motivation levels be nominated to take part.

3.5.3 Data management

Data collected included consent and assent records, questionnaire responses (on paper and online), audio recordings and transcriptions of group interviews, and field notes capturing non-verbal aspects of the group interviews.

Interviews were recorded using Teams on the researcher's personal device, which was password-protected and secured according to university infosec guidelines. Explicit consent was sought from pupils and parents/guardians for audio recording. No pupil who withheld consent was present during recording. The researcher ensured that the camera on Teams was disabled to avoid inadvertent video recording.

Field notes were taken on paper during the interviews and transcribed. Once transcribed, paper notes were immediately destroyed. Field notes included information on participants' seating arrangements and body language, but did not include personally identifying information.

All data was stored on the researcher's university Nexus365 OneDrive account. Any items temporarily downloaded to the researcher's personal device for analysis were subsequently deleted. All data will be permanently deleted after three years.

3.6 Data preparation and analysis

3.6.1 Quantitative data

Questionnaire responses were collated in a spreadsheet, with paper responses entered manually by the researcher and checked for accuracy. Two questionnaires (P226 and P207) were excluded due to patterns indicating non-engagement (straight-lining and marking between Likert scale points). All other responses appeared to have a pattern consistent with genuine responses, and as a result outliers were treated as valid and included in analysis.

Only sixteen individual items were unanswered across the dataset, representing 0.24% of total possible observations. Two respondents (P227 and P336) omitted three items, with no other respondent omitting multiple items. Ten omissions occurred in the final two questions. This pattern appeared consistent with accidental omission due to fatigue. Accordingly, the decision was made to replace missing values with the respondent's overall mean score for that section (Qs 7, 13, 14 and 15) or 3-item construct (Q12).

Data was analysed using the R package V2025.05.1+513 (2025). AI tools (OpenAI, 2025) were used to aid with writing, refining and troubleshooting R code. All items were tested for normality or homogeneity of variance, with the majority of items showing signs of non-normality. Accordingly, appropriate non-parametric tests were conducted to analyse differences between groups and correlations between variables.

Motivation scores as measured by the LLOS were treated as the primary outcome variable. An alternative outcome variable, self-assessed proficiency (Q7), received apparently inconsistent responses. In particular, despite having studied Chinese for an additional year, Year 10s reported lower mean proficiency scores than Year 9s (see Appendix I). As a result, responses to this question were excluded from analysis, as they appeared unlikely to reflect objective proficiency and may represent an alternative construct such as confidence.

3.6.2 Qualitative data

Interviews were transcribed from auto-generated transcripts in Microsoft Word, checked against audio recordings to ensure accuracy and annotated using field notes. The results were then uploaded to NVivo (version 15.2.0) for coding and analysis.

Participants were pseudo-anonymised using school-specific codes: C1-C6 (School C: Y9 MEP), C7-C10 (School C: Y9 non-MEP), E1-E7 (School E: Y9), C11-C16 (School C: Y10 non-MEP) and E8-E11 (School E: Y10)

Reflexive thematic analysis followed the six-phase approach recommended by Braun and Clarke (2021). Interview transcripts were coded using a combination of inductive and deductive approaches. Deductive coding drew from interview questions and SDT concepts of autonomy, competence and relatedness. Codes were then revisited, and similar codes combined. The final code list was printed and sorted by hand into exploratory thematic groupings. This was a recursive process, with themes successively regrouped and subsumed. Themes were constructed around a central organising idea rather than a topic. While each theme is coherent and distinct, some degree of linkage and overlap between themes was allowed. Once themes had been identified, they were checked against the original transcripts to ensure clarity and consistency. Lists of codes and detail of the theme development process is provided in Appendix L.

In accordance with Braun and Clarke (2021), reliability and validity were not established through objectivity measures such as inter-coder reliability, but by careful record-keeping and reflection on the researcher's subjectivity throughout. A reflexive journal was used, and excerpts of transcripts and code lists were shared and discussed with a secondary school teacher classmate. This gave me a second viewpoint on my analytical process and ensured that my subjectivity was appropriately acknowledged. For example, while my colleague broadly agreed with coding, he felt that pupil judgements about pedagogy appeared under-coded. I recognised that my lack of school teaching experience was making me nervous of analysis that appeared critical of teachers. This reflection enabled me to remain aware of areas of low self-confidence and ensure that these did not cause me to shy away from constructive and evidence-based recommendations where appropriate.

3.7 Ethics

Ethics approval was received from the Central University Research Ethics Committee on 15th April 2025 (EDUC_1228030), with an amendment to the title approved on 7th August 2025 (see Appendix C). All university ethics and safeguarding protocols were fully adhered to throughout, and approved

procedures for non-invasive research methods with children recruited via an organisation (AP25) were followed at all times.

For questionnaire-only participants, parent/guardian opt-out was chosen to maximise response rates. Full consent was sought for interviews and audio recording given their more invasive nature. In order to minimise the risk that pupils might feel pressured to take part, the study was verbally explained before data was collected and it was stressed that participants could withdraw at any time without consequence. The researcher remained sensitive to any signs of discomfort during interviews and ensured that each participant was given space to contribute (Cohen et al., 2018).

Confidentiality procedures were fully adhered to, with all data anonymised to the fullest possible extent and access to participant consent forms restricted to the researcher and her supervisor. Interview recordings and records of participant names were destroyed at the earliest possible opportunity. No other personal data was recorded and retained, and potentially identifying information was redacted from field notes and transcripts wherever possible.

3.8 Positionality

Throughout my research I reflected on my own identity as a non-heritage learner of Chinese and how this has shaped my knowledge and beliefs (Elliott, 2023). While I built a successful career using Chinese, the majority of my cohort allowed their skills to lapse, leading to a feeling that my experience might be exceptional. While this did colour my responses to the data, it also gave me a valuable viewpoint from which to interpret it. I used a reflexivity journal to ensure that I was not conflating my own experiences with those of my participants, and to allow me to use my experience thoughtfully and with self-awareness.

My background as a successful Chinese learner may give me some 'insider' status in a CFL context. However, the age gap between myself and the participants and my lack of school connections also position me as an 'outsider'. While this might allow participants to speak more freely, it also increases the difficulty of building rapport (Elliott, 2023). To mitigate this, I chose to visit schools in person and agreed to talk to classes about my own learning journey and career, including my experiences living in China and Taiwan.

It is also possible that my status as a successful learner of Chinese and affiliation with the University of Oxford might subtly influence participants to overstate their motivation to learn or positive feelings about Chinese – otherwise known as social desirability bias (Dörnyei & Dewaele, 2023; Elliott, 2023). To minimise this risk, I stressed to participants that I was there to learn from them, that

I was not expecting a specific response, and that there would be no repercussions to stating negative opinions.

Chapter 4: Results

This chapter presents the results of statistical and thematic analyses of questionnaire and interview data respectively. These are organised according to research question, with quantitative findings presented first. Statistical results are broken down by sub-question where appropriate. Themes are described in full and presented under the most relevant research question.

4.1 RQ1: What is the nature of motivation to learn Mandarin among secondary-aged learners in English schools?

4.1.1 Questionnaire findings

In order to establish the reliability of the LLOS 7-construct motivation scale (Q12), Cronbach's alpha was calculated for each construct (see Appendix G). Most groupings demonstrated good internal consistency ($\alpha > 0.7$). However, alpha could not be calculated for the External Regulation subscale due to negative inter-item correlations, indicating the items did not form a single construct. It was therefore decided to treat items 12_12 ('Because it will help me to get a good job in the future') and 12_17 ('So I can earn lots of money in the future') as one construct relating to future earning opportunities, or 'Instrumentality' ($\alpha = 0.69$), and treat 12_19 ('Because I feel like others expect me to') as a separate item representing 'Social Pressure'. These constructs are exploratory and should be interpreted with caution. However, they have been retained in this analysis due to their theoretical importance.

Questionnaire responses were tested for normality according to the revised 8-construct model. Normality assumptions were violated for several constructs (see Appendix H). As a result, non-parametric tests were used. Medians (Md) and interquartile ranges (IQR) for the whole sample are illustrated in Table 4.1.1 and Figure 4.1.

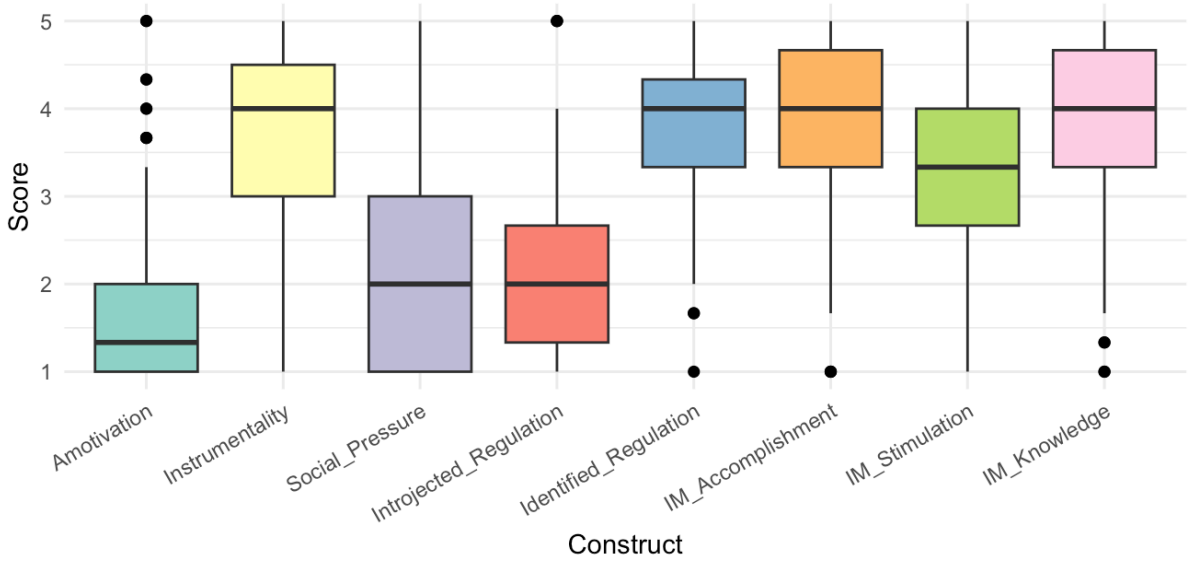
Table 4.1.1

Whole-sample motivation results

Construct	Md	IQR_lower	IQR_upper
Amotivation	1.33	1.00	2.00
Instrumentality	4.00	3.00	4.50
Social Pressure	2.00	1.00	3.00
Introjected regulation	2.00	1.33	2.67
Identified regulation	4.00	3.33	4.33
IM-Accomplishment	4.00	3.33	4.67
IM-Stimulation	3.33	2.67	4.00
IM-Knowledge	4.00	3.33	4.67

Figure 4.1

Boxplot of whole-sample motivation results



Median scores were relatively low for Amotivation, Social Pressure and Introjected Regulation and high for Instrumentality, Identified Regulation, IM-Accomplishment, IM-Stimulation and IM-Knowledge.

A Friedman test indicated a significant difference between constructs (χ^2 (7) = 367.19, p <.001). Follow-up pairwise comparisons using Wilcoxon signed-rank tests with Bonferroni correction revealed multiple significant differences between variables (all p <.001) as shown in Table 4.1.2.

Table 4.1.2

Significant differences between motivational constructs

Construct 1	**Construct 2**	**Effect size (*r*)***	**Magnitude**
Amotivation	Instrumentality	-.78	Large
	Social Pressure	.44	Medium
	Identified Regulation	-.76	Large
	IM-Accomplishment	-.76	Large
	IM-Stimulation	-.69	Large
	IM-Knowledge	.77	Large
Instrumentality	Social Pressure	.6	Large
	Introjected Regulation	.77	Large
Social Pressure	Identified Regulation	-.63	Large
	IM-Accomplishment	-.64	Large
	IM-Stimulation	-.44	Medium
	IM-Knowledge	-.64	Large
Introjected Regulation	Identified Regulation	-.83	Large
	IM-Accomplishment	-.80	Large

	IM-Stimulation	-.71	Large
	IM-Knowledge	-.80	Large
Identified Regulation	IM-Stimulation	.54	Large
IM-Accomplishment	IM-Stimulation	.59	Large
IM-Stimulation	IM-Knowledge	-.64	Large

*Calculated as r from Wilcoxon Z scores

Overall, results appeared consistent with a picture of a strongly self-determined cohort, with higher scores for the more self-determined elements of the regulation continuum. Two results were of particular interest:

- Instrumentality, despite being theoretically classed as an extrinsic form of motivation, had similar median scores to self-determined constructs.
- IM-Stimulation had significantly lower median scores than other self-determined constructs.

RQ1a: Are there differences in the motivational profiles of those who want to continue learning and those who do not?

Fieldwork revealed that the majority of schools mandated GCSE enrolment for MEP pupils, and only nine participants planned to stop learning after Year 9. Furthermore, some questionnaire responses suggested that Q10 (future intentions) had been interpreted as only applying post-GCSE. For example, nine learners responded 'not sure' for Q10 despite indicating in Q11 that they were intending to sit the GCSE. It was therefore decided to disregard Q11 (GCSE choice) and refocus Q10 analysis towards post-GCSE intentions. Q10 answers which indicated no intention to continue post-GCSE were grouped under 'plans to drop'. Responses indicating longer-term intent to continue, whether at home or in school, were grouped as 'plans to continue' (see Table 4.1.3). These new groupings likely conflated information about potential A Level uptake with plans for independent learning. However, grouping positive responses also reduced ambiguity and lessened the impact of inconsistent KS5 provision between schools.

Table 4.1.3

Frequency table of grouped intent to continue (Q10)

	Plans to Drop	Unsure	Plans to continue
I don't plan to continue learning it after this year	9	-	-
I plan to continue learning it at school, but only until GCSE	41	-	-
I'm not sure	-	19	-
I want to continue learning it, but only outside of school	-	-	10
I plan to continue learning it at school after GCSE	-	-	43
Total	50	19	53

As with whole-sample scores, sub-sample scores on motivational constructs did not meet expectations of normality and accordingly, non-parametric tests were used (see Appendix H). Medians (Md) and Interquartile Range (IQR) for each group are illustrated in Table 4.1.4.

Table 4.1.4

Motivation scores by intent group

Construct	Plans to drop		Unsure		Plans to continue	
	Md	IQR	Md	IQR	Md	IQR
Amotivation	1.67	1.00-2.58	1.67	1.00-2.33	1.33	1.00-1.67
Instrumentality	3.50	3.00-4.50	3.50	2.75-4.00	4.00	3.50-4.50
Social Pressure	2.50	1.00-4.00	2.00	1.00-3.00	2.00	1.00-3.00
Introjected Regulation	1.83	1.33-2.67	1.67	1.00-2.67	2.00	1.33-2.67
Identified Regulation	3.67	3.00-4.33	3.33	3.17-4.33	4.00	3.67-4.67
IM-Accomplishment	4.00	3.08-4.67	4.00	3.33-4.00	4.00	3.67-4.67
IM-Stimulation	3.00	2.33-3.67	3.33	2.83-3.67	3.67	3.00-4.33
IM-Knowledge	4	3.08-4.67	3.67	3.17-4.50	4.33	4.00-4.67

A Kruskal-Wallis test identified that only IM-Stimulation had significant differences after Bonferroni correction (χ^2 (2) = 16.70, p = .002). Post-hoc Wilcoxon-rank sum tests indicated a significant difference between those who planned to continue and other groups (see Table 4.1.5 and Figure 4.2). This confirmed the researcher's initial hypothesis of a significant relationship between IM-Stimulation and intent to continue (see section 3.1).

Table 4.1.5

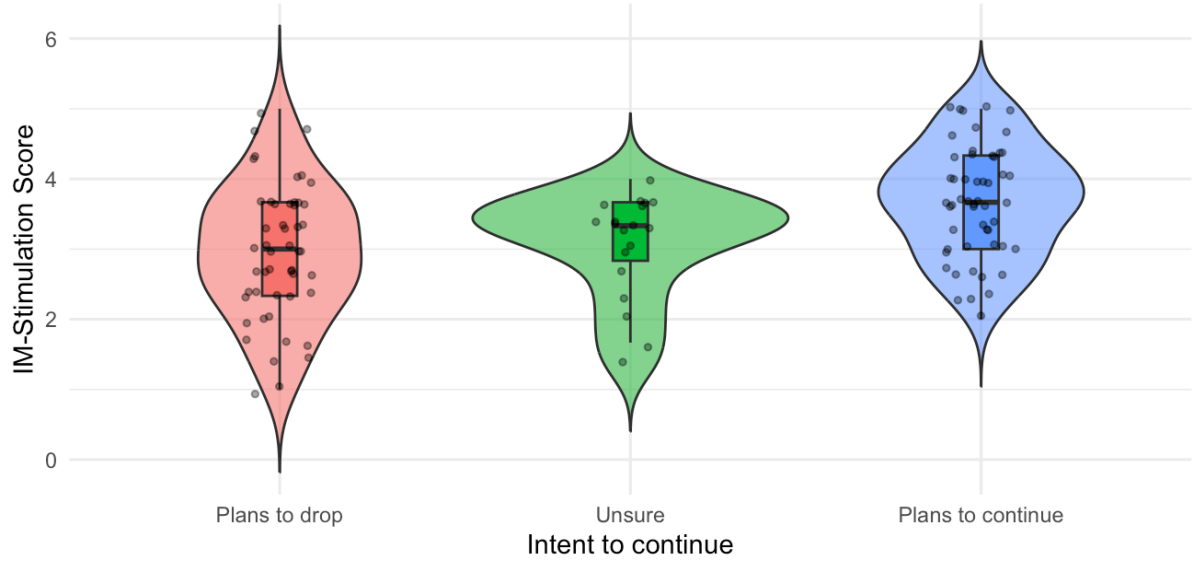
Significant differences for IM-Stimulation by intent group

Group 1	**n1**	**Group 2**	**n2**	***p***	***p_adj***	**Effect size (*r**)**	**Magnitude**
Plans to drop	50	Unsure	19	.52	1	.08	Small
Plans to drop	50	Plans to continue	53	<.001	<.001	.38	Medium
Unsure	19	Plans to continue	53	.008	.02	.31	Medium

*Calculated as r from Wilcoxon Z scores

Figure 4.2

Violin plot of IM-Stimulation scores by intent to continue



RQ1b: Does motivation vary according to demographic variables?

Year Group

Median scores for motivation constructs across year group are compared in Table 4.1.6. Results for multiple constructs were non-normally distributed (see Appendix H) and, accordingly, non-parametric tests were used. Wilcoxon rank-sum tests with Bonferroni adjustment failed to identify any significant differences between groups (see Appendix J).

Table 4.1.6

Motivation comparison by year group

Construct	Year 9 (n = 72)			Year 10 (n = 50)		
	Md	**IQR_lower**	**IQR_upper**	**Md**	**IQR_lower**	**IQR_upper**
Amotivation	1.42	1.00	2.33	1.33	1.00	2
Instrumentality	3.50	3.00	4.50	4.00	3.00	4.5
Social Pressure	2.00	1.00	3.25	2.00	1.00	3
Introjected Regulation	2.00	1.33	2.67	1.67	1.00	2.33
Identified Regulation	4.00	3.33	4.33	3.00	3.67	4.67
IM-Accomplishment	4.00	3.25	4.67	4.00	3.67	4.67
IM-Stimulation	3.33	2.67	4.00	3.33	2.67	3.92
IM-Knowledge	4.00	3.33	4.33	4.33	3.67	4.67

Heritage Status

Heritage learner (HL) median motivation scores are compared with non-heritage learners (NHL) in Table 4.1.7. Testing confirmed that NHL results were not normally distributed (see Appendix H). Accordingly, non-parametric tests were used. HLs scored lower on all constructs except Introjected Regulation and Social Pressure:

Table 4.1.7

Motivation comparison by heritage status

Construct	Heritage Learners (n = 9)			Non-heritage Learners (n = 103)		
	Md	**IQR_lower**	**IQR_upper**	**Md**	**IQR_lower**	**IQR_upper**
Amotivation	1.33	1.00	2.00	1.33	1.00	2.00
Instrumentality	3.50	2.50	4.00	4.00	3.00	4.50
Social Pressure	4.00	3.00	4.00	2.00	1.00	3.00
Introjected Regulation	2.67	1.33	3.33	1.67	1.33	2.33
Identified Regulation	3.67	3.00	4.33	4.00	3.33	4.33
IM-Knowledge	3.33	2.67	4.00	4.00	3.67	4.67
IM-Stimulation	3.00	2.00	3.33	3.33	2.67	4.00
IM-Accomplishment	3.67	2.50	4.17	4.00	3.67	4.67

Wilcoxon rank-sum tests were used to identify significant differences. Significance values were adjusted using Benjamini-Hochberg (BH) adjustment to preserve power due to the small HL sample size (n = 19). The results showed significant (p <.05) differences with small effect sizes in Introjected Regulation (r = 0.21), IM-Accomplishment (r = 0.21) and IM-Knowledge (r = 0.29). However, Social

Pressure displayed a highly significant difference (p <.01) with moderate effect size (r = 0.36). Significant differences are displayed in Figure 4.3:

Figure 4.3

Violin plots of significant motivational differences by heritage status

Heritage learners' higher scores for extrinsic motivators, particularly Social Pressure, appear to confirm the researcher's initial hypothesis that HLs would have a distinct, more extrinsically motivated profile (see section 3.1).

School

Testing confirmed that school-level results for several constructs were not normally distributed (see Appendix H). Accordingly, non-parametric tests were used. Differences in median scores for motivation between schools are illustrated in Table 4.1.8.

Table 4.1.8

Motivation comparison by school

Construct	**School A**		**School B**		**School C**		**School D**	
	Md	IQR	Md	IQR	Md	IQR	Md	IQR
Amotivation	1.50	1.00-2.00	1.00	1.00-2.00	1.67	1.00-2.33	1.33	1.00-2.00
Instrumentality	3.75	3.00-4.00	3.50	3.00-4.00	3.50	3.00-4.50	4.50	4.00-4.50
Social Pressure	2.00	1.00-3.00	2.50	2.00-4.00	2.00	1.00-3.00	2.00	2.00-3.00
Introjected Regulation	1.67	1.33-2.58	1.67	1.33-2.67	2.00	1.33-2.58	2.00	1.33-2.67

Identified Regulation	4.00	3.33-4.33	4.00	3.42-4.67	3.67	3.00-4.25	4.00	4.00-4.33
IM-Accomplishment	4.00	3.33-4.33	4.33	3.67-4.67	3.83	3.08-4.33	4.00	4.00-5.00
IM-Stimulation	3.00	2.67-3.67	3.33	2.75-4	3.33	2.33-3.92	3.67	3.00-4.00
IM-Knowledge	4.00	3.67-4.67	4.00	3.33-4.67	4.00	3.33-4.33	4.67	4.00-5.00

Kruskal-Wallis tests were used to identify significant differences in motivation across schools (see Appendix J). Although Instrumentality and IM-Knowledge had a p-value below .05, these results became insignificant after Bonferroni adjustment.

In summary, the overall sample reported higher motivation scores for self-regulated constructs and instrumentality, and IM-Stimulation was shown to correlate significantly with intent to continue. Significant differences in motivational profile were only observed between heritage and non-heritage learners.

4.1.2 Interview findings

Eight themes were developed to answer the four research questions. Themes relating to motivation in general terms – *Fuelled by Fun*, *It's Cool We Can Do This*, and *A Useful Language* –are explored under RQ1. Themes relating to learner conceptions of difficulty – *A Surmountable Challenge* and *Exams Set the Pace* – are explored under RQ2. *Mix it Up* relates to learners' expectations of enjoyment and is explored under RQ3. Finally, *Worth the Effort* and *Don't Waste My Time* relate to the direct impact of enjoyment and difficulty on motivation. These findings are explored under RQ4.

This section will explore themes that describe overall motivation – *Fuelled by Fun*, *It's Cool We Can Do This*, and *A Useful Language*. *Fuelled by Fun*, an overarching theme, suggests enjoyment or fun as a central inciting and sustaining force behind Chinese learning. 'Fun' was not just an emotion or experience for participants, but an important criterion for successful learning, linked to the motivational construct IM-Stimulation. Participants frequently used fun or enjoyment to explain high or low motivation levels:

> Overall, it was fun, and I'd do it again. (C4)
>
> I kind of enjoyed it in Year 7, but as the years have gone on, I just […] I don't think I find it the most enjoyable anymore. (C3)

Fun was a common reason for beginning Chinese study, with MEP students particularly drawn to the promised trip to China. Many simply believed that Chinese would be a fun language to learn. E8, E9 and E10 vividly described a primary outreach visit by School E four years previously:

> She made it a game about, it was *ni* [你: 'you']. And then how to learn it was like: go down the slide and then down the pole, across the monkey bars, down the pole, and *splat*. And it was really fun to learn it. (E9)

This lesson was frequently cited throughout the interview, with E8 and E10 reporting subsequent parental encouragement:

> When I did it in school, I went home and I was like, 'Oh my God, Mum, this is so fun. This is so fun.' And then she's like, 'Oh, do you want to do it? Because it's, it's on the phone. Like, I could say yes.' And I was like, 'Yeah, go on then.' (E8)

Despite the learning experience becoming more stressful and less enjoyable over time, pupils continued to encounter joy through day-to-day learning of Chinese:

> I just think writing the characters is, it feels very nice. Just, yeah, I don't know how to explain it really. (E4)

While *Fuelled by Fun* primarily relates to IM-Stimulation, *It's Cool We Can Do This* focuses on the influence of IM-Accomplishment on learners' sense of self. This theme explores the self-esteem and satisfaction derived from language achievement, and how this shapes individual and group identities. Learners described a sense of reward and in-group status from learning Chinese, often derived from their ability to understand a 'difficult' language:

> I think learning Mandarin is really good because I don't think a lot of people can do it. It's a really hard language, so it means a lot to be able to speak it. (C1)

Learners' pride in academic success and sense of community with classmates are related to competence and relatedness. Autonomy was also an important factor in building learner identity. Well-motivated students reported a sense of control over their choice to learn Chinese and a wish to stand out from their peers. In contrast, C3 attributed her low motivation in part to parental pressure:

> I think that's made it less enjoyable as well because it's kind of more as something that [my dad] wants to do instead of me.

On the other hand, HL student E2 did not feel that parental pressure negatively impacted his motivation:

> My parents said, you're gonna, you're going to do this, and I just said, OK […] I wasn't really, like, worried, I just thought this was just gonna be normal.

A Useful Language relates to the belief that Chinese is more useful than other languages, particularly for future employment. Tied to the concepts of economic capital and instrumentality, this theme is unique in that it has no direct relationship to *Fuelled by Fun*. Many learners explicitly attributed their beliefs to parental influence:

> My dad's been telling me all the jobs I can do [...] And so I've been talking about a lot of job opportunities. That's probably why I'm doing it. (E1)

Learners also recounted parental arguments that China's rising superpower status and increasing migration would make Chinese 'the language of the future' (E10). E5 put instrumentalist and future-facing reasons at the heart of her GCSE choices:

> I've got a couple of other subjects that I really, really like and really want to take forwards. But I am taking [Mandarin] for GCSE and I'm going to drop those […] I think [Mandarin] could definitely help with working. Seeing as AI might take some jobs, so there'll be less work for people.

While NHLs felt that Mandarin learning would enhance their CVs, HLs saw it as an opportunity to boost their overall grades, as they considered Mandarin 'an easy GCSE' (E2).

In summary, interview findings broadly reflected a mix of intrinsic and instrumentalist motivations. IM-Stimulation emerged as the most powerful motivator, with IM-Accomplishment driving a strong sense of identity. Autonomy, competence, and relatedness played strongly into learners' enjoyment and sense of pride in their achievement. Instrumentalist beliefs were influenced by parental predictions about future job opportunities and China's global influence. Heritage learners reported lower intrinsic motivation, instrumentalist motivations that focused on grades rather than jobs, and high acceptance of parental influence.

4.2 RQ2: How difficult do pupils find Mandarin? Does this differ by skill?

4.2.1 Questionnaire findings

Pupil ratings were collected for overall difficulty (Q13_10) and the difficulty of individual sub-skills. Testing suggested non-normality of at least one item (see Appendix H). Accordingly, non-parametric tests were used. Median scores and interquartile ranges (IQR) are displayed in Table 4.2.1 and Figure 4.4, with high scores indicating that learners found the skill easier.

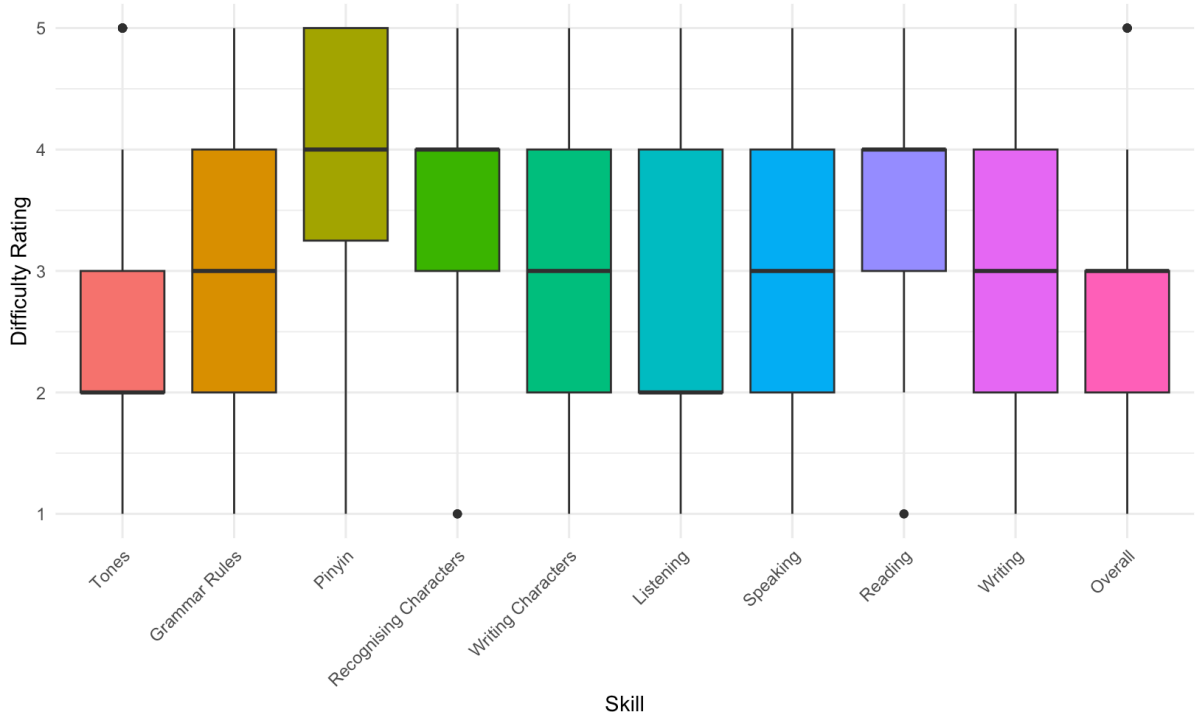
Table 4.2.1

Difficulty scores: whole sample

Skill	Item	Md	IQR_lower	IQR_upper
Overall	13_10	3.00	2.00	3.00
Tones	13_1	2.00	2.00	3.00
Grammar Rules	13_2	3.00	2.00	4.00
Pinyin	13_3	4.00	3.25	5.00
Recognising Characters	13_4	4.00	3.00	4.00
Writing Characters	13_5	3.00	2.00	4.00
Listening	13_6	2.00	2.00	4.00
Speaking	13_7	3.00	2.00	4.00
Reading	13_8	4.00	3.00	4.00
Writing	13_9	3 .00	2.00	4.00

Figure 4.4

Boxplots of difficulty ratings



Pinyin, recognising characters and reading had higher median scores, and scores were lower for tones and listening. A Friedman test confirmed significant differences between items (χ^2 (9) = 182.00, p <.001). Follow-up pairwise comparisons using Wilcoxon signed-rank tests with Bonferroni correction revealed multiple significant differences as listed in Table 4.2.2 (for full results see Appendix J).

Table 4.2.2

Pairwise comparison of difficulty ratings by skill (N = 122)

Skill 1	**Skill 2**	***p*_adj**	**Effect size (*r*)***	**Magnitude**
Overall	Pinyin	<.001	.66	Large
	Recognising Characters	<.001	.68	Large
	Reading	<.001	.53	Large
Tones	Grammar rules	.01	.32	Medium
	Pinyin	<.001	.70	Large
	Recognising Characters	<.001	.61	Large
	Writing Characters	.002	.39	Medium
	Speaking	<.001	.44	Medium
	Reading	<.001	.52	Large
	Writing	.018	.36	Medium
Grammar Rules	Pinyin	<.001	.54	Large
	Recognising Characters	<.001	.48	Medium
	Reading	.005	.33	Medium
Pinyin	Writing Characters	<.001	.50	Medium
	Listening	<.001	.55	Large
	Speaking	<.001	.43	Medium
	Writing	<.001	.52	Large
Recognising Characters	Writing Characters	<.001	.47	Medium
	Listening	<.001	.48	Medium
	Speaking	.013	.33	Medium
	Writing	<.001	.49	Medium
Listening	Reading	<.001	.45	Medium
Reading	Writing	.007	.34	Medium

*Calculated as r from Wilcoxon Z scores

Pinyin, reading and recognising characters differed significantly from overall ratings with a large effect size, and had significant differences with many other sub-skills. While tones had several significant differences from other sub-skills, large effect size were only found for differences with pinyin, reading and recognising characters. Listening only showed significant differences with pinyin, reading and recognising characters.

This suggests that pinyin, reading and recognising characters were perceived as easier across the sample, while listening and tones were perceived as somewhat more difficult. This only partly aligns with the researcher's initial hypothesis that all linguistic elements that are unique to Chinese languages (e.g., tones and characters) would be perceived as more difficult (see section 3.1).

RQ2a: What are pupils' beliefs about ability to learn Mandarin?

Responses to ability belief questions did not meet tests of normality (see Appendix H). Accordingly, a non-parametric approach was adopted. Median scores and interquartile ranges are reported in Table 4.2.3.

Table 4.2.3

Median scores for ability belief

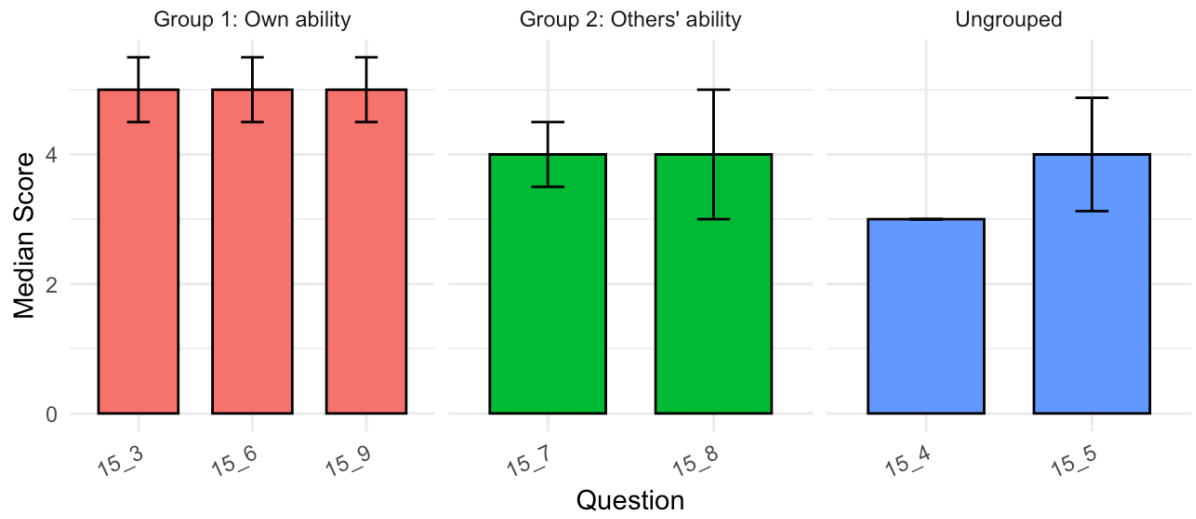
Question	**Item**	**Md**	**IQR_lower**	**IQR_upper**
I have the ability to learn Chinese	15_3	5.00	4.00	5.00
Pupils in English schools are very good at learning Chinese	15_4	3.00	3.00	3.00
How much you can learn from a Chinese course mostly depends on the quality of the teacher	15_5	4.00	3.25	5.00
I have the ability to learn foreign languages	15_6	5.00	4.00	5.00
Everyone has the ability to learn to speak a foreign language	15_7	4.00	4.00	5.00
Everyone has the ability to learn to speak Chinese	15_8	4.00	3.00	5.00
How much you can improve your proficiency in Chinese depends on your effort	15_9	5.00	4.00	5.00

Median scores and theoretical groupings suggested commonality between three answers relating to individual ability (15_3, 15_6, 15_9) and two items measuring beliefs about others (15_7, 15_8). Cronbach's alpha calculations suggested good consistency for Variable 1 (Own ability, α = .74) and Variable 2 (Others' ability, α = .87). The two remaining items (15_4, 15_5) did not combine (α = .21) and were kept separate (see Figure 4.5).

A Wilcoxon rank-sum test showed a strong, significant difference between the grouped variables (p <.001, r = .5). This indicates that learners had relatively strong belief in their own ability. The excessive central clustering of responses for Q15_4 suggests that respondents were not confident making general judgements about the ability of English school pupils.

Figure 4.5

Ability belief scores: grouped (see Table 4.2.3 for question wording)



4.2.2 Interview findings

This section examines beliefs relating to CFL difficulty. Participants gave a wide range of opinions about difficulty, making the data feel messy, contradictory or internally inconsistent. This prompted reflection during analysis about my reactions to apparently counterintuitive statements and a realisation that my own beliefs about difficulty were not particularly coherent. Eventually, this led to the construction of two sub-themes defining difficulty using different framings. The first, *A Surmountable Challenge*, discusses what C4 called the 'inherent' difficulty of Chinese, linked to its typological distance from English. The second, *Exams Set the Pace*, discusses the difficulty of preparing for assessments. When viewed through these lenses, seemingly incompatible statements about relative difficulty felt easier to integrate.

A Surmountable Challenge acknowledged that many learners defined Chinese as difficult due to its difference from English or other Latin-derived languages, particularly its lack of alphabet and use of tones. The degree of challenge this posed to learners appeared to depend on their prior expectations:

> When you look at it from the outside, you almost think of it as just another language, you know? When you actually go in, it's a lot harder. (E1)
>
> I expected it to be quite hard […] But once you get the hang of it and start enjoying it more, it kind of just comes naturally. (C2)

The process of learning reduced feelings of difficulty and boosted learner self-efficacy. This was particularly common for character learning. For C16, characters even felt easier than learning alphabetic languages:

> I feel like it's quite enjoyable […] you can, kind of, link the characters to something you recognise. Like, there's quite a lot of characters that look like a tree or like a house, and they're quite closely linked to the word as well. So, it's kind of easier whereas maybe other language[s] might be more difficult to remember, because their words could be quite a lot different from the actual English ones.

Like C16 and C2, learners frequently described enjoyment as a mediating factor that helped them to build confidence.

In contrast to characters, learning to perceive and produce tones continued to feel challenging:

> I'm not finding it too hard […] I will say though, I do find listening quite hard. I can't really hear the tones at all. (C15)
>
> I think speaking is the hardest because, like, trying to copy the tones and make sure you say everything correctly. (C11)

Exams Set the Pace describes difficulty in terms of challenging workload and test preparation. In contrast to *A Surmountable Challenge*, this provoked predominantly negative emotions, and challenge was not framed as enjoyable:

> I enjoyed it in Year 9 […] I could learn it really well because it was good paced. But now in Year 10 it's got a lot harder, and I don't enjoy it anymore. (C14)
>
> The amount of vocab. It's just so much and, like, sentence structures, all of this, having to justify, just - there's so much. Especially for GCSE level, it's crazy. (E11)

The expectation that students would quickly memorise and reproduce large numbers of new characters was particularly stressful. 'Sentence structure' was also frequently mentioned as a challenging element. While sentence structure could be understood as a typological feature, this element was included under *Exams Set the Pace* based on the researcher's judgement that subject specification and pedagogy may have influenced student perceptions. This judgement will be discussed in more detail in the next chapter.

Testing was frequently cited as the most difficult aspect of Chinese. However, learners also judged certain sub-skills to be easier if they could apply strategies during tests to compensate for knowledge gaps:

> You only listen for the key words. Like, you can almost blank everything else and just listen for – it would be like, the date of when I played football, and you just listen to whenever the date is and then football, and then you'll be alright. (E1)

In summary, while linguistic elements that are not found in English such as tones and characters were rated as difficult, many participants claimed that character learning became easier over time. Difficulty was linked to two separate themes dealing with typological differences and exam pressure respectively. These themes provoked different emotional reactions and ability beliefs in learners. A key difference between these themes is the degree of enjoyment that learning activities bring to learners, linking *Fuelled by Fun* as an overarching theme.

4.3 RQ3: How enjoyable do pupils find learning Mandarin? Does enjoyment differ by skill?

4.3.1 Questionnaire findings

Enjoyment scores did not consistently meet expectations for normality (see Appendix H). Accordingly, non-parametric analyses were used. Median scores and interquartile ranges (IQR) for overall enjoyment and each sub-skill are displayed in Table 4.3.1 and Figure 4.6. High scores indicate that learners found the skill more enjoyable.

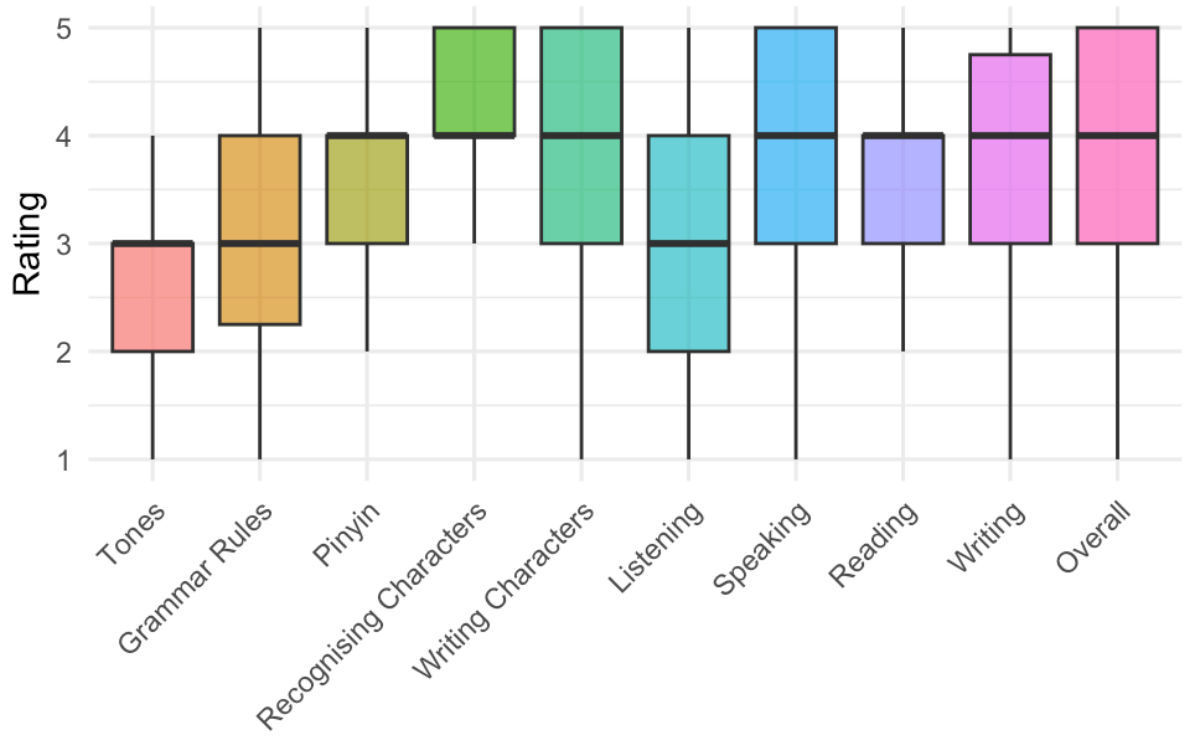
Table 4.3.1

Enjoyment scores: whole sample (N = 122)

Skill	Item	Median	IQR_lower	IQR_upper
Overall	14_10	4.00	3.00	5.00
Tones	14_1	3.00	2.00	3.00
Grammar Rules	14_2	3.00	2.25	4.00
Pinyin	14_3	4.00	3.00	4.00
Recognising Characters	14_4	4.00	4.00	5.00
Writing Characters	14_5	4.00	3.00	5.00
Listening	14_6	3.00	2.00	4.00
Speaking	14_7	4.00	3.00	5.00
Reading	14_8	4.00	3.00	4.00
Writing	14_9	3.00	3.00	4.75

Figure 4.6

Boxplots of enjoyment ratings



A Friedman test confirmed statistically significant differences between sub-skills (χ^2 (9) = 220.4, *p* <.001). Follow-up pairwise comparisons using Wilcoxon signed-rank tests with Bonferroni correction revealed multiple significant differences, as listed in Table 4.3.2 (see Appendix J for full results).

Table 4.3.2

Pairwise comparison of enjoyment ratings by skill (N = 122):

Skill 1	**Skill 2**	***p*_adj**	**Effect size (*r*)***	**Magnitude**
Overall	Tones	<.001	.73	Large
	Grammar	<.001	.64	Large
	Pinyin	.034	.31	Medium
	Listening	<.001	.58	Large
	Reading	.017	.32	Medium
	Writing	.014	.33	Medium
Tones	Pinyin	<.001	.56	Large
	Recognising Characters	<.001	.73	Large
	Writing Characters	<.001	.58	Large
	Speaking	<.001	.63	Large
	Reading	<.001	.56	Large
	Writing	<.001	.50	Medium
Grammar Rules	Pinyin	.002	.37	Medium

	Recognising Characters	<.001	.64	Large
	Writing Characters	<.001	.47	Medium
	Speaking	<.001	.42	Medium
	Reading	<.001	.41	Medium
	Writing	.002	.37	Medium
Pinyin	Recognising Characters	<.001	.40	Medium
	Listening	.022	.32	Medium
Recognising Characters	Listening	<.001	.58	Large
	Speaking	.031	.31	Medium
	Reading	<.001	.44	Medium
	Writing	<.001	.42	Medium
Writing Characters	Listening	<.001	.43	Medium
	Writing	.036	.30	Medium
Listening	Speaking	<.001	.42	Medium
	Reading	.002	.37	Medium
	Writing	.015	.33	Medium

*Calculated as r from Wilcoxon Z scores

Listening, grammar and tones had significantly lower median scores than overall ratings with a large effect size. All three had significant differences with many other sub-skills, with tones showing the largest effect size. Tones therefore appeared to be the least enjoyable aspect of learning, followed by grammar and listening.

4.3.2 Interview findings

While *Fuelled by Fun* describes the overall importance of enjoyment for CFL learners, *Mix it Up* explores the roles of variety and novelty in enjoyment. Participants reported enjoying the novelty of unfamiliar typological features of Chinese, particularly characters. Even features that were considered challenging, such as tones, were seen as enjoyable due to their novelty:

> 'If you say the wrong tone, it can mean something completely different. And I just find that so interesting.' (E8)

Variety and novelty were also the main sources of enjoyment in the classroom. Learners enthusiastically described their favourite classroom games, all of which taught character recognition, and felt strongly that these aided learning. Conversely, repetitive activities such as character drilling or fixed lesson formats were described as boring and unproductive:

> Maybe if we mixed it up and did something different to, like, make it more interactive, cos then people concentrate on what you're meant to be learning. (C16)

Mix it Up connects to both difficulty themes, as feelings of enjoyment influenced how learners approached challenges. However, it is included as a separate theme to highlight the importance of novelty and variety for enjoyment.

4.4 RQ4: What is the relationship between pupils' motivation and a) perceptions of difficulty? b) enjoyment?

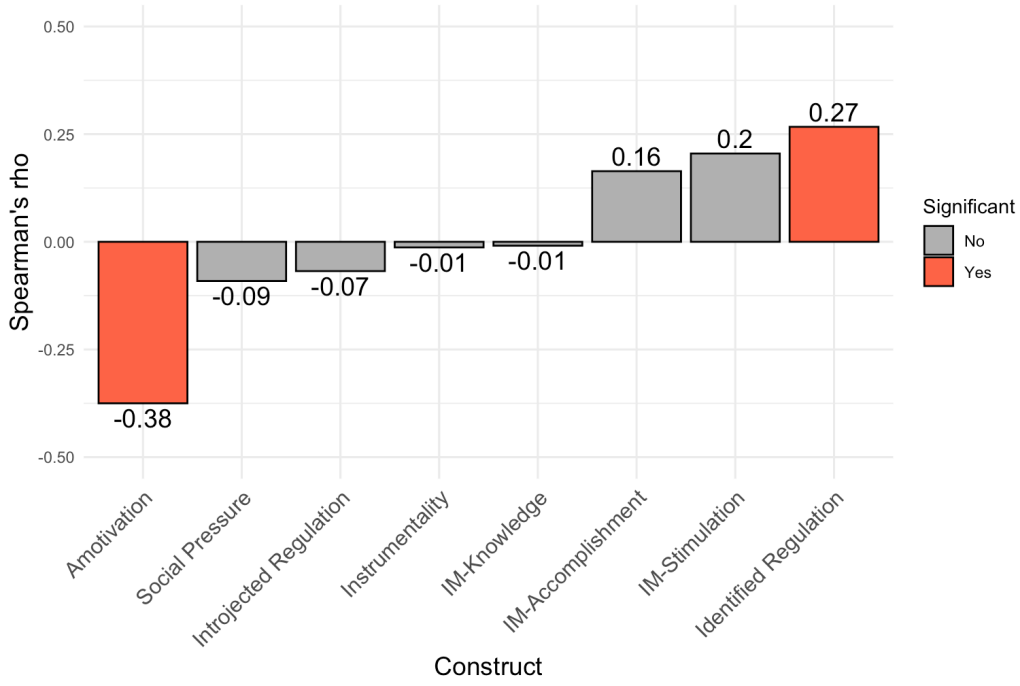
4.4.1 Questionnaire findings

The relationship between each motivation construct and overall scores for difficulty and enjoyment (Qs 13_10 and 14_10) was assessed using Spearman's rank correlation. Bonferroni adjustment was made to p-values to control for multiple comparisons.

For difficulty, significant relationships were observed for Amotivation (ρ = -.38, p <.001) and Identified Regulation (ρ = .27, p = .02). Results are displayed in Figure 4.7.

Figure 4.7

*Spearman correlations: difficulty**



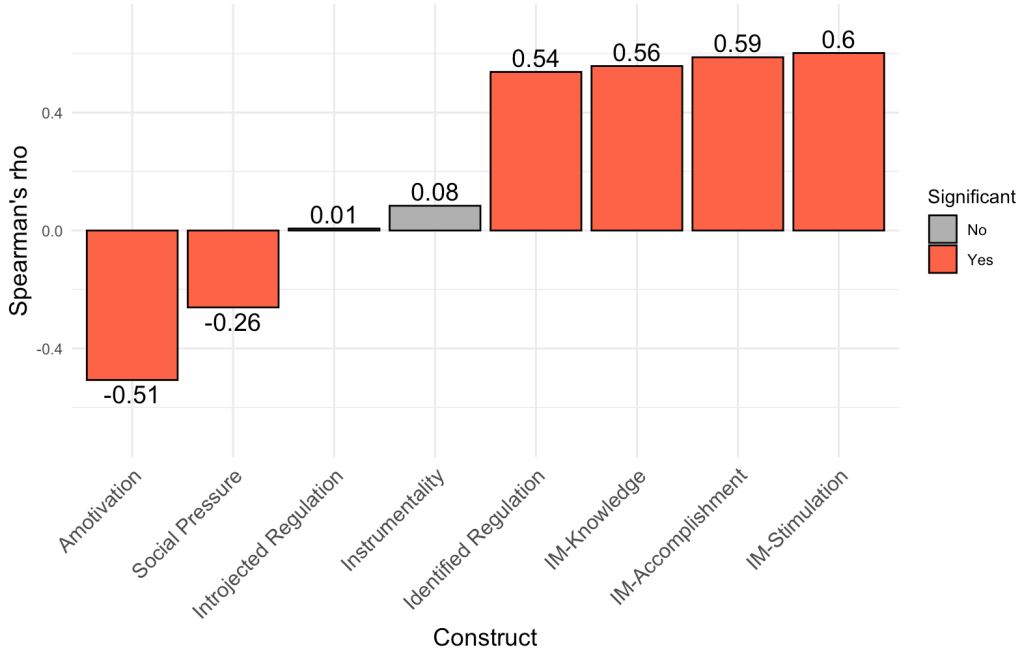
*Bars coloured by significance after Bonferroni correction

This suggests that the easier a learner finds Chinese, the less likely she is to feel amotivated, and the more likely she is to have internalised a belief that learning Chinese is the right thing to do.

For enjoyment, highly significant positive results (ρ >.53, p <.001) were observed for all self-regulated constructs. Negative relationships with enjoyment were found for Social Pressure (ρ = -.26, p = .02) and Amotivation (ρ = -.56, p <.01). Results are displayed in Figure 4.8.

Figure 4.8

*Spearman correlation: enjoyment**



*Bars coloured by significance after Bonferroni correction

These results suggest a strong relationship between self-determined motivation and enjoyment.

4.4.2 Interview findings

Previous themes established the centrality of enjoyment and difficulty to learner motivation and explored how these constructs were understood by learners. The final two themes, *Worth the Effort* and *Don't Waste My Time*, identify ways that beliefs about difficulty and enjoyment influenced participants' intended motivated behaviour – either through school subject choices or commitment to independent study.

Worth the Effort describes learners' understanding that reaching proficiency in Chinese will require sustained effort beyond GCSE. This understanding, along with judgements of Chinese's usefulness and anticipation of future enjoyment, informed decisions about subject choice.

In the short term, participants justified investing more time on Mandarin than other subjects:

> I try to practise it a little bit more than my other subjects because if you don't practise the characters and the tones, like, all the time, then you will just forget them. (E6)

Learners who decided to continue beyond GCSE expressed a feeling of owing it to themselves to reach communicative competence:

> I think it's really useful to learn it and I feel like GCSE doesn't cover everything. Like, you're not fluent, and you'd have to study for quite a long time to be fluent. (C11)

However, for others, the knowledge that they cannot give Chinese the commitment it deserves was a reason for discontinuation:

> I'm not really sure if I want to do it for A level because right now I'm finding it really difficult to keep up. And I want to do sciences at A level so that's going to be hard within itself […] I want to focus on sciences because I want to be a doctor, so I just feel like doing Chinese when I'm already struggling, like, not *struggling* struggling, but it's definitely, like, tedious, you know? (E11)

Don't Waste My Time builds on *Exams Set the Pace* to explore how school policies provoke feelings of frustration and resentment in learners, leading to demotivation. While School C's compulsory MFL GCSE policy provoked mixed reactions, pupils at both schools found mandatory 'twilight' (after-school) lessons demotivating. Despite significant variation between schools in how the hour was used, pupils consistently found this lesson to be boring, unproductive and disruptive to their life outside school:

> Sometimes I have to pick up my brother and they expect us to be at an after-school lesson. If I don't enjoy it, and if it's a waste of time, if we're not going to take any of it in, we could have picked another subject. So if we're not going to enjoy it why would we go to the after-school lessons? (C14)

Worryingly, C3 reported deliberately reducing independent study time to account for the extra lesson. While this strategy was not widely reported, a number of learners did report spending less time on Mandarin than other subjects, and even highly motivated learners reported feeling drained and demotivated by the extra lesson:

> By the third lesson, you're too tired to even just think about anything more. (E8)

In this way, the extra lesson threatened not only learner autonomy but also feelings of competence. Learners argued that boosting enjoyment by building in variety, interaction and games would make the sessions more productive. C16 suggested dispensing with it altogether, and amalgamating extra contact time into the school day:

> I feel like you could have interventions like they do with other subjects during form time. Because especially in Year 10, it just gets so repetitive […] And we can spend that time during the day at school rather than after school.

In summary, while overall enjoyment was a strong driver of motivated behaviour, beliefs about difficulty played an important role in students' decision processes. School interventions that reduced

enjoyment and threatened autonomy were a source of tension and may perversely disincentivise independent learning.

4.5 Conclusion

Both quantitative and qualitative results indicate an overall pattern of high intrinsic motivation and self-belief across the sample. IM-Stimulation appeared to correlate with intent to continue, with lower median scores than other intrinsic constructs. Instrumentalist motivations appeared to be as highly motivating as self-determined constructs. Difficulty and enjoyment results suggested that character learning was perceived as easier and enjoyable, while tones and listening were seen as more difficult and less fun. However, qualitative findings suggest that difficulty may be perceived differently in different contexts.

5. Discussion

The present study investigated motivation and beliefs about Chinese learning among English secondary pupils. Findings suggest that participants were mostly intrinsically motivated and appeared to enjoy the process of learning Chinese despite its inherent challenges. However, instrumentalist beliefs were also a strong motivator, and interviewees found repetitive or compelled activities demotivating. This chapter will discuss these findings in relation to the broader literature before offering suggestions for future research and pedagogy.

5.1 RQ1: What is the nature of motivation to learn Mandarin among secondary-aged learners in English schools?

Overall, self-determination theory (SDT) and its organismic integration (OIT) sub-theory (Deci & Ryan, 2000) provided useful insight into students' motivational profiles. Questionnaire respondents scored highly on self-determined constructs. Qualitative data indicated that enjoyment (IM-Stimulation, *Fuelled by Fun*) and a sense of pride in making progress (IM-Achievement, *It's Cool We Can Do This*) were woven inextricably into learners' conception of learning Chinese. Questionnaire and interview data suggested strong correlations between IM-Stimulation and self-reported intent to continue. While this is the first known study to directly apply SDT to CFL motivation in English secondary classrooms, its findings are in line with previous studies of English secondary-level Mandarin learners such as Higgins and Sheldon (2001), Wang (2009) and Xie (2013).

Findings on heritage learners (HLs) were also in line with the broader literature and initial hypotheses. As suggested by Comanaru et al. (2009), HLs were significantly less likely to learn for intrinsic reasons. In this study HLs scored significantly higher than NHLs on extrinsic constructs, particularly social pressure, and lower on intrinsic sub-scales.

Analysis of year groupings failed to uncover significant differences in motivation. This is likely related to the fact that all participant schools were members of the Mandarin Excellence Programme (MEP), biasing the sample towards students who had already committed to GCSE. Around 80% of Year 7 MEP learners end up taking Mandarin GCSE four years later (Impact Stories, 2024). Statistical comparisons of motivational profiles also failed to find significant differences between schools. This may reflect the effect of smaller sample sizes on statistical power. Alternatively, school groupings may be too broad, and more granular analysis may be required that takes account of a range of demographic or school-level variables (Parrish et al., 2024).

One surprising finding was the failure of External Regulation items to cohere as a single construct. Non-heritage learners indicated in both questionnaires and interviews that social pressure was not a

strong motivator, but that they expected Chinese skills to improve their employment prospects. This suggests that external reward and social pressure might work differently as motivators for the target population. It may be that the respondents' youth makes employability less of a tangible reward than predicted by Deci and Ryan (2000). Nevertheless, thematic analysis suggested an external source for instrumentalist motivations, as pupils described a strong parental influence shaping their beliefs. Neoliberal narratives of 'Chinese as capital' as described by Parrish (2021) and Pan (2023) were also detectable in interview data:

> My parents wanted me to learn another language because I already know Farsi and Arabic. And […] they say China is really important now and you have to be able to communicate with a world superpower. (C4)

The present study therefore aligns with the findings of Xie (2013), Tinsley and Board (2014), Parrish (2019) and Parrish and Lanvers (2018) that wider social attitudes valorising Chinese as economically useful have been absorbed by parents, school leaders and pupils.

While instrumentality was clearly an important motivator for learners, further research is needed to understand how this construct relates to self-determination and to what extent it sustains motivated behaviour. It is notable that the term chosen to describe this construct is strongly associated with Gardner's (1985) Socio-Educational Model. This model, and its constructs of integrative and instrumental orientations, is often criticised as excessively focused on integration with L2 target populations and unsuitable for the classroom context (Al-Hoorie, 2017). However, it might serve as a useful complementary lens through which to investigate instrumentalist motivation. This would align with the argument that the multi-faceted and dynamic nature of SLA motivation is best understood using complex dynamic systems theory (CDST) (Boo et al., 2015). Proponents of CDST argue that combining theoretical frameworks can allow researchers to understand the dynamic interaction between motivational constructs from different perspectives (Dörnyei & Ushioda, 2021).

5.2 RQ2: How difficult do pupils find Mandarin? Does this differ by skill?

While questionnaire ratings for overall difficulty clustered around the midpoint of 'neither easy nor difficult', analysis of interviews revealed a wide range of difficulty beliefs. These were eventually grouped into two themes dealing respectively with the linguistic challenge of learning a typologically different language (*A Surmountable Challenge*) and the stress of meeting the standard required for GCSE (*Exams Set the Pace*). This is the first known study to propose a dual framework for understanding difficulty, and as such the proposed groupings remain exploratory.

Within *A Surmountable Challenge*, character learning was frequently cited as a difficult aspect of learning that became manageable with practice. Tones, on the other hand, remained an enduring

challenge. This is reflected in the questionnaire data, which rated characters/reading as the easiest sub-skills and listening/tones as the most difficult. This may be a result of limited classroom time spent practicing tones:

> I don't think they teach the tones that well. They did in Year 7[…] But now […] they don't require you to write the tones, so you don't learn them, really. (E9)

This hypothesis is supported by Hu (2010)'s finding that perceived difficulty is most influenced by self-reported proficiency in the sub-skills of aural perception and oral production.

The researcher decided to include 'sentence structure' under *Exams Set the Pace* rather than *A Surmountable Challenge*. Unlike with characters and tones, the researcher found it difficult to understand learners' rationale for listing Chinese syntax as one of the most challenging sub-skills. Both English and Chinese have limited-to-no inflectional morphology and generally follow S-V-O word order. This has led to received wisdom that Chinese has 'no grammar' or that grammar is very easy to acquire (Hu, 2010). While Tinsley and Board (2014) acknowledge that this belief is misplaced, they add that more challenging Chinese grammatical constructs tend to be highly ambiguous and are rarely noticed by school-aged learners. Nevertheless, grammar does seem to be a source of stress for beginners, as highlighted by Hu's (2010) study of university students. One explanation could be that beginner learners are taught Chinese grammar in a way that is confusing or subverts expectations. The Mandarin GCSE specification uses a framework designed for European languages, limiting teachers' freedom to develop tailored pedagogical approaches (Zhang & Li, 2010). Lam (2020) carried out a comparative analysis of CFL provision in five English schools and found that grammar was primarily taught according to rigid patterns based on the GCSE specification. However, while teachers felt frustrated at being expected to teach oversimplified rules that were technically inaccurate, students generally found grammar clear and easy to learn.

The present study did not include classroom observations and participant schools' approach to grammar teaching is not known. However, pupils' beliefs about the complexity of sentence structures suggest a rules-based approach. It is possible that difficulty or confusion stems from natural language failing to fit these rules:

> The sentence structure [is difficult]. Cause we got told, like, the STTVO [sic] thing. But like, sometimes in specific structures even that changes. And then I'm like, well, it's just thrown it off now. (E8)

In summary, while learners found Chinese inherently difficult, they often saw it as an enjoyable challenge. In contrast, the increased pace of learning as pupils approached GCSE often caused anxiety and exhaustion. While some level of challenge is an unavoidable aspect of GCSE study, it is possible that current approaches cause unnecessary stress or cognitive load.

5.2.1 RQ2a: What are pupils' beliefs about their ability to learn Mandarin?

Questionnaire results indicated that learners had high levels of belief in their own abilities. This finding relates to competence as theorised by SDT's basic psychological needs theory (BPNT) (Deci & Ryan, 1985). It is also reflected in the theme *It's Cool We Can Do This,* which centres feelings of pride and positive self-image derived from making progress in Chinese. High questionnaire scores for the belief that success depends on individual effort is also reflected in the theme *Worth the Effort. Worth the Effort's* affirmation of the importance of sustained learning is interesting in the context of Yang's (2015) finding that Mandarin teachers in English schools believed their pupils were not prepared for the hard work and memorisation involved in learning Chinese. Objective measurements of effort are outside the scope of both Yang (2015) and the present study, and it is possible that neither pupils' nor teachers' assessments of pupil work ethic are accurate.

Learners' strong sense of identity and pride at learning an 'intimidating' language could be interpreted as academic elitism. The literature points to a belief among school leaders that Mandarin provision will boost their school's standing and prestige (Xie, 2013; Tinsley & Board, 2014; Codó & Sunyol, 2019). The MEP has also been associated with elitism and academic selection (Tinsley & Board, 2014). Elitism could be argued to be a latent factor driving pupil beliefs that Chinese skills will lead to enhanced job prospects (*A Useful Language*). However, interviewees did not overtly express pride at having been selected for the MEP, and there was no explicit mention of studying Chinese to gain entry to elite universities or professions. Instead, feelings of pride appeared to derive directly from the experience of learning Mandarin. School C pupils who did not participate in the MEP also expressed feelings of satisfaction derived from growing proficiency:

> Using characters that you know and, like, putting them in the right order and stuff […] is fun. (C9)

In summary, while learners had a strong positive self-image as successful language learners, this self-image was not explicitly linked to external selection or qualifications but appeared to be derived from the satisfaction of acquiring a language which others perceived as difficult. As such, this effect may not primarily be a result of elitism and may hold true were access to CFL learning broadened.

5.3 RQ3: How enjoyable do pupils find learning Mandarin? Does enjoyment differ by skill?

Enjoyment was a dominant theme in both quantitative and qualitative results. Students reported high levels of interest, excitement and joy when learning Chinese. Interview participants frequently mentioned enjoyment unprompted, particularly in relation to character learning, and cited enjoyable activities such as classroom games or class trips as favourite elements of learning. In contrast, anxiety, another commonly studied emotion in Applied Linguistics more broadly, was only mentioned

infrequently and in the contexts of examinations or listening to L1 Chinese speakers. Interviewees' anxiety over listening aligns with questionnaire findings that listening and tones were the least enjoyable skills.

Learner experience of enjoyment was interwoven in interview data with judgements of novelty or variety (*Mix it Up*). This is broadly in agreement with questionnaire findings on intrinsic motivation and is also cited as an important factor by similar studies (Xie, 2013; Higgins & Sheldon, 2001). For example, Higgins and Sheldon (2001) found that learners felt that Chinese was 'different, fun and a challenge' (p. 113). It is likely that high levels of learner confidence in their own abilities as documented in the previous section also contribute to feelings of enjoyment (Smith & Li, 2022). It is notable that character learning was both rated as most enjoyable and frequently mentioned in relation to fun and engaging classroom activities. This accords with Fredrickson's (2001) broaden-and-build theory, which posits that positive learning experiences boost learner confidence and lead to increased resilience.

5.4 RQ4: What is the relationship between pupils' motivation and a) perceptions of difficulty? b) enjoyment?

Statistical analysis yielded limited insight into the relationship between difficulty and motivation, with significant correlations observed only for amotivation and identified regulation. While this could be interpreted as a weak relationship between difficulty and intrinsic motivation, interview findings suggest that averages across the entire sample might conceal a more nuanced picture.

Interview data contained apparently contradictory messages describing difficulty as both a demotivating and motivating factor. The researcher found that these could be partially reconciled by framing difficulty as two separate concepts relating to typological difference (*A Surmountable Challenge*) and classroom pressure (*Exams Set the Pace*). Thematic analysis suggests that inconsistencies were not a result of different individuals in the sample expressing different, internally coherent opinions about difficulty. Rather, difficulty was understood differently depending on context: getting to grips with Chinese was an enjoyable challenge, but the learning methods required to do so were cognitively demanding and stressful. In this way, feelings of motivation and demotivation related to task difficulty existed in tension even within high performing, highly motivated learners. It might therefore be productive for future studies to adopt a more granular approach to quantitative measurement of difficulty beliefs in order to capture multiple contexts and perspectives.

The theme *Worth the Effort* suggests that most learners did not feel demotivated by awareness of gaps in their knowledge, and for some this was a strong motivator to continue learning. The difficulty of preparing for assessments, on the other hand, did prove demotivating for many interview participants, with some successful learners deciding that they could not balance Mandarin workloads alongside other demanding subjects. Such decisions involve learner judgements of their own abilities and pursuit of optimal challenge and are therefore linked to feelings of competence as defined by BPNT (Deci & Ryan, 2000).

Quantitative analysis suggested a significant correlation between enjoyment and self-determined motivation. IM-Stimulation, the motivational construct most closely linked to enjoyment, also correlated significantly with learner intent to continue. Thematic analysis identified enjoyment as the basis for the overarching theme *Fuelled by Fun*, while *Mix it Up* describes the role of novelty and variety in driving enjoyment. This focus on novelty and challenge demonstrates that enjoyment is also closely linked to feelings of competence as defined by BPNT (Deci & Ryan, 2000).

A second BPNT construct, autonomy, relates to an individual's feelings of control over her learning (Deci & Ryan, 1985). Autonomy was not identified as a distinct theme when discussing general motivation: with the notable exceptions of C3, C8 and E2, most children felt that they were in control of their choice to learn Mandarin. This is perhaps not surprising given Mandarin's status as a lesser-taught MFL subject (Tinsley & Board, 2014). However, students did experience demotivation when school policies threatened their autonomy (*Don't Waste My Time*), particularly in relation to mandatory after-school lessons. These 'twilight' lessons are commonly used by schools to fulfil the MEP requirement of four in-person contact hours per week, with teachers listing timetabling as one of their biggest challenges (Research Stories, 2022; Impact Stories, 2024). This hour was associated with negative emotions in participants, with one learner reporting actively reducing independent study time to compensate. The strength of feeling surrounding this issue accords with Parrish and Lanvers' (2018) and Parrish et al. (2024)'s findings that school policies perceived to infringe student autonomy can have a deleterious effect on motivation.

5.5 Pedagogical implications

Participants in the present study were strongly intrinsically motivated and enjoyed learning Chinese. This indicates that Mandarin provision in participating schools has been broadly successful, and that Mandarin might be a strong choice of MFL subject for other schools.

Both qualitative and quantitative data underlined the importance of IM-Stimulation, or fun. Interview findings suggest that teaching is engaging and stimulating overall, and that novel

approaches to teaching character recognition are particularly popular. Listening and tones, on the other hand, emerged as areas of low confidence and low enjoyment. This suggests that more curriculum time might be usefully spent on fun activities that practise aural comprehension.

Three recommendations are made based on interview themes:

Learners reported that they would like to see more variety and interaction in lessons. While the pressure of exam preparation is clearly a factor, traditional learning approaches that emphasise rote memorisation may also have contributed to learner judgements that lessons can be overly repetitive. If properly integrated into lesson plans, games and interactive elements have been shown by Lam (2020) to be effective motivators in a CFL context.

While the GCSE specification and limited contact time may limit teachers' room to develop innovative approaches to grammar teaching, attention should be paid to aspects of grammar that increase learners' cognitive burden. Both Tinsley and Board (2014) and Lam (2020) recommend providing teachers with continuous professional development (CPD) to help them build confidence when explaining Chinese grammar to young anglophone learners.

While learner autonomy was generally high in the interview sample, mandatory after-school learning was a source of friction. Both interview schools met MEP contact hour requirements using twilight lessons, and the present study was therefore unable to collect data on alternative approaches such as lunchtime or before-school classes, or amended timetabling during school hours (Impact Stories, 2024). It is nevertheless recommended that schools plan any extra lessons carefully and put measures in place to help students understand and engage with their purpose. Suggested measures could include pupil consultations, acknowledging the inconvenience that these lessons cause or positively recognising pupil commitment.

5.6 Policy-level implications

The Mandarin Excellence Programme appears to be a popular and effective way to boost Chinese learning in schools (Research Stories, 2022; Tinsley & Board, 2014). The trip to China in particular was a strong positive motivator for participants (Impact Stories, 2024). It is recommended that this programme be maintained.

Questions have been raised in recent years about elitism in the MEP (Research Stories, 2022; Tinsley & Board, 2014). While Chinese is undoubtedly a challenging language, this study's findings suggest that pupils may find the learning process satisfying regardless of academic attainment. It is therefore possible that, if taught at an appropriate pace and with high quality support, the benefits of the MEP could be enjoyed by a wider range of pupils. This is backed up by the most recent MEP evaluation

report, which found that participation had a positive impact on GCSE attainment even after controlling for confounding factors such as selection bias and FSM eligibility (Impact Stories, 2024).

Finally, while many students are pleased that they chose Mandarin GCSE, interview participants' negative emotions around the pace of learning and grammatical structures suggest that some aspects of the curriculum may be contributing to excessive cognitive load. A review of the GCSE specification for Chinese would ensure that the knowledge assessed is appropriate and promotes effective, sustainable learning.

5.7 Limitations and implications for future research

The present study addresses an important gap in CFL motivation literature by using self-determination theory to examine the experiences of English school learners after several years of study. It involved a relatively large number of participants from a range of schools, and combined data from questionnaires and interviews to provide a full and nuanced picture. One strength of this study is its relative breadth, allowing observation of patterns across different school environments. However, the challenges of recruiting during exams limited the sample to MEP participant schools. This is likely to have biased sampling towards better resourced schools. Similar bias might have resulted from the use of convenience sampling leading to over-representation of rural and suburban schools (Cohen et al., 2018). A larger scale study including non-MEP schools and schools in inner cities would improve ecological validity and allow for more in-depth analysis of between-school differences.

In addition to strengthening validity, a larger study would provide greater statistical power to run parametric tests and regression analyses. The present study found a correlation between IM-Stimulation and self-reported intent to continue, and qualitative analysis implied that appraisals of enjoyment might inform decisions about whether to persevere with learning. Future research is needed, however, to establish conclusively whether IM-Stimulation scores can be used to predict motivated behaviour.

Due to constraints on the scope of this study, several demographic and school-level variables which might influence motivation were not included in analysis. These include curriculum provision, teaching quality, enrolment policies, gender and social background. Future studies are needed that can measure and analyse the impact of these variables.

One surprising finding was the failure of External Regulation to cohere as a single construct for the target population. While Instrumentality and Social Pressure appear to be adequate descriptors for the two constructs that emerged, these groupings remain exploratory. It is also not clear whether

learners have internalised instrumentalist narratives, or to what extent they act as an effective long-term motivator. Future research is needed to theoretically refine extrinsic motivation for a UK secondary school context. Future studies could also adopt a complex dynamic systems paradigm to build a more dynamic and situated picture of learner motivation. For example, measurement of SDT constructs could be combined with other complementary theoretical frameworks (Dörnyei & Ushioda, 2021). Longitudinal studies would also give valuable insight into how individual motivation changes over time (Cohen et al., 2018; Elliott, 2023).

Finally, a major limitation of this study was its reliance on self-report and a lack of reliable measure of motivated behaviour. A focus on self-report sheds light on individual decision processes but risks allowing social desirability bias or lack of self-awareness to impact the reliability of findings (Miller, 2012). While proficiency and intent to continue were measured quantitatively, the former construct was not reliably demonstrated, and the latter appears to have been interpreted inconsistently. In addition, these constructs were measured alongside the motivation instrument, leading to a risk of common method bias (Al-Hoorie et al., 2025). Future studies are needed that can triangulate questionnaire findings with observable measures of motivated learning such as assessed proficiency or classroom engagement. These could include case studies, classroom observations or intervention studies that trial specific approaches to promote self-efficacy and intrinsic motivation.

6. Conclusion

This mixed-methods study investigated motivation to learn Chinese among 122 secondary school learners at five English schools. It aimed to understand pupils' motivations after several years of instruction, and how motivation was affected by exam preparation and perceptions of the relative difficulty of Chinese. The overall findings are encouraging. Self-determination theory appeared appropriate for measuring CFL motivation in English classrooms, revealing a strongly self-determined pattern of motivation amongst participants. Despite the stress of exam preparation, students still found joy and interest in the process of learning Chinese and believed in their own ability to learn it well. These findings suggest that current approaches are generally effective and engaging and confirm Mandarin as an attractive MFL subject for English schools. Given that all participant schools were affiliated with the Mandarin Excellence Programme, the findings of the present study are also an encouraging sign that direct investment may be having positive results.

Looking to the future, the strength of participants' beliefs about the usefulness of Mandarin is interesting against a backdrop of falling university enrolment and the impact of AI on traditional language-related professions (The Economist, 2023). It is far from certain that instrumentalist beliefs will be persuasive enough to change learners' A Level or university choices. Indeed, they may not even be strong enough to counter social narratives that devalue language learning. It could be argued that the most effective approach to the UK's language learning 'crisis' is to directly challenge monolingual mindsets and neoliberal assumptions about language as economic capital, rather than promote Chinese as the exception that proves the rule (Parrish, 2021).

Nevertheless, the study's findings on enjoyment and intrinsic motivation suggest that instrumentality only forms part of the picture. It seems likely that Mandarin's 'useful' image serves to attract some pupils who would not otherwise choose to learn a language, many of whom go on to find language learning enjoyable and enriching. More research is needed to understand the relationship between instrumental and intrinsic motivations for these learners. However, an optimistic reading of the present study might suggest that initiatives such as the MEP could be used to stimulate wider MFL uptake, or even spark a broader national conversation about the benefits of multilingualism.

These outcomes are far from certain in a changing policy and geopolitical environment. Nevertheless, the present study provides evidence that Mandarin is already an engaging and motivating element of English schools' MFL provision. It is hoped that this study will encourage policymakers and school leaders to continue to increase opportunities for young people to benefit from access to Chinese learning.

7. Reference list

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Appendix A – Participant recruitment materials

Initial approach email to schools

Hello,

I hope this email finds you well. My name is Jo McLaughlin and I am currently studying for a Masters at the University of Oxford in Applied Linguistics after a long career as a Mandarin translator. I am really interested in the experience of children learning Chinese at school, and I would like to write my dissertation on pupil motivation in Years 9 and 10. I wondered if your school would be interested in participating in my research.

The study would involve asking pupils about their motivation to learn Chinese, and how difficult they feel it is, by asking them to fill in a short survey. For some schools, I would also like to do a follow up group interview with willing students.

I realise you must be incredibly busy, but if you could pass my email on to the relevant member of staff for Mandarin, I would be happy to answer any questions.

Many thanks in advance,

Jo McLaughlin

Formal approach to Headteacher

Dear [Headteacher]

I hope you are well. I am writing to enquire about conducting some research on Mandarin learning in your school this academic term. I have already contacted [Subject Lead] to have an initial discussion of the project. If you are happy to proceed, I would love to call/visit the school next week to agree next steps.

I have attached a letter outlining the research project and the information sheets we would provide to parents and children for the survey and interview stages. I have also copied the text of the letter below.

Thank you so much for your time and consideration,

Jo McLaughlin

BEGINS

[Head Teacher name]

[School name]

[School address]

[Date]

Ethics Approval Reference: EDUC_1228030

Dear [Head Teacher name],

I am writing to enquire about conducting some research in your school next academic term. I am a Masters student at the University of Oxford, supervised by Anna-Maria Ramezanzadeh In my research study, Exploring Chinese Language Learning Motivation of GCSE Students in English Secondary Schools, I will explore the factors behind children's decisions to carry on their studies of Mandarin to GCSE or beyond.

The research will take place with pupils in Years 9 and 10 who are studying Mandarin in school. My research focus is on students' experiences and beliefs about learning Mandarin, and whether these might affect their decision to continue their studies.

By participating in the research, your school would be contributing to research that will help to shed light on what factors can encourage children to become lifelong learners of languages. I hope that this research will help policy makers to identify and resolve issues that interfere with children's motivations to continue learning Mandarin.

The commitment from the school would be to allow me to spend time with Mandarin classes in summer term 2025. I would like to administer a survey to pupils lasting approximately 15 minutes. As a follow up, I may also ask to visit the school on a second occasion to run a group interview with small groups of students (roughly 3-7 students per group). Each interview will take approximately 20-30 mins and I would be looking to conduct up to 4 group interviews with students if your school is selected. These would require the use of an empty room or classroom, and could be conducted during their Mandarin lessons, or lunch or break times, or during any other free period. I would audio-record the group interviews for ease of transcription.

The University of Oxford has strict ethics procedures on conducting research with teachers and students, consistent with current British Educational Research Association guidelines. Before beginning the research, I would inform parents/guardians about the research and offer the students and parents/guardians the opportunity to refuse to participate. If a student is selected to take part in an interview, I would seek parent/guardian consent specfically for this. Throughout the research, students and parents/guardians will be able to refuse to participate at any time.

All data collected from participants, including students, teachers and the school, would be anonymised in all research reports. The data collected would be kept strictly confidential, available only to my supervisor and myself and not used other than specified without the further consent of all involved being obtained. All recordings would be destroyed after transcription, and kept in locked conditions until then. I have a DBS check from 24th February 2025, reference number 001228252550. I have enclosed copies of the information for parents/guardians and students with this letter.

If your school would like to take part in the study, or you need more information about what is involved, please contact me. Whether or not you feel it would be appropriate for your school to participate, I would be grateful if you would complete the pro-forma below, and return it to me via email.

Thank you for your time and attention. I look forward to hearing from you.

Yours Sincerely,

Jo McLaughlin

Exploring Chinese Language Learning Motivation of GCSE Students in English Secondary Schools

Jo McLaughlin, University of Oxford Department of Education

[School name]

[School address]

[Head Teacher name]

☐ We do not wish to participate in this project.

☐ We would like to find out more about this project.

☐ We would like to take part in this project.

If you would like further information, or are interested in taking part, please give the name of a contact person for your school, and details of the best way to contact them.

Contact name: _____

Contact email: _____

Contact telephone number: _____

Please return this form via email to joanne.mclaughlin@education.ox.ac.uk

Thank you for your help.

Appendix B – Questionnaire

Q1. Welcome!

Thank you for agreeing to take part in our project!

This questionnaire will ask you about your background, your reasons for learning Chinese, and some of your experiences and beliefs about learning Chinese.

Please try to answer the questions as honestly as you can. If you have any questions, please let me know.

It is up to you to decide if you want to take part in this research. You are free to stop at any time without giving a reason. You do not have to say why and this will not affect your education. If you decide to stop, no one will be upset with you.

Results are kept strictly confidential, and only the people doing the research, or helping with the research, can look at the data. The questionnaire will not record your name, and all information and results are kept in a password-protected computer file in the University.

This research is part of a Masters degree and is fully funded by the University of Oxford.

This research has received ethics approval from a subcommittee of the University of Oxford Central University Research Ethics Committee. (Ethics reference: EDUC_1228030).

Thank you for reading – please ask me any questions

Section 1: Demographic information

Q2. What is your age? _____Years _____ Months

Q3. How do you describe yourself?

Male	Female	Non-binary / third gender	Prefer to self-describe	Prefer not to say

Q4. What is your first language? Please tick all that apply.

English	Chinese (Mandarin)	Chinese (other - e.g. Cantonese, Taiwanese, Hakka)	Another language (please specify_____)

Q5. Were any languages other than English spoken in your home when you were growing up?

No, just English	Yes (please specify which languages _____)

Q6. How long have you been studying Mandarin Chinese?

Less than a year	1-2 years	3-5 years	More than 5 years

Q7. How would you rate your level of Mandarin Chinese? A rating of 0 indicates no ability, and a rating of 10 means completely fluent.

- Q7_1 Overall
- Q7_2 Speaking
- Q7_3 Listening
- Q7_4 Reading
- Q7_5 Writing

0	1	2	3	4	5	6	7	8	9	10

Q8. Have you learned any languages other than Mandarin Chinese? Please answer all that apply.

No	Yes, at school (please specify the languages that you have learned _____)	Yes outside of school (please specify the languages that you have learned _____)

Q9. What year are you in?

Year 9	Year 10

Q10. What are your plans for learning Mandarin?

I don't plan to continue learning it after this year	I want to continue learning it, but only outside of school	I plan to continue learning it at school, but only until GCSE	I plan to continue learning it at school after GCSE	I'm not sure

Q11. (Year 9 only) Are you planning to choose Mandarin as a GCSE subject?

Definitely not	Probably not	Not sure	Probably yes	Definitely yes

Section 2: Motivation

Q12. To what extent do you agree with the following statements: **I learn Chinese....**

- 12_1 Because I would feel guilty if I didn't know Chinese.
- 12_2 To prove to myself that I am a good citizen because I speak Chinese.
- 12_3 I don't understand why I learn Chinese.
- 12_4 Because I enjoy it when I understand something difficult in Chinese.
- 12_5 Because I think it is good for my personal development.
- 12_6 Because I choose to be the kind of person who can speak more than one language.
- 12_7 Because I enjoy listening to native Chinese speakers speaking Chinese

- 12_8 Because it makes me feel satisfied to find out new things
- 12_9 I don't know why I learn Chinese, it feels like a waste of time.
- 12_10 Because I enjoy knowing more about Chinese culture
- 12_11 Because I would feel embarrassed if I couldn't speak to Chinese speakers in their own language.
- 12_12 Because it will help me to get a good job in the future.
- 12_13 Because I choose to be the kind of person who speaks Chinese.
- 12_14 For the satisfaction I get when I make progress while learning Chinese.
- 12_15 I don't know why I learn Chinese, and I don't care about learning it.
- 12_16 For the enjoyment I feel when hearing Chinese spoken.
- 12_17 So I can earn lots of money in the future.
- 12_18 Because I enjoy speaking Chinese.
- 12_19 Because I feel like others expect me to.
- 12_20 For the satisfaction I feel when I succeed at a difficult task.
- 12_21 Because I enjoy learning about China and the way Chinese speakers live.

1 = Strongly disagree	2 = Somewhat disagree	3 = Neither agree nor disagree	4 = Somewhat agree	5 = Strongly agree

Section 3: Difficulty

Q13. How **difficult** do you find the following aspects of learning Chinese?

- 13_1 Tones
- 13_2 Grammar rules
- 13_3 Pinyin (e.g. nǐ hǎo)
- 13_4 Recognising characters
- 13_5 Writing characters
- 13_6 Listening
- 13_7 Speaking
- 13_8 Reading
- 13_9 Writing
- 13_10 Chinese language in general

1 = Extremely difficult	2 = Somewhat difficult	3 = Neutral	4 = Somewhat easy	5 = Extremely easy

Section 4: Enjoyment

Q14. How **enjoyable** do you find the following aspects of learning Chinese?

- 14_1 Tones
- 14_2 Grammar rules
- 14_3 Pinyin (e.g. nǐ hǎo)
- 14_4 Recognising characters

- 14_5 Writing characters
- 14_6 Listening
- 14_7 Speaking
- 14_8 Reading
- 14_9 Writing
- 14_10 Chinese language in general

1 = Extremely dislike	2 = Somewhat dislike	3 = Neither enjoy nor dislike	4 = Somewhat enjoy	5 = Really enjoy

Section 5: Ability beliefs

Q15. To what extent do you agree or disagree with the following statements?

- 15_1 Learning Chinese is not as difficult as learning European languages (eg. French, Spanish)
- 15_2 It is easier for someone who already speaks an Asian language to learn Chinese.
- 15_3 I have the ability to learn Chinese.
- 15_4 Pupils in English schools are very good at learning Chinese.
- 15_5 How much you can learn from a Chinese course mostly depends on the quality of the teacher.
- 15_6 I have the ability to learn foreign languages.
- 15_7 Everyone has the ability to learning to speak a foreign language.
- 15_8 Everyone has the ability to learn Chinese.
- 15_9 How much you can improve your proficiency in Chinese depends on your effort.

1 = Strongly disagree	2 = Somewhat disagree	3 = Neither agree nor disagree	4 = Somewhat agree	5 = Strongly agree

Thank you for your help!

Appendix C: Semi-structured interview protocol

Introduction

Thank you for agreeing to speak to me today. My name is Jo McLaughlin and I am studying how we learn languages at the University of Oxford. I learned Mandarin when I was at university, but I never had the opportunity to study Mandarin at school. I'm interested in finding out more about your experiences studying Mandarin, the good and the bad, and how you are feeling about studing Mandarin in the future. I hope that the results of my findings will help schools to plan and improve Mandarin courses in future.

I'm going to ask you a few questions about your language learning background and about your experience of learning Chinese. Please answer completely honestly – there are no right or wrong answers. All your interviews will be recorded and transcribed using codes instead of your real names, to make it harder to identify who said what. When I write my final report I won't include any information that might allow you to be identified. If you don't feel like taking part, you can leave at any time. If you decide later that you have changed your mind about taking part, please let your teacher know. If the information hasn't been made anonymous yet, your answers will be removed from our data.

Questions

1. Which year are you in?

2. How long have you been learning Mandarin? How has your experience of learning Mandarin been so far? Was it your choice?

3. Do you notice any differences between learning other FL and Mandarin? What are they?

4. What interests you most when you learning Mandarin? Why do you find it is interesting?

(Prompts: talk about tones, characters, speaking, listening, writing, reading, cultural differences)

5. What have you found difficult in learning Mandarin? Why do you think this?

(Prompts: talk about tones, characters, speaking, listening, writing, reading, cultural differences)

6. What part of learning Mandarin do you enjoy practicing the most?

(Prompts: talk about tones, characters, speaking, listening, writing, reading, cultural differences)

7. How does your experience of learning Mandarin compare with your expectations before you started?

(prompts: is there anything that is more interesting/enjoyable/easier than you expected? is anything more boring/annoying/difficult?)

8. What other people in your life have had an influence on your decision to learn Chinese? How important is their influence for you?

(prompts: Did anyone encourage you? is there anyone that you would like to impress by learning Chinese? Is there anyone who you think would be disappointed if you stopped?)

9. How much time do you have to spend on Chinese study compared to other subjects? How does that make you feel?

8. (If in year 10): Are you planning to carry on learning Chinese after you've done the GCSE? Why/why not?

(if in year 9): Are you planning to take GCSE Mandarin? Why/why not?

Conclusion

Is there anything else that I haven't asked about that you think is important to talk about?

That's the end of my questions. Thank you for sharing your experiences with me. If you have any other questions about the project please ask me today or let your teacher know.

Appendix D: CUREC approval email

Applicant: Joanne McLaughlin
Principal Investigator: Anna-Maria Ramezanzadeh
Department: Education

Study title: 'The Language of the Future'? Exploring Motivations for Learning Chinese in English Secondary Schools
(Version: 2.0)

Ethics reference: Education (Educ) DREC **-** 1228030

Dear Anna-Maria Ramezanzadeh,

On behalf of the Committee, I confirm that the above research study described in the application and other supporting documentation submitted to the committee has been carefully considered by the Education (Educ) DREC in accordance with the University's regulations and policy for ethics approval of research involving human participants, human tissue and/or personal data. The opinion is as follows:

Opinion of Research Ethics Committee: Favourable Opinion

Subject to the following conditions:

Decision Date: 7 Aug 2025, 16:08

Opinion End Date: 14 Oct 2026

If favourable, insurance-provided indemnity arrangements will be in place between the decision date and opinion end date and you may now commence your study activities. Should you plan to continue the research beyond the end date above, it is your responsibility to ensure that you request, and receive, an extension (via amendment) from the committee for indemnity to remain in place. You may be required to provide a justification.

Please note the following:

Amendments: Should there be any subsequent changes to the reviewed study, applications for amendments can be made via the Oxford Ethics Application System (Worktribe Ethics).

Reports: Studies considered by OxTREC are expected to submit an *annual progress report* on each anniversary of study approval, until the study is completed. An end of study report is also required.

Audit: This study may be selected for audit at the discretion of the Research Governance, Ethics and Assurance Team.

Data safety: It is the responsibility of the PI to ensure that all data collected during the course of the study is stored and transferred safely and securely in accordance with University requirements. Further guidance and advice are available from the Research Data Team. Additional information is available at https://researchsupport.web.ox.ac.uk/governance/ethics

Yours Sincerely

Education Ethics Officer

Appendix E: Participant information sheets

E1. Parent/Guardian information sheet (questionnaire only)

Exploring Chinese Language Learning Motivation of GCSE Students in English Secondary Schools

INFORMATION SHEET FOR PARENTS/GUARDIANS

Central University Research Ethics Committee Approval Reference: EDUC_1228030

In partnership with researchers at the University of Oxford, your child's school has agreed to take part in a research study investigating how secondary school pupils feel about learning Mandarin. We would like to invite your child to be part of this research. We very much hope you would like your child to take part, but before you decide, it is important that you understand why the research is being done and what it will involve.

Why is this research being conducted?

In the last ten years there has been a growing emphasis on teaching Mandarin in schools, and many schools also now offer Mandarin at GCSE and/or A level. We would like to understand how young people who have had the opportunity to learn Mandarin at school feel about the subject as they approach their GCSEs. We would like to find out whether they are interested in continuing to learn Mandarin in future, and what their reasons are.

More information about the research can be obtained by contacting the research team (contact details overleaf).

Why has my child been invited to be involved in this research?

We are inviting your child to take part because they are a young person, aged between 13 and 15 years, attending [insert school/institution name here] and learning Mandarin in a classroom setting.

We are inviting pupils from schools around the South of England to take part.

Does my child have to be involved?

No. You can ask questions about the research before deciding whether to allow your child to participate. If you do agree to participation, you may withdraw your child and their data, without giving a reason and without any effect on their education, by advising the school or researchers of this decision. You can withdraw any information they have contributed up until the point that they complete the questionnaire (after which date all data will be anonymised in preparation for analysis).

If your child is not involved in the research, they will receive alternative provision of equivalent educational value.

What will happen if my child takes part?

- In the Summer term your child would be asked to complete a questionnaire in class, answering questions about their experiences of language learning and their motivation. This questionnaire should take no longer than 15 minutes to complete and would be administered in

class by your child's usual class teacher. You will be able to remove your child from the research project by completing the attached opt-out form. Your child would be asked to give their assent to participating in research activities and would be reassured that they do not have to participate if they would rather not do so.

What are the possible disadvantages and risks in taking part?

We do not envisage any disadvantages or risks to your child from participating in the study.

Students are free to withdraw from the survey at any point during data collection if they feel uncomfortable, with no consequences.

Are there any benefits in taking part?

While there are no immediate benefits to your child in participating, we hope that they will find the research tasks enjoyable and interesting. it is hoped that this research will lead to improved teaching and learning of Mandarin in schools. We will write a report of our findings that will be made available to you through your child's school if you are interested.

What information will be collected and why is the collection of this information relevant for achieving the research objectives?

The information that we collect will include the completed consent forms and completed questionnaires. The results of the questionnaires will be analysed to understand the motivations, beliefs and experiences that young people learning Mandarin have.

Identifiable data (including consent forms) will be stored securely on university systems until completion of the study. Digital records will be stored on the researcher's OneDrive, and only the researcher and her supervisor will have access to the folder. Any paper records will be stored securely in a locked cupboard that only the researcher has access to. Once the study has been completed, all identifiable data will be deleted or destroyed. Other research data will be stored for three years after the dissertation is submitted.

A summary of our findings will be given to the school and will be available to interested families. I will not identify the school, teacher or any students in any reports of the research.

Will the research be published? Could my child be identified from any publications or other research outputs?

The findings from the research will be written up as a Masters dissertation, and may be sumitted for academic publication or presentation at a conference in future. It will not be possible for individual participants to be identifiable in any outputs from this research – quotations used from interviews will be carefully pseudonymised and any identifying elements removed.

Data Protection

The University of Oxford is the data controller with respect to your personal data, and as such will determine how your child's personal data is used in the research.

The University will process your child's personal data for the purpose of the research outlined above. Research is a task that we perform in the public interest.

Further information about your rights with respect to your personal data is available from https://compliance.web.ox.ac.uk/individual-rights.

Who has reviewed this research?

This research has received ethics approval from a subcommittee of the University of Oxford Central University Research Ethics Committee. (Ethics reference: EDUC_1228030).

Who is organising and funding the research?

This research is being carried out as part of a Masters dissertation and is funded by the University of Oxford.

Who do I contact if I have a concern about the research, or I wish to complain?

If you have a concern about any aspect of this research, please contact Jo McLaughlin on joanne.mclaughlin@education.ox.ac.uk or Anna-Maria Ramezanzadeh on anna-maria.ramezanzadeh@education.ox.ac.uk, and we will do our best to answer your query. We will acknowledge your concern within 10 working days and give you an indication of how it will be dealt with. If you remain unhappy or wish to make a formal complaint, please contact the University of Oxford Research Governance, Ethics & Assurance (RGEA) team at rgea.complaints@admin.ox.ac.uk or on 01865 616480.

What should I do next?

Please fill in the enclosed form and return it to your child's class teacher if you would not like your child to take part in this research. Please remember that you may withdraw your child at any time before data is collected, without affecting their education and without giving a reason, by notifying the researcher or your class teacher.

Further Information and Contact Details

If you would like to discuss the research with someone beforehand (or if you have questions afterwards), please contact:

Jo McLaughlin (researcher): University email: joanne.mclaughlin@education.ox.ac.uk or Anna-Maria Ramezanzadeh (supervisor) University email: anna-maria.ramezanzadeh@education.ox.ac.uk

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Parent/Guardian information sheet (questionnaire and interview)

Exploring Chinese Language Learning Motivation of GCSE Students in English Secondary Schools

INFORMATION SHEET FOR PARENTS/GUARDIANS

Central University Research Ethics Committee Approval Reference: EDUC_1228030

In partnership with researchers at the University of Oxford, your child's school has agreed to take part in a research study investigating how secondary school pupils feel about learning Mandarin. We would like to invite your child to be part of this research. We very much hope you

would like your child to take part, but before you decide, it is important that you understand why the research is being done and what it will involve.

Why is this research being conducted?

In the last ten years there has been a growing emphasis on teaching Mandarin in schools, and many schools also now offer Mandarin at GCSE and/or A level. We would like to understand how young people who have had the opportunity to learn Mandarin at school feel about the subject as they approach their GCSEs. We would like to find out whether they are interested in continuing to learn Mandarin in future, and what their reasons are.

More information about the research can be obtained by contacting the research team (contact details overleaf).

Why has my child been invited to be involved in this research?

We are inviting your child to take part because they are a young person, aged between 13 and 15 years, attending [insert school/institution name here] and learning Mandarin in a classroom setting.

We are inviting pupils from schools around the South of England to take part.

Does my child have to be involved?

No. You can ask questions about the research before deciding whether to allow your child to participate. If you do agree to participation, you may withdraw your child and their data, without giving a reason and without any effect on their education, by advising the school or researchers of this decision. You can withdraw any information they have contributed up until the point that the questionnaire or interview is complete (after which date all data will be anonymised in preparation for analysis).

If your child is not involved in the research, they will receive alternative provision of equivalent educational value.

What will happen if my child takes part?

In the Summer term your child would be asked to complete a questionnaire in class, answering questions about their experiences of language learning and their motivation. This questionnaire should take no longer than 15 minutes to complete and would be administered in class by your child's usual class teacher.

Your child may also be asked to take part in a group interview with the researcher, Jo McLaughlin. The researcher holds a DBS certificate. Interviews will take place in person at your child's school in groups of 3-7. During the interview, we will discuss your child's experience of learning Mandarin at school. This interview should take around 30 minutes, but it could be a little longer or shorter.

The interview will be audio recorded to make sure that we have an accurate record of everything that was said. We will transcribe everything that was said in the interview, but participants will be identified by a number instead of their name. All data and recordings will be stored in a

password protected file in University systems, and access will be restricted to the researcher and her supervisor.

You child would be asked to give their assent to participating in research activities and would be reassured that they do not have to participate if they would rather not do so.

What are the possible disadvantages and risks in taking part?

We do not envisage any disadvantages or risks to your child from participating in the study.

Taking part in the research will take up to 45 minutes of your child's time.

Although we will take great care to protect your child's data, there is still a small possibility that someone could recognise them from something that they tell us. To make sure that this risk is as small as possible, we will:

- Use numbers instead of names
- Remove any information from the transcript that might be identifiable (e.g. month of birth, hometown, area of residence, parent/guardian occupation).
- Store the original recordings and transcripts in a password-protected file that only we can access
- Delete the original recording as soon as we no longer need it

Students are free to withdraw from the survey at any point during data collection if they feel uncomfortable, with no consequences.

Are there any benefits in taking part?

While there are no immediate benefits to your child in participating, we hope that they will find the research tasks enjoyable and interesting. it is hoped that this research will lead to improved teaching and learning of Mandarin in schools. We will write a report of our findings that will be made available to you through your child's school if you are interested.

What information will be collected and why is the collection of this information relevant for achieving the research objectives?

The information that we collect will include the completed consent forms, completed questionnaires, audio recordings, transcripts of interviews and field notes.

The results of the questionnaires and interviews will be analysed together to understand the motivations, beliefs and experiences that young people learning Mandarin have.

Identifiable data (including consent forms) will be stored securely on university systems until completion of the study. Digital records will be stored on the researcher's OneDrive, and only the researcher and her supervisor will have access to the folder. Any paper records will be stored securely in a locked cupboard that only the researcher has access to. Once the study has been completed, all identifiable data will be deleted or destroyed. Other research data will be stored for three years after the dissertation is submitted.

A summary of our findings will be given to the school and will be available to interested families. I will not identify the school, teacher or any students in any reports of the research.

Will the research be published? Could my child be identified from any publications or other research outputs?

The findings from the research will be written up as a Masters dissertation, and may be sumitted for academic publication or presentation at a conference in future. It will not be possible for individual participants to be identifiable in any outputs from this research – quotations used from interviews will be carefully pseudonymised and any identifying elements removed.

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The University of Oxford is the data controller with respect to your personal data, and as such will determine how your child's personal data is used in the research.

The University will process your child's personal data for the purpose of the research outlined above. Research is a task that we perform in the public interest.

Further information about your rights with respect to your personal data is available from https://compliance.web.ox.ac.uk/individual-rights.

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This research has received ethics approval from a subcommittee of the University of Oxford Central University Research Ethics Committee. (Ethics reference: EDUC_1228030).

Who is organising and funding the research?

This research is being carried out as part of a Masters dissertation and is funded by the University of Oxford.

Who do I contact if I have a concern about the research, or I wish to complain?

If you have a concern about any aspect of this research, please contact Jo McLaughlin on joanne.mclaughlin@education.ox.ac.uk or Anna-Maria Ramezanzadeh on anna-maria.ramezanzadeh@education.ox.ac.uk, and we will do our best to answer your query. We will acknowledge your concern within 10 working days and give you an indication of how it will be dealt with. If you remain unhappy or wish to make a formal complaint, please contact the University of Oxford Research Governance, Ethics & Assurance (RGEA) team at rgea.complaints@admin.ox.ac.uk or on 01865 616480.

What should I do next?

Please complete the attached consent form to indicate whether you are happy for your your child to take part in this research. You can do this by completing the form attached to this email and returning it to your class teacher, or by filling in this online form. Please remember that you may withdraw your child at any time before data is collected, without affecting their education and without giving a reason, by notifying the researcher or your class teacher.

Further Information and Contact Details

If you would like to discuss the research with someone beforehand (or if you have questions afterwards), please contact:

Jo McLaughlin (researcher) University email: joanne.mclaughlin@education.ox.ac.uk or Anna-Maria Ramezanzadeh (supervisor) University email: anna-maria.ramezanzadeh@education.ox.ac.uk

Pupil information sheet (questionnaire only)

Exploring Chinese Language Learning Motivation of GCSE Students in English Secondary Schools

INFORMATION SHEET

Central University Research Ethics Committee Approval Reference: EDUC_1228030

We are inviting you to join in a research study. Our names are Jo McLaughlin and Anna-Maria Ramezanzadeh and we work at the University of Oxford in the Department of Education.

Before you decide if you would like to join in, it's important to understand what the research is about, why we're doing it and what it would involve for you. Please read and think about this leaflet carefully. Please feel free to talk to your family, friends, or the researchers about it if you want.

If anything isn't clear or you have more questions you can ask your parent/guardian to give us a call and we can discuss it with you and your parent/guardian.

Why are we doing this research?

In the last ten years a lot of secondary schools have started teaching Mandarin, and many schools also now offer Mandarin at GCSE and/or A level. We would like to understand what it feels like to be taking Mandarin at school, what your experience has been like so far, and what your plans are to use Mandarin in the future.

Why have I been invited to take part?

We would like to talk to people like you who are studying Mandarin at school. We are interested in understanding how you feel about Mandarin now, because this is a time where you make important choices about your future study. We are hoping to recruit about 100 students to complete a survey about their experiences and opinions.

Do I have to take part?

No - It is up to you to decide if you want to take part in this research. You are free to stop taking part at any time during the research without giving a reason by telling your teacher, the researcher or your parent/guardian. You do not have to say why and this will not affect your education.

If you decide to stop, no one will be upset with you.

If you do not wish to join in, your teacher will arrange for you to do something else while others are taking part.

What will happen if I take part in the research?

You will be asked to fill out a survey that asks about your history of learning Mandarin and other languages, and about your opinions about learning Mandarin and languages in general. This survey should take approximately 15 minutes to complete.

Before the research starts, we will need consent from your parent/guardian for you to take part,. We will also ask you to confirm that you are happy to take part in the research. If you change your mind about the research, you can stop participating at any time.

What are the possible disadvantages and risks in taking part?

We don't think there will be any disadvantages or risks from you taking part in the study.

Are there any benefits in taking part?

Although there will be no direct or personal benefit to you from taking part in this research, we hope that you will enjoy it, and it can be used to make the teaching and learning of Mandarin in schools more effective in the future.

What information will be collected and what happens to the results of the research?

Results are kept strictly confidential, and only the people doing the research, or helping with the research, can look at the data. The questionnaire will not record your name, and all information and results are kept in a password-protected computer file in the University. We will change the names of your school, teacher, and all the students when we write about the research. No one will know that you have taken part unless you tell them yourself.

The findings from the research will be written up in an MSc dissertation, and may be used in the future as the basis for academic publications or conference presentations. These will be written in such a way that it should not be possible to identify anyone who has taken part.

If we want to use the information for anything else, we will ask your permission. At the end of the research, we will write to your school about what was discovered. You are welcome to read this if you are interested.

All research data and records will be stored for 3 years after publication or public release of the work of the research. Third parties may be given access to research data for monitoring and/or audit of the research, or for data storage purposes.

Data Protection

The University of Oxford is the data controller with respect to your personal data, and as such will determine how your personal data is used in the research.

The University will process your personal data for the purpose of the research outlined above. Research is a task that we perform in the public interest.

Further information about your rights with respect to your personal data is available from https://compliance.web.ox.ac.uk/individual-rights.

Will anyone else know I'm doing this?

We will keep your information private. This means we will only tell those who have a need or right to know, such as the research team and your parent/guardian. We will only share information that has your name and address removed.

What if I don't want to take part in the research anymore?

Just tell your parent/guardian and the people carrying out the research that you don't want to take part. You don't have to give a reason and no one will be annoyed with you. It is YOUR choice.

Who is organising and funding the research?

This research is part of a Masters degree and is fully funded by the University of Oxford.

Who has reviewed the research?

This research has received ethics approval from a subcommittee of the University of Oxford Central University Research Ethics Committee. (Ethics reference: EDUC_1228030).

What do I do now?

Please tell your parents, guardians and/or teacher whether you are happy to take part.

What if there is a problem or something goes wrong?

Please tell us if you are worried about any part of this research, by contacting the researcher at joanne.mclaughlin@education.ox.ac.uk or her supervisor at anna-maria.ramezanzadeh@education.ox.ac.uk. You may also talk to your teacher/parent/guardian who will let the researcher know. If you are still unhappy or wish to make a complaint, either you or your teacher/parent/guardian can contact the University of Oxford Research Governance, Ethics & Assurance (RGEA) team at rgea.complaints@admin.ox.ac.uk or on 01865 616480.

Further Information and Contact Details

If you would like to discuss the research with someone beforehand (or if you have questions afterwards), please contact:

Jo McLaughlin (researcher), University email: joanne.mclaughlin@education.ox.ac.uk or Anna-Maria Ramezanzadeh (supervisor), University email: anna-maria.ramezanzadeh@education.ox.ac.uk

Thank you for reading – please ask me any questions

Pupil information sheet (questionnaire and interview)

Exploring Chinese Language Learning Motivation of GCSE Students in English Secondary Schools

INFORMATION SHEET

Central University Research Ethics Committee Approval Reference: EDUC_1228030

We are inviting you to join in a research study. Our names are Jo McLaughlin and Anna-Maria Ramezanzadeh and we work at the University of Oxford in the Department of Education.

Before you decide if you would like to join in, it's important to understand what the research is about, why we're doing it and what it would involve for you. Please read and think about this leaflet carefully. Please feel free to talk to your family, friends, or the researchers about it if you want.

If anything isn't clear or you have more questions you can ask your parent/guardian to give us a call and we can discuss it with you and your parent/guardian.

Why are we doing this research?

In the last ten years a lot of secondary schools have started teaching Mandarin, and many schools also now offer Mandarin at GCSE and/or A level. We would like to understand what it feels like to be taking Mandarin at school, what your experience has been like so far, and what your plans are to use Mandarin in the future.

Why have I been invited to take part?

We would like to talk to people like you who are studying Mandarin at school. We are interested in understanding how you feel about Mandarin now, because this is a time where you make important choices about your future study. We are hoping to recruit about 30 students to complete a survey and interview about their experiences and opinions.

Do I have to take part?

No - It is up to you to decide if you want to take part in this research. You are free to stop taking part at any time during the research without giving a reason by telling your teacher, the researcher or your parent/guardian. You do not have to say why and this will not affect your education.

If you decide to stop, no one will be upset with you.

If you do not wish to join in, your teacher will arrange for you to do something else while others are taking part.

What will happen if I take part in the research?

You will be asked to fill out a survey that asks about your history of learning Mandarin and other languages, and about your opinions about learning Mandarin and languages in general. This survey should take no more than 15 minutes to complete.

You have also been selected to take part in a group interview. The interviews will happen in groups of 3-7 people. During the interview, the researcher will ask you to talk in more detail about some of the subjects that were covered in the survey that you competed previously. This interview should take around 30 minutes, but it could be a little longer or shorter than that.

The interview will be recorded to make sure that we have an accurate record of everything that was said. We will transcribe everything that was said in the interview, but instead of using your names we will use a number, so it won't be so easy to identify you.

Before the research starts, we will need consent from your parent/guardian for you to take part. We will also ask you to confirm that you are happy to take part in the research. If you change your mind about the research, you can stop participating at any time.

What are the possible disadvantages and risks in taking part?

Although we will take great care to protect your data, there is still a small possibility that someone could recognise you from something that you tell us. To make sure that this risk is as small as possible, we will:

- Use numbers instead of names
- Remove any information from the transcript that might be identifiable (e.g. the month you were born, your hometown, the area you live in, what your parent/guardian's job is).
- Store the original recordings and transcripts in a password-protected file that only we can access
- Delete the original recording as soon as we no longer need it

Are there any benefits in taking part?

Although there will be no direct or personal benefit to you from taking part in this research, we hope that you will enjoy it, and it can be used to make the teaching and learning of Mandarin in schools more effective in the future.

What information will be collected and what happens to the results of the research?

Results are kept strictly confidential, and only the people doing the research, or helping with the research, can look at the data. The questionnaire will not record your name, and all information and results are kept in a password-protected computer file in the University. Only a number will be used to identify you, and all information and results are kept in a password-protected computer file in the University. We will make sure that recordings are securely stored and encrypted and only shared with each other. We will change the names of your school, teacher, and all the students when we write about the research. No one will know that you have taken part unless you tell them yourself.

The findings from the research will be written up in an MSc dissertation, and may be used in the future as the basis for academic publications or conference presentations. These will be written in such a way that it should not be possible to identify anyone who has taken part.

If we want to use the information for anything else, we will ask your permission. At the end of the research, we will write to your school about what was discovered. You are welcome to read this if you are interested.

All research data and records will be stored for 3 years after publication or public release of the work of the research. Third parties may be given access to research data for monitoring and/or audit of the research, or for data storage purposes

Data Protection

The University of Oxford is the data controller with respect to your personal data, and as such will determine how your personal data is used in the research.

The University will process your personal data for the purpose of the research outlined above. Research is a task that we perform in the public interest.

Further information about your rights with respect to your personal data is available from https://compliance.web.ox.ac.uk/individual-rights.

Will anyone else know I'm doing this?

We will keep your information private. This means we will only tell those who have a need or right to know, such as the research team and your parent/guardian. We will only share information that has your name removed.

What if I don't want to take part in the research anymore?

Just tell your parent/guardian and the people carrying out the research that you don't want to take part. You don't have to give a reason and no one will be annoyed with you. It is YOUR choice.

Who is organising and funding the research?

This research is part of a Masters degree and is fully funded by the University of Oxford.

Who has reviewed the research?

This research has received ethics approval from a subcommittee of the University of Oxford Central University Research Ethics Committee. (Ethics reference: EDUC_1228030).

What do I do now?

Please tell your parents, guardians and/or teacher whether you are happy to take part.

What if there is a problem or something goes wrong?

Please tell us if you are worried about any part of this research, by contacting the researcher at joanne.mclaughlin@education.ox.ac.uk or her supervisor at anna-maria.ramezanzadeh@education.ox.ac.uk. You may also talk to your teacher/parent/guardian who will let the researcher know. If you are still unhappy or wish to make a complaint, either you or your teacher/parent/guardian can contact the University of Oxford Research Governance, Ethics & Assurance (RGEA) team at rgea.complaints@admin.ox.ac.uk or on 01865 616480.

Further Information and Contact Details

If you would like to discuss the research with someone beforehand (or if you have questions afterwards), please contact:

Jo McLaughlin (researcher), University email: joanne.mclaughlin@education.ox.ac.uk or Anna-Maria Ramezanzadeh (supervisor) University email: anna-maria.ramezanzadeh@education.ox.ac.uk.

Thank you for reading – please ask me any questions

Appendix F – Consent forms

Parent/Guardian opt-out form (questionnaire only)

Exploring Chinese Language Learning Motivation of GCSE Students in English Secondary Schools

OPT-OUT FORM

Ethics Approval Reference: EDUC_1228030

If you DO NOT want your child to participate in the above-named research study please fill out the form below and return it to the school by [dd/mm/yyyy].

If we do not receive an opt-out form from you by this date, your child may be invited to take part in this study, as described in the accompanying information sheet.

I, the undersigned, hereby DO NOT give permission for my child to take part in the study titled Exploring Chinese Language Learning Motivation of GCSE Students in English Secondary Schools

Name of child:

Name of parent/guardian:

Signature:

Date:

Name of researcher:

Parent/Guardian consent form (questionnaire and interview)

PARENT/GUARDIAN CONSENT FORM

Central University Research Ethics Committee Approval Reference: EDUC_1228030

Exploring Chinese Language Learning Motivation of GCSE Students in English Secondary Schools

Your child's school has agreed to take part in a study run by the University of Oxford looking at how motivated children are to learn Mandarin Chinese.

If your child takes part, a researcher would come and visit them at school and ask them to take part in a short group interview. The interview would be audio recorded.

To find out more about the study, please read the attached information sheet. You can e-mail the researcher at joanne.mclaughlin@education.ox.ac.uk, or her supervisor at anna-maria.ramezanzadeh@education.ox.ac.uk, Alternatively, you can call Anna-Maria Ramezanzadeh on 01865 274024 if you have any questions.

If you are happy for your child to take part, please fill in the form below and return it to your child's class teacher as soon as possible.

- -

Name of child:

Name of school: _____

I have read and understood the details of the above study, and have had the opportunity to ask questions and discuss the study with others. I have received satisfactory answers to my questions. I understand that the project has received ethics clearance through the University of Oxford's ethical approval process for research involving human participants, and I understand who will have access to the data, how it will be stored and what will happen to the data at the end of the study. I understand that participation is voluntary and that my child and I are free to withdraw at any time, without giving any reason and without my child's education being affected in any way. I understand how to raise a concern or make a complaint.

I agree for my child to be audio recorded: Yes|No

I understand how audio recordings will be used in research outputs: Yes|No

I give permission for my child to take part in the above study.

Name of parent/guardian:

Signature: Date: dd / mm / yyyy

Name of researcher:

Signature: Date: dd / mm / yyyy

Pupil assent form (questionnaire only)

ASSENT FORM FOR CHILDREN UNDER 16

Exploring Chinese Language Learning Motivation of GCSE Students in English Secondary Schools

Child/Young Person (or if unable, parent/researcher/teacher on their behalf) to circle all they agree with:

- Has somebody else explained this project to you? Yes|No
- Do you understand what this project is about? Yes|No
- Have you asked all the questions you want? Yes|No
- Have you had your questions answered in a way you understand? Yes|No
- Do you understand it's OK to stop taking part at any time? Yes|No
- Are you happy to take part? Yes|No

If any answers are "no" or you don't want to take part, that's OK! No one will be cross with you.

If you do want to take part, please write your name below

Your name

Date

The researcher who explained this project to you needs to sign too:

Print Name

Sign

Date

Thank you!

Pupil assent form (questionnaire and interview)

ASSENT FORM FOR CHILDREN UNDER 16

Exploring Chinese Language Learning Motivation of GCSE Students in English Secondary Schools

Child/Young Person (or if unable, parent/researcher/teacher on their behalf) to circle all they agree with:

- Has somebody else explained this project to you? Yes|No
- Do you understand what this project is about? Yes|No
- Have you asked all the questions you want? Yes|No
- Have you had your questions answered in a way you understand? Yes|No
- Do you understand it's OK to stop taking part at any time? Yes|No
- Are you happy to take part? Yes|No
- Are you happy for your voice to be recorded? Yes|No

If any answers are "no" or you don't want to take part, that's OK! No one will be cross with you.

If you do want to take part, please write your name below

Your name

Date

The researcher who explained this project to you needs to sign too:

Print Name

Sign

Date

Thank you!

Appendix G – Cronbach's alpha calculations

Table 1: Cronbach's α calculations for seven LLOS constructs

Construct	Items	Cronbach's α
Amotivation	12_3, 12_9, 12_15	.87
External regulation	12_12, 12_17, 12_19	Not calculated
Introjected regulation	12_1, 12_2, 12_11	.72
Identified regulation	12_5, 12_6,12_13	.72
IM-Accomplishment	12_4, 12_14,12_20	.87
IM-Stimulation	12_7, 12_16,12_18	.78
IM-Knowledge	12_8, 12_10, 12_21	.84

Table 2: Cronbach's α calculation for amended 'Instrumentality' construct

Construct	Items	Cronbach's α
Instrumentality	12_12, 12_17	.69

Table 3: Cronbach's α calculation for ability belief groupings

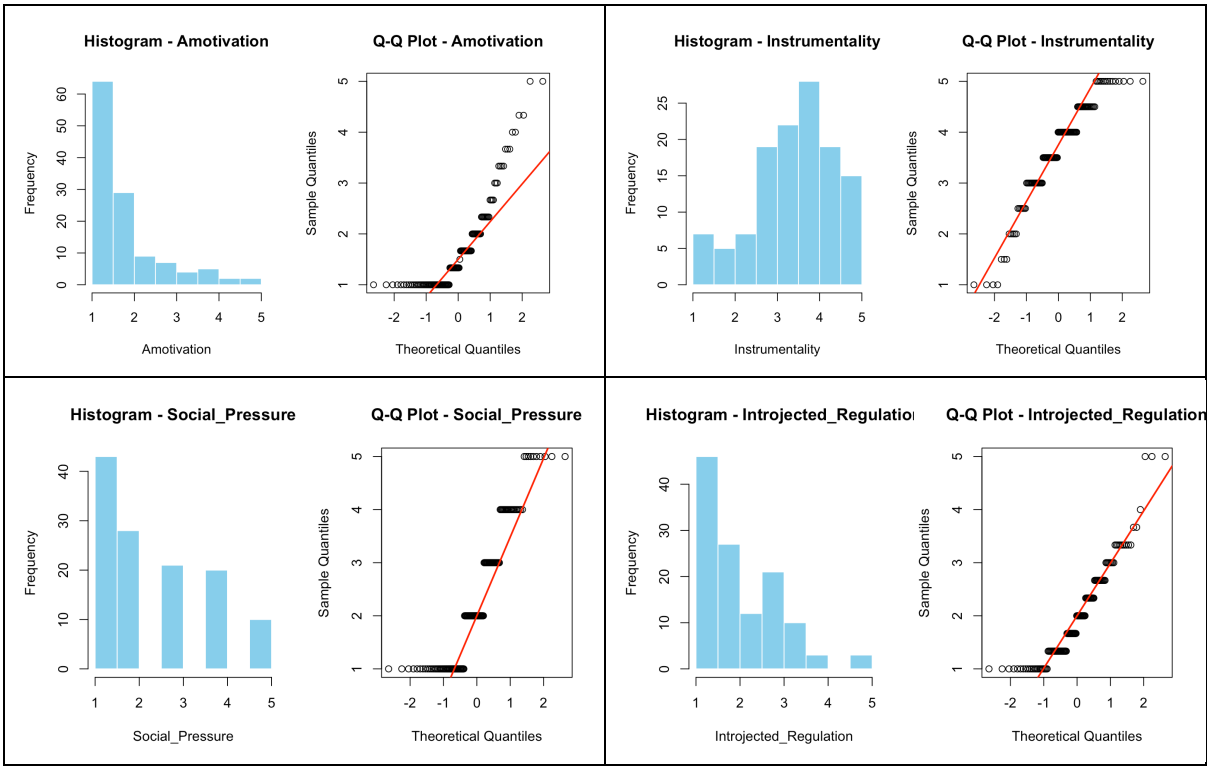
Grouping	Items	Cronbach's α
Variable 1 (Own ability)	15_3, 15_6, 15_9	.74
Variable 2 (Others' ability)	15_7, 15_8	.87
Variable 3	15_4, 15_5	.21

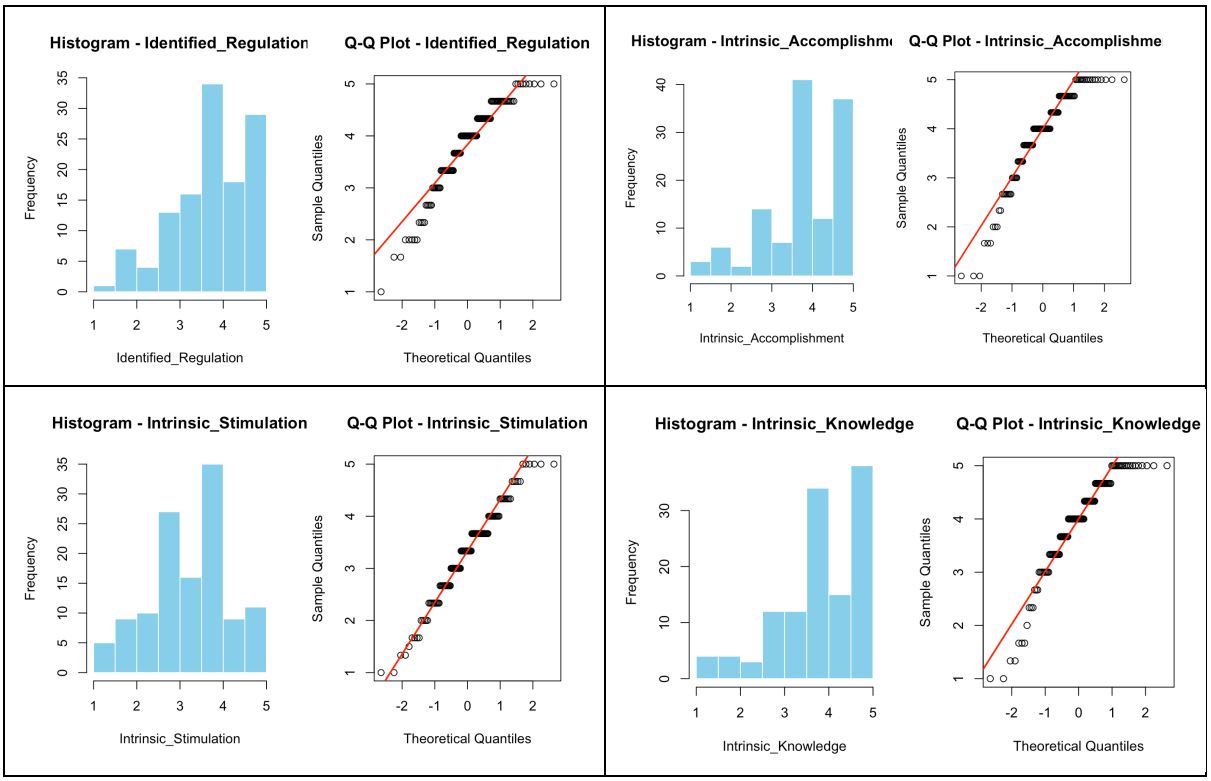
Appendix H – Tests of normality and homogeneity of variance

RQ1: Motivation (Question 12)

Whole sample

Construct	Mean	SD	Min	Max	Shapiro_W	Shapiro_p	Skewness	Kurtosis
Amotivation	1.75	0.94	1	5	0.789	<.001	1.52	4.83
Instrumentality	3.63	0.99	1	5	0.927	<.001	-0.73	3.22
Social_Pressure	2.39	1.33	1	5	0.855	<.001	0.51	2
Introjected_ Regulation	2.04	0.93	1	5	0.898	<.001	0.94	3.7
Identified_ Regulation	3.80	0.87	1	5	0.929	<.001	-0.82	3.2
IM-Accomplishment	3.86	0.96	1	5	0.898	<.001	-1.03	3.72
IM-Stimulation	3.29	0.92	1	5	0.976	.026	-0.27	2.71
IM-Knowledge	3.89	0.95	1	5	0.897	<.001	-1.06	3.84

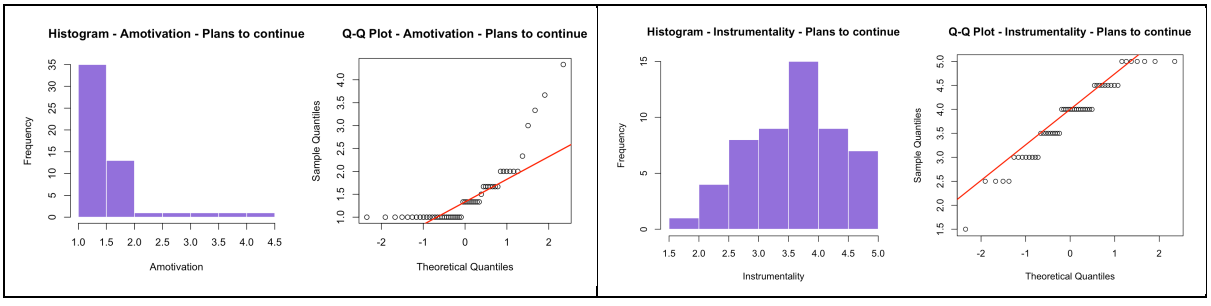


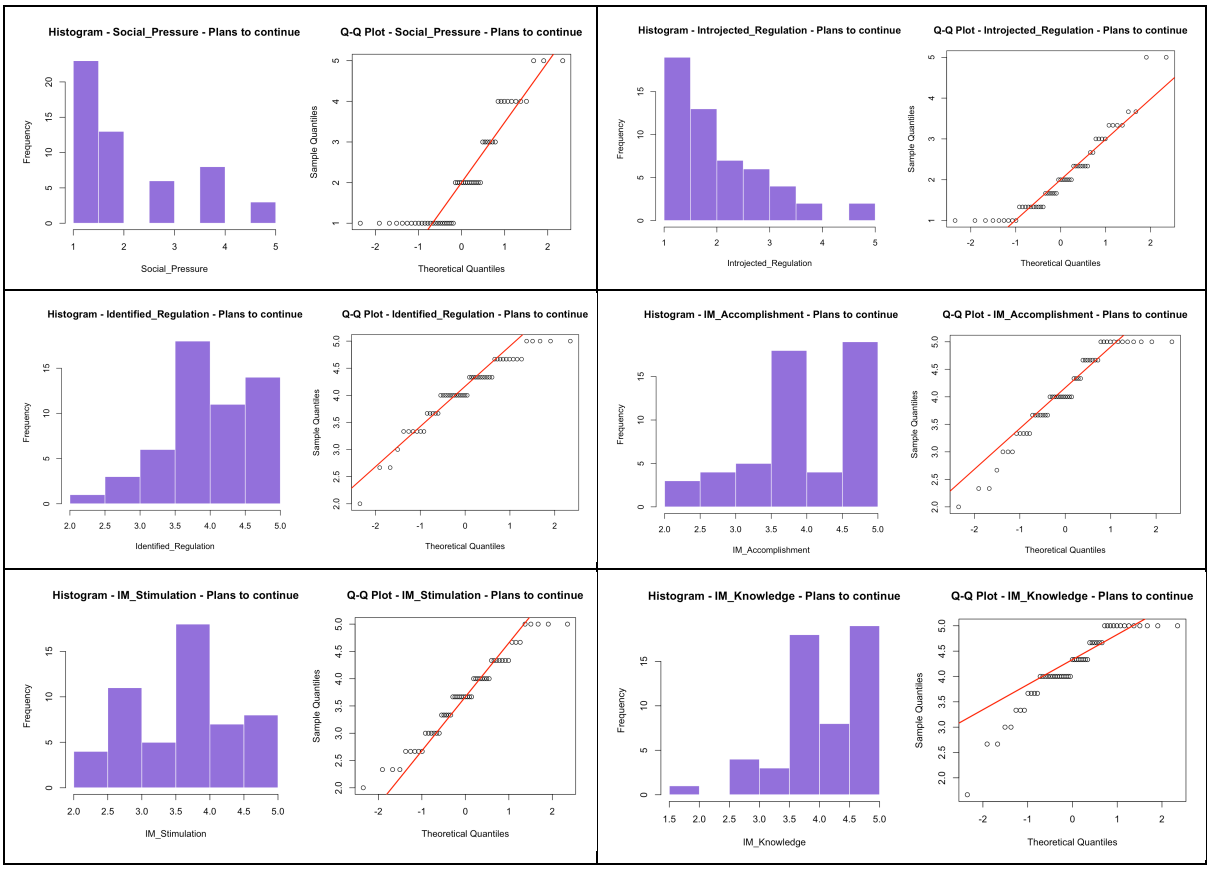


RQ1a Motivation according to intent to continue

Plans to continue

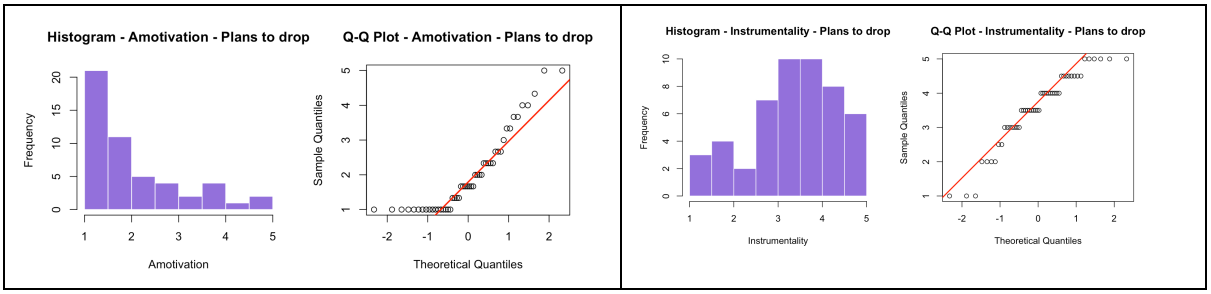
Construct	Mean	SD	Min	Max	Shapiro_W	Shapiro_*p*	Skewness	Kurtosis
Amotivation	1.49	0.72	1	4.33	0.701	<.001	2.14	7.68
Instrumentality	3.82	0.80	1.5	5	0.939	.009	-0.46	2.93
Social_Pressure	2.15	1.29	1	5	0.811	<.001	0.8	2.36
Introjected_ Regulation	2.09	0.98	1	5	0.889	<.001	1.07	3.92
Identified_ Regulation	4.06	0.65	2	5	0.929	.004	-0.84	3.79
IM-Accomplishment	4.05	0.79	2	5	0.919	.002	-0.59	2.7
IM-Stimulation	3.68	0.79	2	5	0.964	.108	-0.11	2.24
IM-Knowledge	4.18	0.73	1.67	5	0.891	<.001	1.02	-4.29

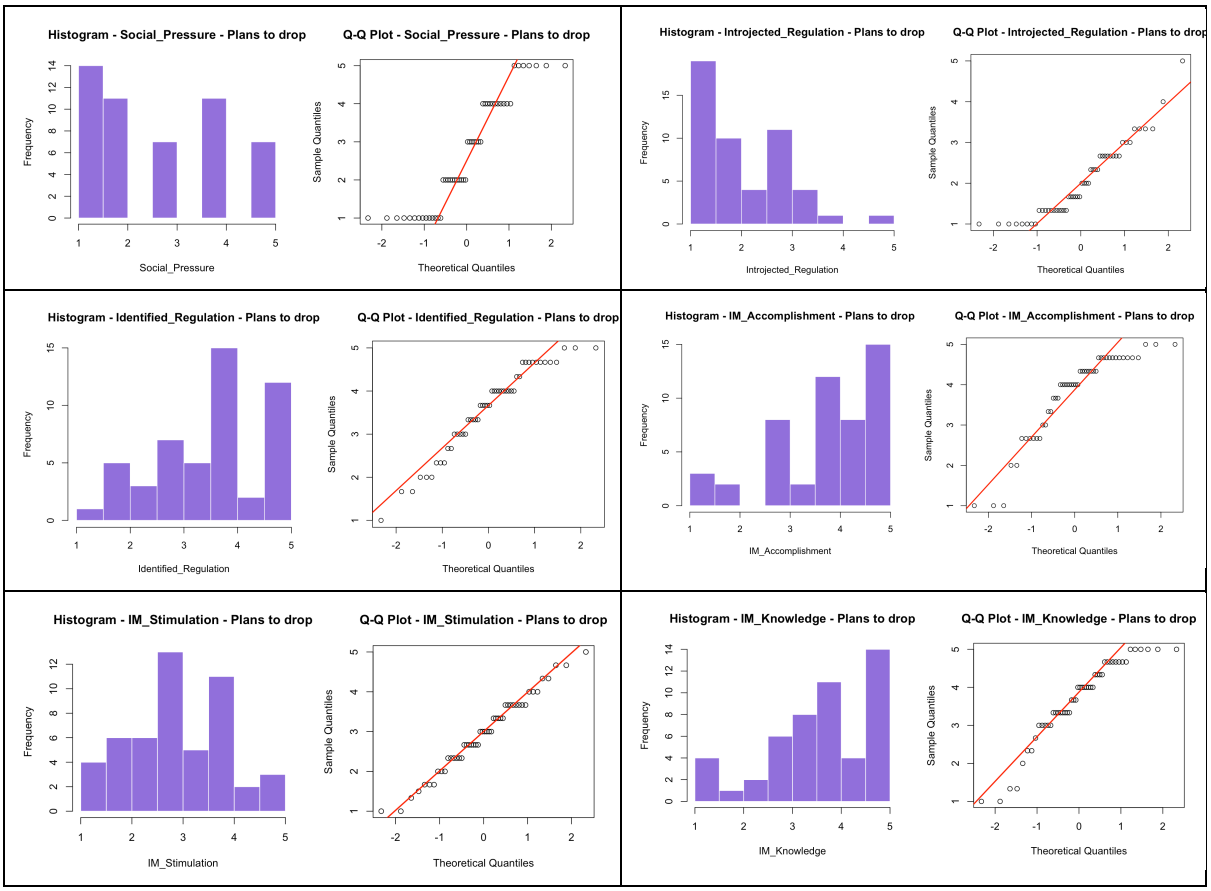




Plans to drop

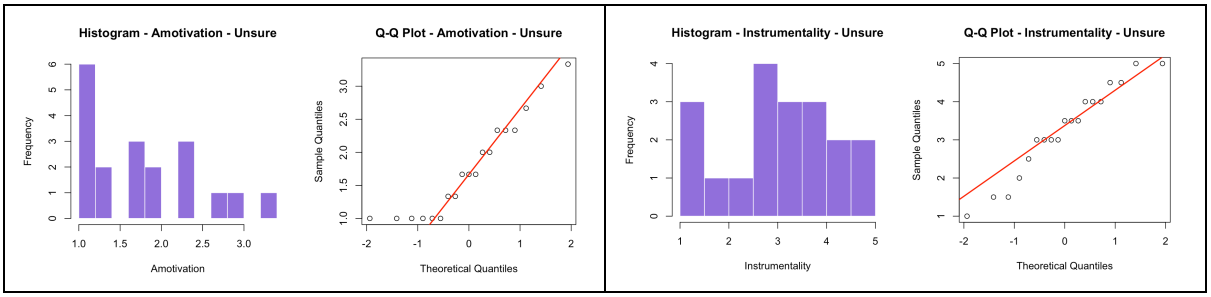
Construct	Mean	SD	Min	Max	Shapiro_W	Shapiro_*p*	Skewness	Kurtosis
Amotivation	2.02	1.13	1	5	0.840	<.001	1.08	3.26
Instrumentality	3.56	1.06	1	5	0.921	.002	-0.75	3.07
Social_Pressure	2.72	1.44	1	5	0.87	<.001	0.21	1.65
Introjected_ Regulation	2.05	0.91	1	5	0.903	<.001	0.88	3.56
Identified_ Regulation	3.57	1	1	5	0.941	.015	-0.56	2.53
IM-Accomplishment	3.77	1.06	1	5	0.854	<.001	-1.16	3.59
IM-Stimulation	2.95	0.96	1	5	0.982	.628	-0.04	2.48
IM-Knowledge	3.67	1.08	1	5	0.91	.001	-0.85	3.16

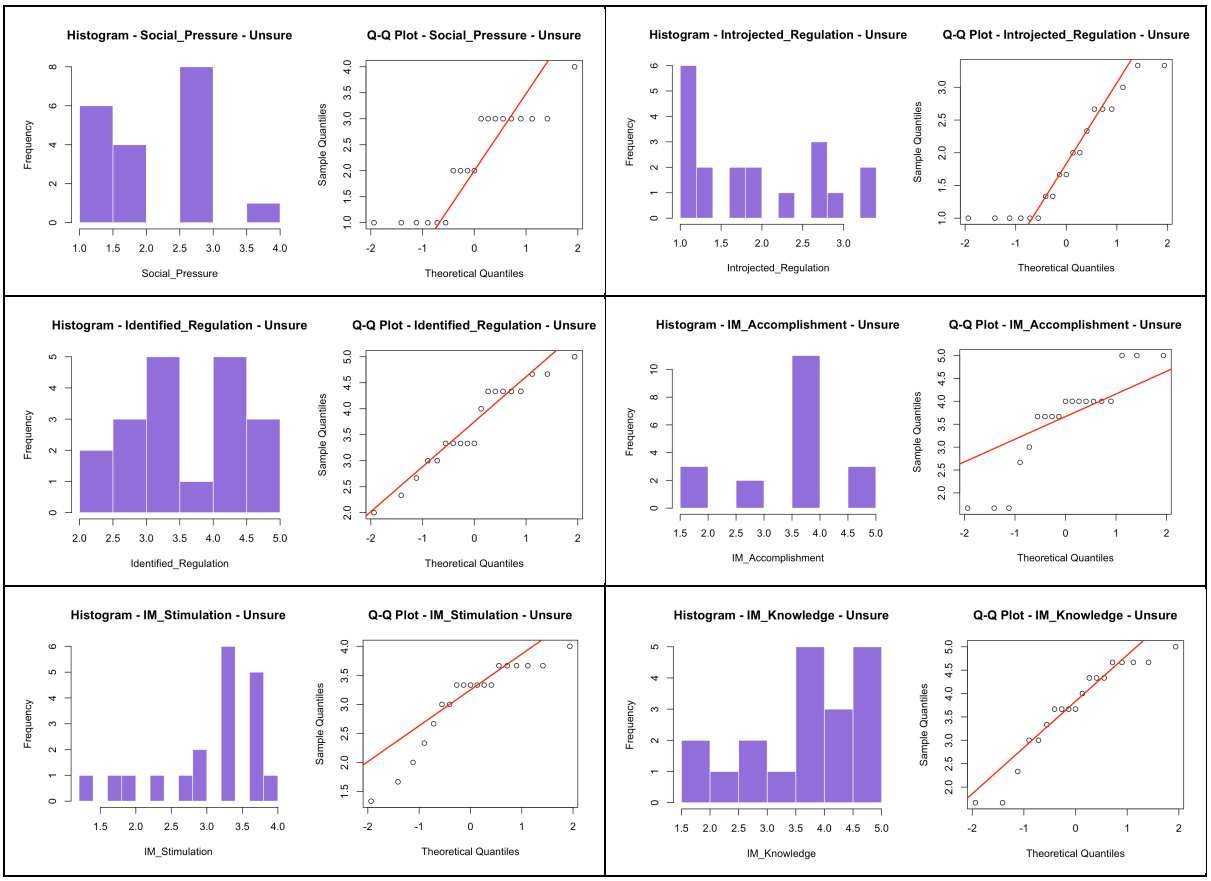




Unsure

Construct	Mean	SD	Min	Max	Shapiro_W	Shapiro_*p*	Skewness	Kurtosis
Amotivation	1.77	0.74	1	3.33	0.895	.04	0.57	2.25
Instrumentality	3.26	1.17	1	5	0.953	.437	-0.34	2.25
Social_Pressure	2.21	0.98	1	4	0.833	.004	-0.06	1.69
Introjected_ Regulation	1.89	0.85	1	3.33	0.876	.017	0.39	1.74
Identified_ Regulation	3.67	0.85	2	5	0.936	.226	-0.27	2.04
IM-Accomplishment	3.60	1.04	1.67	5	0.853	.008	-0.7	2.72
IM-Stimulation	3.07	0.74	1.33	4	0.855	.008	-1.08	3.1
IM-Knowledge	3.7	1	1.67	5	0.902	.053	-0.78	2.65



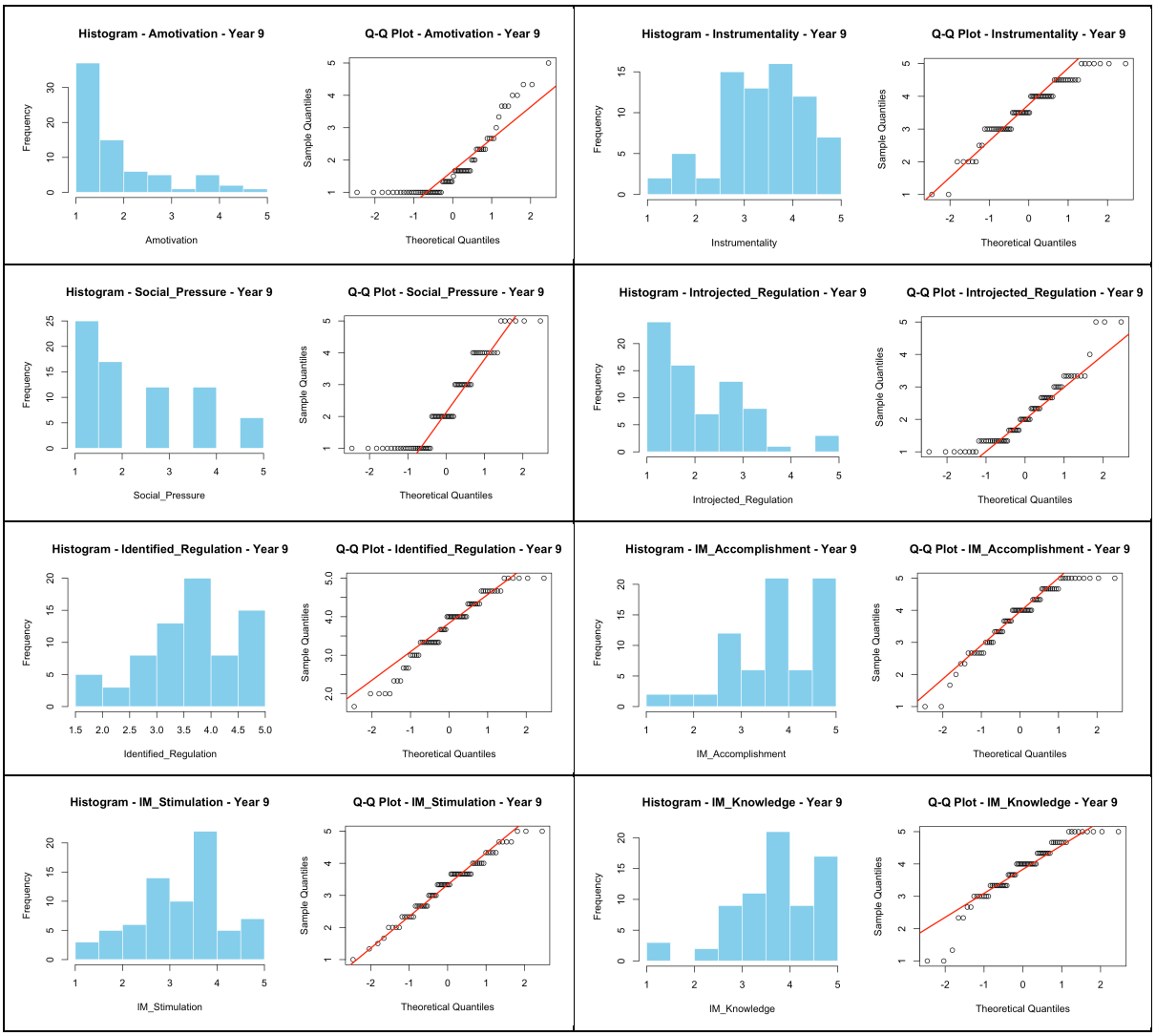


RQ1b: Motivation according to demographic variables

Year Groups

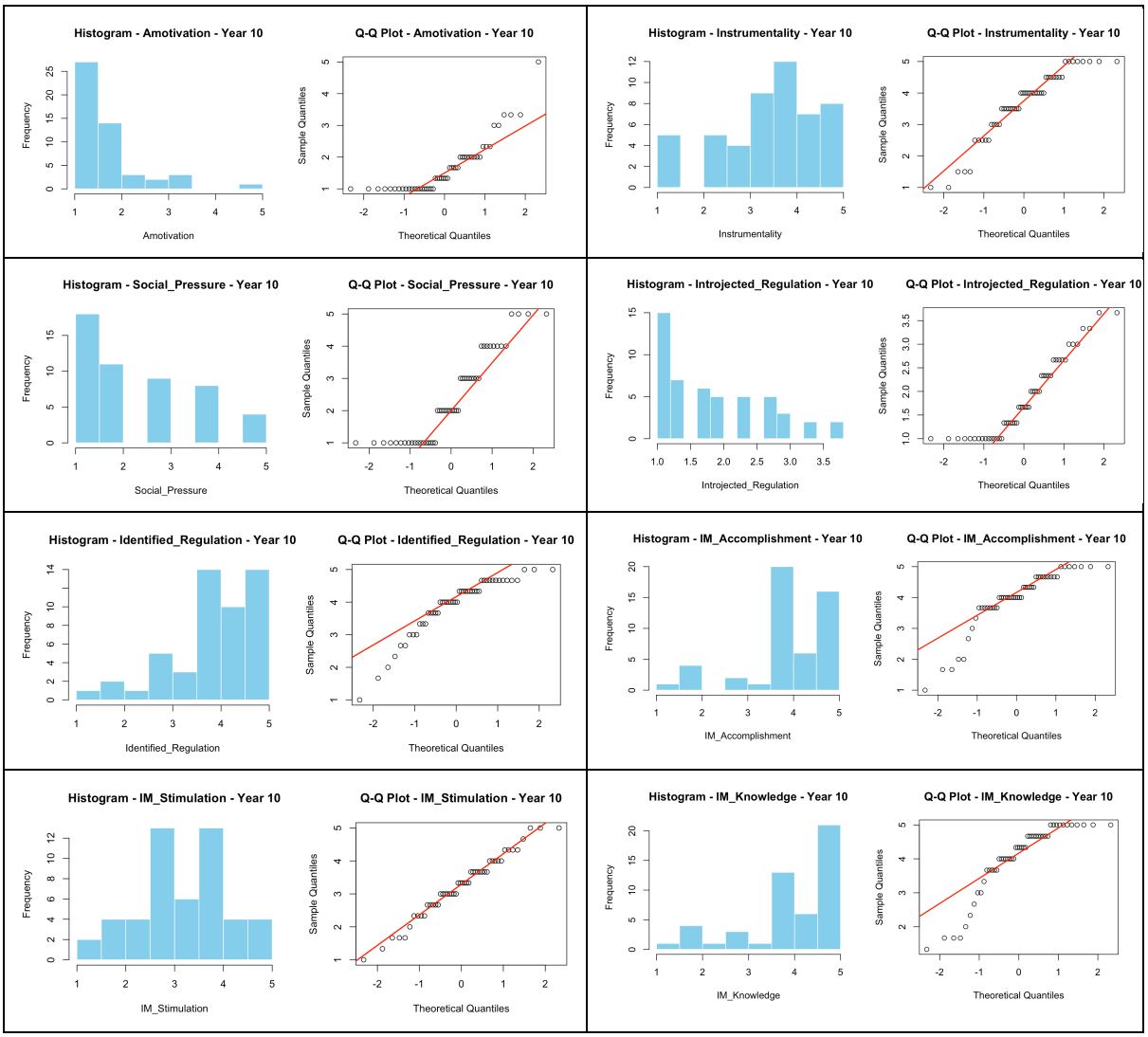
Year 9

Construct	Mean	SD	Min	Max	Shapiro_W	Shapiro_*p*	Skewness	Kurtosis
Amotivation	1.80	1.01	1	5	0.790	<.001	1.38	4.07
Instrumentality	3.62	0.92	1	5	0.934	<.001	-0.65	3.31
Social_Pressure	2.40	1.34	1	5	0.857	<.001	0.51	2
Introjected_ Regulation	2.18	0.98	1	5	0.896	<.001	0.98	3.74
Identified_ Regulation	3.72	0.85	1.67	5	0.947	.004	-0.48	2.52
IM-Accomplishment	3.80	0.97	1	5	10.921	<.001	-0.82	3.31
IM-Stimulation	3.31	0.90	1	5	0.975	.158	-0.29	2.69
IM-Knowledge	3.81	0.90	1	5	0.912	<.001	-1.01	4.36



Year 10

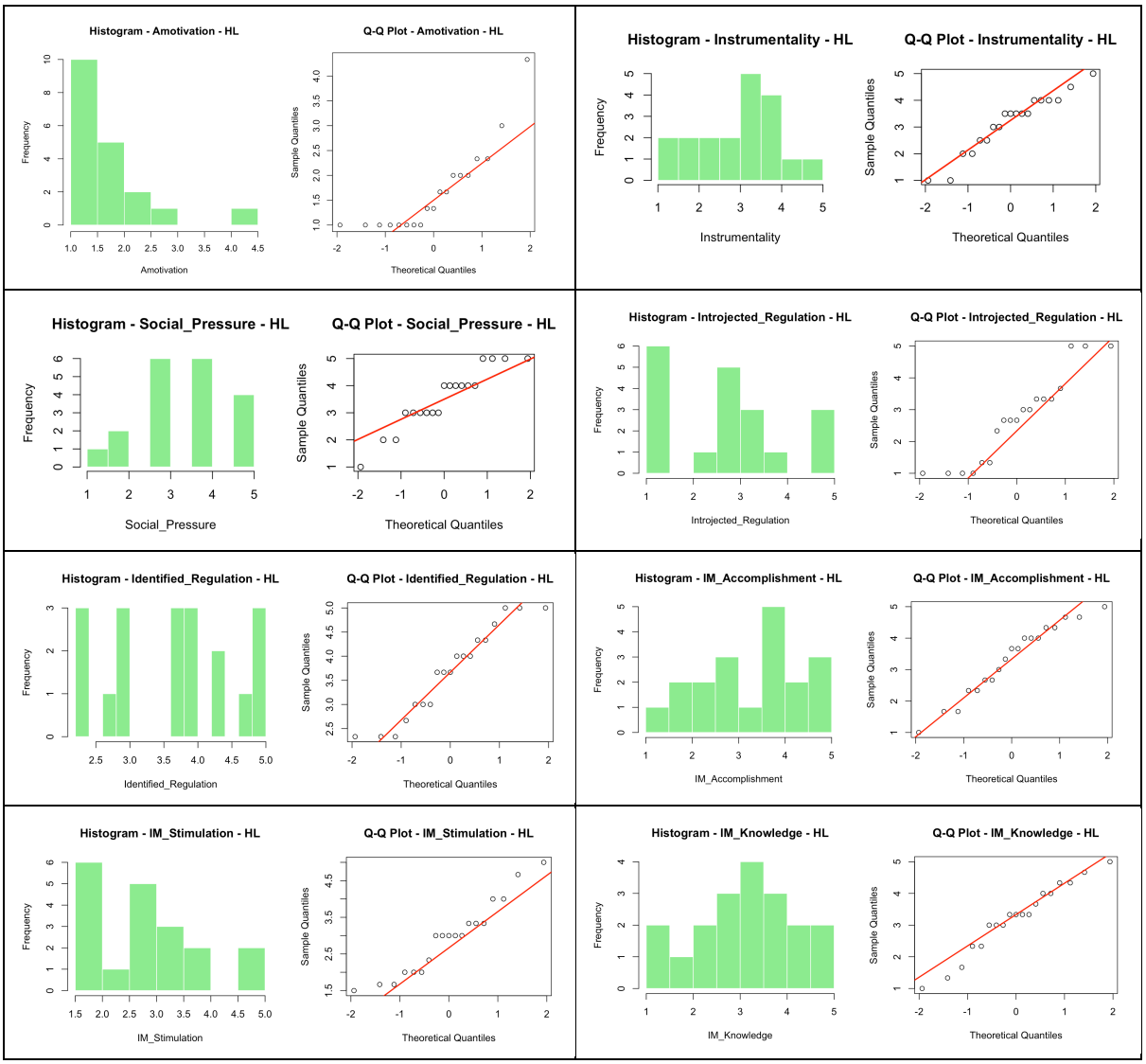
Construct	Mean	SD	Min	Max	Shapiro_W	Shapiro_*p*	Skewness	Kurtosis
Amotivation	1.67	0.85	1	5	0.781	<.001	1.71	6.38
Instrumentality	3.64	1.08	1	5	0.908	<.001	-0.8	3.03
Social_Pressure	2.38	1.34	1	5	0.855	<.001	0.52	2.01
Introjected_ Regulation	1.85	0.81	1	3.67	0.884	<.001	0.63	2.26
Identified_ Regulation	3.91	0.88	1	5	0.873	<.001	-1.31	4.49
IM-Accomplishment	3.95	0.94	1	5	0.843	<.001	-1.39	4.6
IM-Stimulation	3.25	0.94	1	5	0.977	.426	-0.23	2.73
IM-Knowledge	4.01	1.02	1.33	5	0.836	<.001	-1.21	3.54



Heritage Status

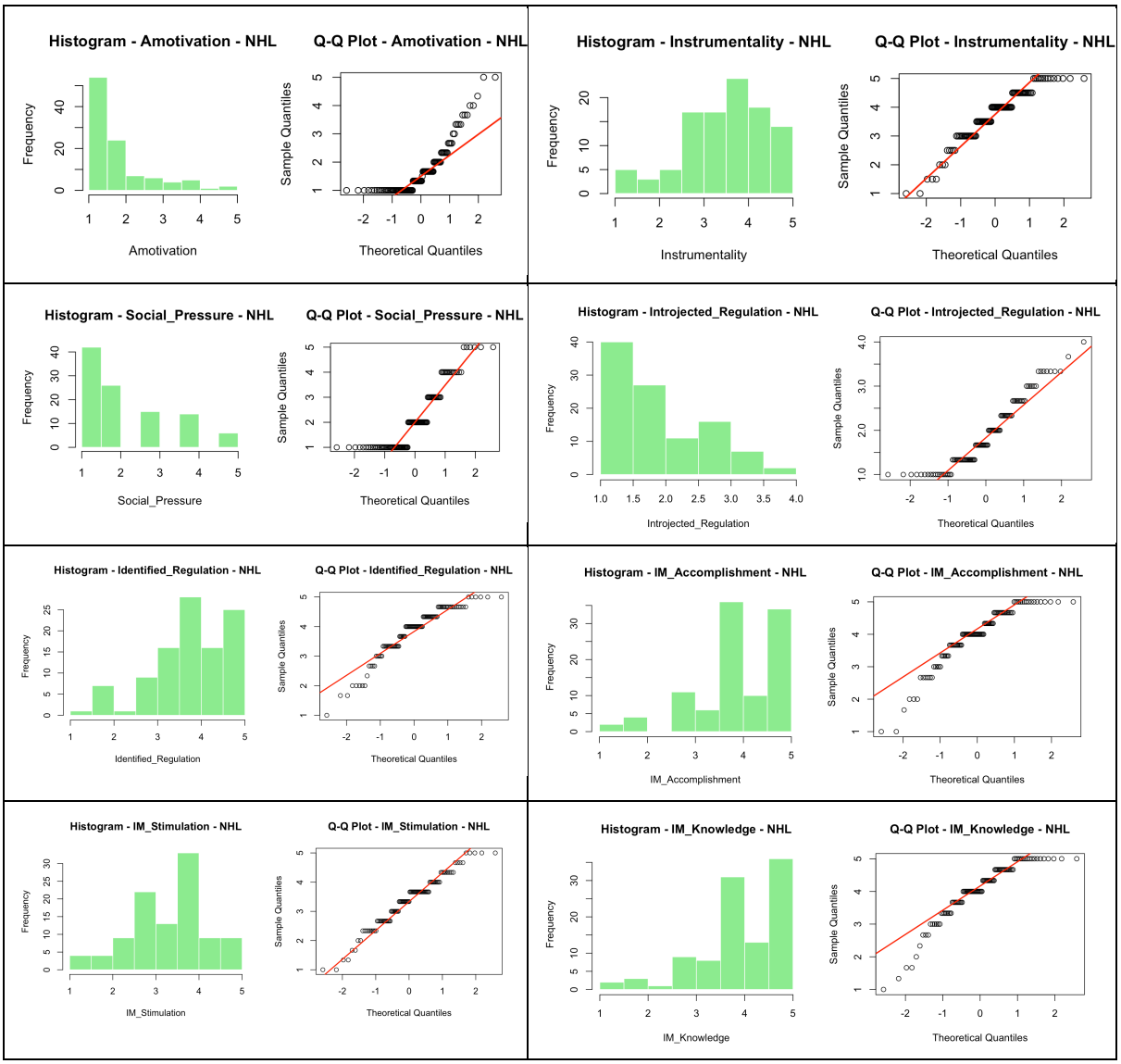
Heritage Learners (HL)

Construct	Mean	SD	Min	Max	Shapiro_W	Shapiro_*p*	Skewness	Kurtosis
Amotivation	1.68	0.88	1	4.33	0.785	<.001	1.59	5.36
Instrumentality	3.16	1.09	1	5	0.938	.240	-0.55	2.63
Social_Pressure	3.53	1.12	1	5	0.910	.073	-0.43	2.62
Introjected_ Regulation	2.72	1.37	1	5	0.898	.045	0.26	2.1
Identified_ Regulation	3.68	0.92	2.33	5	0.924	.136	-0.07	1.8
IM-Accomplishment	3.32	1.15	1	5	0.951	.41	-0.41	2.1
IM-Stimulation	2.94	1.01	1.5	5	0.939	.248	0.37	2.36
IM-Knowledge	3.21	1.1	1	5	0.960	.579	-0.42	2.47



Non-heritage learners (NHL)

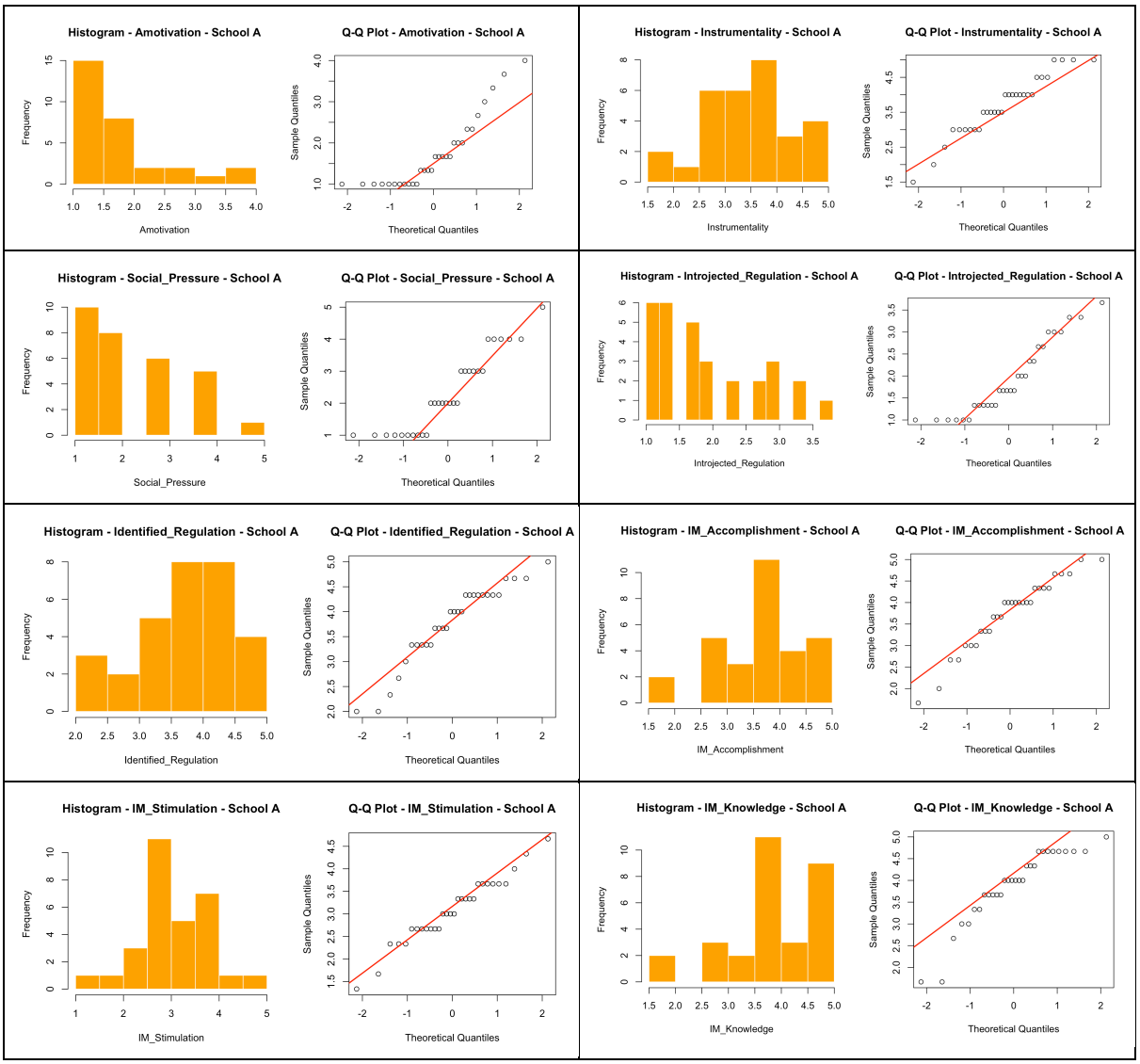
Construct	Mean	SD	Min	Max	Shapiro_W	Shapiro_*p*	Skewness	Kurtosis
Amotivation	1.76	0.96	1	5	0.789	<.001	1.5	4.73
Instrumentality	3.71	0.95	1	5	0.926	<.001	-0.74	3.3
Social_Pressure	2.18	1.27	1	5	0.827	<.001	0.76	2.38
Introjected_ Regulation	1.92	0.77	1	4	0.915	<.001	0.6	2.39
Identified_ Regulation	3.82	0.86	1	5	0.911	<.001	-0.97	3.59
IM-Accomplishment	3.96	0.89	1	5	0.892	<.001	-1.14	4.33
IM-Stimulation	3.35	0.89	1	5	0.968	.014	-0.38	2.98
IM-Knowledge	4.02	0.87	1	5	0.887	<.001	-1.18	4.44



School

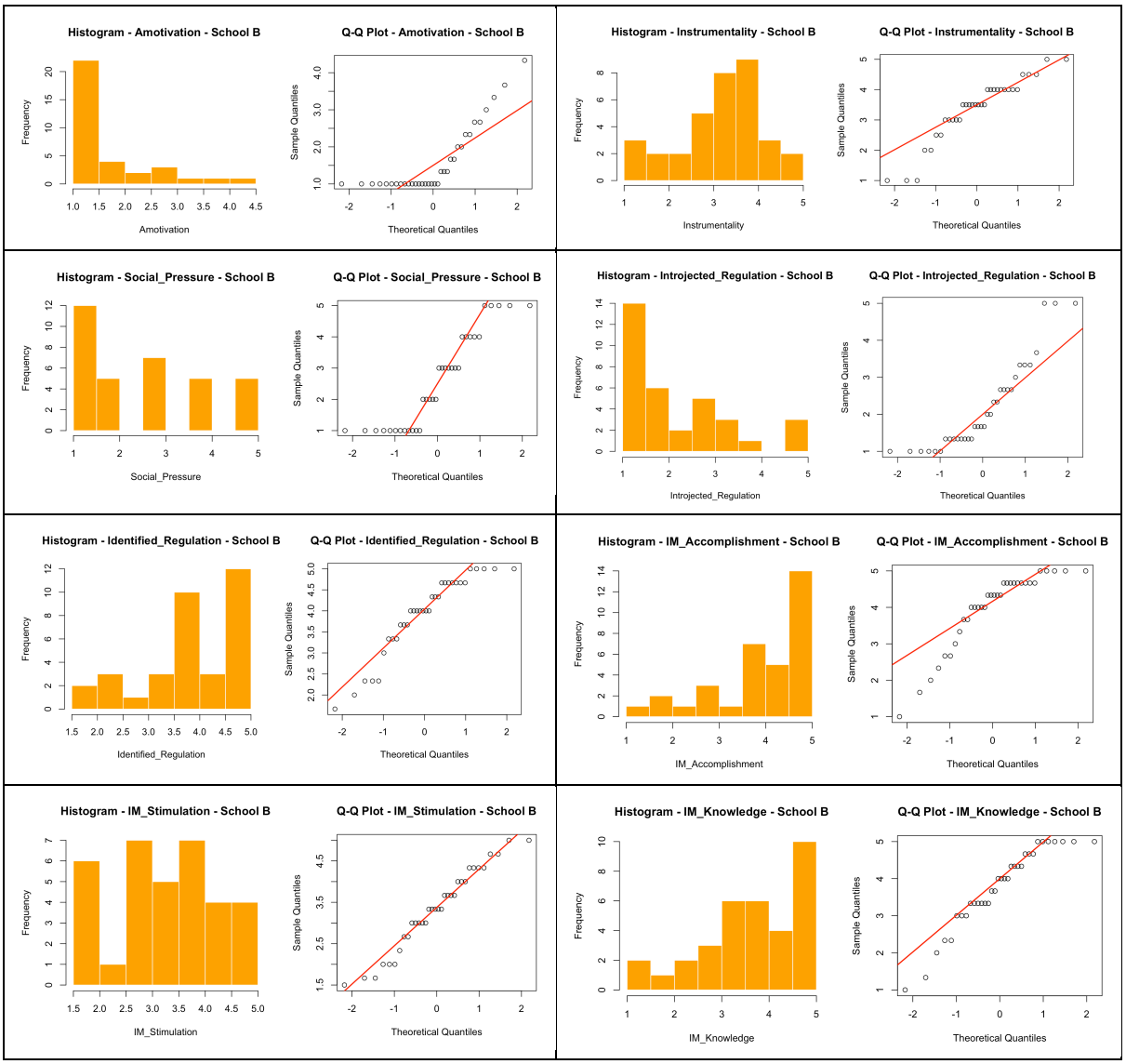
School A

Construct	Mean	SD	Min	Max	Shapiro_W	Shapiro_*p*	Skewness	Kurtosis
Amotivation	1.73	0.86	1	4	0.821	<.001	1.2	3.52
Instrumentality	3.68	0.87	1.5	5	0.944	.116	-0.42	3.01
Social_Pressure	2.30	1.21	1	5	0.870	.002	0.48	2.1
Introjected_ Regulation	1.92	0.82	1	3.67	0.895	.007	0.61	2.13
Identified_ Regulation	3.77	0.78	2	5	0.919	.025	-0.77	2.91
IM-Accomplishment	3.74	0.82	1.67	5	0.943	.113	-0.7	3.1
IM-Stimulation	3.08	0.73	1.33	4.67	0.968	.484	-0.16	3.18
IM-Knowledge	3.88	0.84	1.67	5	0.876	.002	-1.15	3.99



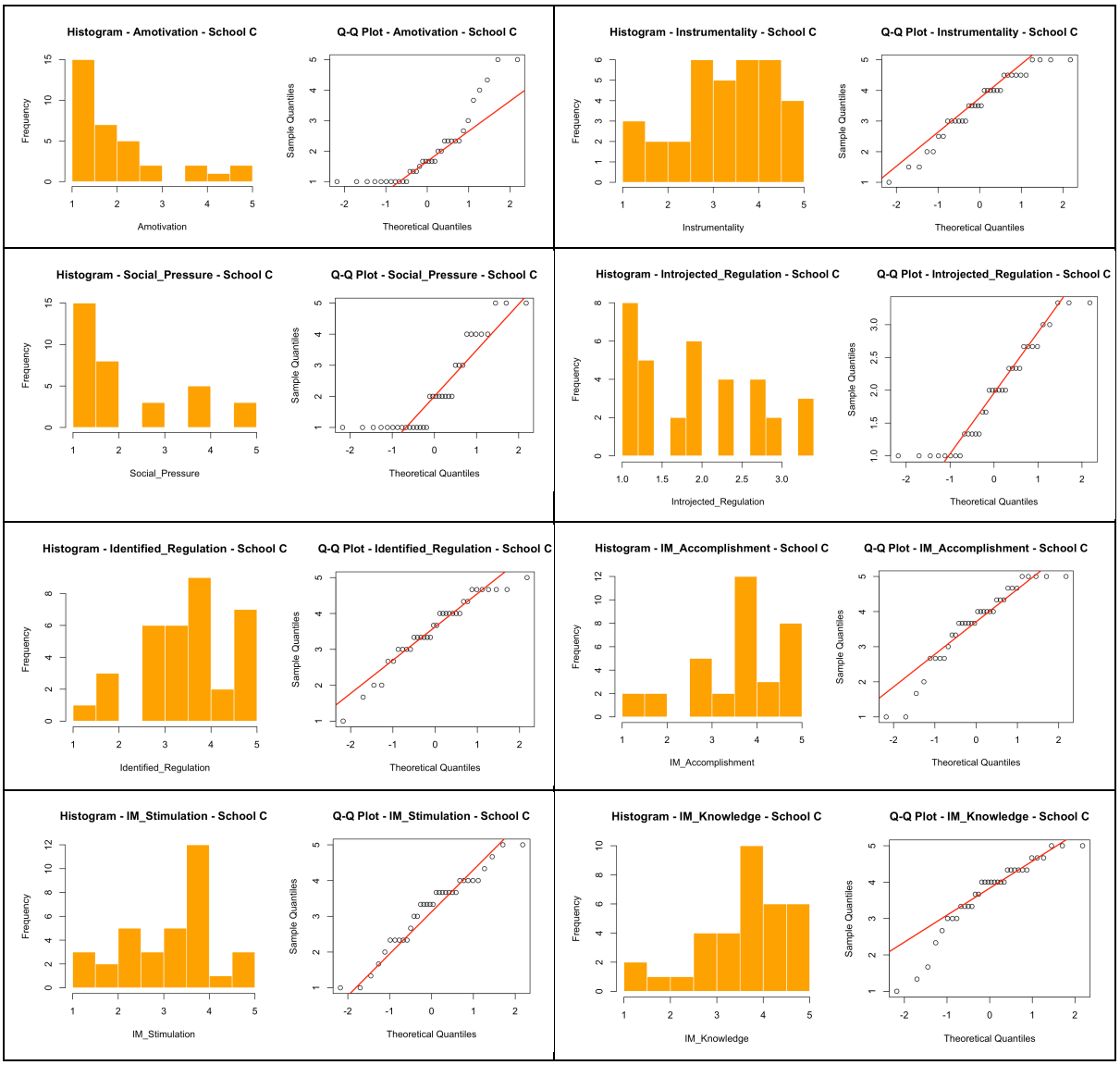
School B

Construct	Mean	SD	Min	Max	Shapiro_W	Shapiro_*p*	Skewness	Kurtosis
Amotivation	1.61	0.91	1	4.33	0.725	<.001	1.45	4.13
Instrumentality	3.37	1.04	1	5	0.906	.006	-0.85	3.29
Social_Pressure	2.59	1.48	1	5	0.854	<.001	0.34	1.73
Introjected_ Regulation	2.19	1.19	1	5	0.847	<.001	1.09	3.32
Identified_ Regulation	3.92	0.93	1.67	5	0.894	.003	-0.86	2.84
IM-Accomplishment	3.96	1.04	1	5	0.840	<.001	-1.25	3.71
IM-Stimulation	3.34	0.98	1.5	5	0.963	.29	-0.19	2.19
IM-Knowledge	3.75	1.08	1	5	0.914	.011	-0.77	3.02



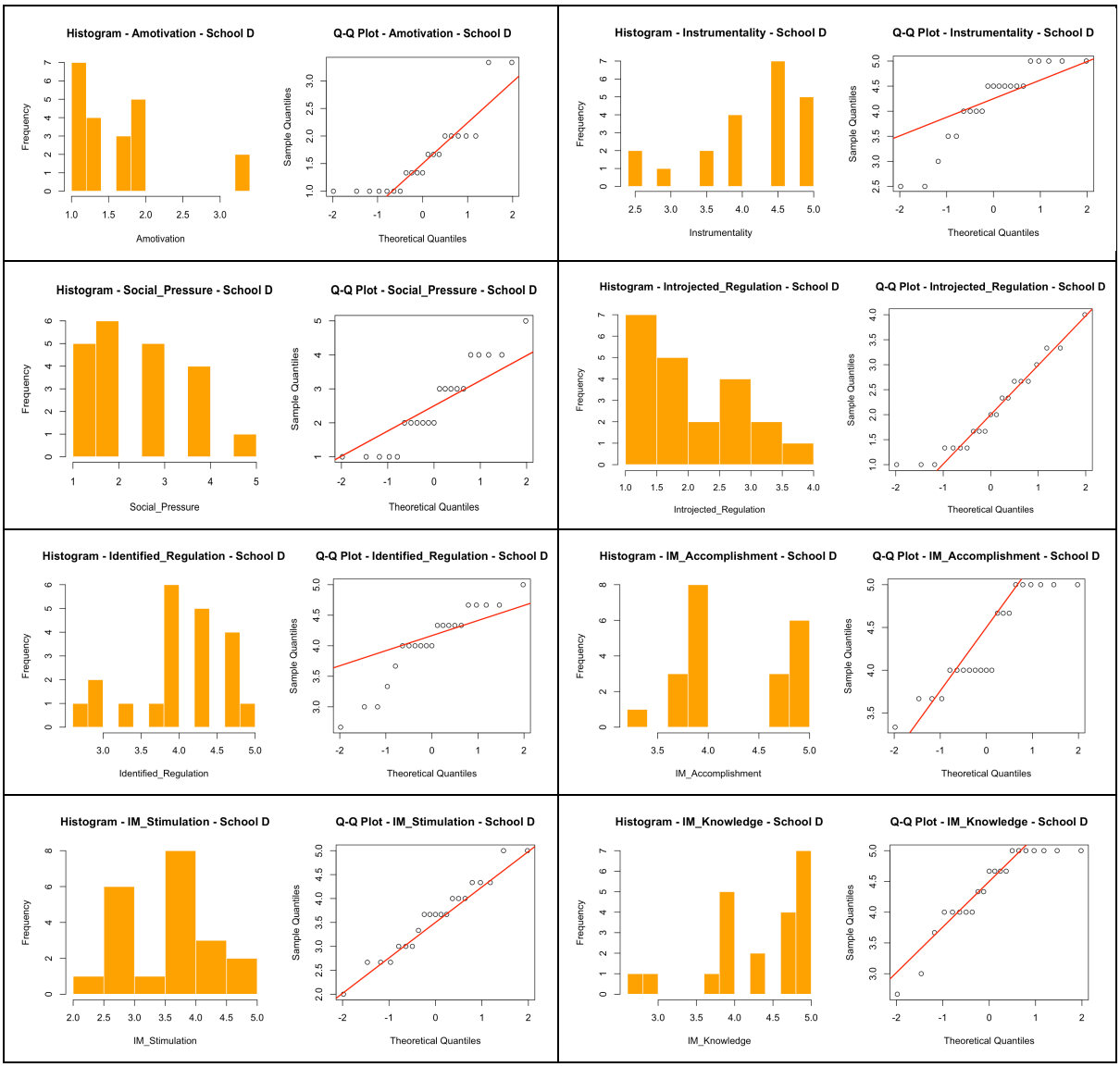
School C

Construct	Mean	SD	Min	Max	Shapiro_W	Shapiro_*p*	Skewness	Kurtosis
Amotivation	2.00	1.17	1	5	0.809	<.001	1.3	3.75
Instrumentality	3.51	1.08	1	5	0.939	.057	-0.55	2.53
Social_Pressure	2.21	1.39	1	5	0.801	<.001	0.8	2.25
Introjected_ Regulation	1.94	0.78	1	3.33	0.908	.008	0.29	1.89
Identified_ Regulation	3.56	0.96	1	5	0.937	.049	-0.73	3.12
IM-Accomplishment	3.65	1.09	1	5	0.911	.009	-0.86	3.17
IM-Stimulation	3.20	1.04	1	5	0.949	.113	-0.45	2.62
IM-Knowledge	3.70	1.00	1	5	0.898	.004	-1.07	3.71



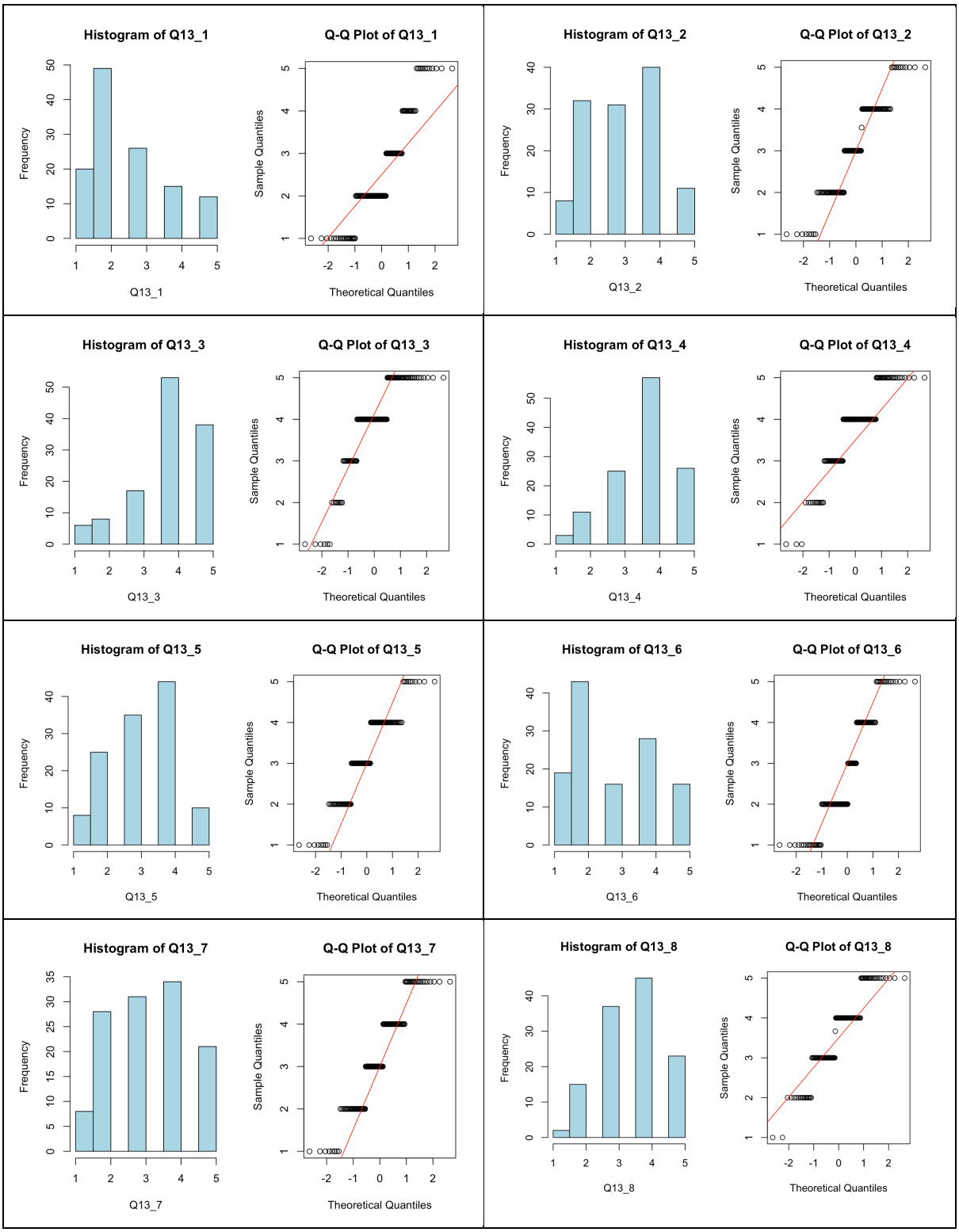
School D

Construct	Mean	SD	Min	Max	Shapiro_W	Shapiro_*p*	Skewness	Kurtosis
Amotivation	1.62	0.69	1	3.33	0.799	<.001	1.32	4.18
Instrumentality	4.17	0.78	2.5	5	0.863	.007	-0.9	2.86
Social_Pressure	2.52	1.21	1	5	0.906	.045	0.29	2.07
Introjected_ Regulation	2.08	0.87	1	4	0.932	.148	0.53	2.31
Identified_ Regulation	4.05	0.62	2.67	5	0.912	.059	-0.75	2.81
IM-Accomplishment	4.30	0.56	3.33	5	0.851	.004	0.09	1.59
IM-Stimulation	3.60	0.79	2	5	0.964	.608	-0.05	2.46
IM-Knowledge	4.37	0.67	2.67	5	0.849	.004	-1.02	3.38



RQ2: Difficulty (Question 13)

Skill	Mean	SD	Min	Max	Shapiro_W	Shapiro_*p*	Skewness	Kurtosis	Q
Overall	2.89	0.93	1	5	0.897	<.001	0.17	2.65	13_10
Tones	2.59	1.19	1	5	0.878	<.001	0.6	2.48	13_1
Grammar rules	3.11	1.1	1	5	0.907	<.001	-0.11	2.14	13_2
Pinyin	3.89	1.07	1	5	0.822	<.001	-1.07	3.7	13_3
Recognising characters	3.75	0.97	1	5	0.862	<.001	-0.73	3.23	13_4
Writing characters	3.19	1.06	1	5	0.901	<.001	-0.3	2.35	13_5
Listening	2.83	1.31	1	5	0.883	<.001	0.25	1.82	13_6
Speaking	3.26	1.18	1	5	0.908	<.001	-0.13	2.05	13_7
Reading	3.59	0.98	1	5	0.896	<.001	-0.3	2.5	13_8
Writing	3.16	1.02	1	5	0.870	<.001	-0.52	2.44	13_9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Q13_2
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Frequency
Q13_3
Q-Q Plot of Q13_3
Sample Quantiles
Theoretical Quantiles
Histogram of Q13_4
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Q13_4
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Frequency
Q13_7
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Theoretical Quantiles
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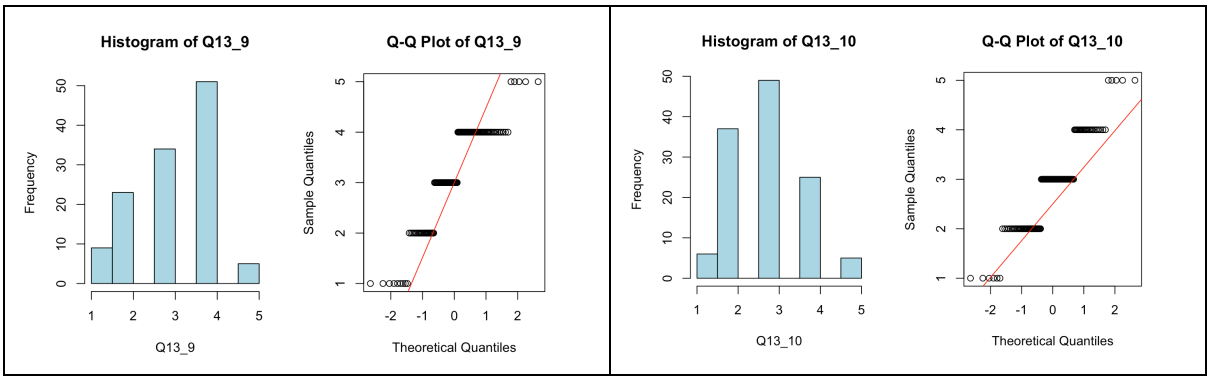
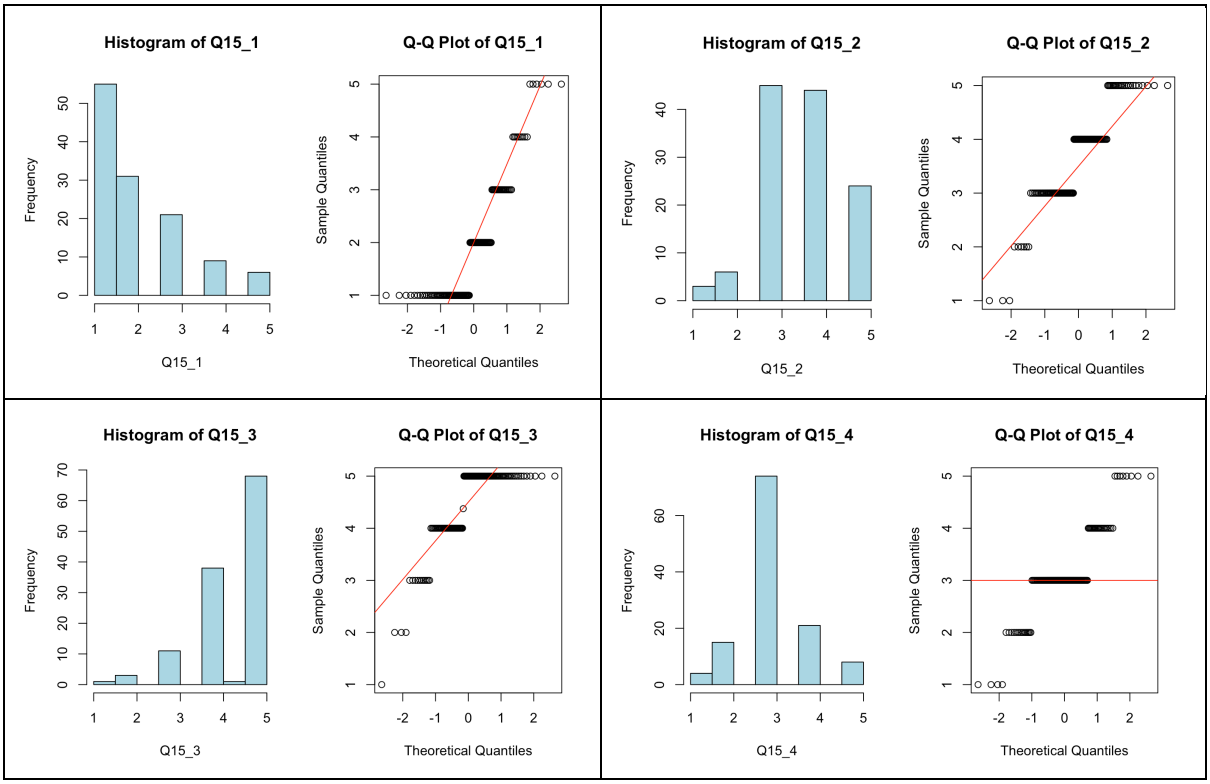
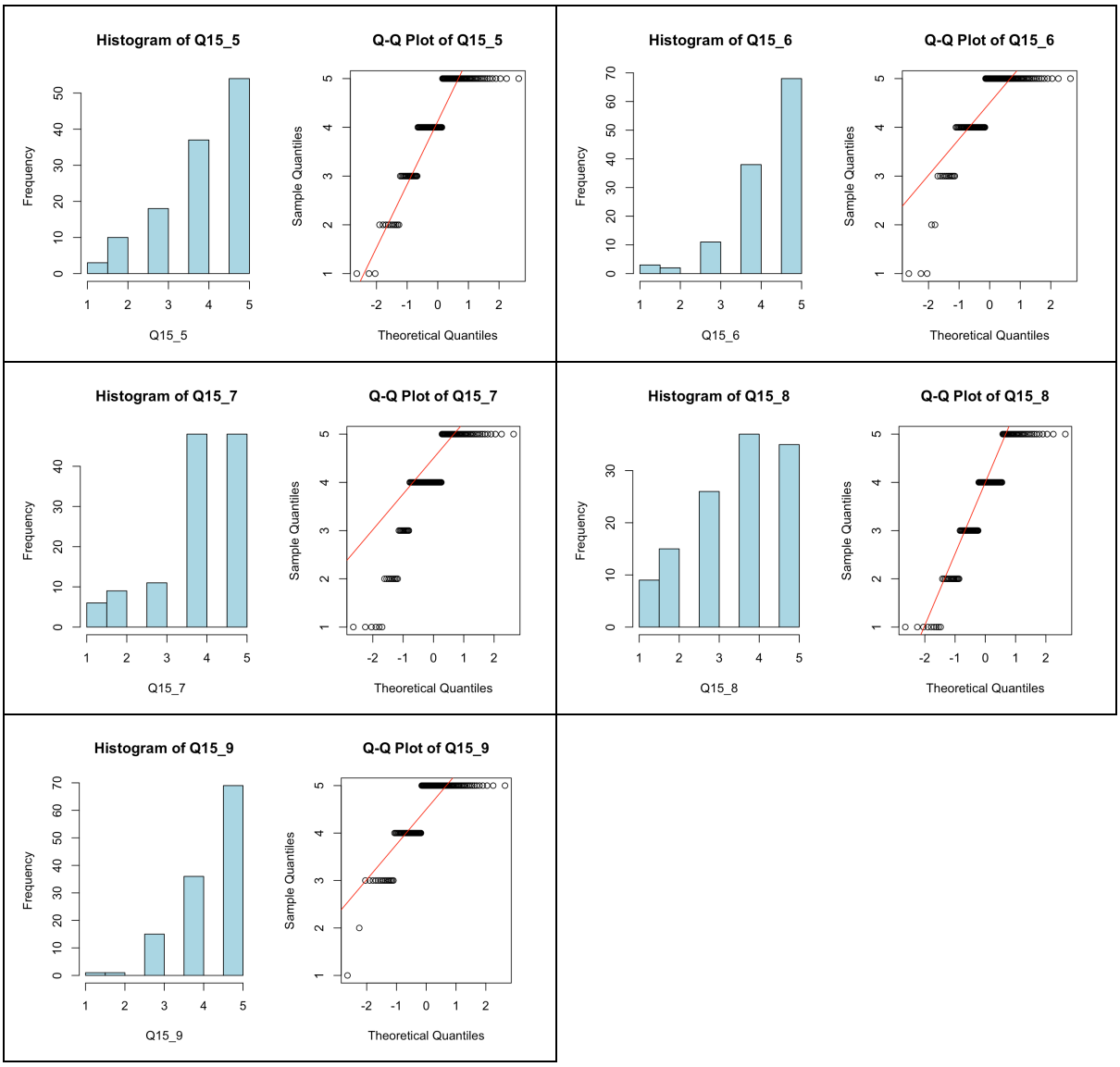
Q13_8
Q-Q Plot of Q13_8
Sample Quantiles
Theoretical Quantiles



RQ2a Ability beliefs (Question 15)

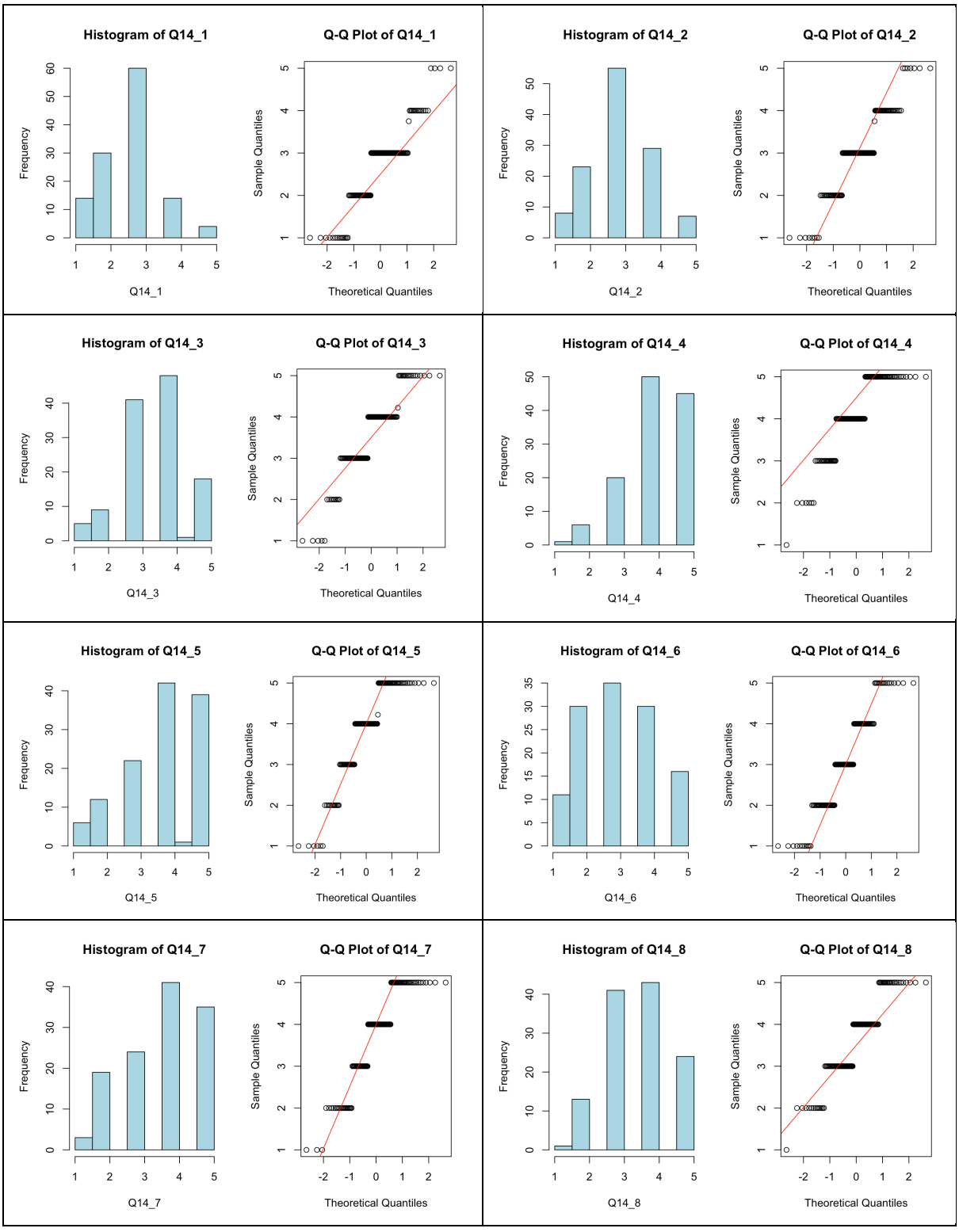
Item	Mean	SD	Min	Max	Shapiro-Wilk	Shapiro_*p*	Skewness	Kurtosis
Q15_1	2.016	1.17	1	5	0.805	<.001	0.99	3.07
Q15_2	3.656	0.93	1	5	0.874	<.001	-0.37	3.08
Q15_3	4.397	0.82	1	5	0.726	<.001	-1.48	5.28
Q15_4	3.115	0.83	1	5	0.832	<.001	0.14	3.9
Q15_5	4.057	1.07	1	5	0.806	<.001	-1.01	3.22
Q15_6	4.36	0.90	1	5	0.706	<.001	-1.73	6.26
Q15_7	4.008	1.11	1	5	0.787	<.001	-1.22	3.82
Q15_8	3.607	1.23	1	5	0.875	<.001	-0.58	2.37
Q15_9	4.402	0.8	1	5	0.729	<.001	-1.33	4.79





RQ3: Enjoyment (Question 14)

Item	Mean	SD	Min	Max	Shapiro_W	Shapiro_*p*	Skewness	Kurtosis	Q
Overall	3.97	0.91	1	5	0.849	<.001	-0.71	3.06	14_10
Tones	2.7	0.93	1	5	0.881	<.001	<.001	3.05	14_1
Grammar rules	3.03	0.96	1	5	0.901	<.001	-0.12	2.87	14_2
Pinyin	3.54	0.97	1	5	0.882	<.001	-0.55	3.22	14_3
Recognising characters	4.08	0.9	1	5	0.828	<.001	-0.85	3.38	14_4
Writing characters	3.8	1.14	1	5	0.854	<.001	-0.8	2.85	14_5
Listening	3.08	1.18	1	5	0.915	<.001	-0.01	2.12	14_6
Speaking	3.70	1.12	1	5	0.873	<.001	-0.50	2.27	14_7
Reading	3.62	0.95	1	5	0.889	<.001	-0.18	2.39	14_8
Writing	3.57	1.13	1	5	0.894	<.001	-0.35	2.33	14_9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Q-Q Plot of Q14_3
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Frequency
Q14_7
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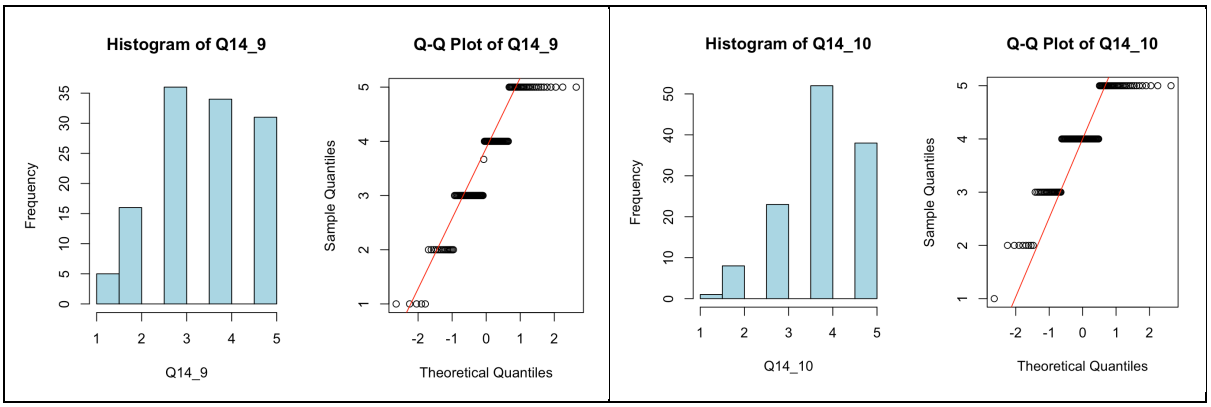
Frequency
Q14_8
Q-Q Plot of Q14_8
Sample Quantiles
Theoretical Quantiles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Q14_9
Q-Q Plot of Q14_9
Sample Quantiles
Theoretical Quantiles
Histogram of Q14_10
Frequency
Q14_10
Q-Q Plot of Q14_10
Sample Quantiles
Theoretical Quantiles

Appendix I: Mean scores for self-rated proficiency by year group

Mean scores and standard deviations for self-reported proficiency overall (Q7_1) and against four sub-skills (Q7_2 – Q7_5) are reported in Table I:

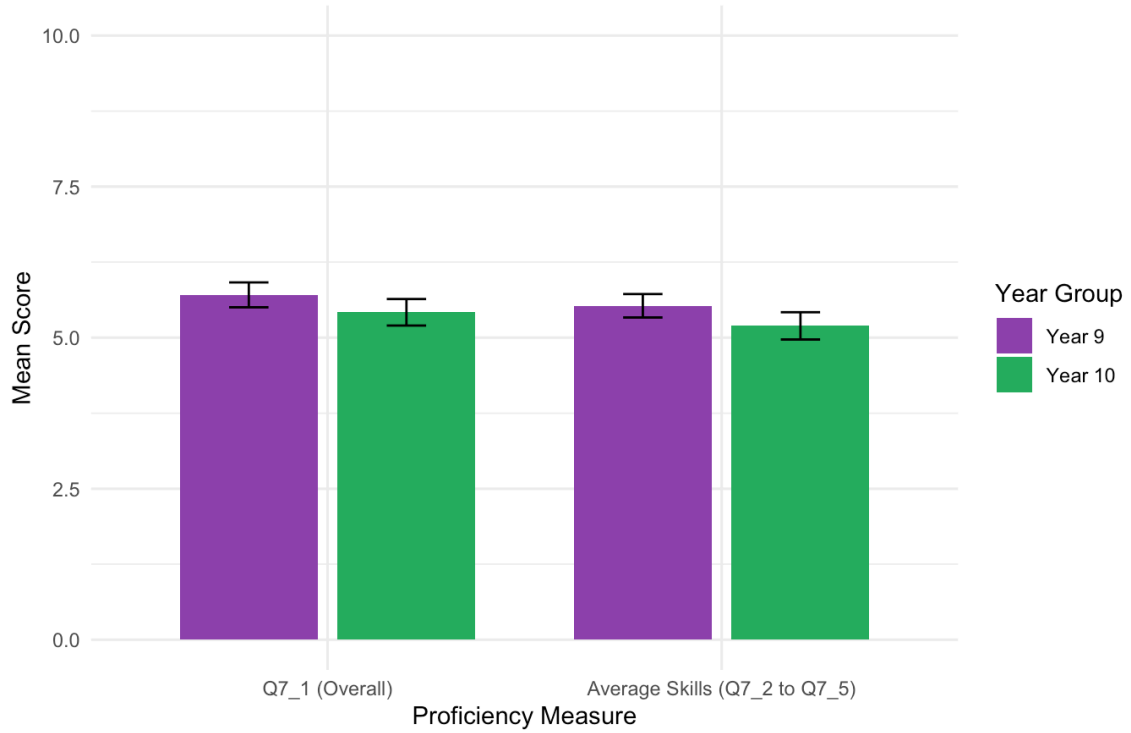
Table I

Self-reported proficiency scores

Item	Q	Whole Sample		Year 9		Year 10	
		Mean	SD	Mean	SD	Mean	SD
Overall	7_1	5.59	1.67	5.71	1.75	5.42	1.55
Speaking	7_2	5.37	2.09	5.64	2.20	4.98	1.89
Listening	7_3	5.06	2.33	5.32	2.23	4.68	2.44
Reading	7_4	5.87	1.92	5.92	2.08	5.8	1.69
Writing	7_5	5.27	2.01	5.24	2.15	5.32	1.81
Average of sub-skills	7_2-7_5	5.39	1.63	5.53	1.65	5.20	1.60

Figure I

Self-reported Proficiency: Year Group comparison



Appendix J: Full output of non-parametric statistical tests

Table J – Summary of statistical tests and results

RQ	Statistical tests	Results summary
1. What is the nature of motivation to learn Mandarin among secondary-aged learners in UK schools?	Friedman test Post-hoc Wilcoxon signed-rank tests	Significant median differences between 19 motivation construct pairings.
1a. Are there motivational differences between those who want to continue learning and those who do not?	Kruskal-Wallis test Post-hoc Wilcoxon-rank sum tests	Significant median differences between respondents who intend to continue and other groupings for IM-Stimulation.
1b. Does motivation vary according to year group, heritage language status or school?	Wilcoxon-rank sum tests Kruskal-Wallis test	Significant difference between heritage and non-heritage learner median scores for Social Pressure (p <.01, r=0.36), Introjected Regulation (p <.05, r =0.21), IM-Accomplishment (p <.05, r=0.21) and IM-Knowledge (p <.05, r=0.21). No significant differences observed between year or school groups.
2. How difficult do pupils find Mandarin? Does this differ by skill (listening/reading/writing/speaking)?	Friedman test Post-hoc Wilcoxon signed-rank tests	Significant median differences between 23 sub-skill construct pairings.
2a. What are pupils' beliefs about their ability to learn Mandarin?	Wilcoxon-rank sum tests	Significant median differences between items indicating belief in own ability and items indicating belief in others' ability (p <.001, r = .5)
3. How enjoyable do pupils find learning Mandarin? Does enjoyment differ by skill (listening/ reading/ writing/ speaking)?	Friedman test Post-hoc Wilcoxon	Significant median differences between 29 sub-skill construct pairings.

	signed-rank tests	
4. What is the relationship between learners' motivation and perceptions of a) difficulty? b) enjoyment?	Spearman's rank correlation	For difficulty, significant relationships were observed for Amotivation (ρ = –.38, p =<.001) and Identified Regulation (ρ = .27, p = .02): For enjoyment, significant positive results (ρ >.53, p <.001) were observed for all self-regulated constructs. Negative relationships with enjoyment were found for Social Pressure (ρ= -.26, p = .02) and Amotivation (ρ = -.56, p <.01)

RQ1 What is the nature of motivation to learn Mandarin among secondary-aged learners in UK schools?

- Eight motivational constructs were identified using Cronbach's alpha tests of reliability (see Appendix G)
- Composite scores for each construct were tested for normality and homogeneity of variance (see Appendix H).
- A Friedman test confirmed significant differences between scores across all constructs: ($\chi^2(7) = 367.19$, p <.001).

Table J.1

Pairwise comparisons using Wilcoxon signed-rank tests with Bonferroni correction to identify significant differences between motivational constructs

Construct 1	**Construct 2**	***p*_adj**	**Effect size (*r**)**	**Magnitude**
Introjected_Regulation	Identified_Regulation	<.001	-.83	Large
Introjected_Regulation	IM_Knowledge	<.001	-.80	Large
Introjected_Regulation	IM_Accomplishment	<.001	-.80	Large
Amotivation	Instrumentality	<.001	-.78	Large
Amotivation	IM_Knowledge	<.001	-.77	Large
Instrumentality	Introjected_Regulation	<.001	.77	Large
Amotivation	Identified_Regulation	<.001	-.76	Large
Amotivation	IM_Accomplishment	<.001	-.76	Large
Introjected_Regulation	IM_Stimulation	<.001	-.71	Large
Amotivation	IM_Stimulation	<.001	-.69	Large

IM_Stimulation	IM_Knowledge	<.001	-.64	Large
Social_Pressure	IM_Accomplishment	<.001	-.64	Large
Social_Pressure	IM_Knowledge	<.001	-.64	Large
Social_Pressure	Identified_Regulation	<.001	-.63	Large
Instrumentality	Social_Pressure	<.001	.60	Large
IM_Accomplishment	IM_Stimulation	<.001	.59	Large
Identified_Regulation	IM_Stimulation	<.001	.54	Large
Amotivation	Social_Pressure	<.001	-.44	Medium
Social_Pressure	IM_Stimulation	<.001	-.44	Medium
Instrumentality	IM_Stimulation	.056	NA	NA
Amotivation	Introjected_Regulation	.089	NA	NA
Instrumentality	IM_Knowledge	.117	NA	NA
Social_Pressure	Introjected_Regulation	.234	NA	NA
Instrumentality	IM_Accomplishment	.45	NA	NA
Instrumentality	Identified_Regulation	1	NA	NA
Identified_Regulation	IM_Accomplishment	1	NA	NA
Identified_Regulation	IM_Knowledge	1	NA	NA
IM_Accomplishment	IM_Knowledge	1	NA	NA

*Effect size is calculated as r from Wilcoxon Z scores

RQ1a Are there motivational differences between those who want to continue learning and those who do not?

- Three intent to continue groupings were decided based on theoretical coherence.
- Composite scores for each grouping were tested for normality and homogeneity of variance (see Appendix H).

Table J.2

Kruskal-Wallis test with Bonferroni correction to identify areas of significant difference according to intent to continue groups

Construct	**Kruskal-Wallis H**	***p***	***p*_adj**	**Effect size (r)**	**Magnitude**
Amotivation	6.96	.031	.246	.041	Small
Instrumentality	3.41	.182	1	.012	Small
Social_Pressure	4.59	.101	.808	.022	Small
Introjected_Regulation	0.56	.757	1	-.012	Small
Identified_Regulation	7.05	.029	.235	.042	Small
IM_Accomplishment	2.98	.226	1	.008	Small
IM_Stimulation	16.7	<.001	.002	.123	Medium
IM_Knowledge	7.19	.027	.219	.044	Small

RQ1b Does motivation vary according to year group, heritage language status or school?

Year group

- Composite motivation scores for each grouping were tested for normality and homogeneity of variance (see Appendix H).

Table J.3

Pairwise comparisons using Wilcoxon signed-rank tests with Bonferroni correction to identify significant differences in motivational constructs between year groups

Construct	**p**	**p_adj**	**Effect size (r*)**	**Magnitude**
Amotivation	.690	1	.036	Very Small
Instrumentality	.639	1	.043	Very Small
Social_Pressure	.923	1	.009	Very Small
Introjected_Regulation	.052	.412	.176	Small
Identified_Regulation	.14	1	.134	Small
IM_Accomplishment	.338	1	.087	Very Small
IM_Stimulation	.698	1	.035	Very Small
IM_Knowledge	.068	.54	.166	Small

*Effect size is calculated as r from Wilcoxon Z scores

Heritage status

- Composite motivation scores for each grouping were tested for normality and homogeneity of variance (see Appendix H).

Table J.4

Pairwise comparisons using Wilcoxon signed-rank tests with using Benjamini-Hochberg (BH) correction to identify significant differences in motivational constructs by heritage status

Construct	***p***	***p*_adj**	**Effect size (*r**)**	**Magnitude**
Amotivation	.838	.838	.018	Small
Instrumentality	.035	.056	.191	Small
Social_Pressure	<.001	<.001	.36	Medium
Introjected_Regulation	.021	.042	.21	Small
Identified_Regulation	.474	.542	.065	Small
IM_Accomplishment	.018	.042	.214	Small
IM_Stimulation	.06	.08	.171	Small
IM_Knowledge	.002	.008	.287	Small

*Effect size is calculated as r from Wilcoxon Z scores

School

- Composite motivation scores for each grouping were tested for normality and homogeneity of variance (see Appendix H).

Table J.5

Kruskal-Wallis test to identify areas of significant difference in motivation according to School with Bonferroni correction

Construct	Kruskal-Wallis H	p	p_adj	Effect size (r)	Magnitude
Amotivation	3.45	.327	1	.004	Small
Instrumentality	9.46	.024	0.19	.056	Small
Social_Pressure	1.83	.608	1	-.01	Small
Introjected_Regulation	0.61	.894	1	-.02	Small
Identified_Regulation	5.06	.167	1	.018	Small
IM_Accomplishment	7.44	.059	0.47	.039	Small
IM_Stimulation	4.94	.176	1	.017	Small
IM_Knowledge	8.00	.046	0.37	.043	Small

RQ 2: How difficult do pupils find Mandarin? Does this differ by skill (listening/reading/writing/speaking)?

- Scores for each difficulty item (Q13) were tested for normality and homogeneity of variance (see Appendix H).
- A Friedman test confirmed significant differences between scores across all items: (χ^2 (9) = 182.00, p <.001).

Table J.6

Pairwise comparisons using Wilcoxon signed-rank tests with Bonferroni correction to identify significant differences between difficulty items (N=122)

Item 1	Item 2	p_adj	Effect size (r*)	Magnitude
Tones	Pinyin	<.001	.7	Large
Characters: reading	Overall	<.001	.683	Large
Pinyin	Overall	<.001	.656	Large
Tones	Characters: reading	<.001	.611	Large
Reading	Overall	<.001	.533	Large
Pinyin	Listening	<.001	.552	Large
Grammar Rules	Pinyin	<.001	.540	Large
Tones	Reading	<.001	.525	Large
Characters: reading	Listening	<.001	.484	Medium
Characters: reading	Writing	<.001	.491	Medium
Pinyin	Writing	<.001	.521	Large
Listening	Reading	<.001	.454	Medium
Pinyin	Characters: writing	<.001	.498	Medium
Grammar Rules	Characters: reading	<.001	.479	Medium
Characters: reading	Characters: writing	<.001	.467	Medium
Tones	Speaking	<.001	.439	Medium
Pinyin	Speaking	<.001	.434	Medium
Tones	Characters: writing	.002	.395	Medium
Grammar Rules	Reading	.005	.333	Medium
Reading	Writing	.007	.340	Medium

Tones	Grammar Rules	.01	.324	Medium
Characters: reading	Speaking	.013	.334	Medium
Tones	Writing	.018	.356	Medium
Characters: writing	Reading	.075	.294	Small
Listening	Speaking	.095	.258	Small
Characters: writing	Overall	.147	.275	Small
Speaking	Overall	.148	.278	Small
Writing	Overall	.255	.283	Small
Pinyin	Reading	.357	.281	Small
Characters: writing	Listening	.517	.240	Small
Speaking	Reading	.612	.220	Small
Listening	Writing	.828	.230	Small
Grammar Rules	Overall	.873	.197	Small
Tones	Listening	1	.166	Small
Tones	Overall	1	.201	Small
Grammar Rules	Characters: writing	1	.080	Very Small
Grammar Rules	Listening	1	.212	Small
Grammar Rules	Speaking	1	.070	Very Small
Grammar Rules	Writing	1	.070	Very Small
Pinyin	Characters: reading	1	.178	Small
Characters: reading	Reading	1	.194	Small
Characters: writing	Speaking	1	.011	Very Small
Characters: writing	Writing	1	.072	Very Small
Listening	Overall	1	.062	Very Small
Speaking	Writing	1	.019	Very Small

*Effect size is calculated as r from Wilcoxon Z scores

RQ2a: What are pupils' beliefs about their ability to learn Mandarin?

- Scores for each ability belief item (Q15) were tested for normality and homogeneity of variance (see Appendix H).
- Two ability groupings were decided based on theoretical coherence and clustered median scores, and tested for reliability using Cronbach's alpha (see Appendix G).

Table J.7
Wilcoxon rank-sum test of difference between grouped ability variables

Group 1	**Group 2**	***p*_adj**	**Effect size (*r**)**	**Magnitude**
Own ability	Others' ability	<.001	.5	Large

RQ3 How enjoyable do pupils find learning Mandarin? Does enjoyment differ by skill (listening/ reading/ writing/ speaking)?

- Scores for each enjoyment item (Q14) were tested for normality and homogeneity of variance (see Appendix H).

- A Friedman test confirmed significant differences between scores across all items: (χ^2 (9) = 220.4, p <.001).

Table J.8

Pairwise comparisons using Wilcoxon signed-rank tests with Bonferroni correction to identify significant differences between enjoyment items (N=122)

Item 1	**Item 2**	***p*_adj**	**Effect size (*r**)**	**Magnitude**
Tones	Overall	<.001	.734	Large
Tones	Recognising Characters	<.001	.728	Large
Grammar Rules	Recognising Characters	<.001	.644	Large
Overall	Grammar Rules	<.001	.639	Large
Tones	Speaking	<.001	.630	Large
Overall	Listening	<.001	.579	Large
Recognising Characters	Listening	<.001	.579	Large
Tones	Writing Characters	<.001	.577	Large
Tones	Pinyin	<.001	.564	Large
Tones	Reading	<.001	.562	Large
Tones	Writing	<.001	.497	Medium
Grammar Rules	Writing Characters	<.001	.472	Medium
Recognising Characters	Reading	<.001	.442	Medium
Writing Characters	Listening	<.001	.429	Medium
Listening	Speaking	<.001	.424	Medium
Recognising Characters	Writing	<.001	.420	Medium
Grammar Rules	Speaking	<.001	.419	Medium
Grammar Rules	Reading	<.001	.408	Medium
Pinyin	Recognising Characters	<.001	.401	Medium
Grammar Rules	Pinyin	.002	.372	Medium
Grammar Rules	Writing	.002	.372	Medium
Listening	Reading	.002	.366	Medium
Overall	Writing	.014	.327	Medium
Listening	Writing	.015	.325	Medium
Overall	Reading	.017	.322	Medium
Pinyin	Listening	.022	.316	Medium
Recognising Characters	Speaking	.031	.307	Medium
Overall	Pinyin	.034	.305	Medium
Writing Characters	Writing	.036	.304	Medium
Recognising Characters	Writing Characters	.169	.261	Small
Tones	Grammar Rules	.196	.261	Small
Overall	Speaking	.244	.254	Small
Tones	Listening	.279	.249	Small
Overall	Recognising Characters	1	.129	Small
Overall	Writing Characters	1	.133	Small

Grammar Rules	Listening	1	.008	Very small
Pinyin	Writing Characters	1	.195	Small
Pinyin	Speaking	1	.098	Very small
Pinyin	Reading	1	.040	Very small
Pinyin	Writing	1	.026	Very small
Writing Characters	Speaking	1	.086	Very small
Writing Characters	Reading	1	.193	Small
Speaking	Reading	1	.066	Very small
Speaking	Writing	1	.080	Very small
Reading	Writing	1	.047	Very small

*Effect size is calculated as r from Wilcoxon Z scores

RQ4 What is the relationship between learners' motivation and perceptions of a) difficulty? b) enjoyment?

- The relationship between each motivation construct and overall scores for difficulty and enjoyment (Qs 13_10 and 14_10) were assessed using Spearman's rank correlation.

Table J9

Spearman's rho correlation calculation between Overall Difficulty (13_10) and Motivation constructs with Bonferroni correction

Construct	**Spearman_rho**	***p*_value**	***p*_adj**
Amotivation	.375	<.001	<.001
Instrumentality	-.013	.885	1
Social_Pressure	-.091	.316	1
Introjected_Regulation	-.068	.455	1
Identified_Regulation	.267	.003	0.023
IM_Accomplishment	.164	.072	0.575
IM_Stimulation	.205	.024	0.191
IM_Knowledge	-.009	.92	1

Table J10

Spearman's rho correlation calculation between Overall Enjoyment (14_10) and Motivation constructs with Bonferroni correction

Construct	**Spearman_rho**	***p*_value**	***p*_adj**
Amotivation	-.507	<.001	<.001
Instrumentality	.084	.358	1
Social_Pressure	-.261	.004	.03
Introjected_Regulation	.007	.941	1
Identified_Regulation	.538	<.001	<.001
IM_Accomplishment	.588	<.001	<.001
IM_Stimulation	.602	<.001	<.001
IM_Knowledge	.558	<.001	<.001

Appendix K – Selected interview transcripts

[This section has been redacted to preserve participant confidentiality]

Appendix L – Thematic analysis process

Initial codes organised by theme

Codes

Name	Sources	References
Easy overall	4	5
Don't have to change word endings	2	3
Easier than expected	3	3
Easier than other languages	3	7
Easy character recognition	4	5
Easy grammar	1	1
Easy pinyin	1	1
Easy reading	2	4
Easy speaking	2	4
Easy translation	1	1
Easy writing	2	2
Enjoyment overall	5	17
Boring learning characters	1	2
Boring repetitive lesson structure	3	7
Boring writing	4	7
Enjoyment characters	6	8
Enjoyment culture	2	3
Enjoyment games	4	7
Enjoyment reading	2	4
Enjoyment speaking	1	1
Enjoyment translation	2	2
Games help you learn	3	6
Less fun as it goes on	3	6
More enjoyable than expected	2	2
More fun than Euro languages	3	3
Extra lesson not enjoyable	5	8
Extra lesson extends the school day	3	5
Extra lesson interferes with clubs	3	7
Extra lesson is a waste of time	1	7
Extra lesson is just part of the deal	1	2

Name	Sources	References
Extra lesson just revision	2	5
Extra lesson resent having to prioritise	2	7
Extra lesson too hard	1	2
Extra lesson used to be fun	2	2
Harder than expected	1	2
Chinese people speak quickly	2	2
Difficult characters	6	13
Difficult grammar	4	4
Difficult listening	4	7
Difficult reading	1	1
Difficult revising without speakers around	2	2
Difficult speaking	4	4
Difficult tests	3	5
Difficult thinking of what to say	3	6
Difficult to catch up if start late	2	2
Difficult tones	4	5
Difficult too much to remember	5	17

Name	Sources	References
Difficult writing	3	9
Difficulty increases over time	6	11
Euro languages easier	3	5
Gaps in course content	2	4
Hard to say if easy or hard	2	2
I like it despite difficulty	2	8
Learning too fast-paced	2	6
Heritage learner finds it easier than any other language	1	3
Heritage interesting evolution of language	1	1
Heritage wider family utility	1	1
HLs need taught differently	3	5
Motivation easy GCSE	3	3
HSK	2	3
I don't regret my decision	2	4

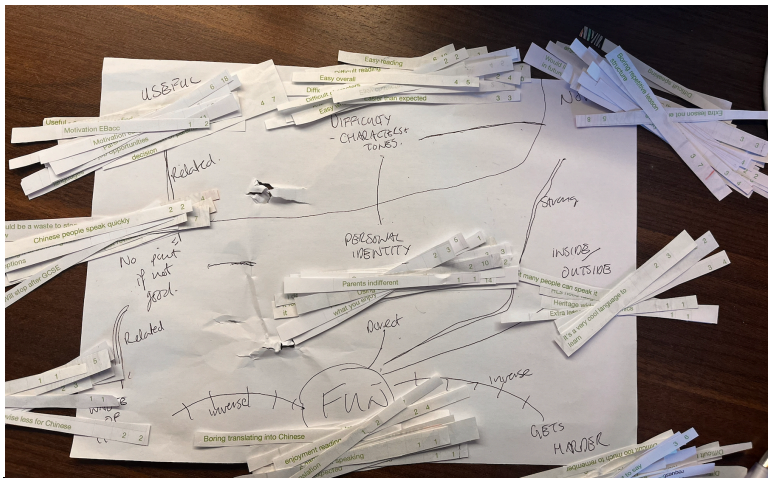
Name	Sources	References
Gets better once you learn how it works	2	4
I'm not sure yet about after GCSE	2	3
Will continue after GCSE	3	3
Will stop after GCSE	2	4
Would be a waste to stop now	2	7
Would like to travel to China in future	2	4
I have the ability to learn Chinese	3	7
Higher level of language learning	2	3
I have the ability to learn foreign languages	3	4
Interest or intrinsic stimulation	5	18
I like other subjects better	2	8
Interesting characters	6	12
Interesting culture	5	8
Interesting Etymology of character	3	4
It feels good to be able to speak	3	5

Name	Sources	References
Chinese		
Impressing others	1	2
it's a very cool language to learn	2	3
Not many people can speak it	2	4
Using Chinese in real life	2	10
Motivation trip to China	3	6
Motivation CS visited primary school	2	4
Trips to universities	2	2
Negative emotions	3	8
Emotion neutral	3	6
Novelty	3	3
No alphabet	5	8
Novelty characters	3	8
Novelty culture	1	2
Novelty grammar	3	4
Novelty tones	2	4
Own choice to learn	7	14
Parental influence	6	18
Combination of parents and own decision	4	7

Name	Sources	References
Parents indifferent	1	1
Parents made decision for me	2	2
Parents want you to do what you enjoy	3	4
School made the decision for me	2	10
Peer relationships	4	6
Sibling influence	3	5
Teaching to test	2	3
Would prefer to study independently	1	2
You can use strategies in tests	2	7
Thought it looked fun before starting	2	2
Didn't enjoy Euro languages in primary	2	2
Looks difficult before learning	4	4
No prior knowledge before starting	2	2
To be fair, Mandarin does require work	4	6
I revise more for Chinese	4	6

Name	Sources	References
Revise less for Chinese	2	2
Transferable skills from other L2s	3	3
Euro languages not my thing	4	6
Useful - or instrumentalism	5	10
China will be a global player (latent)	5	5
Looks good on my CV	3	5
Most spoken language	1	2
Motivation EBacc	1	2
opens job opportunities	6	11
Other subjects more useful	2	6
Work or study in China	2	2
You could be a translator	4	6

Codes arranged into tentative thematic groupings by hand:



Initial groupings of themes before review

Final Theme list

Theme Name	Description
Fuelled by Fun	This overarching theme captures the inciting and sustaining role of enjoyment in CFL motivation.
It's Cool We Can Do This	This theme explores the self-esteem and satisfaction derived from language achievement, and how this shapes individual and group identities.

A Surmountable Challenge	This theme defines difficulty as a function of Chinese's typological distance from English. It charts learners' growing confidence as their familiarity with Chinese grows.
Exams Set the Pace	This theme explores the challenges of classroom learning and the stress of preparing for GCSE. Difficulty becomes (re)defined in terms of classroom assessment rather than longer term acquisition.
Don't Waste my Time	This theme describes learners' emotional and behavioural responses to school policies mandating learning and how this impacts motivation.
Mix it Up	This theme explores the contribution of novelty and variety to enjoyment. It covers both the appeal of Chinese as a novel language, and learners' need for varied classroom activities.
Worth the Effort	This theme covers learners' belief that Chinese proficiency requires long term effort and commitment, and the influence this belief has on intent to continue.
A Useful Language	This theme relates to the belief that Chinese is more useful than other languages. Tied in to the idea of economic capital, this theme is unique in that has no direct relationship to *Fuelled by Fun*.

Final thematic grouping

Solid lines (↔) indicate a mutually reinforcing relationship between themes. For example, the motivating power of Fuelled by Fun is reinforced by the motivating power of It's Cool We Can Do This. Dashed lines (⇿) indicate an undermining relationship – For example, the motivating power of Fuelled by Fun is undermined by the (de-)motivating power of Exams Set the Pace.