Context Influences on the Reporting of Strategy Use

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Abstract
Learning strategy research has often investigated typical strategy use through large-scale surveys using questionnaires such as the Strategy Inventory for Language Learning (SILL). Despite its extensive use, doubts remain about the validity of the SILL. This paper investigates this issue using a case study of a single learner who completed a reduced version of the SILL after two different reading tasks. By triangulating the learner's reports of strategy use on the SILL with retrospective interviews focusing on the strategies used in the two reading tasks, it was found that the SILL elicited strategies used during recent learning experiences, rather than typical strategy use. The findings, although not generalisable, cast further doubt on the construct validity of strategy questionnaires such as the SILL.

Over the last 30 years, learners' use of strategies has become a major focus of research in language teaching. This research has examined the strategies used on specific tasks, learners' development of strategy use, and large-scale surveys of typical strategy use, the last often conducted to investigate the relationship between strategy use and other variables, such as learning style and language proficiency.

The instruments used in strategy research depend on the purpose. Investigations of specific task strategy use usually involve think-aloud protocols (e.g. Gu et al., 2005; Li & Munby, 1996; Nassaji, 2003; Yang & Shi, 2003), retrospective interviews (e.g. Dhieb-Henia, 2003; Nassaji, 2003; Yang & Shi, 2003) or diaries (e.g. Halbach, 2000; Leki, 1995). Research into strategy development often involves narrative interviews (e.g. Gao, 2006). Surveys of typical strategy use largely rely on questionnaires, either ones specifically designed for a particular research focus (e.g. Liao, 2006; Vandergrift, 2005; Zhang & Goh, 2006) or standard questionnaires into strategy use. By far the most frequently used standard strategy use questionnaire is the Strategy Inventory for Language Learning or SILL (Oxford, 1990). This instrument has been applied both without any changes (e.g. Akbai & Hosseini, 2008; Cohen, 1999; Green & Oxford, 1995; Griffiths, 2003; Griffiths & Parr, 2001; Hong-Nam & Leavell, 2006; Mochizuki, 1999; Oxford & Ehrman, 1995; Taguchi, 2002; Yang, 1999) or as a tweaked version for a specific purpose (e.g. Petrić & Czárl, 2003; Purdie & Oliver, 1999; Sheorey, 1999). The SILL has clearly been a valuable and productive research instrument, but in this paper we raise questions about its reliability and validity.

The Strategy Inventory for Language Learning

The SILL is "an instrument for assessing the frequency of use of language learning strategies" (Oxford, 1996: 30) which appears in two main versions, one for native English speakers learning a foreign language and one for ESL/EFL learners. In this paper, we will focus on the latter. The ESL/EFL SILL consists of fifty five-point Likert rating scale questions. Each question takes the form of a statement describing a learning strategy (e.g. "I try to relax whenever I feel afraid of using English") which

respondents rate on a scale from ‘never or almost never true of me’ to ‘always or almost always true of me’.

A questionnaire like the SILL as a research instrument to investigate strategy use allows a wide range of strategies to be measured at one time (Oxford, 1996), is practical and non-threatening (Oxford & Burry-Stock, 1995) and can be used with a large number of subjects to test hypotheses (Cohen, 1998). However, results may reflect students’ perceptions more than actual behaviour (Gu et al., 2005), may be based on students’ ideas about the ‘right answer’, may not cover all strategies used (Chamot, 2001), and may not be accurate because of over- or under-estimation by respondents (Cohen, 1998).

Because of such problems, it is important that the validity and reliability of research instruments be investigated and reported. In the case of the SILL, extensive data is available concerning its validity and reliability (see Oxford, 1996, and Oxford & Burry-Stock, 1995, for summaries).

The data concerning SILL reliability is fairly uncontroversial with high to very high reports of Cronbach alpha scores. For validity, however, the data provided by Oxford is less persuasive. Validity concerns the extent to which an instrument actually measures what it is supposed to measure. Both Oxford (1996) and Oxford & Burry-Stock (1995) contain long reports purportedly showing the validity of the SILL. These reports focus largely on criterion-related validity, and claim that high levels of criterion-related validity are shown because of strong relationships between SILL results and language performance. These validity claims are strongly emphasised in the reports; for instance, “this evidence is probably the strongest support possible to the assertion of the validity of the SILL” (Oxford & Burry-Stock, 1995: 7). However, learning strategies and language performance are very different constructs, and arguing that a relationship between them indicates validity is dubious (even the nature of the relationship is unclear since Hong-Nam & Leavell (2006) found that intermediate students use more strategies than advanced students, and Mullins (1992, cited in Oxford, 1996) found a negative correlation between affective strategies and performance). In several research studies, the SILL has been used to investigate whether there is a relationship between strategy use and performance. Arguing that findings from such studies indicating such a relationship validate the SILL is circular since the SILL was used to produce the findings. Similar arguments are made for the validity of the SILL based on its relationship with learning styles.

Rather than correlating the results of the SILL with completely different constructs, examining the relationship between the SILL and other methods of eliciting learning strategies, in other words triangulating the data, is needed for validation (DeCapua & Wintergerst, 2005). In addition, conducting a think-aloud protocol of how respondents answer the SILL (Petrić & Czárl, 2003) and examining the effects of extraneous factors on SILL responses would also provide information relevant to its validity. None of these approaches is included in the lengthy reports claiming to show the validity of the SILL, and thus its validity is still in doubt.

In this paper, we intend to investigate one of these aspects of validity (and reliability) not previously considered, namely, whether extraneous factors have an influence on students’ self-reports through SILL. Several studies into specific tasks have shown

that learners' choice of strategies is dependent on the context (e.g. Brown, 2008). Because of this, Cohen (1998) argues that respondents' recent experiences may have an effect on the strategies they report, and goes on to suggest that, because of this, strategy use research should focus on specific experiences rather than typical strategy use. However, research into typical strategy use is potentially valuable. Rather than focusing research exclusively on specific experiences, we would argue that research into typical strategy use is needed, but evidence of the extent to which experiences affect reports of typical strategy use is vital if such research is to be credible. Therefore, it is our purpose in this study to investigate how recent learning experiences influence the self-reports of one student about her typical strategy use.

Research methodology

Overview

To investigate the effects of recent experiences on self-reports of strategy use, we decided to adopt a naturalistic approach following a single learner, rather than requiring a group of learners to engage in experiences that they may not necessarily normally engage in. The subject was a Masters student of engineering at a respected Thai university who regularly read both academic articles in English for her studies and graded readers both for pleasure and to improve her English. She is named Somying for the purposes of this article. As an enthusiastic member of a self-access reading club, we were able to ascertain the English reading materials she expected to read, and identified a period of time where she expected to read an academic article in detail for a few days and then wanted to spend time reading a graded reader. This would allow us to compare the effects of academic reading experiences and reading-for-pleasure experiences on her self-reports of typical reading strategy use.

To elicit self-reports of typical strategy use, an adapted version of the SILL questionnaire was completed by Somying twice, once after her intensive reading of the academic article (Zhang et al., 1998) and once after she had spent a week reading her chosen graded reader (Paretsky, 2000). In addition, we interviewed Somying four times: at the start of the research to elicit her personal background; twice, immediately after each completion of the adapted SILL, to gain more information about her recent reading experiences; and at the end of the research to find out about her responses to the questionnaire.

Subject

Somying comes from a large upcountry town in Thailand and started studying English at primary school. Much of her English study at school involved memorising vocabulary lists, but she started reading short articles in English in her last two years of secondary school. At university, Somying studied four English courses, including one specifically about reading which involved extensive reading of English language newspapers and intensive reading of academic articles, an area also covered in her one course of English in her postgraduate studies. Although a keen reader of novels in Thai, before she started her Masters degree, Somying read English only because the teacher assigned reading and read each text only once. In her postgraduate studies, she reads academic articles for a clear purpose, and so often reads articles several times until she is sure that she understands them.

Questionnaire

To investigate the effects of recent experiences on SILL responses, it is not practical to use the full 50-item SILL. Since Somying's recent language learning experiences concerned reading, a shorter questionnaire focusing on reading was designed, based largely on the SILL. The rubric, rating scale and format were taken directly from the SILL, and 5 SILL items directly related to reading together with a further 3 SILL items indirectly related to reading were included in the questionnaire. A further 4 items directly related to reading but not included on the SILL were constructed following the same style as the SILL. As a control, 5 more items were randomly selected from the remaining SILL items for inclusion on the questionnaire. The questionnaire (see below) therefore consisted of 17 SILL or SILL-like items divided into four groupings: strategies related to approach to reading, strategies for dealing with unknown words while reading, strategies for remembering new words, and general learning strategies.

The questionnaire was presented in English and was completed by the subject at the start of the second and third interviews. No reference was made to Somying's recent reading experiences until she had completed all of the questions. The items were presented in different random sequences on the occasions the questionnaire was used.

Interviews

Four interviews were conducted with the following purposes:

- Interview 1: To elicit personal background and history of English language learning, and to identify potential language learning experiences that could be used in the research.
- Interview 2: To complete questionnaire 1, and to gain details of Somying's recent academic reading experiences.
- Interview 3: To complete questionnaire 2, and to gain details of Somying's recent reading-for-pleasure experiences.
- Interview 4: To clarify responses to the two questionnaires, and to highlight differences in reading approaches between academic reading and reading for pleasure.

The interviews were conducted in Thai with both researchers involved, and each interview lasting around one hour. Key topics to be covered in the interviews were prepared beforehand. The interviews were recorded, and the recordings were transcribed and translated.

Data analysis

Somying's responses to the two questionnaires were compared, both as individual questions and in the clusters of questions given in the description of the questionnaire above. If the questionnaire is reliable and if recent experiences do not affect responses (i.e. the questionnaire is valid), we would expect to see little difference in Somying's responses to the two questionnaires. If the questionnaire is reliable but experiences affect responses (i.e. the questionnaire is not valid), we would expect to see little difference in Somying's responses to questions not concerning reading but differences in her responses to questions concerning reading. If the questionnaire is not reliable, responses to all questions may differ.

The data from the interviews were categorised into the following themes:

- reasons for reading English in general
- reasons for reading academic articles
- strategies used in reading academic articles
- problems in reading academic articles
- reasons for reading graded readers
- strategies used in reading graded readers
- problems in reading graded readers
- comparison of reading academic articles and graded readers

The categorisation into these themes was compared for reliability (with a reliability coefficient of 0.91 suggesting reliable categorisation into themes). The thematically categorised themes were then used to try to explain the findings from the two questionnaires.

Findings

Questionnaire data

The ratings of strategy use from the two questionnaires are shown in Table 1. In comparing the responses from the two questionnaires, no difference or a difference of 1 is taken as showing no real differences in strategy use in the two contexts. Differences of 2 or more suggest that there is a real difference in strategy use. There are four items where a difference in strategy use is manifested:

- If I guess the meaning of a word, later I will check whether my guess is correct by using a dictionary.
- I first skim an English passage (read over the passage quickly) then go back and read carefully.
- I try not to translate word-for-word.
- To understand unfamiliar words, I will try to identify the part of speech of the words.

All four of these items concern reading, and are therefore strategies where the different contexts (after reading an academic article or after reading a graded reader) may have an influence. The lack of any real difference for the other 13 items suggests that the questionnaire is reliable.

Table 1: Ratings for strategy use after the two reading experiences

	After reading an academic article	After reading a graded reader	Difference between ratings
Strategies related to approach to reading			
I try not to translate word-for-word.	4	2	2
I read English without looking up every new word.	4	4	0
I first skim an English passage (read over the passage quickly) then go back and read carefully.	5	2	3
I am aware of my purposes in reading.	2	2	0
Strategies for dealing with unknown words while reading			
To reinforce my learning, I will complete any activities included in books concerning unfamiliar words.	2	2	0
To understand unfamiliar words, I will try to identify the part of speech of the words.	2	4	2
If I guess the meaning of a word, later I will check whether my guess is correct by using a dictionary.	5	1	4
To understand unfamiliar English words, I make guesses.	4	5	1
Strategies for remembering new words			
I remember a new English word by making a mental picture of a situation in which the word might be used.	1	2	1
I connect the sound of a new English word and an image or picture of the word to help me remember the word.	2	3	1
I remember new English words or phrases by remembering their location on the page.	1	1	0
I look for words in Thai that are similar to new words in English.	3	2	1
General learning strategies (not related to reading)			
I have clear goals for improving my English skills.	3	3	0
I practise English with other students.	1	1	0
When I can't think of a word during a conversation in English, I use gestures.	4	5	1
I try to talk like native English speakers.	2	1	1
I try to relax whenever I feel afraid of using English.	5	4	1

Note:
1. Never or almost never true of me (very rarely true of me)
2. Usually not true of me (less than half the time)
3. Somewhat true of me (about half the time)
4. Usually true of me (more than half the time)
5. Always or almost always true of me (almost always)

In terms of the groupings of strategies, the average differences in the ratings after reading an academic article and after reading a graded reader are shown in Table 2. Again, there are clear average differences in ratings for those two groupings which most closely concern reading (approach to reading and dealing with unknown words) whereas the average differences in ratings for the two groupings not directly related to reading (remembering new words and general strategies) show high levels of agreement. These findings reinforce the conclusions that different contexts affect reading strategies and that the questionnaire is reliable.

Table 2: Average ratings for strategy groups after the two reading experiences

Strategy grouping	Average difference in ratings
Strategies related to approach to reading	1.25
Strategies for dealing with unknown words while reading	1.75
Strategies for remembering new words	0.75
General learning strategies (not related to reading)	0.60

Interview data

To see why Somying reported such clear differences in reading strategy use, we need to examine her detailed reports of her recent reading experiences from the interviews. Firstly, Somying had very different reasons for reading an academic article and a graded reader.

As might be expected, Somying read the academic paper "in order to learn more about what I am studying" (Interview 1), and to achieve this goal, she needed to "read to get details" (Interview 1). She had clear goals concerning the content she wished to learn from the article:

> "I read this paper because I need to understand about how to recycle batteries. I want to know how such recycling is done, so I can use this knowledge in my own research ... I read the experiment because I want to know about the different types of experimental research – how much the research works, what are the advantages and disadvantages of each research study." (Interview 1)

From her reading, she was also able to make judgments about the usefulness of reading the article:

> "My research is to recycle nickel metal hydride batteries as I have mentioned. However, this paper finished at the form of the solution but I will re-form the solution to be a metal. So I will follow this paper for about half of my study and for the other half I will follow another paper which is about reforming nickel below the recycling grade ... From this paper I would like to know about the pH used. What pH is used and for how long? ... At the beginning I didn't know what the solvent exception is, I have to find it, and then I found it." (Interview 2)

In reading academic articles, then, Somying had clear pre-set goals and needed to focus on understanding details in order to achieve these goals.

For the graded reader, in contrast, Somying's goals are far less specific:

> "I read it for pleasure. Actually, I like reading novels, but recently I've changed from reading novels in Thai to reading them in English ... I admit that I just read for fun." (Interview 1)

These different reasons for reading are reflected in how Somying approaches the reading of the two different texts. For academic articles, Somying first skims the article and then reads parts of it several times in depth to make sure that she understands the details:

> "I start by reading the abstract and then decide whether it is relevant to what I want or not. If it is relevant, I read it from the first page to the last one. I read everything in the paper because I need to understand both the methodology and the results ... For the first time, I read in order to know what the paper is about, to get the overall picture. Then, I read the details ... For the second time, I don't read the introduction, but for some parts I read them again in detail." (Interview 2)

For the graded reader, on the other hand, Somying only re-reads individual sentences that she has problems understanding and even then was not concerned with understanding everything:

> "At home, I read from the first page, but I don't look at the preface or other parts ... According to my purposes of reading, I don't feel that I have to know everything ... Sometimes I couldn't get the meaning of the sentences ... I would read two or three times, but if I still couldn't understand I would move on to the next sentence or the next paragraph and continue reading." (Interview 3)

Another key difference in how Somying reads the two texts concerns how she deals with unknown words. For academic articles:

> "When reading academic articles, some words have specific meanings. I have to be careful, so I have to use a dictionary to make sure ... I will show you one example. The word 'stripping' means to remove or take off. But, in the case of this article, it means to take away what we don't want. It doesn't mean to remove or take off. It means to wash away ... Maybe I'll try to guess it the first time, but then I don't feel very sure, so I have to use a dictionary." (Interview 2)

For the graded reader, on the other hand:

> "In the short story, if I don't know some vocabulary, it doesn't affect my understanding of the story much ... When I see some words that I don't know, I'll try to guess the meaning that fits with the sentence." (Interview 1)
>
> "For any sentences that I thought were important to understand, I would look up the difficult words in a dictionary. But I think I didn't use a dictionary for most of the words, only a few. Sometimes, I was so interested in the content that I didn't want to use a dictionary. I would just underline the words and continue reading." (Interview 3)

One final clear difference in Somying's approach to reading the two texts concerns translating:

> "When I read this academic article, I want to translate it word by word. However, the meanings of some words are not the same as in the dictionary, so I try to read the whole sentence to understand what it's about. For the short story, I really translate word by word like in the case of the word 'grain' that I needed to translate." (Interview 4)

These three differences in how Somying reports that she reads the two texts – overall approach to reading, using a dictionary to deal with unknown words, and translating word by word – match three of the items in the two SILL questionnaires where the differences in reading strategies reported were greatest. This suggests that the differences in Somying's ratings of strategy use on the questionnaires were due to her recent reading experiences.

The interviews also show that Somying used very similar strategies for the two texts for those points where the ratings on the two questionnaires were similar. For instance, for remembering new words, Somying complained that she had problems remembering words from both the academic article ("If I read another paper, sometimes I have to use a dictionary again for the same word" Interview 1) and from the graded reader ("I completely forgot some words. I don't know how to write or pronounce the words and I forgot the meanings" Interview 1). Her preferred strategy for remembering new words ("writing the words on pieces of paper and posting them to the walls of my room" Interview 1) was the same for all words, irrespective of whether she read them in an academic article or a graded reader.

Discussion

Despite claims that learning strategy questionnaires such as the SILL elicit typical strategy use, the findings in this study suggest that questionnaire ratings of strategy use are heavily influenced by recent experiences. Even though the instructions for the questionnaire and the descriptions of the rating scale explicitly asked about typical strategy use and no mention of recent reading experiences was made prior to the questionnaire being completed, Somying's responses on the questionnaire clearly reflect her recent reading experiences more than her typical strategy use. There were clear differences in her ratings for those strategies that she used differently in reading the two texts, while other strategies remained stable. This suggests that, even though the questionnaire is reliable, it is not a valid instrument for measuring typical strategy use.

While it is impossible to generalise from a single case study, the findings still suggest that questionnaire ratings of typical strategy use need to be treated with caution. More research into the validity of strategy elicitation research is needed, since it is unclear whether typical strategy use can be elicited (or, indeed, even exists). Perhaps, questionnaires eliciting strategy use should be restricted to reports of recent experiences (Cohen, 1998) or, if typical strategy use is targetted, an extra section asking respondents to list recent experiences could be included to allow the results to be interpreted more accurately. Whether either of these choices is used or not, the doubts about the construct validity of strategy use questionnaires such as the SILL mean that any researcher using such instruments to investigate typical strategy use should be very cautious about the findings.

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