Can cognitive style predict language proficiency? Self-rated questionnaire versus performance-based measure

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Introduction

In existing literature, close attention has been given especially to the role of cognitive style (i.e., verbalizer-visualizer spectrum) in influencing learners' learning outcomes (e.g., Thomas & McKay, 2010; Kolloffel, 2012), but not language proficiency which is examined in this study. Various self-reported questionnaires or tests can be adopted. However, research on this topic requires reliable and valid measurements. The present study is to investigate the effect between a self-rated questionnaire and a performance-based measure and their roles in predicting English competence. The main research questions and hypotheses are:

Research question 1: Does the type of cognitive style estimated by a self-reported questionnaire same as or different from the type estimated by a performance-based measure?
Research question 2: Does cognitive style predict English competence?

Hypothesis 1: There is a coherence of the type of cognitive style estimated by the self-reported questionnaire and the performance-based measure of cognitive style.
Hypothesis 2: The verbalizer dimension significantly predicts English competence.

Method

Participants: 192 undergraduate students (57 males, 135 females; 91% of them were year one students)

English language proficiency: the grades obtained from the public examination (e.g., in HKALE or HKDSE)

Verbalizer-Visualizer Questionnaire (VVQ): (the self-rated questionnaire, adapted version from Mendelson & Thorson, 2004):

- Verbalizer Dimension (10 items)
  - I enjoy doing work that requires the use of words.
  - I find illustrations or diagrams help me when I am reading.

Verbal-Imagery Cognitive Style (VICS): (the performance-based measure, Chinese version translated from Peterson, Deary & Austin, 2005):

- 116 verbal items (58-item in word form and 58-item in picture form)
- 116 imagery items (58-item in word form and 58-item in picture form) (Note: the below is a makeup item for illustration purpose.)

<table>
<thead>
<tr>
<th>足球</th>
<th>草坪</th>
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<tr>
<td>Example of a verbal item in the word form.</td>
<td>Example of an imagery item in the word form.</td>
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<tr>
<td>足球</td>
<td>草坪</td>
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<tr>
<td>Example of a verbal item in the picture form.</td>
<td>Example of an imagery item in the picture form.</td>
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Note: For both the verbalizer and visualizer dimensions in VQS, the scores varied from 10 to 70, with 10 being either most verbal or most visual respectively. For the VICS, the scores ranged from 0 to 7 (or above), with indicating the spectrum from a verbal preference to an imagery preference.

There are no correlations between the sets of data.

Verbalizing and visualizing are not the opposite ends of a continuum. Although people differ in their predisposition to learn from verbal and visual information, some are still equally good at learning from both of them.

Results and Conclusion

The score of the self-reported questionnaire on cognitive style was not correlated with that of the performance-based measure. Only the verbalizer dimension of the VQS could predict English competence significantly.

Language learning might be particularly influenced by verbalization.

References and Acknowledgements


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