

## Views on learning in different cultures. Comparing patterns in China and Uruguay

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**Título:** Concepciones del aprendizaje en diferentes culturas. Comparación de pautas en China y Uruguay

**Resumen:** El trabajo presenta los hallazgos de un estudio comparativo acerca de las concepciones de aprendizaje entre estudiantes universitarios chinos y uruguayos. Los resultados fueron obtenidos a través del re-análisis de datos de entrevistas efectuadas en dos estudios independientes. El re-análisis comparativo fue llevado a cabo según el esquema general propuesto por Marton, Watkins y Tang (1995), en el cual las diferentes concepciones de aprendizaje fueron estructuradas a lo largo de dos dimensiones, es decir una dimensión temporal (adquisición / conocimiento / aplicación) y otra referida a la profundidad del aprendizaje (superficial y profundo).

Los resultados demuestran que tanto los estudiantes chinos como uruguayos enfatizan la fase de adquisición del aprendizaje y también comparten la visión de que el aprendizaje comienza siempre cuando se adquiere algo desde el exterior del individuo. En efecto, ninguno de los sujetos entrevistados explica cómo se desarrolla esa fase inicial del aprendizaje. Las perspectivas expresadas por los dos grupos aparecen como contradictorias en muchos casos, pero se vuelven complementarias una vez que son analizadas a la luz del esquema propuesto.

Los estudiantes chinos tienden a enfatizar los aspectos ligados al trabajo que deben realizar para aprender, en tanto que los uruguayos enfatizan la noción de incorporar el conocimiento dentro de ellos mismos. Los estudiantes chinos plantean el acto de llevar lo que han leído o escuchado a su memoria como un paso necesario hacia el aprendizaje, en tanto que sus colegas uruguayos no piensan que eso sea necesario, ya que el hecho de llevar las cosas a la memoria es considerado como un producto natural del aprendizaje.

Los estudiantes chinos enfatizan aspectos externos del comportamiento tales como la práctica repetida, en tanto que los uruguayos lo hacen en relación a actividades internas tales como la asimilación, incorporación o experiencias personales. Finalmente, los estudiantes chinos conciben dos tipos de memorización: mecánica y razonada. La última está relacionada con la comprensión, mientras que los uruguayos simplemente igualan la memorización con el aprendizaje memorístico y lo conciben como opuesto a la comprensión.

**Palabras clave:** Aprendizaje humano, psicología de la educación, estilos de aprendizaje, concepciones del aprendizaje, aprendizaje en diferentes culturas.

**Abstract:** This paper reports findings from a comparative study of conceptions of learning amongst Chinese and Uruguayan students. The results were obtained through re-analyzing the interview data of two independent studies. This comparative re-analysis was undertaken in line with the general framework proposed by Marton, Watkins and Tang (in press) in which different conceptions of learning are structured along two dimensions, i.e. a temporal dimension (acquiring-knowing-applying) and depth of learning (surface-deep).

The results showed that both Chinese and Uruguayan students emphasized the acquisition phase of learning and furthermore, they shared the view that learning was always initiated by obtained knowledge. However, almost none of the subjects explained how they went about the initial action of learning. The views expressed by the two groups appeared contradictory in many cases but turned out to be complementary once they were seen in terms of the aforesaid framework. The Chinese students tended to emphasize the on-going aspect of learning and Uruguayans the act of making the knowledge obtained permanent within themselves. The Chinese students singled out the act of committing what they have read or told to their memory as a necessary step in learning while the Uruguayan students didn't think such a conscious act was necessary because keeping things in the memory was regarded as a natural byproduct of learning. The Chinese students stressed outer behaviors such as repeated practice more and the Uruguayan students inner behaviors such as assimilating, incorporating and self-experiencing. Finally, the Chinese students saw memorization as being of two kinds: mechanical and meaningful, the latter being interrelated with understanding, while the Uruguayan students simply equated memorization with rote learning and saw it as opposite to understanding.

**Key words:** Human learning, psychology of education, learning styles, views of learning, cross-cultural learning.

### Background

Research on students' conceptions of learning goes back to the late 70ies and the early

80ies. Säljö (1979), van Rossum and Schenk (1984) and others reported that the differences in people's conceptions of learning

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could be captured by a limited number of categories. More recently Marton, Dall'Alba and Beaty (1993) described qualitatively different conceptions of learning found among British Open University students. Learning was seen by them as

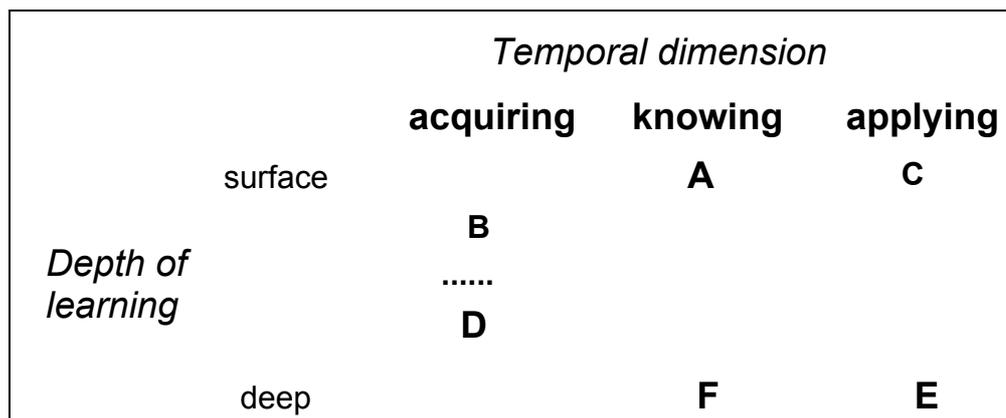
- A. ... as an increase in knowledge
- B. ... as memorizing and reproducing
- C. ... as applying
- D. ... as understanding
- E. ... as seeing something in a different way or as
- F. ... changing as a person.

However, when similar studies were carried out in non-European contexts, the findings only partially overlapped with the previous ones. By examining the data from various cultural contexts, two dimensions were identified. One is a temporal dimension and the second concerns the depth of learning. Along these two dimensions, a hypothesized field of different conceptions of learning was proposed by Marton, Watkins and Tang (in press). In terms of the temporal dimension, learning consists of three phases which are,

however, not discrete entities. These are phases of acquiring, knowing and applying.

Learning starts with taking in something from the outside, which is known as the phase of *acquiring*. Somehow a learner has to manage to keep the things acquired in their memory and this phase is called *knowing*. It is always tacitly assumed that the things acquired and kept in memory can be used later. This is the phase of *applying*.

The knowing phase lacks clear boundaries. In one sense, it can be regarded as the end point of the acquiring phase and at the same time, it can also be perceived as the beginning point of the applying phase. When people talk about learning, their conceptions can be described in terms of these three different reference points. In terms of depth of learning, people's conceptions can be depicted as shallow (surface), or having depth corresponding deep learning (See Figure 1). The previous six different conceptions represent positions in this field and the different conceptions of learning found in non-European contexts can be located in relation to these.



**Figure 1:** Two dimensional field of conceptions of learning

In this study, the two dimensional field of conceptions of learning was used as a frame of reference. We want to examine similarities and differences in views of learning and related phenomena in two culturally different

groups (Chinese and Uruguyan university students) as they were revealed in two separate studies.

## Method

### A study on Chinese conceptions of learning

This study by Wen & Marton (1993), is a replication of the study undertaken by Marton, Dall'Alba and Tse (1992). It was designed to find out whether the differences found by Marton et al. (1992) between Chinese teacher educators and Europeans exist among other Chinese people. 30 university students from two universities in Nanjing participated this study: 13 first-year, 9 second-year and 8 third-year students. Half of them were females and half of them males. Four majored in science, eight in English, five in law, six in pre-school education, six in school administration and one in political science. They all entered university directly from secondary schools except those majoring in pre-school education. The latter came to the university for in-service training for two years after having gained several years' working experience in kindergarten. They were aged between 18 and 27. Due to technical problems, two interviews were not recorded clearly and were not transcribed. Only 28 interviews were thus available for data analysis.

The subjects were first interviewed individually and each of them was asked to answer a series of questions in relation to the concept of learning, such as

1. When you were a child (in primary school or in middle school), did your parents or teachers ask you to recite poems (or Chinese texts or English texts)? Do you think such recitation is helpful for learning? How did you go about recitation?
2. What is understanding? When can you say you have a good understanding of a poem or an argumentary article?
3. What is the role of understanding and memorization in learning? Is there any relation between them?
4. What do you think learning is in general?
5. What is knowledge?

6. If you are asked to read a poem, when can you say that you have a good understanding of that poem?

7. If you are asked to read an article entitled "Is TV good for educating children?", when can you say that you have a good understanding of the article?

After answering the above interview questions, each subject was required to read the abridged text describing the conceptions of learning found among British open university students and to give comments in relation to two questions: (1) What do you think of their views of learning? (2) Do you agree with them or not, and why? This was intended to serve two purposes: (a) the text may be a good stimulus for triggering their deeper or wider thoughts about the concept of learning and (b) their responses to the text can be used for comparison purposes. The interview, combined with the reading commenting activity lasted 40 minutes on the average for each individual.

### A study of Uruguayan students' conceptions of learning

The Uruguayan study was designed to see the changes in conceptions of learning after six months' university study among first-year students' (see Nagle & Marton, 1993). 16 students participated. They all majored in pre-school education and were female. Two semi-structured interviews were carried out with each student: the first being at the end of the third week of classes and the second six months later. The same set of questions were asked during the two interviews. The most important questions were the following:

1. Tell me something that you have learned.
2. What do you think learning is?
3. What do you think understanding is?
4. What is the difference between understanding and learning?
5. What do you think memorizing is?
6. What is the difference between understanding and memorizing?

7. When can you say that you have known a topic?

The interviews were conducted in the subject's mother tongue. The transcripts were translated into English.

### Comparative analysis of the studies

As mentioned above, these two studies were not designed for the exactly same purpose. Moreover, there were some obvious differences between the groups participating. First of all, the subjects in the Chinese study were more heterogeneous than the subjects in the Uruguayan study in terms of their length of university education, their majors and sexes. Furthermore, the findings obtained in the Chinese study were similar to those found in the previous studies on conceptions of learning in the Chinese context. With respect to the Uruguayan study, we are not certain whether the subjects' views represent those of other Uruguayan people.

Despite the above differences, the two studies shared a common set of questions about learning and the subjects involved were all university students. Therefore, we felt that they could be compared at the exploratory phase of a cross-cultural study. The preliminary findings are illuminating and insightful for further research on this topic providing the limitations of the study are kept in mind when reading the results.

In this comparative study, our data-analysis focused on the responses given by the two groups of subjects to a similar set of questions asked in a similar manner. Specifically this started with an examination of the subjects' spontaneous responses to the question "What do you think learning is in general?" followed by a close look at their answers to the questions concerning memorization, understanding and the relation between them in an attempt to find out their conceptions of learning and related phenomena. Similarities and differences were described in terms of the temporal and depth dimensions.

Along the temporal dimension, we concentrated on the different sequences of learning actions within the acquiring phase. Along the depth dimension we compared two sets of variations in relation to the quality of learning. We encountered two problems in our analysis. The first is that people with the same cultural background do not always share the same conception of a phenomenon. There was variation within the groups.

As a comparative study, our interest was obviously not in the variations within each group but in the prevailing views which were held by the majority of the subjects with the same cultural background. In other words, our analysis was made by comparing the prevalent views among the Chinese and Uruguayan university students. The second problem was that the original interviews were conducted in their mother tongues, i.e. Chinese and Spanish respectively. Therefore, the views expressed were affected by the different semantic divisions within the Chinese and Spanish languages. To overcome this problem, we tried to compare conceptions of phenomena related to learning rather than understandings of individual concepts. In this way, we expect the differences to turn out to be more reliable and meaningful.

## Results

By comparing their spontaneous answers to the questions concerning a set of learning-related concepts in terms of the temporal dimension, the two groups showed similarities as well as differences. The following sections will first describe similarities and then differences. The differences will be presented under three different subheadings: (1) Different end points; (2) Different sequences; (3) Different views about memorization.

### Similarities

Both groups of subjects perceived learning primarily in terms of the acquiring phase,

but with different emphases and concerns. In the case of the Chinese subjects, none of them spontaneously mentioned the second phase of learning, although two of them described it in their explanation of what understanding is, and only two out of the 28 included the applying phase in their definitions. One subject even explicitly indicated that application should not be regarded as a major aspect of learning:

Learning is a process in which a learner mainly takes in something. Applying what has been learned can be called learning but is certainly not the major aspect of learning. From my point of view, in learning, input should be more than output.“ (C2)

The reason why the Chinese subjects did not emphasize the phases of knowing and applying in their definition of learning became clear in their comments on the British Open University students' conceptions of learning. In their view, *knowing* was the natural outcome or the result of learning and *application* was the eventual purpose of learning. Some of them remarked in a broad sense learning should be regarded as different phases of a whole learning process. This implies that they spontaneously saw learning in a narrow sense.

In the Uruguayan group, all the students, except two who included the application phase, saw learning in terms of the acquiring phase. However, in many cases, it was seen as reaching the point of the knowing phase.

The two groups of subjects also seemed to hold similar views of the starting point of learning. Just as was the case in the studies carried out in the European context, both Chinese and Uruguayan students explicitly or implicitly expressed the view that learning was always initiated by getting something new from the outside. In the case of institutional learning, those are usually regarded as knowledge which is written in a book or transmitted by a teacher. The following quotes illustrate this point well:

Learning is accumulating knowledge. You understand what you have read from the books first and then store it in your brain.

This process of accumulation is called learning (C27)

Learning is to obtain from the outside the things you haven't known before, experiences, information, knowledge about social science, knowledge about natural science, all kinds of knowledge. (C9)

To extract knowledge from something, to know something, ...to learn from the outside. (U9)

Learning takes place when somebody tries to transmit to you something that you don't know. (U11)

The phrases "memorize what has been learned" and "understand what has been learned" which were frequently found in the Chinese interview scripts were evidence in further support of the claim that the Chinese students did think that there is an initial learning action taken before memorizing and understanding. Among the Uruguayan students, some equated understanding was such an initial action. The following quotes are good examples:

...as you understand, you're accepting what you are being told.. (U2)

Although they all -in one or another way- indicated that initial learning acts did exist, none of them explained those with reference to the process or mechanism of how they got the things into their heads.

The above findings rendered further evidence in support of the more universal claim that people think that the initial action of learning is to take something from the outside world into the learner's head and that this "internalization" then permits subsequent actions to be taken.

## Differences

### *Different ending points*

Although they shared the same view about the starting point of the acquiring phase, the Chinese and Uruguayan students did not have the same end point. The Chinese subjects tended to focus on on-going actions within the process of learning rather than on the product. In their views, "learning" simply means

means that a learner is involved in the process of learning. Their view was neutral with respect to the question of whether or not a learner actually succeeded in achieving what it was intended that they should learn. This prominent feature is well captured by the Chinese term *xue xi*, which corresponds to the English word learning. The first character (*xue*) simply refers to the initial actions of a learning act and the second character (*xi*) literally means practice or revision. Therefore, putting these two characters together obviously reflects the on-going actions in the acquiring phase of learning. The following quotes are good examples:

Suppose you are not able to do something. You have tried to learn it but failed. This is still called learning. (C17)

Learning is mainly to learn the things that we haven't known before. To consolidate what has been learned before is also called learning. (C6)

For example, students in class review what they have already learned. This kind of revision is also a kind of learning. (C16)

Therefore, we could say that the Chinese students kept the end point open. In contrast, the Uruguayan students tended to emphasize the end point of the acquiring phrase since they were very much concerned with the permanence of the acquired knowledge in their memory. Such a view was clearly expressed in the following quotes:

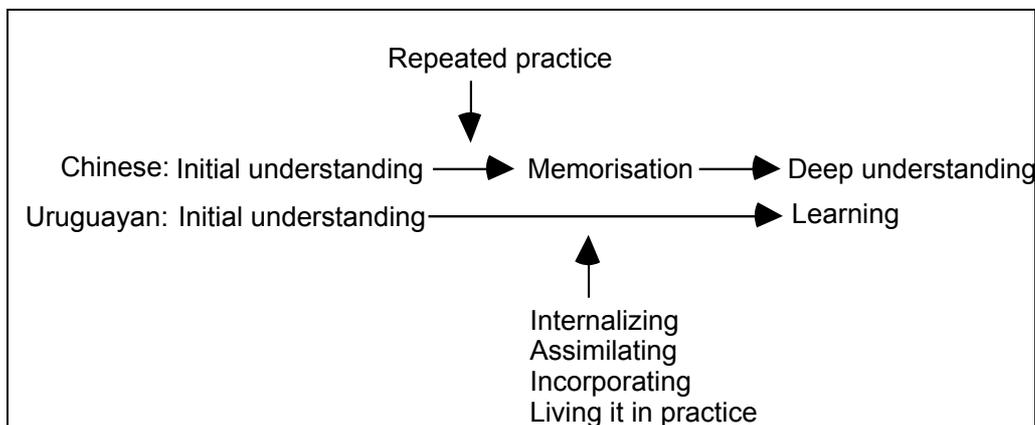
I think you have learned something when it remains in your mind. (U16)

To incorporate things that will remain in your mind for the rest of your life, things you won't forget and perhaps you don't know. (U4)

...learning takes place when you assimilate it, when it becomes a part of yourself. (U2)

#### *Different sequences*

The Chinese and Uruguayan students perceived the acquiring phase in a different sequence. Figure 2 describes such differences diagrammatically.



**Figure 2:** A comparison of Chinese and Uruguayan students' conceptual field of learning.

In the view of Chinese students, acquisition started with an initial phase which was often seen as a form of understanding, followed by memorization (trying to commit the things to memory). Such a sequence was particularly evident in the process of learning Chinese or a foreign language. 26 out of 28

subjects described their learning in such a sequence. The following quotes can serve as good examples:

Usually I recite the text after I have understood the meaning of the text. If the meaning is not clear to me, of course I will understand the meaning first. When I am trying to re-

member it, I like to divide the text into several parts and try to remember them part by part. Sometimes I try to remember it sentence by sentence and then try to recite the whole text together. (C3)

First of all, I read it through to understand its meaning and then try to remember it paragraph by paragraph. (C6)

To make things more complicated, they did not always see these two reference points in a simple linear fashion since they were regarded as intertwined. Therefore, sometimes the starting point could be reversed or these two points could not be clearly differentiated because they almost took place simultaneously.

...Understanding is a precondition for memorization. It is easy to memorize the things you have understood. However, even the things you have memorized mechanically can also be understood gradually. (C27)

Having a good understanding of a text can enable you to memorize it better. However, if you can memorize it, along with the scope of your knowledge being widened, you can perceive a problem from more perspectives. (C26)

Marton et al. (1992) reported that the descriptions of understanding amongst Chinese teacher educators usually showed that they experienced their understanding developing gradually rather than through a sudden shift, as was commonly found in a Swedish study (Helmstad, manuscript). Similar results were also found in this study. For example, one of the subjects perceived understanding as "digesting the food" (See Quote C15) and another one explicitly said that "a good understanding" needs a process (See Quote C28).

Food needs chewing and digesting. The role of understanding is just like digesting the food. (C15)

I think that obtaining a good understanding needs a process. A deep understanding cannot result from reading the text only once. Reading twice may enable you understand a little more (C28).

Twentyone out of the 28 subjects stated clearly that repeated reading could enable them to have a good understanding of the

text. The following quotes are the typical examples:

When I read the text first time, at the beginning I don't know what the text is about and can get a very rough general idea after the first. Then I read it again and try to figure out the meaning of the different parts and then connect them together, this time I feel I have a more understanding of the whole text. The more times I read the text, the deeper understanding I feel I have got. (C2)

I like to read the same text several times. Very often, the text has quite a few problems. You cannot solve all the problems the first time. For me, I read the text the first time rather fast to get the general idea and from the second time onwards, I read it carefully. Every time, I can solve some problems. So long as there is something I cannot understand, I read it again. (C26)

Similarly, the subjects' description of their activity of trying to remember was also marked by a strong temporal flavor. In the case of learning the Chinese and English languages, the common practice they reported was reading the same text many times after they have understood the meaning of the text (See the above quotes C27 and C26).

Fifteen out of the 16 Uruguayan students described their learning in two steps: understanding followed by learning. The following quotes were typical examples:

The first attempt is to understand and then to learn. When I study, If I don't understand what I'm reading I can't learn. I think understanding is a prior step to learning. (U5)

First of all the stage of understanding comes up and once you have understood something, you learn it because I may perfectly understand what you're telling me but there's a way to learning. First you understand and once you have understood something, you begin to learn it. First of all understanding takes place and then learning takes place.

A fundamental requirement in the case of the Uruguayan students, is that one determinate message transmitted in one class or read in one book, appears as the departure point essential for getting success in learning. Understanding from this point of view, is considered as an initial or superficial phase

where the person accepts the general structure of the new knowledges that appears to them.

The Uruguayan students, showed, however, a general need to grasp the logic and conceptual relations that exist in the knowledge transmitted. Understanding in this case is perceived as the initial phase of a process of obtaining depth and the incorporation of certain attitudes or knowledge's. Understanding is seen by the individual as an intellectual activity that requires an active reasoning component.

The surface understanding appears as an initial phase in which the person comprehends the general structure of the presented knowledge.

I: And what do you think it means to learn, the concept "to learn"?

U10: It's something you're taught or told and remains in your mind, because one thing is to understand what somebody is telling me but once they have told me I forget it. Another thing is to learn and it remains in your mind, it's useful for you, if you're asked you know what to answer, you're able to talk about what you were taught, you learned it.

I: And how would you compare learning with understanding?

U10: First of all the state of understanding comes up and once you have understood something, you learn it because I may perfectly understand what you're telling me but there's a way to learn, first you understand and once you have understood something, you begin to learn it. First of all the understanding takes place and then learning takes place.

We must take into account, however, that some students do reference an understanding with a deep character. They talk, on one hand, of a proximity between the learning and understanding and on the other hand, that when they have understood something they are able to talk about the topic in their own words.

U6: Because to learn you may learn by heart, you can learn to add and subtract and don't understand why or , can't explain. I don't know, it's different. To understand is when you're taught something and you're able to explain what you were taught, and some-

times you learn things but not an explanation. It happens many times in certain subjects such as mathematics, chemistry or physics, you don't have an explanation, however you're learning. Understanding would be prior to learning ... you may learn by heart but it wouldn't be the ideal, the ideal would be to understand and then to learn.

The general picture is that the Uruguayan students see understanding from two different and complementary perspectives, one initial and superficial and the other deep and general. Understanding in a deep way, means not only accepting the logical structure of the transmitted knowledge but also the capacity of being able to incorporate and reproduce this in an oral and written way.

In the Uruguayans students' descriptions of learning, they frequently used the terms assimilate, internalize, incorporate, and become a part of yourself and live it in practice. The following quotes provide examples:

...for me when you learn something you have it inside, you incorporate it in yourself and you have it as a part of yourself. (U14)

I think that learning is something you don't forget, it's like assimilating the subject and predicate, you tell me a sentence and I tell you which is the subject and predicate, I have it incorporated, I learned it...(U4)

It is clear that Uruguayan students saw the knowledge they have learned as a part of themselves. In this way, the learner's mental knowledge and his/her physical body seemed to be merged. To achieve this result, they assimilated knowledge and incorporated it into themselves. What is more, they also experienced it in their life.

The interesting thing was that none of the Uruguayan students explicitly indicated that they need to exert effort in committing the knowledge learned to their memory, although they were very much concerned with permanently keeping knowledge in their mind. From the interview data, it was clear that they maintained that something which has been learned would automatically be in their memory. The following quotes represented such views:

you don't need to memorize the things you have learned because they remain in your mind, I didn't need to memorize how to do my job. (U15)  
...as it is something that is incorporated within you, it comes up naturally. (U14)

#### *Different views about memorization*

The Chinese conceptions of memorization were sophisticated while the Uruguayan views were rather straight-forward. Almost all the Uruguayan subjects held that memorization was a sort of rote learning which did not require understanding. The following quotes were their typical answers to the question "What is memorizing?"

"To learn things by heart" (U9)

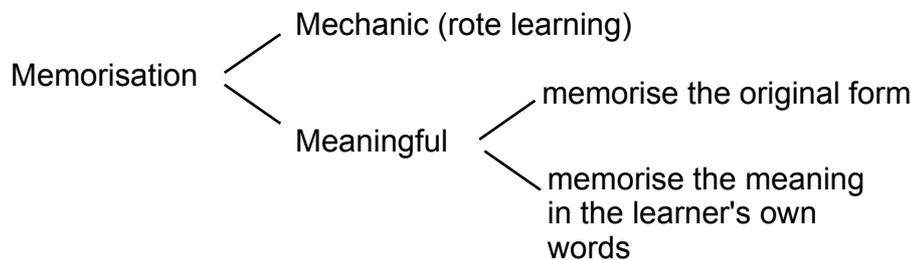
"To memorize is something like...to learn a lot, a lot about something, to repeat it and I think to repeat and repeat it without under-

standing it. You read a sentence, you forget a word in the middle and you can't go on." (U8)

"To learn things word by word, to repeat more or less what you're told... when you repeat, you're reading and reading, your mind doesn't work." (U11)

"Memorizing is something that has no influence on you, it's something in your mind, that you have read a hundred times and that's all. To understand is different, it has influence on you, you have to make an effort to understand it." (U1)

Chinese students, perceived two kinds of memorization: (1) rote learning, i.e. memorize the text word by word without understanding and (2) meaningful memorization which was seen as two subcategories: memorize the original form with understanding and remember the meaning in the learner's own words.



**Figure 3:** Chinese conceptions of memorization

Both Chinese and Uruguayan students described memorization without understanding as an inefficient way of learning. The following quotes can clearly illustrate this point:

It is difficult to memorize the things you don't understand. If you force yourself to do it, you may be able to retain it in your memory but it will quickly disappear. (C6)

If you memorize the things you don't understand, it would be a waste of time. That kind of memorization may not be totally impossible for people to memorize things. My point is that what has been memorized mechanically will be of no use (C24)

Suppose I am learning Law. I found it very hard to study. I learned everything by heart. I

understood it but I didn't study from the point of view of". Well, I'm going to read this and now I'm going to understand what it means". No, I memorized because what I wanted was to get rid of it, I was not interested in understanding it step by step, I wanted to study it to know it at that moment, to get rid of it and that's all. (U10)

Suppose when you reason something... I understand it and I study it...It's different from having a text and memorizing it without understanding it ... If you forget a sentence you fail...but if you tell it in your own words, you study the text, you tell it in your words, not the words of the text, it remains more in your mind. (U9)

## Discussion

The differences found in the Chinese and Uruguayan students' conceptions of learning seemed to be complementary to each other to a large extent. Let us briefly summarize their different views about learning. The Chinese students emphasized the on-going aspect of learning while the Uruguayan students emphasized permanently keeping the knowledge within themselves. Thus, one group emphasized the process and the other group the product. The Chinese students singled out the action of committing what they have read or been told into their memory as one step of learning while the Uruguayan students didn't think such a conscious action was necessary because this is a natural product of learning. In this sense, the Chinese students stressed

conscious memorization whilst the Uruguayan students stressed unconscious memorization. The Chinese students stressed outer behaviors such as the repeated practice required for a good understanding and memorization whilst the Uruguayan students stressed inner behaviors such as assimilating, incorporating and self-experiencing. Actually, learning requires both observable actions as well as inner thinking activities. Finally, the Chinese students saw two kinds of memorization; mechanical and meaningful; which they interrelated with understanding, whilst the Uruguayan students simply equated memorization with rote learning and saw it as the opposite to understanding. However, such a difference did not affect their common feelings against rote learning. We can summarize the differences in emphasis between the two groups of students in the following way:

Chinese students	Uruguayan students
process	product
conscious memorisation	unconscious memorisation
outer learning behaviors	inner learning behaviors
memorisation and understanding intertwined	memorisation understanding opposite to each other

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