Action Research for Continued Professional Development:

Exploring New Teaching and Learning Approaches

Maria Pia Maggioni, Kim Wang, Shan Zhai

What is action research

- "PRACTITIONERS AS RESEARCHERS"

  Action research is defined as the *'studies carried out in the course of an activity or occupation, typically in the field of education, to improve the methods and approach of those involved' in the bid to optimise practitioners' own practice*.

- "CYCLIC NATURE"

  The cyclic nature of action research - it is a never ending journey: once you are on it it will allow you to continuously deepen your understanding and expertise.   *See handout.*

- "REFLECTING AND EVALUATING"

  Carrying out action research puts you at the very core of professional development - there's no better way to learn than to find things out first hand!
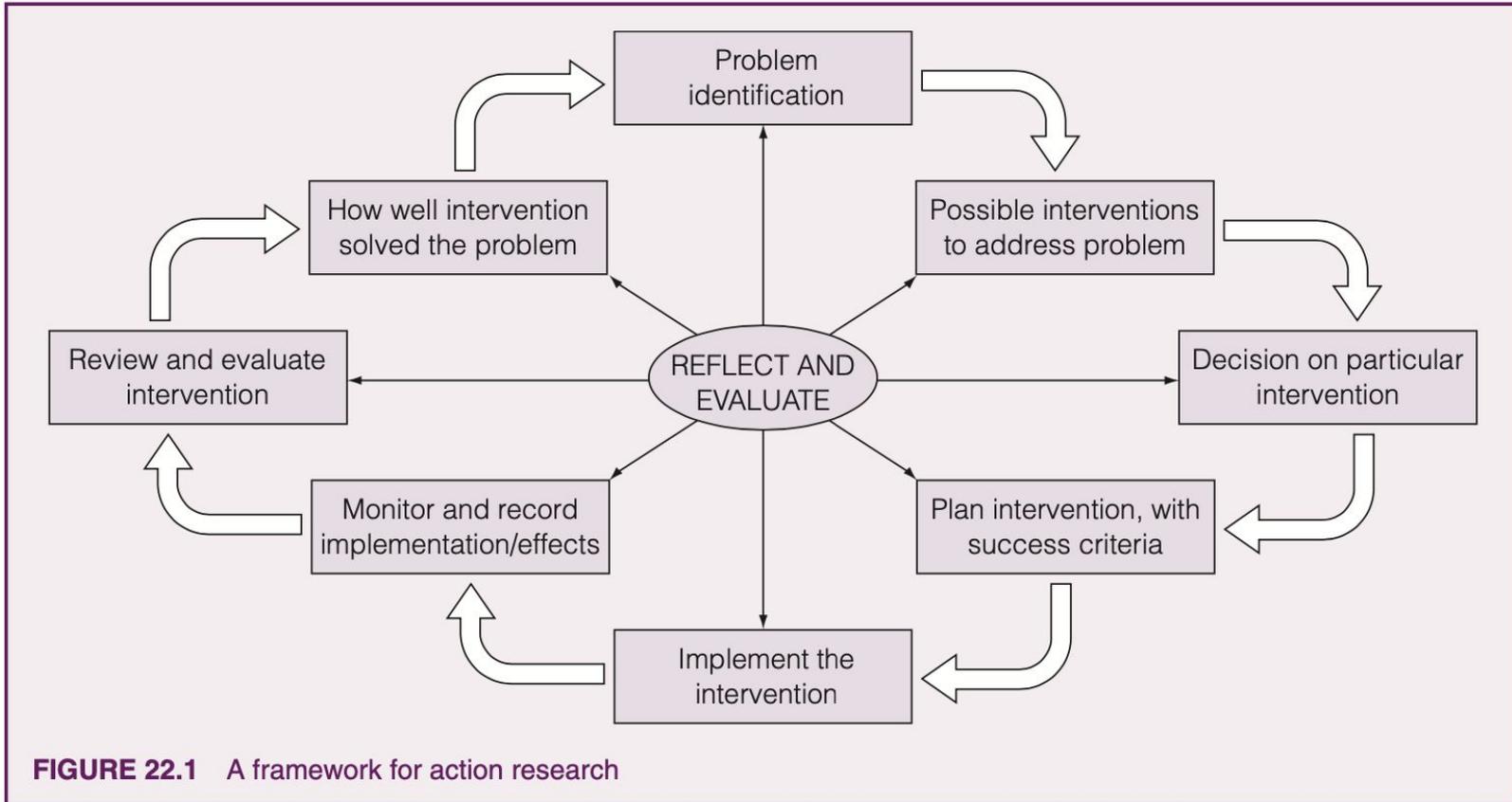
FIGURE 22.1 A framework for action research

(Cohen, Manion & Morrison, 2017)

From *assumptions, doubts and questions* to **research questions**

A. What is the key aspect of this practice area that you find the most challenging for learners? Why do you think it is the most challenging for them? How do you know?
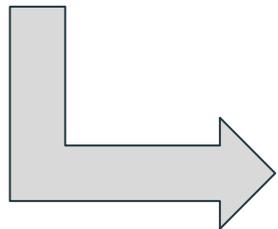
B. What teaching and learning approaches/techniques/activities in this area of practice have you been using in your day-to-day practice? Do they work? Why do you think they work? How do you know they work?

C. Have you ever seen/heard about some T&L approaches/techniques/activities in this area of practice that you have some doubt upon? What are they? Why do you have doubts about them?
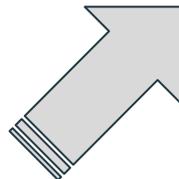
Our experience: getting to the Research Question

Written Word Recognition and Production

Would the connection method help students recognise and write characters effectively? Could we find different applications to the high order thinking skills of Bloom's taxonomy in Mandarin vocabulary learning?

To what extent does Shen's self-discovery vocabulary learning method impact learners' ability to recognise and produce 2-character words in written language?

How effective are deep-processing learning activities on promoting student's vocabulary recall?

Our experience:
Aural Word Pronunciation and Production

Decide the research topic:

From how to improve pronunciation to tone recognition, retention and reproduction

Identify the possible interventions:

Repetition, hand gestures, colour coding for each tone

Find the focus point to design research questions:

- To what extent does the colour-coding strategy for learning tones impact learners' ability to aurally identify the tone of characters in sentences?
- To what extent does the colour-coding strategy for learning tones impact students' ability to produce the accurate tones of characters in sentences?

Our experience:

Character Production

Personal teaching experience:

Characters production is deemed as the most challenging part of learning Chinese

Initial question:

Which way of teaching character writing is more effective?

Final research question:

Compared with the traditional component analysis, is the character decomposition based on students' prior knowledge more effective in teaching character writing?

Your experience!

- Each group is now going to critically engage with one of the three sets of intervention material from our Working Groups that we have just introduced to you

- Discuss any thought you might have on these materials/approaches: do you think this would lead to positive pupil outcome? Why or why not? What are the benefits of approaching this issue in this way? And the drawbacks?

Rationale of the intervention

Our research project has at its core the principles of Shen's self-discovery learning method:

1. Learners need to explore the sound and the meaning of each constituent character
2. If the character is pictographic, learners will need to refer back to the traditional form of the character in order to develop a way to memorise the character. (eg. 日)
3. If the character is picto-phonetic, learners will need to know the meaning of the pictographic component and explore the link between this pictographic component and the entire character. ("财 (cai)", "帐(zhang)", "货(huo)" all have the character "贝" (bei) and all have meanings related to money)
4. If the character is ideographic, learners will need to know both of the semantic components and explore the link/combination of the two components generating the meaning of the entire character.
5. Learners need to explain the link/combination of the meanings coming from each character and the meaning of the word.

Oracle Bone Script	Seal Script	Clerical Script	Semi-Cursive Script	Cursive Script	Regular Script (Traditional)	Regular Scri (Simplified
⊖	日	日	日	日	日	日

| Character	一	二	三	上	下	本	末
Pinyin	yī	èr	sān	shàng	xià	běn	mò
Translation	one	two	three	up	below	root	apex

What we found:

Written Word Recognition and Production

1. Learners' performance at the post recognition tests has improved significantly for most of the target words across the four participant schools
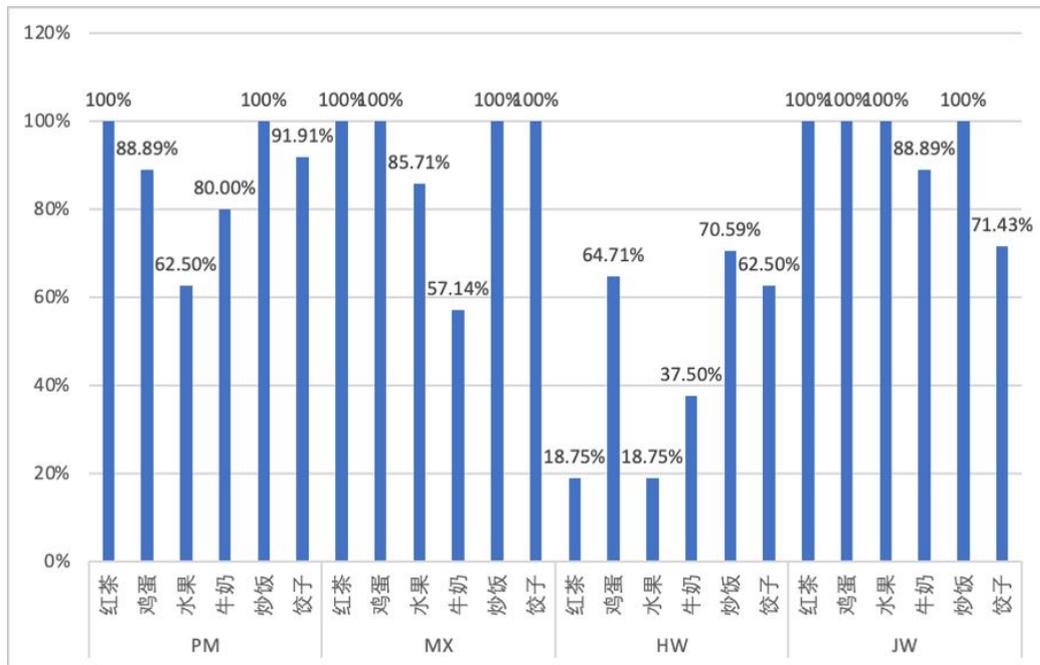
2. Learners' performance at the post production tests has improved across the two participant schools with significant improvement for certain target words
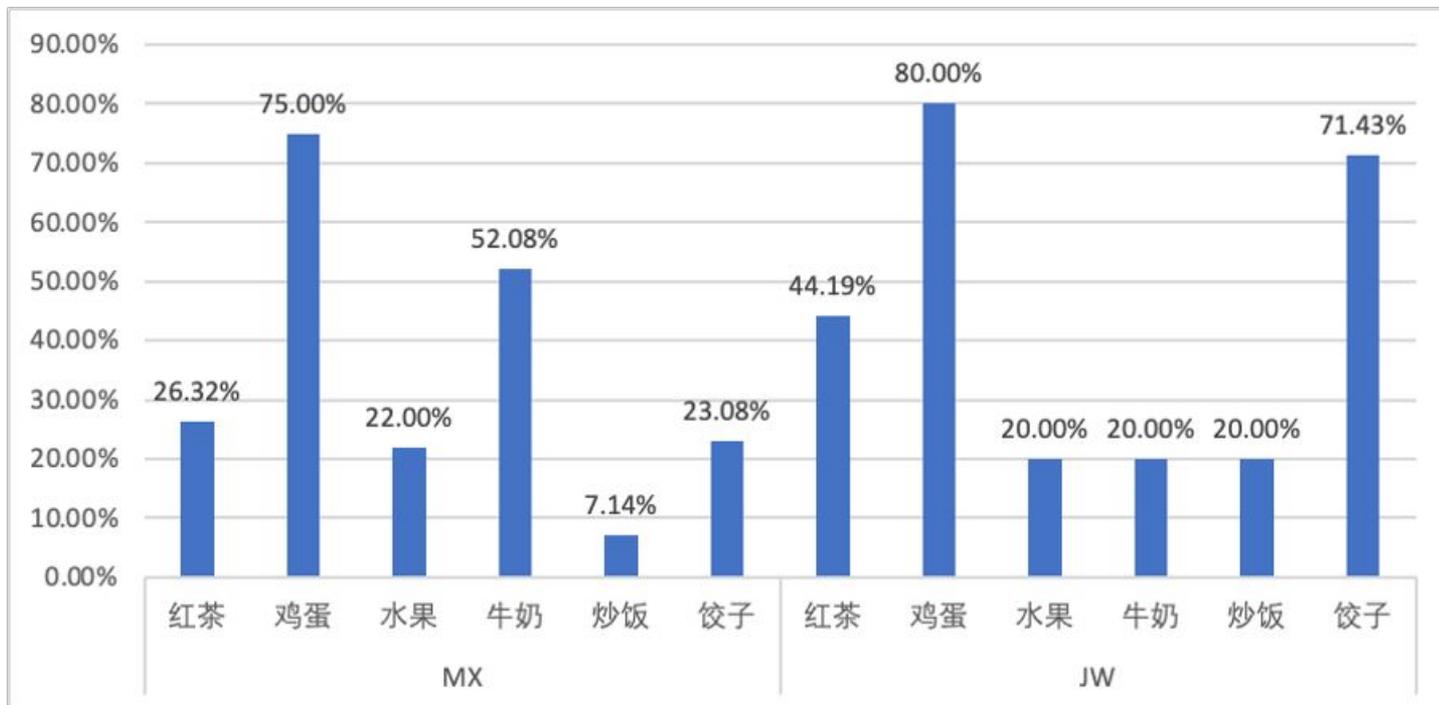
3. Learners' self-efficacy in remembering meanings of written words is in moderate correlation with their performance at pre recognition tests

RecognitionBaseline	Pearson Correlation	.465**	.156	.178	.408**	.192	.283*
	Sig. (2–tailed)	.000	.266	.203	.002	.168	.040
	N	53	53	53	53	53	53

(Reliability: Cronbach's alpha: 0.826).

4. Learners' self-efficacy in re-producing the written words just being taught is in moderate correlation with their performance at pre recognition tests

RecognitionBaseline	Pearson Correlation	.465**	.156	.178	.408**	.192	.283*
	Sig. (2–tailed)	.000	.266	.203	.002	.168	.040
	N	53	53	53	53	53	53

(Reliability: Cronbach's alpha: 0.826).

4. Learners' self-efficacy in remembering pronunciation of the written words just being taught is in high correlation with their performance at pre production tests

ProductionBaseline	Pearson Correlation	.487*	.710**	.329	.416*	.458*	.457*
	Sig. (2–tailed)	.012	.000	.101	.035	.019	.019
	N	26	26	26	26	26	26

(Reliability: Cronbach's alpha: 0.826).

What we found:
Aural Word Pronunciation and Production

1. Interventions were carried out four times but students' performance to identify tones by listening to recording was not consistent.
2. Students' awareness of tone acquisition was much improved.
3. Students' ability to reproduce the four tones was improved but requires long term practice.
4. Assumption that it is a lot easier for students to pronounce 1st tone was not supported by the research finding.
5. The 2nd and 3rd tones have been identified as more difficult to identify and discriminate.
6. The 4th tone appears to be the easiest one to recognise.
7. Learners are able to recognise and reproduce the tones accurately immediately after some targeted practice but fail to retain the ability for longer periods.
8. Colour coding brought visual stimuli and made lessons more fun, but there was little evidence from the research to suggest that it could significantly improve students' ability to recognise and reproduce the tones.
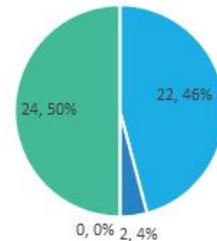
What we found:
Character Production

1. Both ways of teaching characters writing can help students to improve their character production. The new method can better help learners to retain the general shape of characters.

4. To separate the class into two groups – New method and Traditional method, then calculate the accuracy scores (9 is full score) for two student tests:
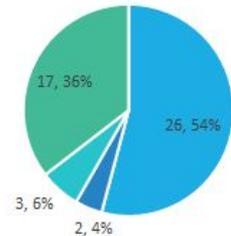
	First Test Score	Second Test Score	Average Score for two student sets
New Method	5.31	5.67	5.49
Traditional Method	4.50	6.56	5.53

Traditional Method

22, 46%
24, 50%
0, 0% 2, 4%

■ 3 scores ■ 2 scores ■ 1 score ■ 0 score

New Method

17, 36%
26, 54%
3, 6%
2, 4%

■ 3 scores ■ 2 scores ■ 1 score ■ 0 score

What we found:
Character Production

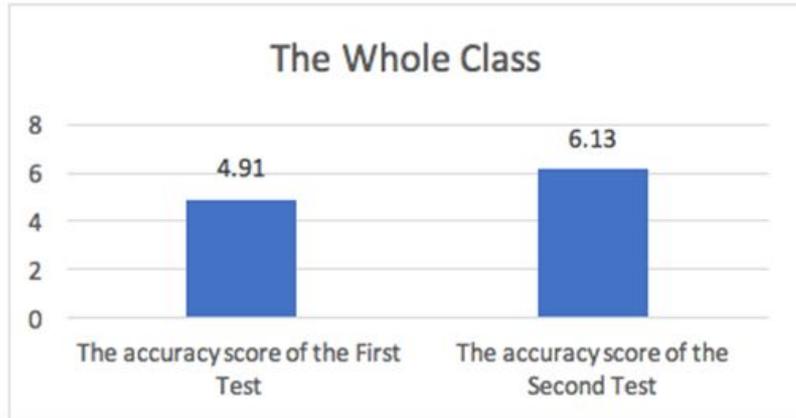2. Students using different methods to learn characters tend to make different types of errors.

What we found:

## *Character Production*

3. For both methods, students' accuracy scores increased in the second intervention with the rate of 19.90%.

The Whole Class

4.91 — The accuracy score of the First Test

6.13 — The accuracy score of the Second Test

Findings for further research:

For both methods, EAL learners tend to gain higher scores than non-EAL learners when asked to produce the characters. It will be very intriguing to further investigate their specific EAL background.
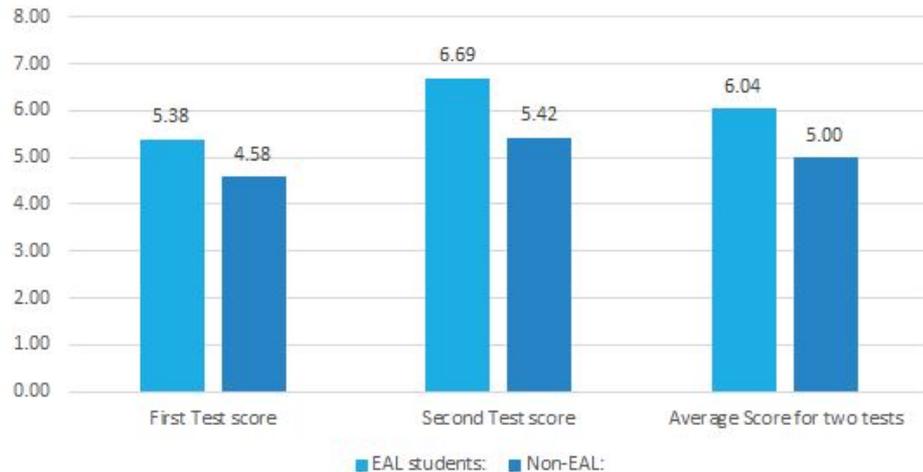
FINAL THOUGHTS

- What ideas did you learn from the 3 Action Research projects? Do the findings sound convincing to you? Why and why not? What would you integrate into your day-to-day T&L? Why and why not?

- What could be taken into account if you were to carry out this Action Research projects for the second cycle?