

Example 1: Petroleum/石油

Excerpt 1

- 1 T1 In Saudi Arabia underneath the sand, there's lot of this underneath the ground,
this is called.
- 2 Ss **Petroleum.**
- 3 T1 It's this stuff that comes out from underneath the ground ...
- 4 S9 Petroleum . . .
- 5 S8 **石油て言うですか?**
Do you call it 'sekiyu?' -petroleum-
- 6 T1 **Sekiyu**, that's, that's . . .
Oil, that's, that's . . .
- 7 S8 Rock . . . **rock energy.**
- 8 T1 Yes! There you are.
- 9 S9 **石油?**
Petroleum?
- 10 T2 **In Japanese, sekiyu, oil.**
- 11 S? **油 (abura)**
Oil.
- 12 S8 Oil? **Rock oil!**
- 13 T1 Yes, rock oil is petroleum . . . There you are. Rock oil is petroleum. When it
comes out of the ground it is changed to petrol. Which your mummy or daddy
can put in the car, or . . .
- 14 S9 Enginge?
- 15 S8 Gasoline!

Excerpt 2


- 1 T1 Good job saying in Japanese what you said before. Petroleum.
2 S8 **Petroleum?**
3 T1 What you said before, about rock oil.
4 S8 **Ah... 石油か?** Rock oil... petro, petroleum?
Ah, petroleum?
5 S9 ア、これ何?
Ah, what is this?
6 S8 ん?
Hmm?
7 S9 これ、何の量なの?
What is this amount?
8 S8 **石油.**
Petroleum.
9 S9 え? 石油の量?
Huh? Petroleum's amount?
10 S8 **先生, 結局 石油は なんでしたっけ? Mr. T1.** ←
T1, in the end, what is petroleum again?
11 T1 This is T1.
12 S8 This number is the picture here?
13 T1 Ah I didn't give you a clear explanation did you. This number is the amount.
14 S8 Amount
15 S9 **量.**
Amount.
16 T1 Petroleum.
17 S9 Petro, **petroleum, 何だけ?**
Petro, petroleum, what is it?

Excerpt 3

- 1 S5 **Petroleum は何だけ?** ←
What is petroleum?
2 T1 Uh, rock oil. Oil that comes out of the ground.
3 S5 **それもある?**
There's also that?
4 T1 If you imagine countries like Saudi Arabia.
5 S7 What is there? ((laughs))
6 T1 Under the sand, black liquid.
7 S5 **あ、石油?**
Ah, petroleum?
8 T1 That's it in Japanese, yeah.
9 S6 **石油は何?** ←
What is petroleum?
10 S7 **私もよく分かんない.**
I also don't really understand.
11 S5 **石油ストーブも.**
There's also petroleum heaters.
12 T1 Dead dinosaurs.
13 S7 Ah.
14 T1 Dead dinosaurs, and they, when their bodies turn into oil.
15 S7 **あ、そうなの? Dinosaur can be oil?**
Oh, is that so?
16 T1 Yes, after millions and millions of years, yes after an incredibly long time.

Example 2 公倍数 common multiples

Excerpt 4

- 1 S5: まだ慣れてないですけど塾で習った。
We haven't learned it yet, but I learned it at cram school.
- 2 T2: 塾で習った。
You learned it at cram school.
- 3 S5: えっと、3と4の**公倍数**。
Uh three and four's **common multiple**.
- 4 S2: **公倍数?**
Common multiple?
- 5 S8: 何だって?
What's that? 
- 6 S5: えっと、組み立て。
Um, putting together.
- 7 S11: 分かった、分かった！公倍数は、えっと
I understand, I understand! Common multiples is, uh
- 8 S2: **だから公倍数は何なの？**
So, what is common multiples?
- 9 S5: **3×4は12で、4×3は12だから、12×2と12×3でどんどんやっていけば、何個の位で合うかが分かる。**
Three times four is twelve, four times three is twelve, so twelve times two and, twelve times three, if you keep going, we know what place they can meet.
- 10 T2: 意味分かった？
Do you understand?
- 11 S1: **公倍数は何？**
What is common multiples?

Excerpt 5

- 1 S8: 簡単に言うと、**公倍数**は例えば今の3と4の公倍数って言われたら、3と4で例えば同じ答えになるのは 3×4 と 4×3 、次に答えが合うのは 4×6 と $4 \times \text{XXXX}$
To put it simply, if the **common multiple** is the **common multiple** of the current 3 and 4, for example, 3 and 4 give the same answer, 3×4 and 4×3 , and the next answer is 4×6 . And $4 \times \text{XXXX}$
- 2 S?: 確かに!
Certainly!
- 3 S3: ア!
Ah!
- 4 S8: えっと、答えが一緒になる時のその答えが公倍数。
Uh, when the answer becomes the same, that answer is common multiple.

Excerpt 6

- 1 S8: 書いてもいいですか? 次の15。
Is it okay to write? Next is fifteen.
- 2 T2: English, please.
- 3 S8: Three is fifty.
- 4 T2: Fifteen?
- 5 S8: English fifteen, English 18, English 21, English 24, and next, Japanese, 16, 20, 24 and 24 and 24 is same.

References

- Baker, C. (2011). *Foundations of bilingual education and bilingualism (5th Edition)*. Multilingual Matters.
- Baker, C., & Wright, W. E. (2017). *Foundations of bilingualism education and bilingualism*. Multilingual Matters.
- Cummins, J. (1979). Cognitive/academic language proficiency, linguistic interdependence the optimum age question and some other matters. *Working Papers on Bilingualism*, 19, 121-129.
- Cummins, J. (2021). Pedagogical translanguaging: theoretical, methodological and empirical perspectives. In P. Juvonen, & M. Källkvist, *Translanguaging: A critical analysis of theoretical claims*. (pp. 1-35). Multilingual Matters.
- Dalton-Puffer, C. (2013). A construct of cognitive discourse functions for conceptualising content-language integration in CLIL and multilingual education. *European Journal of Applied Linguistics*, 1(2), 216-253.
- Dalton-Puffer, C., Bauer-Marschallinger, S., Brückl-Mackey, K., Hofmann, V., Hopf, J., Kröss, L., & Lechner, L. (2018). Cognitive discourse functions in Austrian CLIL lessons: towards an empirical validation of the CDF Construct. *European Journal of Applied Linguistics*, 6(1), 5-29.
- Fegan, C. (2020). Positives and Negatives of Translanguaging Use in a CLIL Mathematics Classroom. *Sophia linguistica: working papers in linguistics*, (69), 101-120.
- Garcia, O., & Wei, L. (2014). *Translanguaging: Language, bilingualism and education*. Palgrave Macmillan.
- Gardner-Chloros, P. (2009). *Code-switching*. Cambridge University Press.
- Garza, E., & Arreguín-Anderson, M. G. (2018). Translanguaging: Developing scientific inquiry in a dual language classroom. *Bilingual Research Journal*, 41(2), 101-116.
- Gierlinger, E. (2015). 'You can speak German, sir': on the complexity of teachers' L1 use in CLIL. *Language and Education*, 29(4), 347-368.
- Grosjean, F. (2016). The complementarity principle and its impact on processing, acquisition, and dominance. In J. Treffers-Daller, & C. (. Silva-Corvalán, *Language dominance in bilinguals: Issues of measurement and operationalization* (pp. 66-84). Cambridge University Press.
- Herdina, P., & Jessner, U. (2002). *A dynamic model of multilingualism: Perspectives of change in psycholinguistics*. Multilingual Matters.
- Ikeda, M. (2013). Does CLIL work for Japanese secondary school students? Potential for the 'weak' version of CLIL. *International CLIL Research Journal*, 2(1), 31-43.
- Ikeda, M. (2019). CLIL in comparison with PPP: A revolution in ELT by competency-based language education. In H. Reinders, R. Hayo, & S. Nakamura, *Innovation in Language Teaching and Learning: The case of Japan* (pp. 23-45). Cham, Germany: Palgrave Learning.
- Isidro, X. S., & Lasagabaster, D. (2019). The impact of CLIL on pluriliteracy development and content learning in a rural multilingual setting: A longitudinal study. *Language Teaching Research*, Vol. 23(5), 584-602.
- Lasagabaster, D., & Doiz, A. (2017). A longitudinal study on the impact of CLIL on affective factors. *Applied Linguistics*, 38(5), 688-712.
- Lee, J. H., & Macaro, E. (. (2013). Investigating age in the use of L1 or English-only instruction: Vocabulary acquisition by Korean EFL learners. *The Modern Language Journal*, 97(4), 887-901.
- Lewis, G., Jones, B., & Baker, C. (2012). Translanguaging: Origins and development from school to street and beyond. *Educational Research and Evaluation*, 18(7), 641-654.
- Lin, A. M. (2015). Conceptualising the potential role of L1 in CLIL. *Language, Culture and Curriculum*, 28(1), 74-89.
- Lin, A. M. (2019). Theories of trans/languageing and trans-semiotizing: implications for content-based education classrooms. *International Journal of Bilingual Education and Bilingualism*, 22(1), 5-16.
- Lin, A. M., & He, P. (2017). Translanguaging as dynamic activity flows in CLIL classrooms. *Journal of Language, Identity & Education*, 16(4), 228-244.
- Lin, A. M., & Lo, Y. Y. (2017). Trans/languageing and the triadic dialogue in content and language integrated learning (CLIL) classrooms. *Language and Education*, 31(1), 26-45.
- Llinares, A., & Pastrana, A. (2013). CLIL students' communicative functions across activities and educational levels. *Journal of Pragmatics*, 59, 81-92.
- Llinares, A., Morton, T., & Whittaker, R. (2012). *The roles of language in CLIL*. Cambridge University Press.
- Mayo, M. D., & de los Angeles Hidalgo, M. (2017). L1 use among young EFL mainstream and CLIL learners in task-supported interaction. *System*, 67, 132-145.
- Meyer, O. (2010). Introducing the CLIL-pyramid: Key strategies and principles for quality CLIL planning and teaching. *Basic issues in EFL-Teaching and Learning*, 11-29.
- Meyer, O., Coyle, D., Halbach, A., Shuck, K., & Ting, T. (2015). A pluriliteracies approach to content and language integrated learning - mapping learner progressions in knowledge construction and meaning-making. *Language, Culture, and Curriculum*, 28(1), 41-57.
- Moore, P., & Nikula, T. (2016). Translanguaging in CLIL classrooms. In T. Nikula, E. Dafouz, P. Moore, & U. Smit, *Conceptualising integration in CLIL and multilingual education 101* (pp. 211-233). Multilingual Matters.
- Morton, T. (2020). Cognitive discourse functions: A bridge between content, literacy and language for teaching and assessment in CLIL. *CLIL Journal of Innovation and Research in Plurilingual and Pluricultural Education*, 3(1), 7-17.
- Nikula, T., & Moore, P. (2019). Exploring translanguaging in CLIL. *International Journal of Bilingual Education and Bilingualism*, 22(2), 237-249.
- Sakamoto, M. (2021). The missing C: addressing criticality in CLIL. *International Journal of Bilingual Education and Bilingualism*, 1-13.
- Sakamoto, M., & Saruhashi, J. (2018). Exploring concepts in translanguaging: An alternative view. *Sophia Linguistica* 67, 59-68.
- Suzuki, B. (2021, March 24). L1 knowledge for the construction of intersubjectivity. *The 4th CAN-Asia Symposium on L2 Interaction*. Online.
- Tsuchiya, K. (2019). CLIL and language education in Japan. In K. Tsuchiya, & M. D. Murillo, *Content and lanugage integrated learning in Spanish and Japanese contexts* (pp. 37-56). Palgrave Macmillan.
- Tsuchiya, K., & Murillo, M. D. (2019). *Content and language integrated learning in Spanish and Japanese contexts*. Palgrave Macmillan.
- Turner, A., & Lin, A. M. (2020). Translanguaging and named languages: Productive tension and desire. *International Journal of Bilingual Education and Bilingualism*, 23(4), 423-433.