



## Documentational approach to didactics The multilingual project

*Translating Issues Report, concerning both the translator and the reviewer*

*Language: Turkish*

*Translator: Burcu Nur Baştürk Şahin*

*Reviewer: Menekse Seden Tapan Broutin*

*Main source: English version*

*Date: May 2020*

1. In a few lines, could you describe the main issues that emerged when translating the DAD entry into Turkish? What were the issues emerging during your interactions with the reviewer?

1. The first issue we would like to mention is the difference of “mathematics education” in English and French “didactics” tradition. In Turkish, “matematik eğitimi” is used to refer “mathematics education” generally. But, we thought that “didactics” is a word that implicates both education and teaching. Then, we should use two words in Turkish “eğitim” and “öğretim” for “education” and “teaching”. First, we translated it as “Öğretim”, because the approach is about the teaching mostly. Then, we searched for the studies that left the English word but make it Turkish in a way, as “Didaktik” for a larger meaning. We decided to use the word “Didaktik” then.
2. The difference between “resource” and “re-source”. We used “kaynak” for “resource”. However, there is no such word to like “kay-nak” corresponding to “re-source”. So we just explained the meaning of “re-source” as “yeniden kaynaklık etmek”. And since it consists of three words, it become harder to organize the sentences.
3. “Operational invariant” was one of the challenging concepts. In the translation process we first use “işlemsel sabit” which is direct translation of operational invariant. Although operation= işlem in Turkish, the studies that referenced Vergnaud’s (1998) research used “işlevsel sabit” for “operational invariant”. So, it is decided to use “işlevsel sabit” for the concept.
4. The difference between “usage schemes” and “utilization schemes” used before in Turkish as “kullanım şeması” and “kullanma şeması”. Actually they have the same meaning, only used for emphasizing the difference. However in this study, we thought that there is no difference between the two concepts, so we used “kullanım şeması” for the two of the concepts.
5. The word “kaynak” is a homonym in Turkish, it both means “spring” and “resource”. In the paper it is obvious that the meaning is resource. But in Turkey when anyone use the word “kaynak”, teachers always think books in the first place. Because of this, we emphasized the definition of the concept that a resource is not only books.
6. As well as “document” equals to “doküman” in Turkish. And it refers to written papers originally, but it takes its meaning in the study itself. So we used the word “doküman” in this paper and emphasized the definition of it.
7. The concept “genesis” could translate as “yaratım” or “oluşum” in Turkish. But “yaratım” means mostly creation. But “oluşum” is something more naturally happening in the process. So we decided to use “oluşum” as “genesis”.
8. For the concepts “Instrumentation/ Instrumentalisation” there is no word in Turkish. That’s why, it remained as “Enstrümantasyon/ Enstrümantalizasyon” which is basically the pronunciation of the words.
9. The concept “situation” is translated into Turkish as “durum”. This word actually the direct translation and corresponds to the meaning of the word. But when we use it as “durumlar sınıfı” for “class of situations”, its meaning is a little bit fuzzy. It has its meaning according to the theoretical framework.
10. The difference between “abaci” and “abacus” was mentioned in Window 1. But there is only one word in Turkish which is “abaküs”. To emphasize the difference “sanal abaküs” is used

for “virtual abaci” and “somut abaküs” is used for “abacus”.

11. The expression “shadowed teacher” was a challenging expression for us to translate. Its translation is “gölgelendirilmiş” but this expression doesn’t make sense in the sentence. That’s why, we benefit from the French version of the paper to understand the word.
12. Finally, the translation is made from English version of the paper. But in the review process, we used the French version. When there is a difference between English and French versions, English version is taken into account. When we couldn’t understand the English expressions, we used the French version, then.

## References

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Tapan-Broutin, M. S. & İlkörücü, S. (2018). Different Types of Resources Used by Master Students Considering Their Thinking Styles. *Journal of Education and Training Studies*, 6(11), 11-20. <https://doi.org/10.11114/jets.v6i11a.3796>

2. For the following words / expressions (table below),

- Did you find easily an equivalent word in your language? In this case, could you give, in English, a definition of this equivalent word? (Case A)
- If you hesitated between different translations (or disagreed between translator and reviewer), which were the possible choices (each one associated with/related to which definition?), and what was the motivation of your final choice? (Case B)
- If it was impossible to find a relevant translation, what did you do (e.g. leaving the English name, or giving a complementary explanation in a footnote)? (Case C)

Word/expression	Difficult to translate yes/no	Translation retained (if any)	Definition (in English) of the word (case A) Definition of the different possible words, motivation for the final choice (case B) Motivation for an alternative solution (case C)
Resource	No	Kaynak	We use the same word "kaynak" for the two words "resource" and "source" in French. In the translation to designate "resource" we used "kaynak" and to designate "source" we used the word "köken" which means "racine".
Document	No	Doküman	
Genesis	No	Oluşum	
Scheme	No	Şema	Vergnaud's scheme concept was used as "şema" in previous studies. So it is used as well.
Operational invariant	Yes	İşlevsel sabit	The definition of the word and motivation of the final choice is explained above.
Instrumentation	Yes	Enstrümantasyon	The word remained as its original version. We just use its Turkish pronunciation.
Instrumentalisation	Yes	Enstrümantalizasyon	The word remained as its original version. We just use its Turkish pronunciation.
Resource system	No	Kaynak Sistemi	
Reflective investigation	No	Yansıtıcı İnceleme	
Didactics	Yes	Didaktik	We used "öğretim" first. Then decided to use "Didaktik" for a larger meaning.
Other?			

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3. Other issues that you would like to share