LEARNING GENERATORS:

NLP AND LEARNING STYLES IN ENGLISH TEXT BOOKS

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Abstract:
After analysing the proportion of the learning styles in the text books used to learn English as a second language, changes should be made to improve the quality of education of books as they only benefit a small percentage of students. The higher representation of exercises that benefits the Reflector Style demonstrates that all the editorials, without exception, follow the natural method. The natural method fails because it has an excess of representation of a single Learning Style (Reflector Style). Text books should act like a tool that generates learning, and if we perfected it considering the different Learning Styles, we would be creating a Learning Generator: an optimal tool of learning.

Key Words:
Neuro-Linguistic Programming, Teaching and Learning Styles, Text books

1. LEARNING STRATEGIES

The term "learning style" talks about the fact that when we want to learn something each one of us uses its own method of learning or set of strategies. Each one of us tends to develop certain preferences as far as style of general learning. Those tendencies constitute our own style of learning. Our learning style would come to be the general tendency, the most used.

No learning style lasts all our life and is stable. The learning styles are modified depending on the circumstances, contexts and personal variables of the same student. Consequently, they can be modified for a better advantage. The students will learn how to improve the different styles that they use, and we can help them on it.

Students appear to be substantially different in terms of intelligence, ability, aptitudes, attitudes and experience. A typical class of 25 to 30 students will present to the instructor a range of these qualities as well as a diversity of learning styles and cognitive methods. This means that instructors must incorporate in their class material enough material, methods of delivery to address the need of each and all students. This can be achieved by developing a comprehensive knowledge of students learning styles.

Of all the theories on learning styles we have, on the one hand, those theories dealing with the information input or Neuro-Linguistic Programming (NLP) dealing with the entrance of information and, on the other hand, the theories about the information processing by Honey and Munford.

As far as the number of people with different learning styles is concerned, the statistical data very usually varies depending on the source, so this data

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must be taken with extreme precaution. For instance, if the statistic makes reference to a study on students, there is usually higher visual representation, whereas if it is made on a sample of different workers, it seems not to have a general pattern of representation, although their score is low in kinaesthetic style. One thing is for sure, we are all different.

1.1. NEURO-LINGUISTIC PROGRAMMING

The Neuro-Linguistic Programming model, also called visual-auditory-kinaesthetic (VAK), takes into account the neurolinguistic criteria, which considers that the route of entrance of the information becomes through the eye, ear and body, from which we have the visual representation, auditory and kinaesthetic systems. If, for example, after an excursion we asked a group of students to describe some of the places that they had visited, probably each one of them would describe different things, because each one of them would have paid attention to different things. We do not remember everything that happens, but just part of it.

Each representational system has its own characteristics and rules of operation. To use a system over the others implies that there are systems that are used less often and, therefore, that different representational systems will have different degrees of development. The one that we use more often is important for two reasons: firstly, because the representational systems are developed more and more if we use them and secondly, because the representational systems are not neutral since each one has its own characteristics

Applied to the classroom, that means that, after receiving the same explanation, all the students will not remember the same. For some students it will be easier to remember the explanations that were written on the blackboard, whereas for others the words of the teacher will be better remembered and, in a third group, we would have students who will remember the impression that this class caused them. It is statistically impossible that a teacher has dedicated the same time explaining the same topic in each one of the different representational systems, but we must try to use a great representation of the different representational systems when we explain something.

As for the visual input is concerned, the visual system is the part of the central nervous system which allows organisms to see. It interprets the information from visible light to build a representation of the world surrounding the body. The visual system accomplishes a number of complex tasks, including the reception of light, and the formation of monocular representations; the construction of a binocular perception from a pair of two dimensional projections; the identification and categorization of visual objects; assessing distances to and between objects; and guiding body movements to visual objects. The psychological manifestation of visual information is known as visual perception.

Light enters the eyes through the cornea and is focused by the lens. The muscles in the eye change the shape of the lens in order to focus on different objects. The light is flipped upside down and inverted as it is passed through the

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lens and strikes the retina. Specialized cells known as cones and rods are what the light reaches first. Cones are activated by color, while rods are activated by black and white. Our number of rods outnumber the cones by approximately 20:1. Most of the cones are concentrated in a curved part of the retina called the fovea. Most of the rods are around the outside of the retina, and this is why we have difficulty determining color when using peripheral vision.

Once the rods or cones have been activated, they activate the bipolar cells, which activate the ganglion cells, which make up the optic nerve. From there the image is sent to the brain. The images from the left side of each retina go to the left hemisphere and vice versa. At this point, there are only theories as to what happens as science has yet to produce significant evidence of what exactly happens.

Another input of information is the auditory system. The auditory association area is located within the temporal lobe of the brain, in an area called the Wernicke's area. This area, near the lateral cerebral sulcus, is an important region for the processing of acoustic signals so that they can be distinguished as speech, music, or noise.

Hearing is a sense that detects vibrations in a medium such as air or water. Sound waves are collected in the outer year and travel down the auditory canal until they reach the tympanic membrane. This membrane is vibrated by the sound energy and transfers the energy to a series of bones. The order of the bones is malleus, incus, and stapes, followed by a membrane known as the oval window, which transfers the energy to the cochlea. The cochlea is a structure filled with fluid that absorbs the energy and causes tiny hairs to move. The hairs are connected to the organ of corti, which is made up of neurons that are activated by the hair cells. The neurons transmit the energy to the brain via the auditory nerve.

Last but not least, the kinesthetic sense gives us information about the position of certain body parts. There are specialized receptors in muscles and joints that report the position of our limbs.

Proprioception, the kinesthetic sense, provides the parietal cortex of the brain with information on the relative positions of the parts of the body. Neurologists test this sense by telling patients to close their eyes and touch the tip of a finger to their nose. Assuming proper proprioceptive function, at no time will the person lose awareness of where the hand actually is, even though it is not being detected by any of the other senses. Proprioception and touch are related in subtle ways, and their impairment results in surprising and deep deficits in perception and action.

1.1.1. Visual system

When we thought about images, for example, when we visualized in our mind the page of the text book with the information that we needed, we can bring to the mind much information simultaneously. For that reason, the people who use the system of visual representation have more facility to absorb

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great amounts of information quickly. To visualize also helps us to establish relations between different ideas and concepts. When a student has problems to relate concepts he may be processing information through an auditory or kinaesthetic form. Using visual representation helps us to establish relations between different ideas and concepts, and also to abstract us. They store information in any order and quickly. Their behaviour is characterized by their high organization, tranquillity and observation. The capacity of abstraction and the capacity to plan directly are connected to the visual system. Those two characteristics would explain that the great majority of the university students and, consequently also teachers are visual.

Figure 1.: Students from Escoles Betlem working with visual activities

1.1.2. Auditory system

When we use our auditory representation, we do it in a sequential and ordered way. The auditory student needs to listen step by step. The students who memorize in an auditory way cannot forget the word order, because they do not know how to follow. The auditory system does not allow relating concepts or to elaborate abstract concepts with the same facility as the visual system and it is not so fast. It is, nevertheless, fundamental in the learning of the languages, and naturally, in the learning of music. The auditory students learn better when they receive the explanations orally and when they can speak and explain that information to another person.

Figure 2.: Students from Escoles Betlem working with auditory activities

The auditory system of representation remembers the information in an ordered way. They store the information using a sequential way, reason why an isolated or disordered question, means a great difficulty for them. The auditory students prefer oral explanations and examinations. Their behaviour is characterized by the language facility and capacity to express their emotions verbally.

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1.1.3. Kinaesthetic system

When we process the information associating it to our sensations and movements, that is to say, to our body, we are using the kinaesthetic system of representation. We use this system, naturally, when we learn a sport, but also for many other activities. The kinaesthetic students learn when they make things like, for example, experiments of laboratory or projects. The kinaesthetic student needs to move. When they often study, they take a walk or they balance themselves to satisfy that necessity of movement. In the classroom they will look for any excuse to rise and move. The kinaesthetic learning is also deep: once we know something with our body, since we have learned it with the muscular memory, it is very difficult to be forgotten. The students who use the kinaesthetic system preferably need, therefore, more time than the others. That slowness does not have anything to do with the lack of intelligence, but with its different way of learning.

Figure 3: Students from Escoles Betlem working with kinaesthetic activities

1.2. LEARNING STYLES

Different parts of the cerebral cortex are involved in different cognitive and behavioral functions. Linear reasoning functions of language such as grammar and word production are often lateralized to the left hemisphere of the brain. In contrast, holistic reasoning functions of language such as intonation and emphasis are often lateralized to the right hemisphere of the brain. Other integrative functions such as intuitive or heuristic arithmetic, binaural sound localization, emotions, etc. seem to be more bilaterally controlled

In human beings, it is the left hemisphere that usually contains the specialized language areas. The two hemispheres are thought to contribute to the processing and understanding of language: the left hemisphere processes the linguistic meaning of prosody, while the right hemisphere processes the emotions conveyed by prosody.

The first language area within the left hemisphere to be discovered is called Broca's Area, after Paul Broca. The Broca's area doesn't just handle getting language out in a motor sense, though. It seems to be more generally involved in the ability to deal with grammar itself, at least the more complex aspects of grammar.

The second language area to be discovered is called Wernicke's Area, after Carl Wernicke, a German neurologist. The problem of not understanding the speech of others is known as Wernicke's Aphasia. Wernicke's is not just about

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speech comprehension. People with Wernicke's Aphasia also have difficulty naming things, often responding with words that sound similar, or the names of related things, as if they are having a very hard time with their mental "dictionaries."

Honey and Mumford postulate that the learning styles are four, and that respond to the four phases of a cyclical process of learning similar to the cycle of learning proposed by Kolb; activists, theorists, reflectors and pragmatists.

Due to the relevance of these theories, other investigations have been carried out with some connection to the CHAEA questionnaire. Among these studies, we find that on learning styles in nursing students, carried out by a group of investigators belonging to Escuela Universitaria de Enfermería La Paz (Universidad Autónoma de Madrid) in 2004: Mª del Coro Canalejas Pérez, Mª Luisa Martínez Martín, Mª Cristina Pineda Ginés, Manuel Luis Vera Cortés, Marina Soto González, Ángela Martín Marino, Mª Luisa Cid Galán. An observational, exploratory and cross-sectional study was performed in the Nursing School of La Paz, during the academic year 2002-2003, in a sample comprising 180 students. The variables selected were: learning style, academic year, form of access to nursing studies and previous work experience. The instrument used was the Honey-Alonso (CHAEA) learning style questionnaire. Data analysis was based on the contrasting of the differences between the scores in the four learning styles, through the ANOVA test and the Kruskal-Wallis test. They tried to identify the prevalent learning style among nursing students at their teaching institution, as a starting point for an analysis of the current learning-teaching process. Statistically significant differences were found in the reflexive and theoretic learning styles, and no significant differences were found for the active and pragmatic learning styles, according to the students' academic year.

Just a year later, in 2005, Ana María von Chrismar Parejo worked on the study of the learning styles of the Austral University of Chile students, through the application of the styles of learning questionnaire (CHAEA), validated by Honey and Alonso. The CHAEA questionnaire was applied to 156 students of UACh, with two different application formats, electronic and in paper forms, and both agreed with a correlation of 0,9251. A study of the particular behavior of the studied population was made, and tables of interpretation were developed in order to fit to our reality, with the purpose of being able to establish specific differences of students corresponding to five different majors. Medical technology students displayed similar disposition for all of the styles. The biochemistry and the chemistry and pharmacy students, both with similar profiles, demonstrated a smaller development of the pragmatic style. The veterinary medicine students characterized by a low preference for the reflective style; and the business students were different from the other majors by a high prevalence of active and pragmatic students. In order to complete the learning cycle, a didactic unit on learning styles was developed, so the interested students can research further about this subject.

Another investigation was carried out in 2007 by Francisco Javier Báez Hernández, Julia Hernández Álvarez and Jorge Eduardo Pérez Toriz about the

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Learning Styles among nursing students in Puebla, México. Their objective was to identify the learning style that predominates among second four-month period undergraduate nursing students at the Benemérita Universidad Autónoma Nursing School in Puebla (México) and guide curriculum change. To do so, they designed an observational, transverse, descriptive study of 101 undergraduate nursing students, using the Honey- Alonso learning style questionnaire and a document with general data prepared by the researchers. They reached the conclusion that the reflective learning style scored the highest among the nursing students. It is recommended the sample be expanded to include the entire population, and the instrument be applied to teachers for the purpose of a correlation analysis.

In the same year, Iván Claudio Suazo Galdames, from Universidad de Talca (Chile) worked on the Learning Styles and its correlation from academic performance on human normal anatomy. The intention of this work was to determine the existing correlation between the styles of learning and the academic performance obtained by the students in the Normal Human Anatomy course. To a sample of 82 students of Talca's University that they dealt normal anatomy the year 2003 there was applied the questionnaire of styles of Honey-Alonso's learning (CHAEA). The values obtained from the questionnaire were correlated by the yields obtained by these students in normal anatomy. The styles of learning were distributed in a uniform way for four described styles, significant relations not being obtained between these and the values of academic performance.

Francisco Camarero Suárez, Francisco Martín del Buey and Javier Herrero Diez, all from Universidad de Oviedo, analyzed in 2007 the styles and learning strategies in university students. This research analyzed the use of styles and learning strategies in different university specialties and its relationship with the course and the academic achievement. The investigation hypothesis is contrasted in function of its multivariate and H.A.E.A responded to the questionnaires CHAEA and A.C.R.A. The results point at significant differences in relation to a bigger employment of strategies on the part of the students of Humanities; a deeper study based on the search of relations among the contents in the last years of studies, and on students, with a better academic performance, the results show a smaller use of the active style of learning, and bigger use, as a whole, of metacognitive, social-affective (self-instructions) and self-controlled strategies that compose up the support scale to the process of learning.

1.2.1. Activist style

They are based on their experiences, they are open minded and they are easily excited in novel situations. They become conceited before the challenges of novel experiences and they become bored with long term activities. So activist students learn better with activities that present/display a challenge, of relative brevity and immediate result. We must try emotion, drama and crisis with them. To initiate the class they must be announced that a variety of activities will be made and what new things will be learned. We would have to avoid that these students adopt a passive role, to analyze or to process data. They are not to work singly. Proposed activities; to vary activities frequently, to compete in equipment, representations (dialogues, scenes...), directing to

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debates, to discover grammar, orthographic errors..., to make something new at least once per week, practice the initiation of conversations with strangers, fragment the day changing activities, to be forced to occupy the first plane, to solve problems, to take part actively, to be able to move of situation.

1.2.2. Reflectors style

They review and they meditate the experiences, observing them from different perspectives. They make one complete compilation and analysis of information on experiences. So Reflectors students learn better observing. They must think before acting. We must remind them continuously that they have all the time they need to make the task. It is important to remember that it bothers them to be the centre of an activity. Proposed activities; to grant time to review, to watch a film with scrutiny (to repeat scenes after analysing the vocabulary, grammar...), to practice the observation, to write a personal diary, to practice the revision after a class or event, to reunite information.

1.2.3. Theorist style

They analyse the problems in a logical way. They tend to be perfectionist and they order things in a rational scheme. They like to analyse and to synthesize using systematic hypotheses, principles, theories, models and thoughts. So Theorist students render to the maximum, the teacher must them try to face systems and concepts that present a challenge for them. The teacher will have to remember these students that they can ask with complete freedom about any doubt they might have. They will also like the teacher to remember them that the proposed activities serve to reach clear objectives. Proposed activities; to elaborate a notebook of schemes, to explain the theory or to summarize concepts for the rest of the class (at the beginning or end of a class, for example), to read and summarize something dense for 30 minutes daily, to practice the detection of incoherence in arguments, to analyse a complex situation (to consider other possible solutions, etc.), to summarize theories and to try to group them by similarities, to invent procedures to solve problems, to have the possibility of questioning, to feel intellectually pressed, to have to analyse a complete situation, to find ideas and complex concepts able to enrich them, to be with people of their same conceptual level.

1.2.4. Pragmatist style

They are experts proving ideas, theories and techniques to see if they work. Their philosophy is "If it is good, it will work". They discover the positive aspect of new ideas and look for applications. They are impatient during discussions that theorize. Pragmatist students learn better with useful activities, and they relate the theory to their immediate necessities, when they see the others do something. To these students it is necessary to explain them why something is studied, why it serves and how they put it into practice. The teacher must remember these students that they are studying something useful and that will be needed in their daily tasks. Proposed activities; to study structures, vocabulary, etc. related to the daily life, to verify the immediate validity of what was learned, to compile useful systems or techniques to make different tasks, to

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request aid to experts, to make concrete plans of action, to try with situations that require of these capacities, to learn how to make things with evident practical advantages, to have a model able to imitate.

2. GENERAL ANALYSIS OF EDITORIALS

Not only do students have their preferences and their style of learning. All teachers have their own style when giving class, and that style is also reflected when we use the different representational systems. Most of us tend to use a system more often than the others when we teach. In order to detect what our tendencies are, we need to analyze our way of teaching from the point of view of the NLP. Generally, in all the groups of students we will find different types of learning styles. If our teaching style is the same as that of our students, learning will be easier for them than if is not the same one, and with a book using all the different styles we will be benefiting all our students.

In order to see if the books of English as a second language benefit all our students, we analyzed the best-seller book, from the same level, of the five most sold editorials in Barcelona (Spain):

- o Happy Street 2 (Primary 2nd cycle): Oxford University Press

- o Primary colours 2 (Primary 2nd cycle): Cambridge University Press
- o Fun English 3 (Primary 2nd cycle): Pearson Education Longman
- o Little Wizard 2 (Primary 2nd cycle): McMillan Heinemann
- o Happy Days 2 (Primary 2nd cycle): Richmond Publishing

We would classify each exercise according to both neurolinguistic representation and the learning style it would most benefit. That analysis would show which book is closer to be a Learning Generator as it would benefit to all our students.

This investigation was the doctoral thesis presented in the Facultad de Educación de la Universidad Nacional de Educación a Distancia (UNED), under the supervision of Dr. Domingo J. Gallego in 2008.

So, the methodology of the main editorials in English teaching text books would be analysed (in general and by units) as the main goal of this investigation was to see what percentage of quantitative representation the analysed editorials have in the different learning styles corresponding to the theories of the Neurolinguistic Programming and the Learning Styles of Honey and Mumford.

After having analysed these book, we would create some activities so as to deal with the deficiencies of the analysed text books (schemes, additional material for the teacher...), and verify if the modifications previously mentioned can be effective as far as the attainment of the objectives proposed by each book. In that way, we could be closer to a Learning Generator, as all our students would be learning, and not just a group of them.

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2.1. Analysis according to the Neuro-Linguistic Programming

Each editorial has common characteristics and differential characteristic. One of the main common characteristics that has been found after analysing different editorials belonging to the same level is the great numerical equality of exercises that benefit the different systems of neurolinguistic representations. The neurolinguistic representation in the editorials would be;
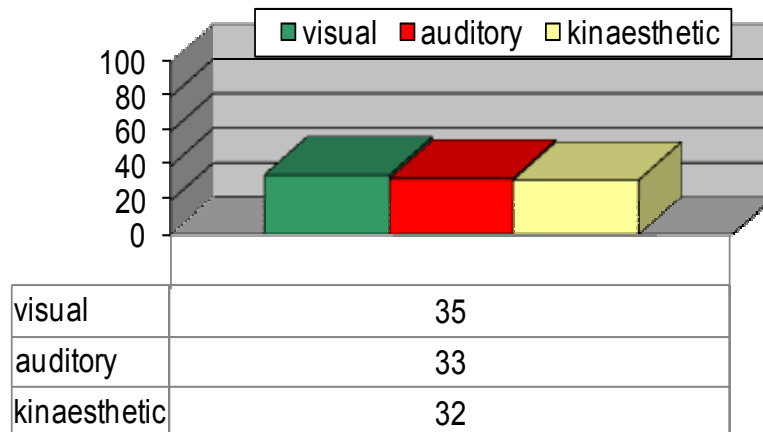

	visual ■ auditory □ kinaesthetic
visual	35
auditory	33
kinaesthetic	32

Table 1. General percentage of NLP in the editorials

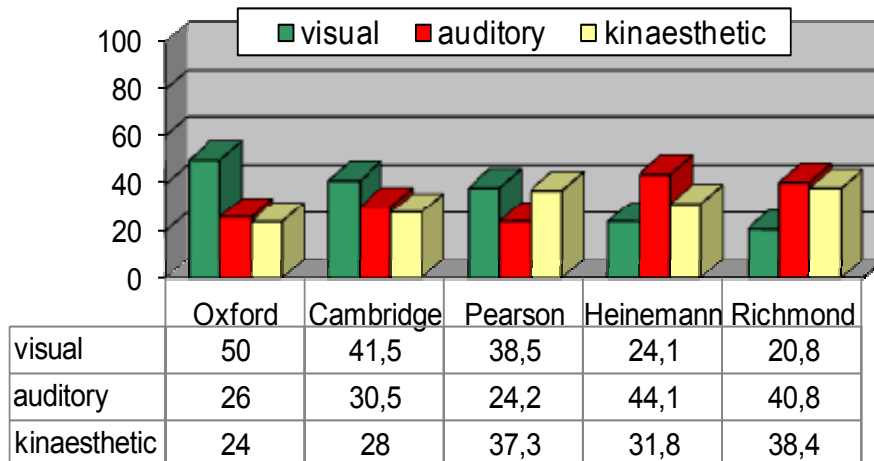|	Oxford	Cambridge	Pearson	Heinemann	Richmond
visual	50	41,5	38,5	24,1	20,8
auditory	26	30,5	24,2	44,1	40,8
kinaesthetic	24	28	37,3	31,8	38,4

Table 2. Percentage of NLP in the editorials

The Oxford publishing house turns out to be the one that benefits more the students with predominance in Visual style (50 %). Cambridge is second (41.5 %), Pearson occupies third (38.5 %), whereas Heinemann (24.1 %) and Richmond (20.8 %) includes a smaller representation of exercises that benefit this group of students. The Visual style is the one that has the greatest representation in three of five editorials, although not by much from the second predominant style, the Auditory style. The one with the greatest percentage is

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Heinemann (44.1 %), followed by Richmond (40.8 %) and Cambridge (30.5 %). Those that have a smaller percentage are Oxford (26 %) and Pearson (24.2 %). The Kinaesthetic style is the least represented in two of five editorials although not by a remarkable amount from the other representational systems, and varies between the greatest representation of Richmond (38.4 %) and the representations of Pearson (37.3 %), Heinemann (31.8 %), Cambridge (28 %) and Oxford (24 %). This analysis demonstrates that the books of the most sold and used editorials are near being learning generators. The percentage of visual children habitually is very superior to the auditory and Kinaesthetic children, for that reason many activities are prepared for these children.
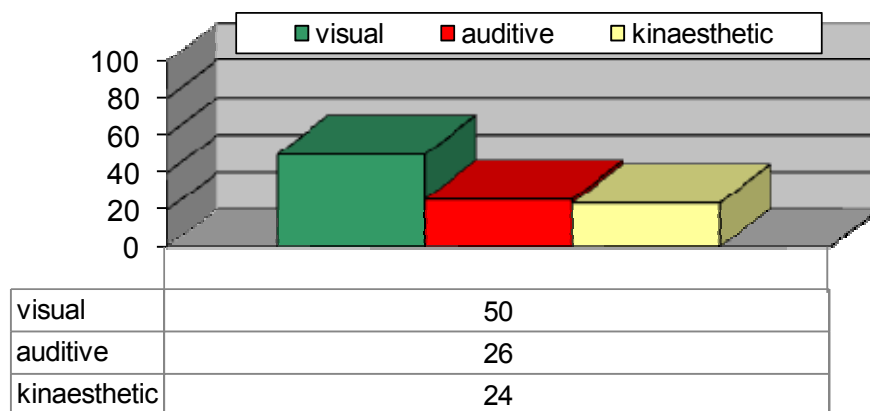
visual	50
auditive	26
kinaesthetic	24

Table 3. Percentage of NLP in Happy Street 2 Oxford

visual	41,5
auditive	30,5
kinaesthetic	28

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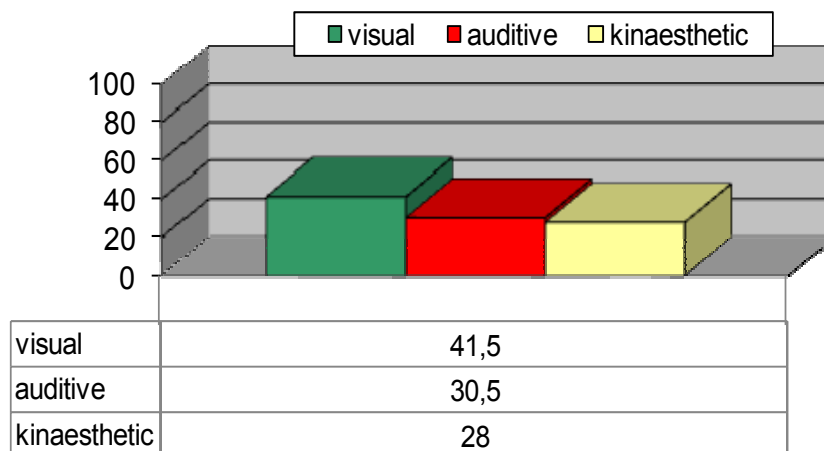
Table 4. Percentage of NLP in Primary Colours 2 Cambridge

visual	38,5
auditive	24,2
kinaesthetic	37,3
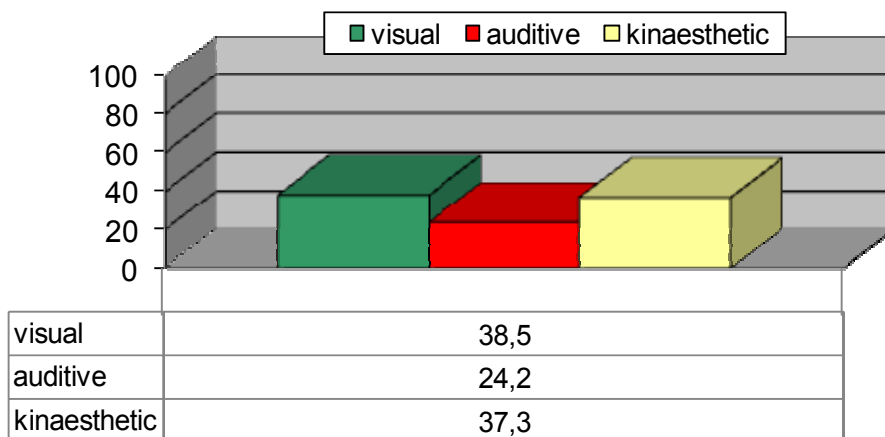
Table 5. Percentage of NLP in Fun English 3 Longman

visual	24,1
auditive	44,1
kinaesthetic	31,8
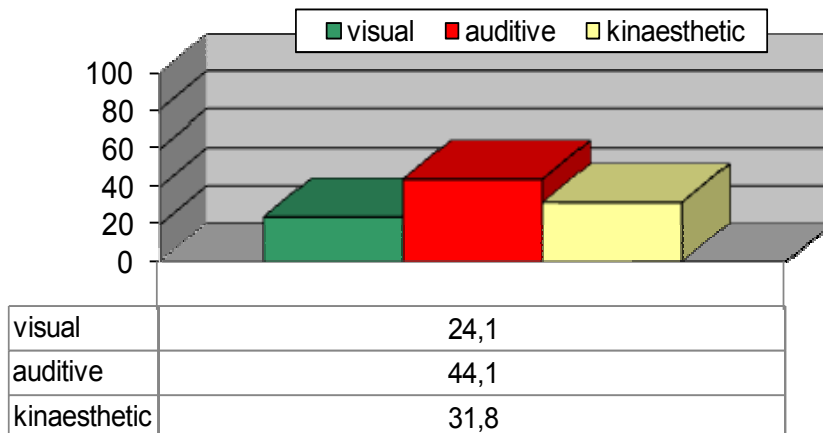
Table 6. Percentage of NLP in Little Wizard 2 Heinemann

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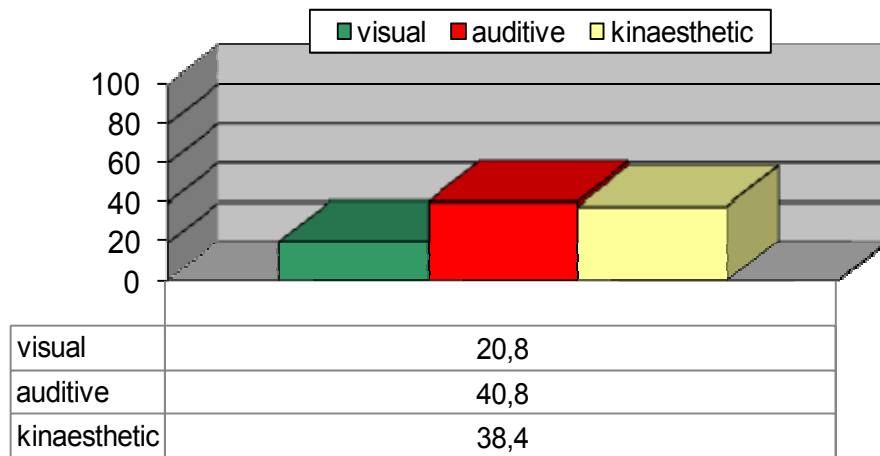| visual	20,8
auditive	40,8
kinaesthetic	38,4

Table 7. Percentage of NLP in Happy Days 2 Richmond

2.2. Analysis according to the Learning Styles

One of the main common characteristics after analysing different editorials on the same level is the great representation of exercises that a Learning Style has over other Styles. The average representation in percentages of the Learning Styles in the analysed editorials would be;
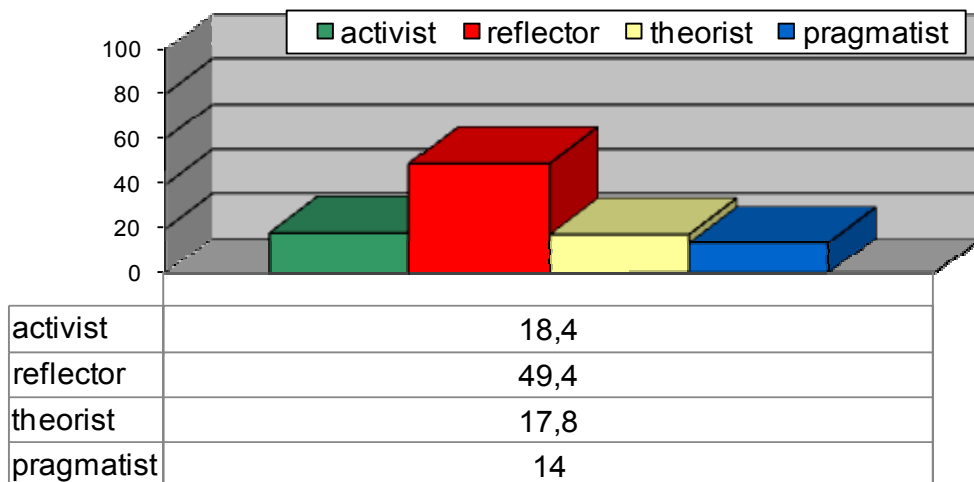

activist	18,4
reflector	49,4
theorist	17,8
pragmatist	14

Table 8. General percentage of Learning Styles in the editorials

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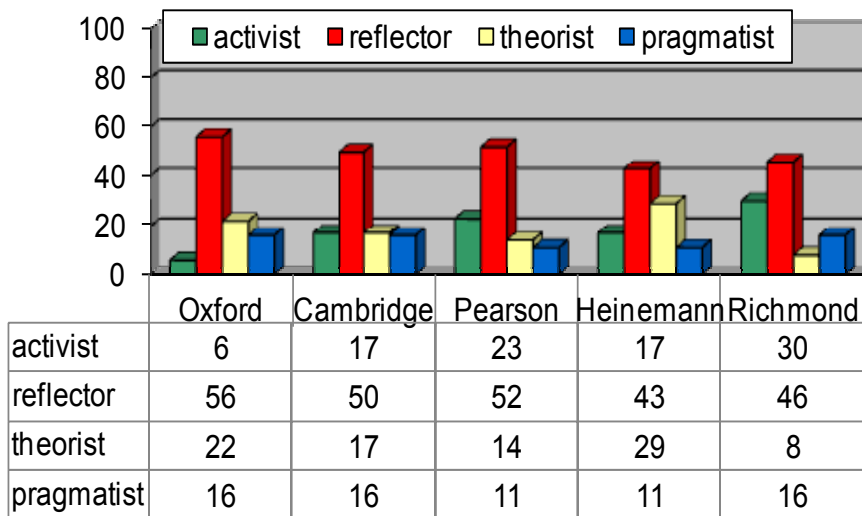|	Oxford	Cambridge	Pearson	Heinemann	Richmond
activist	6	17	23	17	30
reflector	56	50	52	43	46
theorist	22	17	14	29	8
pragmatist	16	16	11	11	16

Table 9. Percentage of Learning Styles in the editorials

The Reflector Style, with a representation of 49.4 %, is the Style which all editorials benefit to. This data is common in all the analysed editorials. The Activist Style occupies second position if we consider the average, with an 18,4 % representation, but it has only been the second more represented Style in three of the five editorials. The third most represented Style is the Theorist Style, with 17,8 %, that is also the second most represented Style in three of the five analysed editorials. The Pragmatist Style, with a representation of 14 %, has been the least represented Style in three of the five editorials, and it is, the Style with the smallest representation in general.

The Richmond publishing house turns out to be the one that most benefits the students with predominance in Activist Style (30 %). The Pearson publishing house is second (23 %) and Cambridge and Heinemann occupy third (17 %), whereas Oxford has the smallest representation of exercises that benefit this group of students.

The Reflector Style is the one that has the greatest representation in all the editorials, and with a clear advantage in percentage from the second predominant Style. The publishing houses with the highest percentage (56 %) are Oxford, and on the other hand, Heinemann is the one that has the lowest percentage (43 %). As it can be verified, the highest score and the lowest do not distant to a great extent. Heinemann is also the publishing house with the greatest percentage in representation of exercises with Theorist Style (29 %). Oxford occupies the second position (22 %). Cambridge (17 %) and Pearson (14 %) occupy the following positions and Richmond has the lowest percentage (7 %). The Pragmatist Style is the least represented style and varies between Pearson and Heinemann (11 %) and Oxford, Cambridge and Richmond (16 %).
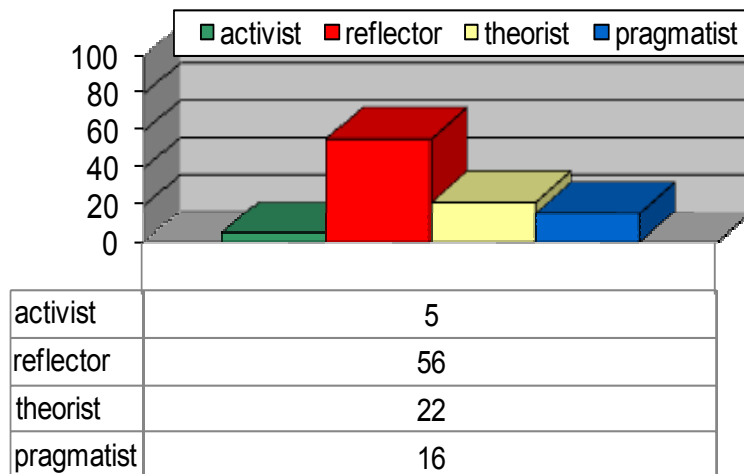
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	activist	reflector	theorist	pragmatist

activist	5
reflector	56
theorist	22
pragmatist	16

Table 10. Percentage of Learning Styles in Happy Street 2 Oxford

	activist	reflector	theorist	pragmatist

activist	17
reflector	50
theorist	17
pragmatist	16
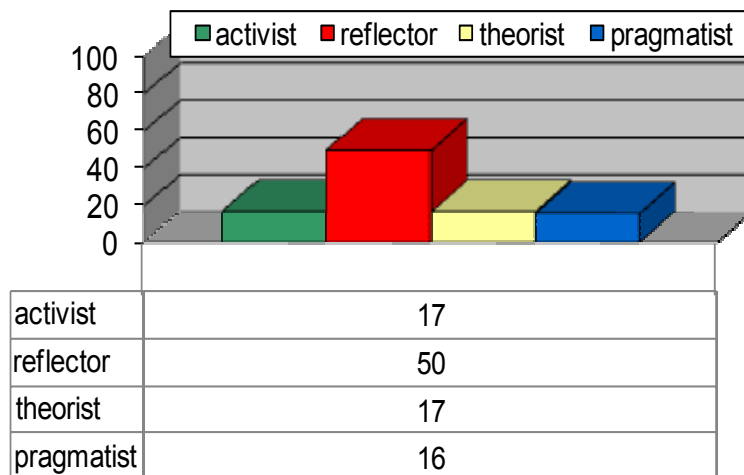
Table 11. Percentage of Learning Styles in Primary colours 2 Cambridge

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activist	23
reflector	52
theorist	14
pragmatist	11
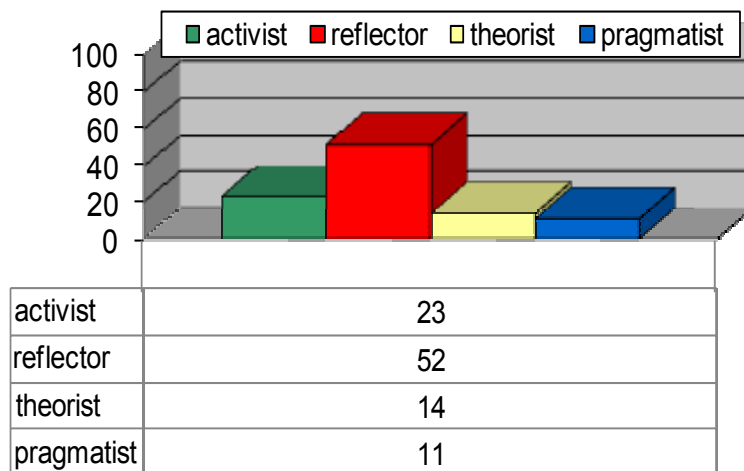
Table 12. Percentage of Learning Styles in Fun English 3 Longman

activist	17
reflector	43
theorist	29
pragmatist	11
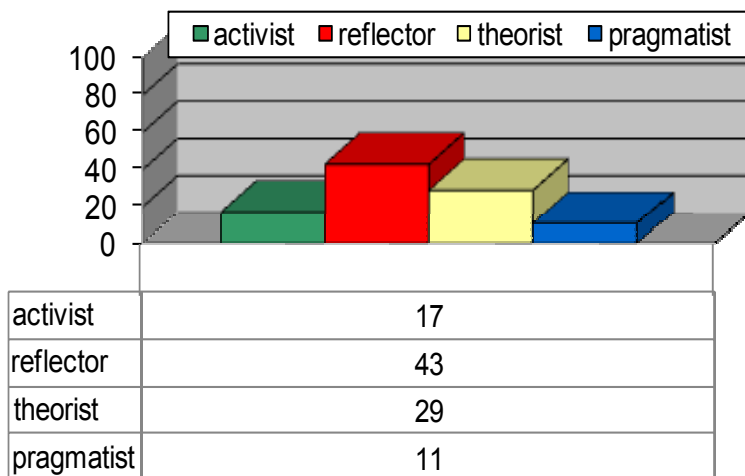
Table 13. Percentage of Learning Styles in Little Wizard 2 Heinemann

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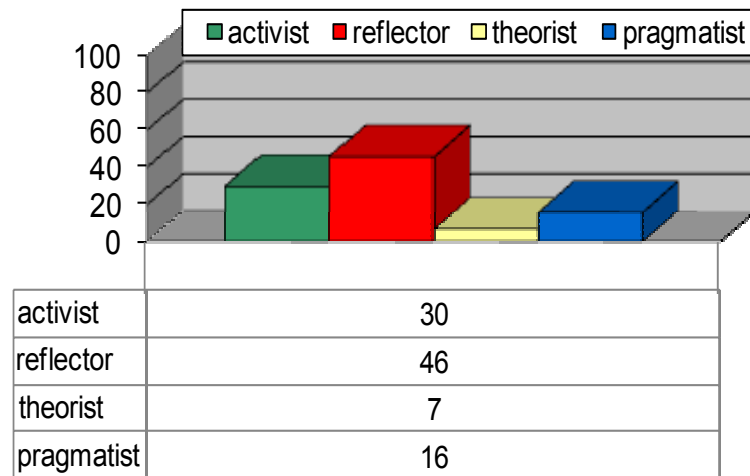| activist | 30 |
reflector	46
theorist	7
pragmatist	16

Table 14. Percentage of Learning Styles in Happy Days 2 Richmond

3.   THE IMPROVEMENT OF THE LEARNING STYLES

After analysing the main deficiencies, some activities were created so as to deal with the deficiencies of the analysed text books (schemes, additional material for the teacher...), and verified if the modifications previously mentioned were effective as far as the attainment of the objectives proposed by each book, using a control group to which these modifications were not applied to.

The students who participated in these activities were students of the same grade as the books analysed, that is to say 2nd of Primary, from Escoles Betlem. Escoles Betlem is a private school in Barcelona (Spain). That school was founded by Mª Pilar Martínez in 1967, and offers Primary and High School education, being one of the best schools in official English certificates.

In order to know their Learning Styles, they all did the Honey and Mumford's Learning Styles Questionnaire. That class had 24 students, half of those were assigned randomly to the control group and the other half assigned to a group where modifications were tested.

The results of the modifications were highly encouraging since the students with Learning Styles with smaller representation in text books obtained better results than those that did not do the activities, since they belonged to the control group. This demonstrated that the complementary activities that had been prepared to replace the deficiencies of books, adding exercises and activities that benefited students from no-Reflectors Learning Style were positive.

There seemed to be a connection between certain Learning Styles and certain linguistic aspects, seeming to have a relation between the oral abilities and the Activist and Pragmatist Styles, and between the written abilities with the

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Reflector and Theorist Styles, since they improved in a parallel way according to the linguistic area worked.

Those students that obtain worse academic results, perhaps by the format generally used in examinations are the students with Activist Style, those of Theorist Style, being the students with better academic results to whom the format of the examinations benefits, and the students of Reflectors Style, probably due to the insistence in text books to work this cognitive facet.

3.1. Grammar

A- For Activist students; to make questions, to solve to problems in small groups, to make representations, competitions so that they interact with other companions

B- For Theorist students; to face systems and concepts that present/display a challenge, grammar competitions, to remind them that the activities that they are doing serve to reach concrete goals, to elaborate a notebook of schemes and exercises, to explain the theory or to summarize concepts after the end of the class

C- For the improvement of the Pragmatist students; representations of dialogues that work on a concrete grammar structure

3.2. Speaking

A- For Activist students; activities that present/display a challenge, relative brevity and immediate result activities. We must try emotion, drama and crisis with them. Begin the class announcing that a variety of activities will be done and what new things will be learned. Paralleling, we should avoid these students adopting a passive role, so as to analyse and process data, not working alone. Proposed activities; to draw faces on their fingers so that they speak, the corner of humour, to create a time for humour, to compete in teams and scoring the results and having debates

B- Theorist students learn better if they are taught with general rules, so using posters with general indications makes it easier for them to have conversation activities

C- Pragmatist students learn better with useful activities and things they need in their daily tasks. Proposed activities; to study structures, vocabulary, etc. related to the daily life, to repeat phrases and structures after the teachers, to have a model to imitate, to mark real and daily situations on a map, to have role plays, to practice things with clear useful advantages

3.3. Reading comprehension

A- Activist students; Reading a second language can also be worked with activities that benefit the Activist students, as the following ones: treasure hunting, reading instructions so as to get a treasure or prize, the newspaper: to elaborate a newspaper with different articles written by groups of students

B- For the improvement of the reading comprehension for students with predominance in Theorist Style we could use the following activities; filling the

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blanks: to fill in the blanks in a text, cross out the extra word: words have been added to a text and the student must eliminate the extra words, alter texts: to change the order of paragraphs or words so that the student orders them correctly.

C- Pragmatist students; the activities for the reading comprehension in a second language for students of this Style are: treasure hunting; the students divided into groups have to find missing objects, or follow the instructions and the winning group is the one that obtains the object in less time, to make up a comic; after creating a comic strip and is corrected by the teacher, comics are distributed to other students so that they are read by their classmates and this activity also serves to work in the writing, to sail in the network; Internet offers a multitude of possibilities to work on reading comprehension in English.

3.4. Listening comprehension

A- So as the Activist students understand English we can use the following activities; to have debates, to practice the initiation of conversations with simulated strangers, to take part actively and to compete in equipment; the game of Bingo is an example: to adapt the classic game to the necessities of the class, that is to say, with numbers, objects, offices, foods, animals..., to use songs in the studied language to work the listening comprehension.

B- For the student with predominance in Theorist Style to improve their listening comprehension, the activities must allow them to analyse what is said, we should repeat it over and over, and even analyse it deeply... Taking this into account, to make activities with video is very appropriate; watching films, documentaries, ...

C- For the Pragmatist students we could prepare these activities; to study structures, vocabulary, etc. related to daily life, interviewing a native person: after the elaboration of questions, a student acts as a famous person, and we work on the vocabulary, the colloquial expressions...

3.5. Writing

A-For Activist students; to chat using Messenger.

B-For Theorist students; to translate subtitles: to watch a scene of a film in original version with subtitles in Spanish and translate it into the second language, working the vocabulary, the grammar... and verify the original version

C-For Pragmatist students; to write e-mails

4. LEARNING GENERATORS

Our students have a preference for certain learning styles, making obsolete the old system centred on the teacher and in order to make learning effective, each student requires of a style of education adapted to his own way of learning. It also has the additional problem that not all teachers have much knowledge of that variety and do not know the strategies to follow according to the theories of the Learning Styles.

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The importance of this investigation is to try to optimise the education and practice of a foreign language, increasing the level of knowledge of all the students using a Learning Generator or common text book for all the students of a definite English level, organizing it previously so that it teaches up to the maximum capacity of each student, considering their Learning Style and thus eliminating the teaching style of each teacher.

That concept of a Learning Generator could be explained in a very clear way as a mathematical function. The mathematical concept of function expresses dependence between two quantities, one of which is given, and is called the independent variable (X), and the other produced (Y), and this one is being called the dependent variable.

There are many ways to give a function and one is by a formula. The formula for this Learning Generator would be:

$$Y = f (X_1 + X_2)$$
Y=text book quality   X1=NLP   X2=Learning Styles

LEARNING GENERATE ➞ **LEARNING STYLES**

Figure   1:
Learning Generator function

5. CONCLUSIONS

In order to identify learning styles we must take into account the investigations made by David Kolb and Peter Honey. Both investigations are complementary and they help us to identify the different learning styles and to see the different ways of learning that each individual has.

Dr. Catalina Alonso maintains that "it is frequent that a teacher tends to teach as he would like to be taught, that is to say, he teaches as he would like to learn, he really teaches according to his own learning style". It is clear that we cannot choose our students and, consequently, the learning styles of our students, but we can choose a teaching method that benefits all our students.

In this investigation the methodology of the main editorials in English teaching text books has been analysed (in general and by units) in order to see what percentage of quantitative representation they have in the different learning styles corresponding to the theories of Honey and Mumford (Activist, Reflectors, Theorist and Pragmatist) and we have seen that books do not follow the theories of the Learning Styles.

The excessive representation of exercises that benefit the Learning Style with less students and the small representation of exercises which benefit the students with majority styles demonstrate that the text books follow a mistaken tendency. The higher representation of exercises that benefits the Reflectors Style demonstrates that all the editorials, without exception, follow the communicative or natural the method.

The editorials do not consider the different Learning Styles of the students, and they are centred in a method that will soon be obsolete because the academic results do not reflect good results.

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The use of a pedagogical approach and the elaboration of the learning programming of a second language must respond to several considerations. In a deductive presentation one begins with axioms, principles or rules. A great percentage of the class is deductive, probably being an elegant and efficient way of introducing what it is taught. Nevertheless, it is evident that to incorporate an inductive component in education promotes effective learning. Thus, inductive education has to have its place just like the deductive.

Connecting this to the education of second languages, we could say that, at the moment, the deductive method would be the classic one and the inductive one would correspond to the natural method, so fashionable nowadays. For this last one, to acquire a language means a gradual learning, obtaining the ability of communication without the necessity of using the rules that a teacher explains, which benefits the students with a predominant Reflector Style, since they are observers, compilers and assimilators.

Different to other subjects, the teaching of English as a second language is very poor in deductive techniques, which makes learning for students with predominant Theorist Style quite difficult. If we have to balance deduction and induction, the text books used in English language teaching follow the wrong methodology, since they benefit a single style, the Reflexive, making learning difficult for students with other Learning Styles. This happens because the editorials follow the natural method. Thus, we must conclude that this method does not benefit the great majority of students and, consequently, we should eradicate it, or, at least, modify it.

We can conclude with clear evidence that the editorials do not consider the different Learning Styles at the time of programming their books. On the one hand, they do not seem to consider the percentage of representation of the pupils pertaining to each Learning Style. But on the other hand, they seem to consider the present tendency in the methods of education of the foreign languages, since they are centred in natural and communicative methods, leaving aside, for example, grammar explanations that would benefit students with Theorist Style. Paradoxically, they do not turn out to be very communicative since they do not include a great variety of communicative exercises, which would benefit the students from Activist and Pragmatist Style. This must be because the text books are designed considering educative contexts where classes have a large number of students, which makes the accomplishment of these activities difficult.

It is obvious that the general implantation of the very fashionable natural or communicative method in the teaching of English does not give the corresponding results. Students who finish obligatory education do not end up with a level of English that allows good oral and written communication.

This investigation analysing the most widely used text books in the classrooms could discover the reason. Although it may seem excessive, this investigation exceeds expectations since the initial intention was only to see which editorial was better in quality, taking into account the diversity of learning styles, but this investigation has ended up finding the main failure of the tendency in education in second languages; the communicative method fails

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because it has an excessive representation of a single Style, which is the one of smallest representation among the students (Reflectors Style).

Now it is time for the editorials to pay greater attention to the theories on Learning Styles than to the present educative tendencies, as the communicative and natural methodologies in foreign languages do not benefit all the students. Text books act as a tool which generates learning, and if we improved them taking into account the different Learning Styles, we would be working with a real Learning Generator for all the students, without any exception at all. Can we imagine a learning system where all the students learned at their best? What degree of knowledge could those students end up reaching if this system were implanted in a generalized manner? It seems utopia, but it is an attainable utopia if we prepare text books that benefit all students. If we used a method which benefited all our students, we would be creating students who would learn with the maximum of their capacities and all society would benefit from that.

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