



Looking at a Learning Styles Research Paper: A Critical Evaluation

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Bio Data

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Abstract

This report evaluates a major study of the learning styles of EFL students. This critical evaluation brings out some of the weaknesses and strengths of research in the area of learning strategies and shows how a technically correct methodology can still lead to somewhat bland results. The report makes recommendations for deeper probing and more precise questions when trying to learn about learning styles.

Keywords: learning styles, strategies, research evaluation

Introduction

This report examines a major empirical study of the learning styles of EFL students: *The Adult Migrant Education Service of New South Wales (AMES) Survey of Learning Styles* (Willing, 1988, pp.100-165).

Studies of variations in the ways students learn are common in all areas of education. In the field of second language acquisition, Skehan (1998) carried out a comprehensive study of learning styles. Segalowitz (1997) reviewed the general field of learner differences and O'Malley & Chamot (1990) gave a thorough introduction to research in learner strategies. In Japan researchers have surveyed learners' strategies (e.g., Watanabe, 1992; Nunnolley, 1993; Willis, 1996), and preferred learning styles (e.g., Ishikawa, 1996; Yamashita, 1996; Hyland, 1994).

A difficulty that confronts researchers in learner styles/strategies is that

writers in this field use several different definitions of learning strategies and styles (cf. Rubin 1987, Wenden 1987) and hence different lists have been developed to categorise styles and strategies (see Rees-Miller, 1993). Related to this, Chaudron (1988, p.110) notes: “it is difficult for classroom research to produce solid evidence of which specific learning strategies are the most fruitful ones to investigate.” It might also be that because learning styles/strategies are more difficult to isolate than, say, motivation or anxiety, the results to date have not been impressive.¹ This does not mean that these studies are unimportant to language learning. Rather the field is primed for further studies that go beyond or build on those of the past. I hope that by critically evaluating a past study some of weaknesses and strengths can be brought out for the improvement of further research.

I chose Willing’s study because it is large and well-documented, and is somewhat epitomic of surveys carried out in this area during the seventies to nineties. It was also research that was put into use. Willing used the study to develop a new training system at AMES and this became the basis for a later book (Willing, 1989). Moreover, several of my thesis students are interested in pursuing research into learning styles/strategies and I wanted to further understand potential problems with this area of research.

The Study

Outline of the study from commencement to completion

1. February to April 1984: (a) Planning, (b) Literature search, and (c) Preliminary interviews with learners and teachers
2. May to June 1984: (a) Generation of hypothesis, (b) Formulation of learning style questionnaire, (c) trialling questions and scales, and (d) Final choice of questionnaire
3. August to December 1985: (a) Administration of survey, (b) Provision of seminars to discuss results, and (c) Began writing up research

The study had a long lead up period before the administration of the questionnaire allowing Willing’s to thoroughly research the topic and develop suitable hypotheses.

Hypothesis generation

Willing’s reviewed relevant literature and based on this decided to use ‘field

dependence/field independence (e.g. Berry 1981, Leu 2000) as a way of interpreting the research. Field dependence/independence is a broad area but Willing specifically interpreted it to mean:

Those who tend to accept or rely upon the external environment are relatively more field dependent (FD), while those who tend to work on it are relatively more Field independent. (1988, 41)

And:

Those who are more field dependent tend to accept social influence more and to be more competent in social relations; while those who are more field independent tend to be more independent of social influence and to exhibit less social competence. (1988, 43)

He further (1988, p. 102) equated Field Dependent learners as being those with ‘concrete’ type learning styles and Field independent with ‘analytical’ learning styles.

In the initial stages of the research, Willing’s interviewed twenty-five former and current AMES students. An advisory group of AMES teachers also contributed information and opinions. The results of these interviews contributed to the generation of the ‘fundamental hypothesis’ (1988, p. 103) that learners would “show a pattern of higher preference either for the analytical-type responses in his questionnaire or the concrete type options”. Willing claims that his hypothesis ‘represented a distillation of the predictions which might reasonable be made, on the basis of existing research’ (1988, 103). He notes that the principle aim was to collect unprejudiced information about learner preferences with regard to six different: types of classroom activities; teacher behaviour; aspects of language which need emphasis; sensory-modality preferences; and self-study. To differentiate between the ‘analytical’ and ‘concrete’ learning styles in each of the six areas above, questions were included that ranged from highly analytical to highly concrete. The study had a subsidiary aim of comparing learners from different backgrounds and cultures and thus data about family and ethnic background were collected. Willing predicted that learners who were (i) from a western background, (ii) well educated, (iii) from small families, and (iv) from a city background would show preferences for field independence (analytical) learning styles. As a preliminary to the study, Willing interviewed 40 teachers

and 25 learners ‘in depth, individually’ (1988, p.27) about:

- 1) What the teachers believed were the learning style preferences of their students and
- 2) What the learners said their preferences were. However, the responses were so varied that ‘it was impossible to generalise’ (Willing1988, p. 28) and he decided that a broader instrument was needed and so opted for surveys for the final study.

Willing was now able to formulate individual questions by which he would be able to determine different learning styles.

Questionnaire Construction

The scale used for the first thirty questions was: *no, a little, good, and best*.

Willing (1988) decided on this after testing other options, which he found unsatisfactory. It is not clear, however, why this scale was eventually decided on. He notes that without detailed instructions “many learners would mark ‘Best’ to virtually everything” (1988, p. 111). Reid (1990, p. 336) found that Japanese students rarely used the extreme of a similar scale (opting almost always for the slightly negative or slightly positive responses whereas native English speakers consistently used the entire scale).

Administration of questionnaires

All questionnaires were given out during class time. The majority were administered and supervised by the research team. Class teachers who were provided with an instruction sheet supervised those that were not. Willing notes that the amount of faults in the teacher supervised questionnaires was no higher than in the research team supervised ones.

Interpreters were used, when learners had insufficient English to understand the questions. The study seemed to follow sound ethical procedures with the purpose of the questionnaire was explained to students. Each participating AMES centre received an analysis of the results as well as copies of the final study.

Analysis of individual questions

This section critiques some of the 45 questions of the questionnaire (See

appendix for complete questionnaire).

1. *I like to learn by reading*

This is imprecise. Does it mean that the student is given a text and left to read silently or is the student asked to read aloud / perhaps the text is used as the basis for a communicative lesson?

2. *I like to listen and use cassettes.*

Does this mean that I use the cassettes by myself or does it relate only to the classroom?

4. *In class, I like to learn by pictures, films, and videos.*

Placing pictures with films and videos confuses the question. Pictures could mean flashcards or pictures out of a magazine. It would have been better to omit pictures from the question.

6. *I want to write everything in my notebook.*

Who would honestly write everything in their notebook? Nevertheless 21% of students circled Best for the question (1988, p. 117).

9. *I like the teacher to give us problems to work on.*

Not specific enough. What type of problems?

12. *I like the teacher to let me find my mistakes.*

Does this mean 'let me find' and then comment as to whether they were correct or to make no comment?

23. *I like to learn English words by doing something.*

I think it would have been preferable to be specific. For example "I like to learn English words by speaking them".

32. *If something in English is too difficult for me, I try to listen to some part of it.*

I think most people would use this strategy. It is not specific enough.

33. *I watch people's faces and hands to help me understand what they say.*

Again this strategy is so common that I think little can be learned from responses to it.

34. *When I'm reading, if I don't understand a word, I try to understand it by looking*

at the other words.

Surely a very basic way of reading, even if some students are not particularly good

at this.

37. I think about what I am going to say before I speak.

I think even native speakers do this very often. (Probably not often enough)

39. When I am speaking English I listen to my pronunciation.

Very normal behaviour. Is it really a specific strategy?

41. If someone does not understand me, I try to say to in a different way.

Again most students would do this.

44. I ask myself how well I am learning English, and I try to think of better ways to learn.

It would have more useful if the question was divided into different options, which

were specific as to 'better ways'.

45. I try to understand the Australian way of life.

These are immigrants to Australia and it seems very likely they would all 'try to

understand this. (This question had the highest positive response of questions 31-

45).

As we see many of the questions were very general. Willing's study had the aim of uncovering traits that are at perhaps a deeper level than these questions reach. Johnson (1992), noting the difficulty of questionnaire construction, recommends using instruments that have been previously used and thoroughly evaluated. Willing's reason for not using an existing questionnaire is that the wording was too complex for students. However, as translators were available this should not have been such a problem.

The Results

Some of the responses to the questions may have been unrelated to whether the students favoured 'concrete' or 'analytical' learning styles. Willing

concedes that “in the case of questions rated high, responses may be indicating a perception of inadequately met needs (rather than personal preferences”. For example a question about pronunciation and sounds gained the highest rating of all questions but he attributes this to the lack of teaching in this area at AMES. Error correction was also rated highly by most learners but Willing thinks this was due to the AMES practice of giving minimal correction. Students were thus expressing a desire for more correction rather than because of any inherent learning style. It is, of course to Willing’s credit that he discusses such results.

Other questions (not discussed by Willing) may also depend on current classroom activities, or lack thereof. The question “I like to study grammar” is an example. Student’s perception of grammar depends on past experience and teacher presentation. For example, I sometimes conduct grammar attitude checks on new students. Sometimes they see grammar as being repetition of simple sentence based exercises – which it often is. However, if I make the effort to teach a grammar point in a context based situation they invariably rate the exercise highly. Another example is question 19: “I like to learn many new words” (1988, p120) Willing finds it significant that it had a very high rating and suggests that this indicates vocabulary development should be given high priority. However, the wording of the question is ambiguous. Does ‘learn’ mean that the words were acquired or that they were merely taught (and not necessarily acquired)? If the students thought that the question implied that many new words were acquired then the high rating could be related to this.

General Results

Willing writes that in “broad terms the basic survey hypothesis was confirmed” (that learners favour either analytical or concrete learning styles (1988, p. 154).

However, considering that he finds that only 10% of the learners actually fit into each of these categories (1988, p. 157) this conclusion seems somewhat inflated.

Conclusion

I chose this study because it appeared to have excellent qualities. The number

of students (507) studied, the thorough preparations, and lengthy planning are all signs of the care and extensiveness of the research. Furthermore, in the preparatory stages information was garnered from students and teachers. The questionnaire was trialed before final acceptance. The administration of the questionnaire was well done and included interpreters. He supplied a great deal of material about the actual study making it transparent to readers. Thus, as far as the technical procedures of conducting research, Willing's study is outstanding.

Despite this, I think its value lies with the indications it gives of general student preferences with regard to the popularity of pedagogical practices at AMES, rather than to insights into individual learner styles.¹

The weaknesses of the survey

1. Many of the questions were not specific enough to penetrate the complex and deep-seated nature of learning style.
2. Willing was candid in discussing the lack of validity of some questions (see 1988, p.105). However, it might have improved the study if he had come up with improved questions where he had such concerns.
3. These different levels of learners is not addressed in the study. Messik (1984) noted that cognitive constructs might vary depending on the level of the learner. For example, at early stages students must work to acquire a basic vocabulary and grammar while at higher levels the application of specialised schemata may be required.
4. The usual approach in studies of this type is to allow respondents to use their native language unless they have an advanced level of English (See O'Malley & Chamot 1990, p. 92). Willing used only English for all the survey questions.
5. I am not convinced that questionnaires are the best way to investigate learning styles. Surveys have the advantage of being readily analysed by statistical methods and hence give apparently solid results with clear and often generalizable patterns. A large amount of information can be obtained from hundreds of respondents with relative ease. For these reasons, survey is perhaps the most "commonly used descriptive method in educational research" (Cohen & Manion 1987, p. 97). While questionnaires have been

popular with researchers in the field of learning strategies (e.g. Oxford, 1986; Politzer & McGroaty, 1985) I argue their value is limited when investigating such complex behaviour as learning strategies. Research like this seems only to tell us what we already know. Beebe (2001) notes that questionnaire-based surveys with generalized questions don't provide sufficient insight into learner behavior and strategies. The highly structured nature of questionnaires necessarily has a strong influence on the eventual data collected (See O'Malley & Chamot 1990, p.95, p.112, p. 221). This can lead to a skewed effect and to remedy this it is preferable that (See Cohen & Manion 2000) multiple data collection be carried out. I think Willing could have greatly improved the study by conducting in-depth interviews (with the help of translators). Interviews give a richness of description and students are likely to be more motivated to respond because of their pleasure in having someone take a direct interest in the way they learn. (See O'Malley & Chamot 1990, p.94).

The reason Willing's decided not to use interviews in the final study was because he found the results too variable. Perhaps, when looking into learner strategies we should expect the great variety that Willing found in the initial interviews and rather than trying to reduce this find ways to incorporate it into any research. I wonder if Willing was already mentally committed to a research based on field independence/ field dependence and because of this was reluctant to look at other ways of analysis.

6. Field independence/ dependence was the guiding theoretical basis for the study; however, I doubt the validity of dividing such complex behavior as learning styles into this simple dichotomy. While Chepelle (Chepelle 1992; Chapelle & Green, 1992) has argued that field independence/dependence is worthy of further study. Ellis (1994), Skehan (1989), and Griffiths & Sheen (1992) have all suggested abandoning further efforts to investigate field independence/dependence in relation to second language learning.

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Appendix

Student Questionnaire

Example:

| | | | | |
|--|----|----------|------|------|
| I like to learn by listening to songs. | no | a little | good | best |
|--|----|----------|------|------|

- | | | | | |
|--|----|----------|------|------|
| 1. In English class, I like to learn by reading. | no | a little | good | best |
| 2. In class, I like to listen and use cassettes. | no | a little | good | best |
| 3. In class, I like to learn by games | no | a little | good | best |
| 4. In class, I like to learn by conversations. | no | a little | good | best |
| 5. In class, I like to learn by pictures, films, video. | no | a little | good | best |
| 6. I want to write everything in my notebook. | no | a little | good | best |
| 7. I like to have my own textbook. | no | a little | good | best |
| 8. I like the teacher to explain everything to us. | no | a little | good | best |
| 9. I like the teacher to give us problems to work on. | no | a little | good | best |
| 10. I like the teacher to help me talk about my interests. | no | a little | good | best |
| 11. I like the teacher to tell me all my mistakes. | no | a little | good | |

| | | | | |
|-----|---|----|----------|------|
| | | | best | |
| 12. | I like the teacher to let me find my mistakes. | no | a little | good |
| | | | best | |
| 13. | I like to study English by myself (alone). | no | a little | good |
| | | | best | |
| 14. | I like to learn English by talking in pairs. | no | a little | good |
| | | | best | |
| 15. | I like to learn English in a small group. | no | a little | good |
| | | | best | |
| 16. | I like to learn English with the whole class. | no | a little | good |
| | | | best | |
| 17. | I like to go out with the class and practise English. | no | a little | good |
| | | | best | |
| 18. | I like to study grammar. | no | a little | good |
| | | | best | |
| 19. | I like to learn many new words. | no | a little | good |
| | | | best | |
| 20. | I like to practise the sounds and pronunciation. | no | a little | good |
| | | | best | |
| 21. | I like to learn English words by seeing them. | no | a little | good |
| | | | best | |
| 22. | I like to learn English words by hearing them. | no | a little | good |
| | | | best | |
| 23. | I like to learn English words by doing something. | no | a little | good |
| | | | best | |
| 24. | At home, I like to learn by reading newspapers, etc. | no | a little | good |
| | | | best | |
| 25. | At home, I like to learn by watching TV in English. | no | a little | good |
| | | | best | |
| 26. | At home, I like to learn by using cassettes. | no | a little | good |
| | | | best | |
| 27. | At home, I like to learn by studying English books. | no | a little | good |
| | | | best | |

28. I like to learn by talking to friends in English. no a little good best
29. I like to learn by watching, listening to Australians. no a little good best
30. I like to learn by using English in shops/CES trains no a little good best
31. When I don't understand something in English, I ask someone to explain it to me. no sometimes often
32. If something in English is too difficult for me I try to listen to some part of it. no sometimes often
33. I watch people's faces and hands to help me understand what they say. no sometimes often
34. When I'm reading if I don't understand a word, I try to understand it by looking at the *other* words no sometimes often
35. When I am not In class, I try to find ways to use my English. no sometimes often
36. I am happy to use my English even if I make mistakes. no sometimes often
37. I think about what I am going to say before I speak. no sometimes often
38. If I don't know how to say something, I think of a way to say it, and then I try it in speaking. no sometimes often
39. When I am speaking English, I listen to my no sometimes often

pronunciation.

40. If I learn a new word, I try to put it into my
no sometimes often

conversation so I can learn it better.

41. If someone does not understand me, I try to say
no sometimes often

it in a different way.

42. I like the sound of English. no sometimes often

43. I try to find my special problems in English, and
no sometimes often

I try to fix them.

44. I ask myself how well I am learning English,
no sometimes often

and I try to think of *better* ways to learn.

45. I try to understand the Australian way of life.
no sometimes often

ⁱ This problem is not limited to second language acquisition research. Leu (2000, p. 753,) noted that limited results had been achieved in the area of research into learning styles with first language reading and technology studies.

ⁱⁱ The study also uncovered the interesting fact that about one third of married AMES students had no children. After comparing this with data for the overall migrant population he noted that this was “far in excess of the proportion of childless marriages in the immigrant population generally; we must conclude that having children is a definite obstacle to coming to AMES classes.” And he recommended that childcare facilities be provided at AMES. A worthy discovery even if unrelated to the aim of the survey.