

# Developing Students' Conceptual Understanding of Mandarin

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# Background

- **Began learning Chinese at age 10**
- **PGCE and PG Dip from UCL IOE**
- **On the Doctor of Education course at UCL IOE**
- **Head of Mandarin at Pinner High School in NW London**

# Context

- Students from across the full age range (Years 7-13) of a non-selective state secondary school in NW London participated in the research.
- Half of the participants were on the MEP
- Even gender balance of participants
- Two individual semi-structured interviews with each of the participants across 2 school years
- Longitudinal, whole-programme research design to capture changes in students' conceptual understanding over time
- Thematic analysis of interview transcripts



# Participants by Year Group at Time of Interview

<b>Year Group</b>	<b>Number of participants in first interview</b>	<b>Number of participants in second interview</b>	<b>Approximate number of students studying Mandarin at the school</b>
<b>7</b>	4	0	180
<b>8</b>	0	4	180
<b>9</b>	3	0	45
<b>10</b>	1	3	45
<b>11</b>	0	1	45
<b>12</b>	2	0	3
<b>13</b>	0	2	2

Mandarin Study at 1 <sup>st</sup> Interview	Participants
Up to 1 year	3
Up to 2 years	0
Up to 3 years	2
Up to 4 years	1
Up to 5 years	2
Up to 6 years	1
Up to 7 years	1

- No home language exposure to Mandarin or other Chinese languages
- 4 of the 10 participants had some Mandarin lessons at primary school.
- Six of the ten participants exposed to heritage languages at home (Gujarati, Welsh, Greek, Swahili, Hindi, Punjabi)
- Above national average of 17.5% of students with heritage language exposure (DfE, 2022)
- All participants had studied Spanish at secondary school
- Four participants had some French lessons at primary
- Participants were studying French, German, or Korean in their own time.

**What do students find most interesting about studying Mandarin?**

**What do students find most challenging about studying Mandarin?**



# What is the most interesting thing about studying Mandarin?

Themes in participant responses by frequency:

1. Novelty factor
2. Characters
3. Culture
4. Future opportunities

# What is the most interesting thing about studying Mandarin?

“It's really different to English, because a lot of other languages like [...] French and Spanish [...] all use the same letters as English, but Mandarin is completely different, so it's really interesting to learn something that you in a way, have no clue of before.” (Maya, Year 8, interview 2)

“How old the language is and how much it's evolved”  
(Johanna, Year 8, interview 2)

“When I was growing up, I had no idea that there were languages that look like that, so I thought that [...] it would just be really interesting if I could learn that.”  
(Neil, Year 12, Interview 1)

“The character can be one thing, but you just add like another line to it, it could be some[thing] completely different. That's probably what's interested me the most.”  
(Amaiya, Year 10, interview 1)



# What is the most difficult thing about studying Mandarin?

Themes in participant responses by frequency:

1. Characters
2. Tones
3. Sentence structures
4. Sound-sign correspondence (音形对应关系)

“It's just remembering how to write them [characters] and if there are radicals that you don't know, then you're writing a character and you think, 'Oh, I don't know what to put in this area, because I don't know what it means, so I don't know what how to write it.'”

(Maya, Year 7, interview 1)

“One character can mean one thing in one sentence, and one completely different thing in another.” (Lily, Year 10, interview 2)

“Trying to say what you want to say. Because if you say it wrong, then it either doesn't make sense, or means something else.” (Neil, Year 13, interview 2)

“Trying to remember how to say said characters [...] I can read a character and I can quite remember what it means, but if it comes to speaking [...], I'm like, ‘I don't remember what that sounds like.’”

(Amaya, Year 10, interview 1)

“It's very hard to get stuck in your head which tones go to which words, you just go with what sounds right in your head, but it may not necessarily always be right. [...] Producing the tone I find quite easy, generally. It's more remembering.” (Daniel, Year 7, interview 1)

**Threshold concepts** are “*particular concepts that can be considered as akin to a portal, opening up a new and previously inaccessible way of thinking about something, [...] without which the learner cannot progress*” (Land et al., 2005, p. 53).

*Examples:*

Threshold concept for young children just learning to read:

**Written symbols convey information about sound and meaning.**

Threshold concept for the study of literature or art:

**The meaning of a piece of art/literature is not fixed – meaning is created through the act of viewing/reading the work.**

**Threshold concepts** are “*particular concepts that can be considered as akin to a portal, opening up a new and previously inaccessible way of thinking about something, [...] without which the learner cannot progress*” (Land et al., 2005, p. 53).

Threshold concepts are:

- “**transformative** (occasioning a significant shift in the perception of a subject)
- **irreversible** (unlikely to be forgotten, or unlearned only through considerable effort)
- **integrative** (exposing the previously hidden interrelatedness of something)
- **troublesome** and/or [...] lead[ing] to troublesome knowledge”

(Meyer and Land, 2005, p. 373)

- “Students are quite capable of getting ‘right answers’ without having an adequate grasp of the concepts involved” (Moore, 2012, p. 5).
- Mimicry: lack of genuine understanding can be masked by a student’s uncomprehending performance of learned facts (Meyer and Land, 2006, p. 24)
- Students need to grapple with conceptual difficulties (Cousin, 2006, p. 5), rather than being insulated from the unspoken rules of the “epistemic game” (Perkins, 2006, p. 43).
- Students from an English-speaking background need to ‘get their heads around’ new ways of thinking about and using language.
- The aim of transformational learning (O’Brien, 2008, p. 302) is for “students not only to understand ‘how historians think’, but to begin to ‘think like a historian’” (Land *et al.*, 2005, p. 57).



“In English, you'd learn the alphabet and when you put these letters together, they make this word. [...]  
But in Chinese, that's not how it works. And the way we— **I can't exactly tell you how we learnt it, but the way that we learnt it is sort of in my mind now** and whenever I come to learn the subject that's... I'm thinking about Chinese and not how I'm speaking English.” (Neil, Year 13, interview 2)

“Initially it's really hard to learn it, because it's like a completely different language, and it uses, like, a different part of your brain. But [...] it gets easier as you go along. [...] I think it's the same logic behind the characters then and it just makes more sense, I guess.” (Sanika, Year 8, interview 2)

“It seems so complicated. But when you like, almost get inside what it is, then it makes a bit more sense.” (Lily, Year 9, interview 1)

“There is a lot of content, but if you just take it slowly, then after time, **after a while you have like a Eureka moment where everything just clicks and you understand a lot. For me, that was the radicals.**” (Vivaan, Year 9, interview 1)

# What are some possible threshold concepts for learners of Mandarin as a foreign language?

- *In what ways might the threshold concepts approach be a useful way of examining our teaching practice?*
- *In what ways might the threshold concepts approach be less suited to our field?*



# Troublesome knowledge for learners:

- Non-alphabetic orthography
- Sound-sign correspondence (音形对应关系)
- Phonics in Pinyin vs English
- Tones in Mandarin (vs phrasal pitch variation in English)
- Differentiating characters w. minimal visual distinction (未未来米)
- Characters with multiple unrelated definitions (只)
- Characters as pictographs/ideographs – only true for a minority of characters (Li, 2017, p. 77)



# Integration and Transformation:

- Use of semantic radicals to aid visual processing and differentiation, comprehension, recall, linking related vocabulary, deduction
- Recognition of the same character recurring in multiple compound words aids recall and linking of related vocabulary.
- Loan words (咖啡、 吉他) - Characters chosen to represent a loan word are often chosen based on their pronunciation, so the meanings of these characters may be unrelated to the definition of the loan word.

# From Alienation to Acceptance

“Some other languages like French and Spanish, they're written in **normal English letters that we know**, but with Mandarin it's the whole thing about characters and radicals.” (Maya, Year 7, interview 1)

“I find it [Mandarin] makes a lot of sense because of the structures and grammar, and there are a lot of things that make sense, but... and I understand that it's completely different to English. It's from a completely different part of the world. It's from a completely different culture, so it's obviously not gonna be anything like English, but there's still elements that make sense.” (Lily, Year 9, interview 1)

What are the *implications* of the  
*threshold concepts framework*  
for our *practice as teachers*  
of Mandarin as a foreign language?



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