

# To Each His Own<sup>1</sup>

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As an English language teacher in the Science Faculty, National University of Singapore, I have observed that not every student is enthusiastic about the same classroom tasks. So to meet the learning needs of my students, I figured I must know their learning style preferences. This piece of important information would then enable me to design appropriate activities for my students so that their needs are catered to effectively in the classroom. Additionally, when students understand their personal learning styles, they can maximise their learning potential – they can exploit their learning styles for various learning situations. Thus, this paper explores how I used the knowledge of Science students' preferred learning styles to help me adopt a multi-style teaching approach when I plan for each classroom lesson. It also explains how students can use the knowledge of their preferred learning styles to enhance their learning in their study of content subjects and of English, and why they have to stretch their learning style preferences to adapt to various teaching styles of lecturers. A Joy Reid's *Perceptual Learning Style Preference Questionnaire* was used to collect data relating to learning styles from first and second year Science students from 1996 to 2001. The study shows that Science students are clearly major kinesthetic learners and are close to being major visual, auditory tactile, group and individual learners.

## TO EACH HIS OWN

To each his own, people always say; one student would gleefully jump into any group activities while another would drag his feet to join one. As an English language teacher in the Science Faculty of the National University of Singapore, I constantly witness that not every student is enthusiastic about the same classroom tasks. For me to meet the learning needs of my students, I have to know their learning style preferences (Kinsella, 1995; Reid, 1995) which

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would then help me design activities to cater to Science students' needs effectively in the classroom. Additionally, when students understand their personal learning style preferences, they can exploit their strengths and compensate for their weaknesses in any learning situation (Gardner & Jewler, 2000).

In my previous research with two other colleagues (Chew, Kitchen & Chu, 1999) on assessing students' learning style preferences, we became aware that Joy Reid's (1995: 202) *Perceptual Learning Style Preference Questionnaire* (Appendix 1) was the perfect device for our purpose. The Reid questionnaire specifically argues that learners of English can be perceived as having a combination of the four sensory learning styles – visual, auditory, tactile, and kinesthetic, and two social learning styles – individual and group. These perceptual preferred learning styles are defined as follows:



**Visual Learners** like to see words or pictures, and often work alone before discussion with others.



**Auditory Learners** like to hear the spoken word through activities like debates, individual conferences and small group discussions.



**Tactile Learners** like to touch, and often prefer hands-on activities such as building models and doing laboratory experiments.



**Kinesthetic Learners** like experiential learning, preferring physical activities such as field trips, role-play and drama.



and

**Individual Learners** like to work alone, and prefer self directed study, independent reading computer work.



**Group Learners** like **group interaction**; they prefer games, role play and other social activities.

## THE ASSESSMENT OF LEARNING STYLES

In order to teach my Science students effectively, I reckoned I had to understand their learning needs more thoroughly. So, I focused on collecting and collating data only from Science students from 1996 to 2001 by using the Joy Reid's *Perceptual Learning Style Preference Questionnaire* again. A total of 384 survey forms were used for this assessment.

The questionnaire elicited responses from Science students and classified them as having major, minor, and negligible learning styles in their study of English. As I was curious to know whether students perceive themselves as using the same learning styles to study their content subjects, I added this question, "Do you use different styles/strategies when studying subjects other than English?" at the end of the survey form.

## THE RESULTS AND INTERPRETATIONS

### Preference Mean

Figure 1. Learning Style Preference Mean of Science Students

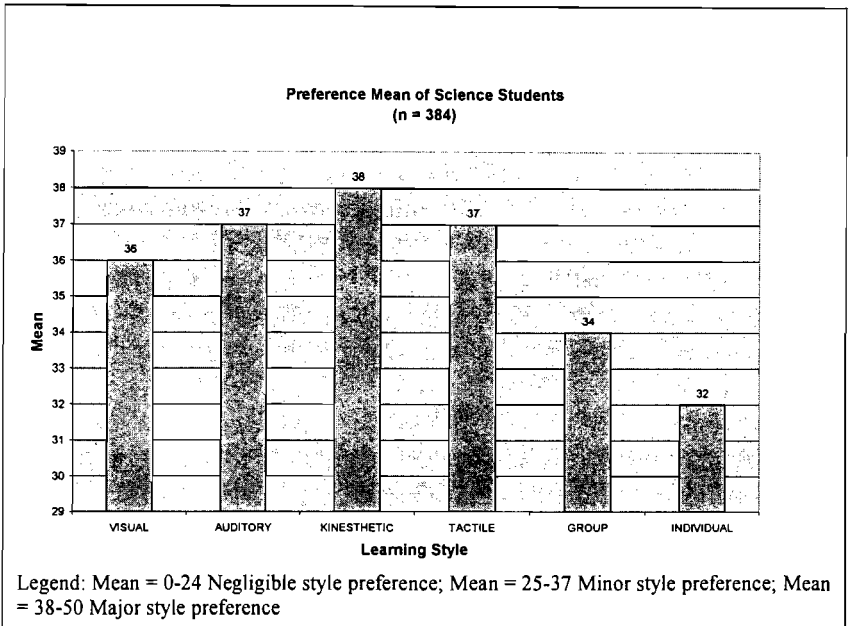


Figure 1 shows that though NUS Science students are clearly major kinesthetic learners, they are close to being major visual, auditory tactile, group and individual learners. Perhaps Science students prefer such modes of learning for the following reasons. Generally, they have to sit in lectures and tutorials to view (visual) what is on the screen/white-board; to listen (auditory) to lecturers/tutors expound subject matters; to move about/be involved (kinesthetic) in group work, and to use their hands (tactile) to do projects and laboratory experiments. All this could predispose them to adopting the same learning style preferences when learning English. If this reasoning holds, then what students indicated as their learning styles in studying English should be the same as those they use in studying other subjects. Therefore, I expected most students to say “No” to the use of different styles/strategies to studying subjects other than English. However, this is not so according to the following data.

## Do Students Change Their Preferred Styles/Strategies?

The table below shows that more students (43%) claimed they change their learning styles and strategies when they study different subjects, compared to those who do not (25%), and to 32% who could not decide. So does the first percentage mean that students actually change their learning style preferences? Or are they just extending their minor learning style preferences to exploit their learning experience?

**Table 1. Students' Responses to Study Strategies in Different Subjects**

Responses to the use different styles/strategies when studying subjects other than English. (n = 264)	
Yes	43%
No	25%
Not sure	32%

To throw some light on these questions, let us consider the learning experience of one of my students. Embarrassed to discuss the matter with me face-to-face, this student e-mailed to explain that whenever he had to engage in group work in class, he would get nervous and he would stutter. I noticed the stuttering; however, I assured him that it did not hamper his communication. He pointed out that he did not enjoy group activities because they intensified his fear of making mistakes in public; thus he would stutter even more. Finally, he concluded that it was his fault and he did not expect me to change my teaching style.

Evidently, in this case, the student had been put in situations where he had to adapt his learning styles to accommodate my teaching style. If I subscribe to what Kinsella (1995) and Oxford (1995) reported in their studies – that learning styles are people's natural and preferred way of absorbing and retaining new information which persist across teaching methods and content area – then this student was just tolerating the situations he was in with no intention of using group style/strategy again.

I reckon that those students who stated that they change their learning style/strategies when studying different subjects share the same learning experience as this student. Their change of learning

styles was merely perceived rather than real because they must be involved in the flow of each class (each is different arising from the different nature of each Science subject) to learn even though their learning styles do not match their teachers' teaching styles. Those who were uncertain about whether they change their learning style/strategies when studying different subjects also concurred that they conform to their teachers' teaching styles in class, and that was why they could not decide whether they really change their learning styles/strategies in studying different subjects.

There were some students who could not answer this question at all as that was the first time they heard of learning styles when they filled in the questionnaire, and they were surprised at what they discovered to be their preferred learning styles. They had to take time to digest this discovery, and this led to their inability to answer this question. It does not matter to me that they could not answer the question; what matters most to me is the fact that they discovered something about themselves with regard to learning styles. It is my hope that they will continue to exploit what they discovered about themselves in every learning situation.

## **IMPLICATIONS FOR THE TEACHER**

The findings reveal that Science students are predominantly kinesthetic learners and are nearly major visual, auditory, tactile, group and individual learners, that students' preferred ways of learning do not change regardless of content and teaching methods, and that students accommodate their teachers' teaching style in order to learn. The findings confirm that if I want to effectively and significantly enhance student achievements in class, I need to match my teaching style to my students' learning styles (Felder & Henriques, 1995; Grasha, 1996). This implies that I have to embrace a multi-style approach to teach by designing interactive activities to maximise kinesthetic students' learning potential, and by planning auditory, tactile, visual, group and individual activities to reach other students in the Science Faculty. The results also tell me that I have to encourage students to expand their learning styles in their study of English and content subjects as each teacher has his/her teaching style which is difficult to change.

## **STRATEGIES FOR THE TEACHER**

Equipped with such implications, my next concern was how to help students use their preferred learning styles to learn effectively in all their subjects in and out of the classroom.

### **Helping Students in Studying All Subjects**

In studying all subjects, some suggested strategies for lectures/tutorials include preparing tutorial answers with a partner beforehand if they preferred group learning and taking down notes if they are tactile and auditory learners. Strategies during study time include reciting information aloud if they are auditory learners, and getting together with others to discuss assignments if kinesthetic or group learners. Each learner was encouraged to find what works best for him/her and to try out his/her less preferred strategies in all learning circumstances.

### **Helping Students in Studying English in Class**

In my classroom, I adopt a multi-style approach to try to create a rapport with each student and to connect with each student's learning style. One thing I do very frequently in my class is to make students sit in a semi-circle. This enhances the visual and auditory learners' ability to see and hear each other as they interact. This seating arrangement also easily allows students to get into groups of twos and threes for discussion and thus satisfying the needs of kinesthetic and group learners.

In drawing up my lesson plans, I make sure that meeting the students' multiple learning needs is top priority. For example, in teaching a lesson on idioms, I made students each draw a card that contained either a picture or an idiom, and they had to go look for their matching idiom or picture. When they found their correct match, they gathered in groups to role-play a story based on the idioms they had. This activity might seem to involve the kinesthetic, tactile, and group learners as it required students to move about, write, and discuss in groups. However, this activity also required students to listen and read text/see pictures; consequently, many visual, auditory, and individual students were also reached.

In another attempt to make my lesson more multi-sensory to learners and to stimulate them to capitalise on their learning styles, I placed a crystal and a jigsaw puzzle, which had two missing pieces, on my desk before a lesson on the essential elements of written communication. The crystal was to link to the simile “as clear as crystal” to illustrate a point in being clear in writing so that readers understood the writing after one reading. The incomplete jigsaw puzzle was to prove a point in being complete in writing by providing all the information readers needed in the writing so that readers would not have to ask the writer for more information. This display and use of the objects was primarily to inspire the visual and individual learners to think about the lesson before it started; its secondary purpose was to encourage other learners, kinesthetic, tactile, and group, to pay attention to the lesson by using their minor or negligible learning styles to see and hear the lesson.

### **A FINAL NOTE**

Since knowing Science students are clearly major kinesthetic learners and are close to being major visual, auditory tactile, group and individual learners, I have begun to adopt a multi-style teaching approach in class to enhance students’ learning. I do not have to be so rigid in my desired style of teaching anymore; I have to constantly adapt and develop classroom tasks so as to cater to each student’s different learning needs, eventually satisfying to each his own.

### **REFERENCES**

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## Appendix 1. Perceptual Learning Style Preference Questionnaire\* Joy Reid (1984)

□ **DIRECTIONS:**

People learn in many different ways. For example, some people learn primarily with their eyes (visual learners) or with their ears (auditory learners); some people prefer to learn by experience and/or by “hands-on” tasks (kinesthetic or tactile learners); some people learn better when they work alone while others prefer to learn in groups.

This questionnaire has been designed to help you identify the way(s) you learn best – the way(s) you *prefer* to learn.

Read each statement on the following pages. Please respond to the statement **AS THEY APPLY TO YOUR STUDY OF ENGLISH.**

Decide whether you agree or disagree with each statement. For example, if you *strongly agree*, mark:

STRONGLY AGREE	AGREE	UNDECIDED	DISAGREE	STRONGLY DISAGREE
X				

Please respond to each statement quickly, without too much thought. Try not to change your responses after you choose them. Please answer all the questions. Please use a pen to mark your choices.

<b>SA</b>	<b>A</b>	<b>U</b>	<b>D</b>	<b>SD</b>
<b>STRONGLY AGREE</b>	<b>AGREE</b>	<b>UNDECIDED</b>	<b>DISAGREE</b>	<b>STRONGLY DISAGREE</b>

		SA	A	U	D	SD
1.	When the teacher tells me the instructions I understand better.					
2.	I prefer to learn by doing something in class.					
3.	I get more work done when I work with others.					
4.	I learn more when I study with a group.					
5.	In class, I learn best when I work with others.					
6.	I learn better by reading what the teacher writes on the chalkboard.					
7.	When someone tells me how to do something in class, I learn it better.					
8.	When I do things in class, I learn better.					
9.	I remember things I have heard in class better than things I have read.					
10.	When I read instructions, I remember them better.					
11.	I learn more when I can make a model of some thing.					
12.	I understand better when I read instructions.					
13.	When I study alone, I remember things better.					
14.	I learn more when I make something for a class project.					
15.	I enjoy learning in class by doing experiments.					
16.	I learn better when I make drawings as I study.					
17.	I learn better in class when the teacher gives a lecture.					
18.	When I work alone, I learn better.					
19.	I understand things better in class when I participate in role-playing.					
20.	I learn better in class when I listen to someone.					
21.	I enjoy working on an assignment with two or three classmates.					
22.	When I build something, I remember what I have learned better.					
23.	I prefer to study with others.					
24.	I learn better by reading than by listening to someone.					
25.	I enjoy making something for a class project.					
26.	I learn best in class when I can participate in related activities.					
27.	In class, I work better when I work alone.					
28.	I prefer working on projects by myself.					
29.	I learn more by reading textbooks than by listening to lectures.					
30.	I prefer to work by myself.					

## SELF-SCORING SHEET

### INSTRUCTIONS

There are 5 questions for each learning category in this questionnaire. The questions are grouped below according to each learning style. Each question you answer has a numerical value:

SA	A	U	D	SD
5	4	3	2	1

Fill in the blanks below with the numerical value of each answer. For example, if answered Strongly Agree (SA) for question 6 (a visual question), write a number 5 (SA) on the blank next to question 6 below.

*Visual*

6 - 5

When you have completed all the numerical values for *Visual*, add the numbers. Multiply the answer by 2, and put the total in the appropriate blank.

Follow this process for each of the learning style categories. When you are finished, look at the scale at the bottom of the page; it will help you determine your major learning style preference(s), your minor learning style preference(s), and those learning style(s) that are negligible. If you need help, please ask your teacher:

**VISUAL**

6 - \_\_\_\_\_

10 - \_\_\_\_\_

12 - \_\_\_\_\_

24 - \_\_\_\_\_

29 - \_\_\_\_\_

Total \_\_\_\_\_ x 2 = \_\_\_\_\_ (Score)

**TACTILE**

11 - \_\_\_\_\_

14 - \_\_\_\_\_

16 - \_\_\_\_\_

22 - \_\_\_\_\_

25 - \_\_\_\_\_

Total \_\_\_\_\_ x 2 = \_\_\_\_\_ (Score)

**AUDITORY**

1 - \_\_\_\_\_

7 - \_\_\_\_\_

9 - \_\_\_\_\_

17 - \_\_\_\_\_

20 - \_\_\_\_\_

Total \_\_\_\_\_ x 2 = \_\_\_\_\_ (Score)

**GROUP**

3 - \_\_\_\_\_

4 - \_\_\_\_\_

5 - \_\_\_\_\_

21 - \_\_\_\_\_

23 - \_\_\_\_\_

Total \_\_\_\_\_ x 2 = \_\_\_\_\_ (Score)

**KINESTHETIC**

2 - \_\_\_\_\_

8 - \_\_\_\_\_

15 - \_\_\_\_\_

19 - \_\_\_\_\_

26 - \_\_\_\_\_

Total \_\_\_\_\_ x 2 = \_\_\_\_\_ (Score)

**INDIVIDUAL**

13 - \_\_\_\_\_

18 - \_\_\_\_\_

27 - \_\_\_\_\_

28 - \_\_\_\_\_

30 - \_\_\_\_\_

Total \_\_\_\_\_ x 2 = \_\_\_\_\_ (Score)

Major Learning Style Preference 38-50;

Minor Learning style Preference 25-37;

Negligible 0-24

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