

Teaching
and learning
crossroads

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Enrique Grau. *Autorretrato*, 1945.
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RESUMEN

En este trabajo se describe una investigación evaluativa cuya meta fue averiguar los estilos de aprendizajes de los estudiantes y del profesor y verificar si el estilo de enseñanza de este último coincidía con los estilos de aprendizajes de los estudiante para determinar si el aprendizaje y la motivación están presentes cuando existe una coincidencia entre los estilos de aprendizaje y enseñanza

Se tomó como muestra un grupo de Inglés Uno conformado por 32 estudiantes y su profesor que pertenecen a una universidad privada localizada en la costa norte de Colombia. Para recolectar información sobre los cuestionamientos de esta búsqueda, al grupo se le aplicaron diversos instrumentos.

Analizados los resultados se encontró que el estilo de aprendizaje más representativo fue el Táctil, seguido por el Auditivo y Kinestésico. Este hallazgo no es similar a ningún otro encontrado en este campo.

Hubo coincidencia entre los estilos de aprendizaje de los estudiantes y el estilo de enseñanza del profesor. También se confirmó que cuando existe una relación entre estos estilos la motivación está presente.

PALABRAS CLAVE: Estilos de aprendizaje mayor, menor y negativo, estilos de enseñanza.

ABSTRACT

This paper is an evaluative research study which is aimed to investigating the learning styles of students and teachers and whether the teacher's teaching style matches with the students' learning styles to determine if learning and motivation are present when there is a crossroad between learning and teaching styles.

The focus group asked to participate in this study was selected from a private university in the north coast of Colombia; the group comprised thirty two students who are studying first level English and their teacher.

Data was gathered from many different sources. From the information gathered, it was found that the tactile learning style was the most representative. This finding is not similar to any other research done in this field. The Tactile style was followed by the Auditory and Kinesthetic styles which were represented by the same percentage. There was a match between teaching and learning styles. According to the data, it was confirmed that when there is a crossroad between teaching and learning motivation is present.

KEY WORDS: Major, minor and negligible learning styles, teaching styles.

INTRODUCTION

How individuals learn or understand new information and their preferred methods for learning have been subjected to a great deal of attention. It has also been the focus of a number of L2 studies in recent years since Reid's influential work on the topic was published in 1987.

Research on learning styles, has provided teachers and also students with a different view of learning and how to apply it to classrooms and lives. Among the authors that have views regarding this topic are: Mathew Peacock (2001), Rao Zhenhui (2001), Joy Reid (1995), Rita and Kenneth Dunn (1993), Richard Felder (1995) among others.

Educators and researchers have developed several instruments to assess students' learning styles, but literature regarding this topic is full of unresolved issues, both theoretical and practical (Wilson, 1998, p. 3). On the other hand, these instruments have been a great help in identifying these styles in students and also exploring them with the aim of improving the learning and teaching processes.

According to the above mentioned information, the purpose of this project was to identify:

a) What are the leaning styles of a First Level English group at a private university located in the North Coast of Colombia?

- b) What are the major – minor and negligible learning styles of the seven students and the teacher chosen for this research?
- c) What is the teacher's teaching style?
- d) Is there a match between students' learning styles and the teacher's teaching style?

This topic is important to us as teachers because we need to know what our students' learning styles are in order to create an optimal environment for the learners and also for us in the classroom.

LITERATURE REVIEW

For many years researchers have investigated the relationship between how individuals learn and how teachers' influence that learning process.

Research on learning and teaching styles has provided teachers and students with a different view of learning and teaching and how to apply them in classrooms. Among the authors that have done research on this topic are:

- Mathew Peacock (2001) studied the correlation between learning and teaching styles based on Reid's hypotheses. He found out that a mismatch between teaching and learning styles causes learning failure, frustration and demotivation. He also found that learners favored kinesthetic and auditory and

disfavored individual and group styles, while teachers favored kinesthetic, group and auditory styles.

- Rao Zhenhui (2001) analyzed matching teaching styles with learning styles in East Asian contexts. He diagnosed learning styles and developed self-aware EFL learners. He mentioned that an effective matching between teaching and learning styles can only be achieved when teachers are aware of their learners' needs, capacities, potentials, and learning style preferences. He also mentioned that it is necessary to alter the teaching styles to create a teacher-student style matching.
- Rita and Kenneth Dunn (1993) studied how people learn and they noticed that some students achieved only through selective methods. They mentioned many elements that influence learning styles: environmental, emotional, sociological and physical elements. They also mentioned nine elements that influence a teaching style: attitudes towards instructional programs among others.
- Joy Reid (1995) said that "Learning styles are internally based characteristics of individuals for intake of understanding of new information. All learners have individual attributes related to the

learning processes. Some people may rely on visual presentations, others prefer spoken language; still others may respond better to hands-on activities. It is evident that people learn differently and these differences in learning about ESL/EFL settings." She also said that matching teaching styles with learning styles give all learners an equal chance in the classroom and builds student self-awareness. She also categorizes learning styles into six types: Visual, Auditory, Kinesthetic, tactile, group, and Individual.

- Felder (1995:28) said that "the way in which an individual characteristically acquires, retains, and retrieves information are collectively termed the individuals' learning styles". He also added that mismatches often occur between learning styles in students in a language class and the teaching style of the instructor with unfortunate effects on the quality of the students' learning and on their attitudes towards the class and the subject.

THEORETICAL FRAMEWORK

No matter what kind of learners they are - their cultural and language background, previous experience, individual learning styles - students are faced with an enormous task when they learn a new language. Being

more aware of how to approach this task and how to do it as effectively as possible – Learning Styles and Teaching Styles must match to obtain a good student's and teacher's performance in the classroom.

Reid defined Language Learning Styles, as a student's preferred method or mode of learning and Style Eble (1980) said that a Teaching Style represents those enduring personal qualities and behaviors that appear in how we conduct our classes. Thus, it is both something that defines us, that guides and directs our instructional processes and that has effects on students and their ability to learn.

There are many theories about Learning Styles and Teaching Styles: Reid (1995) is now the most widely accepted, as is her categorization of styles into six types: 1- Visual Learners (they prefer seeing things in writing), 2- Auditory Learners (they prefer listening), 3- Kinesthetic Learners (they prefer active participation/experiences), 4- Tactile Learners (they prefer hands-on work), 5- Group Learners (they prefer studying or working with others) and 6- Individual Learners (they prefer studying or working alone). According to Reid's major hypotheses about this topic she said that "all students have their own learning styles and learning strengths and weaknesses" and that "a mismatch between teaching and learning styles causes learning failure, frustration and demotivation" and she also said that "learning could be improved when there is an awareness of a wider variety of learning styles".

Throughout this research we used Reid's work (1987-1995) about categorization of leaning styles and Peacock (2001) who studied the correlation between Learning and Teaching Styles based on Reid's hypotheses. We used these models due to the transcendence they have in the learning and teaching fields.

We suggest that a Match between Teaching and Learning Styles in a L2 classroom creates a motivating environment that aids the learning and teaching processes. Although this aspect is under -investigated in Colombia, there are a lot of theories that support that a mismatching between teaching and learning affect negatively these processes. We propose to do more research about this topic and inform to EFL teachers about it and to involve them as participants in this type of studies.

METHODOLOGY

A. Participants

This research was carried out at a private university in the North Coast of Colombia. It is a catholic university, located 8 kilometers outside the city and is made up of 12 faculties. Law and Social Studies is one of them. The Language Center belongs to this faculty. It offers four basic and two specific English levels to the students of this university. The basic levels are not compulsory while the specific ones are.

A first level English group and its teacher were involved in this investigation. The group of students was made up of 22 males and 10 females. They were between 16 and 21 years old. The learners were studying: computing engineering, mechanical engineering, architecture and law. They belonged to 1 to 5 socio-economic backgrounds. The first and second socioeconomic backgrounds correspond to people who have low incomes. The third and fourth ones correspond to people who have average incomes and the fifth and sixth ones are related to high incomes. Seven students were chosen for this research in order to investigate their learning styles, the teacher's learning and teaching styles and the match between them. One student was 21 years old; the others were 16, 17 and 19 years old. Four of them were in first semester and the others were in second, third, and seventh semesters. One studied architecture, two law, and four computing engineering. Four of them liked English; two liked it a little while one did not like it at all. (The aforementioned information was taken from a written questionnaire answered in class by all the students).

The teacher was a female who was 28 years old. She studied English in the United States and had a college degree in Business administration. She has been teaching English in this university since 2003. She has also taught in basic and specific levels.

B. Methods

In this Evaluation research, a quantitative and qualitative descriptive methodology was applied. A Heuristic orientation was given to this task because it was important to know the structure and essence of the students' experiences, feelings, thoughts and how they interpret them.

Data about Learning Styles, students' motivation, experiences with English as a foreign language and matching Learning Styles with Teaching style were gathered from the following instruments:

1. *Reid's Perceptual Learning Style Preference Questionnaire* (PLSPQ, 1987):
2. *A video-Taped Class* to ascertain students' preferences to learn and the teacher's teaching style.
3. *Class tasks* related to learning styles were developed throughout the semester.
4. *Field Notes* were written during the semester.
5. *A written survey*
6. *Tape-recorded interviews* related to learning styles.
7. *Students' evaluation of the class.*
8. *Peer observation*

C. Data analysis

Before collecting the data students were asked permission to participate in this research and they agreed to do it. Their names were changed to maintain

anonymity. First, quantitative scores were calculated for all questionnaire data in order to find out the student's and teacher learning styles. With this instrument learners identified the way they learn best and prefer to learn. It was composed by thirty statements that cover Reid's six learning style preferences, with five expressions for each one of them. Students answered them as they applied to their study of English on a 5-point scale:

Strongly agree	Agree	Undecided	Disagree	Strongly disagree
5	4	3	2	1

Reid (1995) classified learning styles as Major, Minor or Negligible. Major is a preferred leaning style, Minor is one in which learners can still function well, and negligible means they may have difficulty learning. When the numerical value was assigned to the corresponding learning style statement, the numbers were added to obtain a total score and then it was multiplied by 2 determining the major, minor or negligible learning style. After that, all the results were analyzed to categorize them according to the aforementioned learning style preferences and presented in tables and figures shown in the findings. Qualitative data as video-taped class, field notes, class tasks, peer observation, and students' evaluation of the class were utilized to find out information related to learning styles, students' motivation and their

experiences with English as a foreign language and if there was a match or mismatch between teaching and learning styles.

After collecting the data, patterns or coincidences were categorized according to the findings.

RESULTS

Learning styles *a- focus group*

The results from Reid's PLSPQ questionnaire applied to the focus group and its teacher are given in tables and figures 1, 2, 3, 4, 5 and 6. Table 1 and figure 1 show that 50% of the class preferred the visual style (major) and the other 50% (minor) can still function well in that style. This can also be assured when students want to see everything the teacher says written on the board. It also occurred with class handouts and activities in which this style could be seen. e.g. Role-plays, mimics, lotteries and readings. None of the students had a difficulty when using this style (negligible)

Table 1

	POINTS	VISUAL
NEGLEGIBLE	0 - 24	0
MINOR	26 - 36	16
MAJOR	38 - 50	16
TOTAL ESTUDIANTES		32

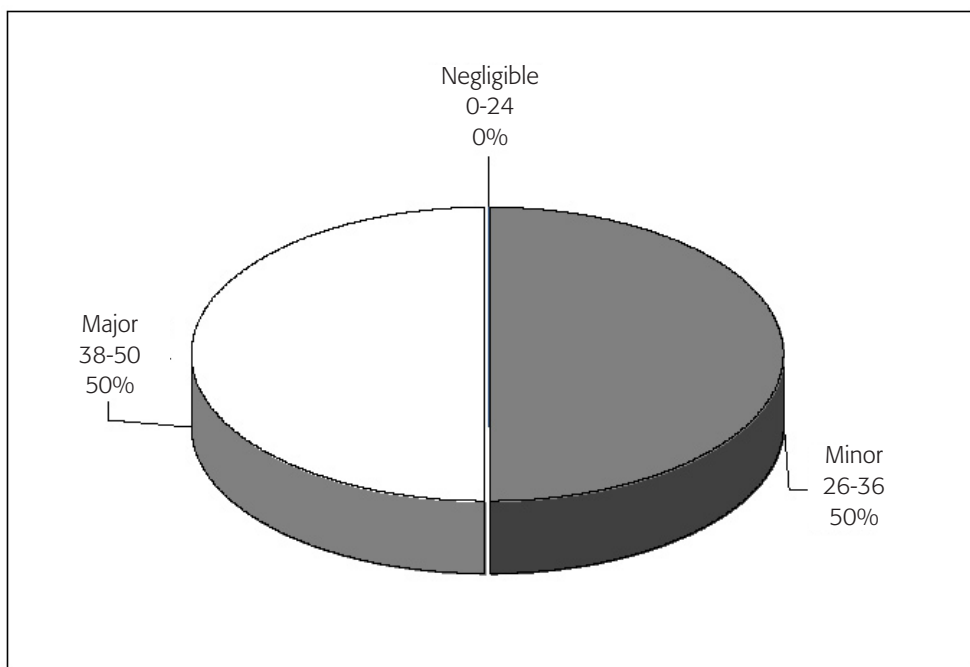


Figure 1. Visual learning style

Table 2 and Figure 2 show that the 63% of the participants' most representative and popular style was the Tactile (major), this means that they learnt by constructing things, taking notes, doing projects. This finding is not similar to any other research done in this field. It can be ascertained that in-class tasks when learners had to create a poster or designing their own family tree, motivated them since they could use different materials such as family photos, scissors, markers, glue, etc and in-class observation, the teacher noticed that throughout the semester they used this style in all the

activities done in class. 28% of the participants can still function well in this learning style (minor) and 9% of the individuals had difficulty learning in that way (negligible).

Table 2

	POINTS	TACTILE
NEGLIGIBLE	0 - 24	3
MINOR	26 - 36	9
MAJOR	38 - 50	20
TOTAL STUDENTS		32

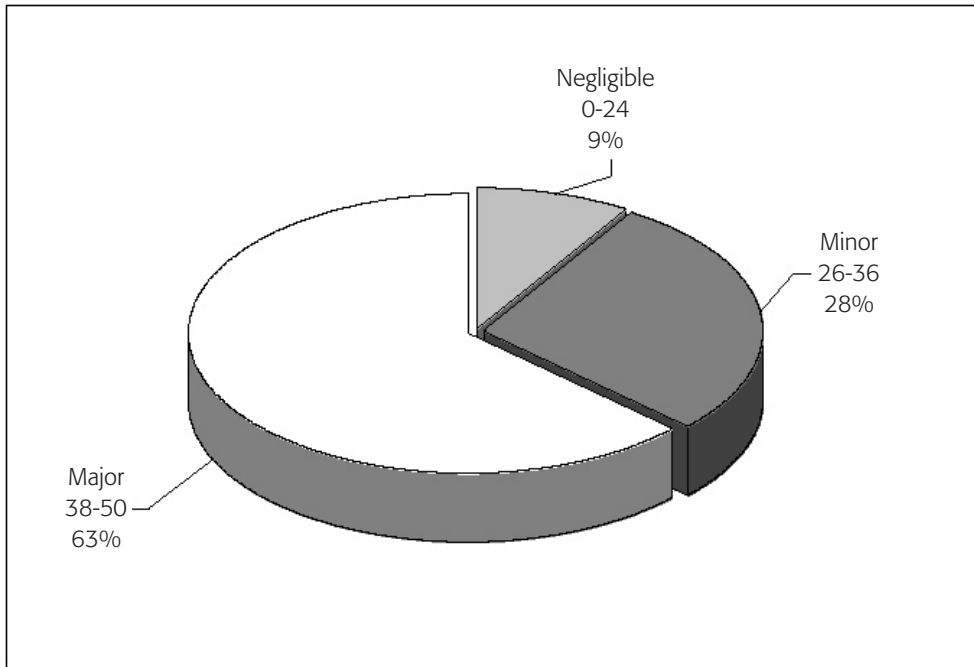


Figure 2. Tactile learning style

Tables and figures 3 and 4 show that Auditory and Kinesthetic styles had the same score of preference among the students 56% (major learning style). This is something our research has in common with other studies in which students liked to role-play and listen to their teacher and classmates speak. This could be corroborated during the video-taped class and the class tasks when students listened to tapes, watched films and videos and when they rehearsed and presented activities related to movement, role-plays, mimics, guessing games, touching, and expressing their feelings physically in which they performed very well. 41% of the students can still function well with this style (minor)

and 3% may have difficulty learning this way (negligible)

Table 3

	POINTS	AUDITORY
NEGLEGIBLE	0 - 24	1
MINOR	26 - 36	13
MAJOR	38 - 50	18
TOTAL STUDENTS		32

Table 4

	POINTS	KINESTHETIC
NEGLEGIBLE	0 - 24	2
MINOR	26 - 36	12
MAJOR	38 - 50	18
TOTAL STUDENTS		32

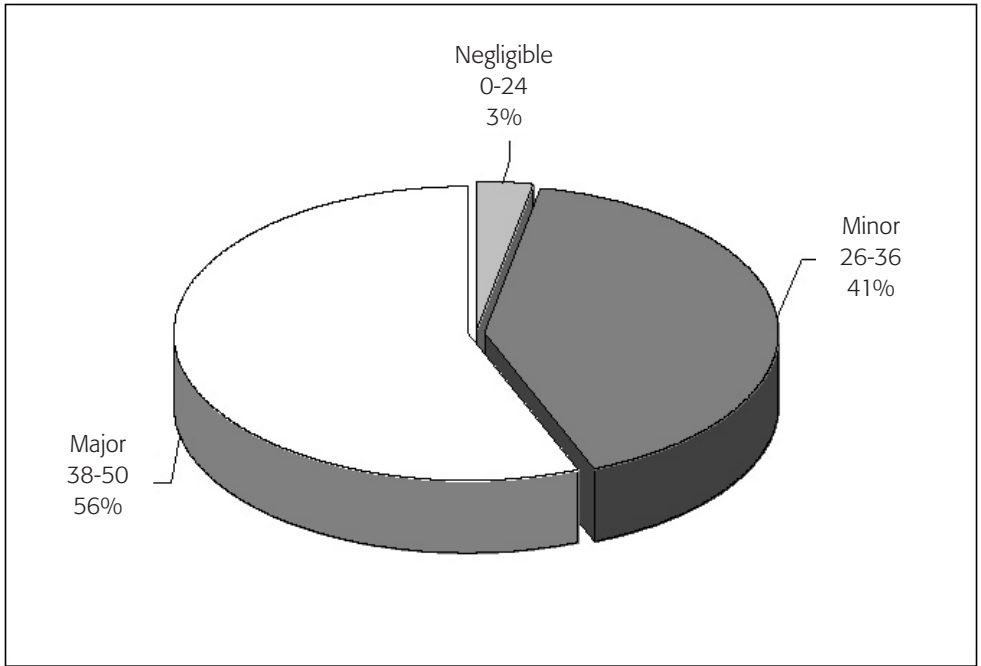


Figure 3. Auditory learning style

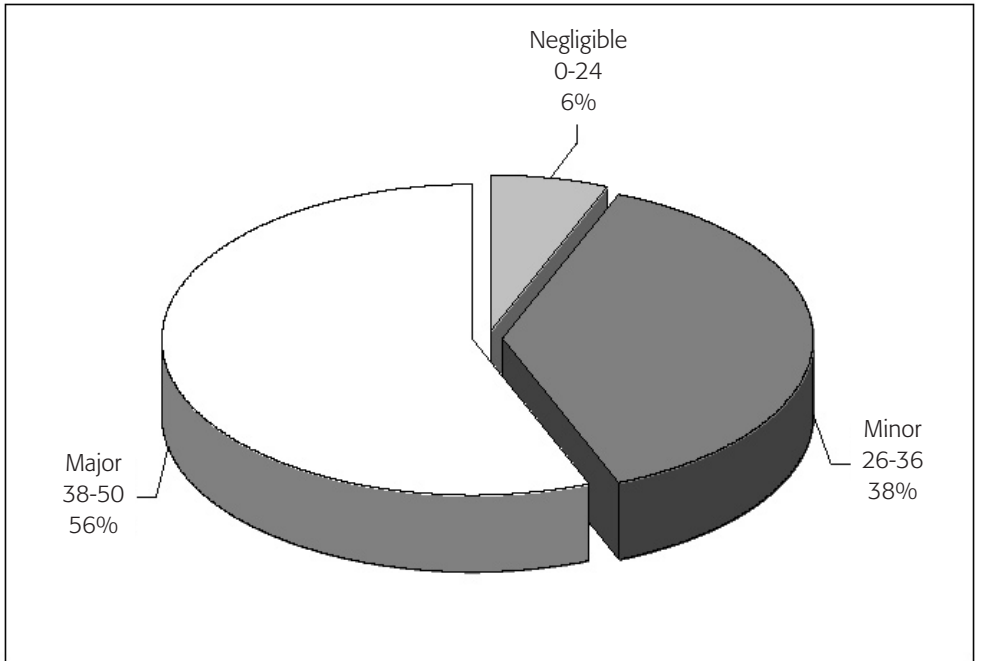


Figure 4. Kinesthetic learning style

Table 5 and figure 5 show that 50% of the students liked to work in groups, to share ideas, opinions and knowledge (major learning style) while 31% of them can still work well in this type of learning(minor) and the other 9% had difficulty when learning in groups (Negative learning style). Group work was a feature that was shown by learners throughout the semester in class observation, class tasks and in the video-taped class.

Table 5

	POINTS	GROUP
NEGLIGIBLE	0 - 24	3
MINOR	26 - 36	13
MAJOR	38 - 50	16
TOTAL STUDENTS		32

Table 6 and figure 6 show that the least popular was the Individual, though it was not negative. 60% of students liked to work individually whereas 31% of them can still function well in this style and the rest of learners (9%) had a negligible learning style. They had difficulty when working alone. During oral interviews they confirmed that they liked to work in groups and they said that they did not like to work individually. The same happened with in class observation; students preferred to work in pairs and in group. Thus, it can be concluded that although individuals like to work in groups they see themselves as individualistic people and this is a Colombian culture trait.

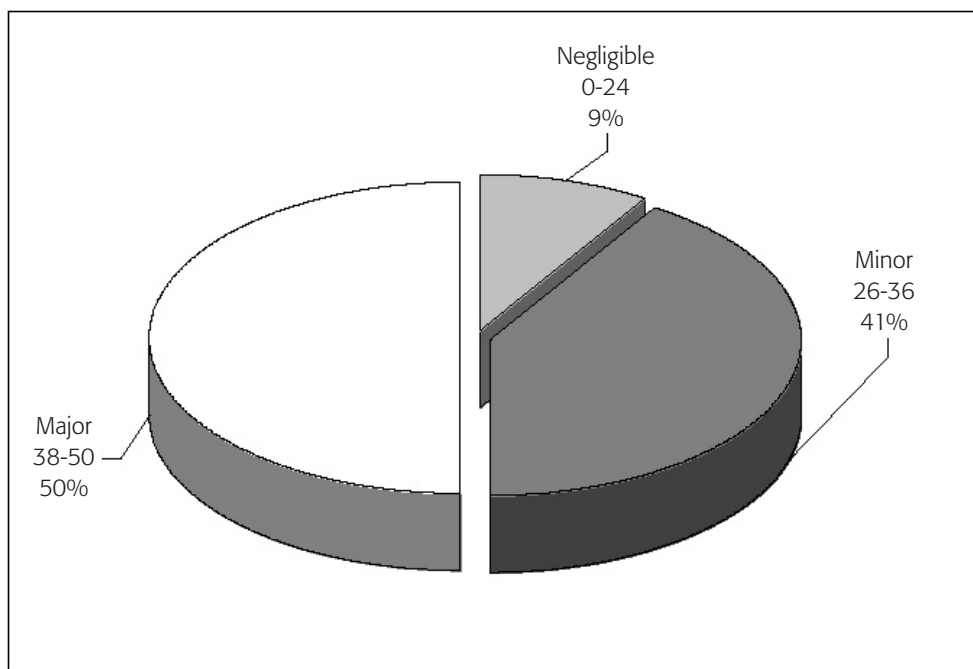


Figure 5. Group learning style

Table 6

	POINTS	INDIVIDUAL
NEGLIGIBLE	0 - 24	3
MINOR	26 - 36	19
MAJOR	38 - 50	10
	TOTAL STUDENTS	2

b) Target students

As it was mentioned at the beginning of this task, seven learners were chosen to study their major, minor and negligible learning styles. The findings are shown below:

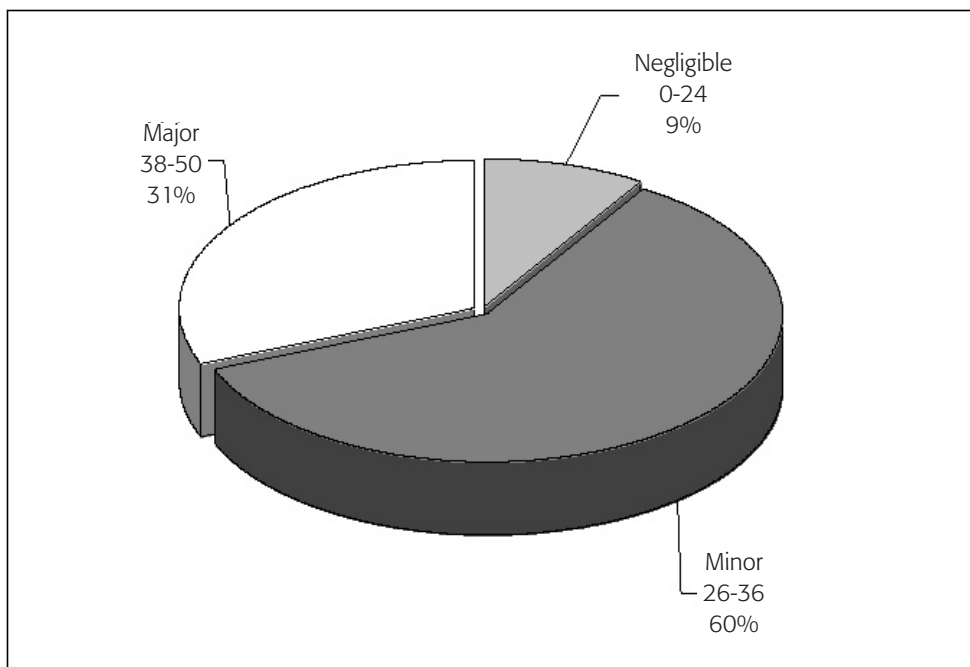


Figure 6. Individual learning style

Table 7
Student 1

	Puntaje	Visual	Tactile	Auditory	Kinesthetic	Group	Individual
NEGLIGIBLE	0 - 24					24	
MINOR	26 - 36	32	36	34	34		
MAJOR	38 - 50						42

Table 8
Student 2

	Puntaje	Visual	Tactile	Auditory	Kinesthetic	Group	Individual
NEGLIGIBLE	0 - 24						
MINOR	26 - 36	30	34		36	36	34
MAJOR	38 - 50			40			

Table 9
Student 3

	Puntaje	Visual	Tactile	Auditory	Kinesthetic	Group	Individual
NEGLIGIBLE	0 - 24						
MINOR	26 - 36	26	34		34	32	34
MAJOR	38 - 50			42			

Table 10
Student 4

	Puntaje	Visual	Tactile	Auditory	Kinesthetic	Group	Individual
NEGLIGIBLE	0 - 24		24				
MINOR	26 - 36	26		26	36	30	30
MAJOR	38 - 50						

Table 11
Student 5

	Points	Visual	Tactile	Auditory	Kinesthetic	Group	Individual
NEGLIGIBLE	0 - 24						
MINOR	26 - 36						
MAJOR	38 - 50	48	46	38	46	48	38

Table 12
Student 6

	Points	Visual	Tactile	Auditory	Kinesthetic	Group	Individual
NEGLIGIBLE	0 - 24						
MINOR	26 - 36						
MAJOR	38 - 50	40	42	48	50	44	38

Table 13
Student 7

	Points	Visual	Tactile	Auditory	Kinesthetic	Group	Individual
NEGLIGIBLE	0 - 24						
MINOR	26 - 36						
MAJOR	38 - 50	38	48	38	44	46	48

Table 14 shows that the most representative teacher's learning style was the Visual, then the tactile and kinesthetic, then the group and individual and the least representative was the auditory, although the last one was negative for the teacher, she used it in class.

introduce a new one. Learners were really interested in both activities as it could be seen in peer's observation. They had fun, laughed a lot and participate actively in those activities. It was also encountered that in spite of the fact, that the teacher had a negligible auditory style, she used it

Table 14
Teacher's Learning Styles

	POINTS	Visual	Tactile	Auditory	Kinesthetic	Group	Individual
NEGLIGIBLE	0 - 24			3			
MINOR	26 - 36					36	36
MAJOR	38 - 50	46	42		42		

DISCUSSION

It was observed that there was a match between teaching and learning styles as it was confirmed in the video -taped class, peer observation of the video and field notes. In the former instrument, the teacher shifted from one style to another creating a participating and motivating environment. In this video, two activities were recorded: a role play and a guessing game that the teacher used to practice a topic and to

in her classes. For each one of her classes, she prepared activities that dealt with most of learning styles in each one of her classes and as a result she obtained good student's performance and raise student's motivation. In other words, a good result can be obtained if a teacher keeps a balance between students' learning styles and his/her teaching style.

It is relevant to study learning styles because recent studies have shown that a match between teaching

and learning styles helps to motivate students' process of learning. That is why teachers should identify their own teaching styles as well as their learning styles to obtain better results in the classroom. The aim is to have a balanced teaching style and to adapt activities to meet students' style and to involve teachers in this type of research to assure the results found in this research study. It is also helpful to design class tasks in which students can deal with their different learning styles and to know what individuals preferred ways of learning are in order to determine better teaching strategies inside the classroom and to motivate students' participation in class by creating activities related to their learning styles.

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