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UNDERSTANDING COGNITIVE PROCESSES IN AN EFL ESSAY

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ABSTRACT

This research aims at finding out how cognitive processes are constructed by an English student writer as shown by her essay. It was done from February to May, 2022. The instrument used to collect the data was an essay written by the student. The data were analysed using Odell's theory (1977). It was found that the student has used all kinds of cognitive processes in her essay, that is, 61 for grammatical subjects, followed in successive order by contrast (20), classification (17), sequences (12), and change (4). The only cognitive process that she has never used in her writing was the phrase "for example" as an element of classification. Her cognitive processes in her essay varied, yet they had different qualities: some linguistic cues were perfectly used, but others were poorly constructed. In order to improve her cognitive processes, it is a good idea that the student focus her essay writing improvement on linguistic constructions in which she is still poor at and her teachers focus on her poor linguistic constructions as such when teaching her.

Keywords: Understanding, Cognitive Processes, EFL, and Essays

Writing in general, in English as a foreign language (EFL) in particular, is a thinking process that can be literally seen through any words used to build a sentence, through any sentences a paragraph, and any paragraphs a discourse. For an ideal piece of discourse, those words, sentences, and paragraphs have to be coherently and cohesively constructed. Such a coherent and cohesive construction is a reflection of a writer's real cognitive processes at work. In other words, an essay indeed reflects writers' cognition, namely, their knowledge of writing and their command of it (Cf. Lindzey *et al.*, 1975: 271). This is why cognitive processes in writing are generally linked to writers' thinking processes as have been done in the last few decades (see, for example, Clark & Harrelson, 2002; Refnita, 2005; Kristono, 2006; Kameo, 2007; Tans, 2007; Tans & Semiun, 2026; Sapitri, 2017; Kreutzer *et al.*, 2011; Cherry, 2020; Berchard *et al.*, 2021; Indeed, Editorial Team, 2021).

However, studies that focus on tertiary students' existing, non-developmental, cognitive processes in writing, as far as the writer knows, has not yet been available, particularly at the Undergraduate English Education Department of Nusa Cendana University, Kupang, Indonesia, a location for this study. This is why this study focuses on cognitive processes a tertiary student has experienced through as seen in her EFL essay written at a particular time along her processes to becoming a (student) writer. Its major question is how such cognitive processes are constructed by the student in her EFL essays.

Answering this question is crucial for the following reasons. First, it is believed that cognitive processes are crucial for students because their activities like dreaming or imagining their future, reading books, and doing

their assignments including writing itself are all cognitive processes or, at least, related to cognitive processes (Krch, 2011; Indeed Editorial Team, 2021). Understanding a student writer's cognitive processes as this study has done is, therefore, important because it will help not only her teachers/lecturers in effectively helping her to succeed, but also the student writer herself to improve her writing competence.

Secondly, English is an international language which is important not only as a global means of communication, but also in academic world in which most academic activities are carried out in. It is, therefore, crucial for teachers of English, that is, of EFL in the context of this writing, to understand their students' level of mastery of English so that they can help them master EFL more effectively, that is, they can be more competent in using it as a means of communication. At the same time, by doing this research on cognitive processes in EFL essay writing, the students themselves can then have a better introspection of their own mastery of English. Based on such a reflection, they can do their best to improve their English which, in turn, help them improve their understanding of any fields of studies they are interested in and their own communicative competence (Hymes, 1972). In this sense, this research is, therefore, worth doing.

Third, this research is also important in relation to what Cummins (1979) calls interlinguistic dependence for it would also help to improve student's mastery of Indonesian which, in turn, can help them to be good writers in both English and Indonesian as a sign of translanguaging in writing (Ofelia and Wei, 2014:26) or being biliterate itself (Tans, 2008). This is supported by Reyes who say that student writers in such a context develop biliteracy competence which is spontaneous (2001) for they usually rely on their dual language competence as they look for unique steps themselves to understand things that they concern with (Gort, 2006: 341).

Fourth, in relation to the third, answering the research problem would help Indonesia create more Indonesian intellectuals/writers that, in turn, contribute more positively for its better development through their published ideas. It is, therefore, crucial to really understand the research students' level of writing skills so that based on such an understanding their teachers/lecturers can then be more effective in helping the student writers improve their writing competence.

Finally, although this study has involved just one single student and, therefore, its findings cannot be necessarily generalized, but readers in general, EFL student writers in particular, can still learn from the research subject of this study about constructing cognitive processes conducive to being a better EFL writer. At the same time English teachers can also learn from this research subject about the best practices that they can apply to help their students along their process to learning and mastering the nature of writing in EFL.

Such help can start within the context of understanding students' cognitive processes which Krch (2011:1) defines as:

a series of cognitive operations carried out in the creation and manipulation of mental representations of information. Cognitive processes may include attention, perception, reasoning, emoting, learning, synthesizing, rearrangement and manipulation of stored information, memory storage, retrieval, and metacognition. These functions can be conscious (e.g. learning a concept) and unconscious (e.g. learning a skill) and can be internally generated (e.g. recalling a memory) or initiated by a novel sensory input from the environment (e.g. solving a problem).

In other words, those cognitive processes are related to cognitive learning which generally refers to "those aspects of learning associated with more complex aspects of behaviour" (Lindzey *et al.*, 1975: 205) including writing EFL essays in the context of this article.

In addition, *Indeed Editorial Team* (2021) assert, cognitive processes that make it possible for humans to create "cultures, societies, friends, and occupations, many important aspects of human life" are a number of chemical and electrical elements that happen in human brain which, in turn, helps human understand their surroundings and obtain knowledge. "Neurons", the Team add, "release chemicals that create electrical signals in nearby neurons, creating a mass of signals that are then translated into conscious and unconscious thoughts. Conscious interpretation of your five senses, procedural knowledge and emotional reactions are all examples of

cognition" (p.1). The *Indeed Editorial Team* add that cognitive processes as such consist of several types, namely: attention, thought, perception, memory, and language (p. 2).

Uses of cognitive process, according to the *Indeed Editorial Team* (2021), are in learning in which memory, thought and perception are used. By combining all those cognitive processes like reading, writing, listening, speaking and thinking about a language, learning can be far quicker and more information can be retained than any of those processes alone (p.2). In addition to learning, cognitive processes are also used in communicating, analysing, and deriving meaning, dreaming, driving cars, reading books, and doing homework as well as writing itself.

In writing, Odell (1977: 111-120) says, cognitive processes also occur. They can be analysed by looking at some linguistic cues that writers use in their essays, namely: (1) focusing; (2) contrasting; (3) classification; (4) change; (5) physical context, and, (6) sequences. Cognitive process of focus is shown by the use of "grammatical subjects" in each sentence. Cognitive process of contrasting can be seen in a student writer's use of connectors, comparative and superlative forms, negative forms, and negative affixes like "disagree." This lexicon includes nouns, verbs, adjective and adverb form of such words as contrast, paradox, distinction, difference and their meaning similarities. Classifying cognitive processes include syntax that uses a linking verb, uses of phrases like *for example*. It also includes the use of such words as "similar, resemble, and class" as noun, verb, adjective, and adverb or its synonyms. Linguistic cues concerning "change" cognitive processes are the uses of the word "change" as verb, noun, adjective and adverb or its synonym. It also includes the synonyms of such words as "become", "realize" or "become aware." In addition, using "began" or its synonym and "stop" or its synonym includes in "change" cognitive processes. Physical context is related to the use of nouns that refer to a geographical location, an object in a physical setting or "a sensory property of a physical setting". Sequence cognitive processes refer to time (past, present and future) and logic or cause-effect relationship.

Based on the research backgrounds and the cognitive processes theories described above, this research has been done with the following method. Its major aim is to find out kinds of cognitive processes EFL students use in their English essays.

Research Method

This is a descriptive-qualitative research aiming at describing a phenomenon (Borg & Gall, 1989: 285), namely, an EFL student's cognitive processes as shown in her EFL essay in the context of this article. In that sense, this article is included in discourse analysis (Titscher *et al.*, 2009), that is, analysing a student's cognitive processes in EFL writing which is an integral part of a classroom discourse (Green & Harker, 1988).

It was conducted from February to May, 2022. Its research subject was a semester IV undergraduate student of the English Education Department, Nusa Cendana University, who was joining a course on *Academic Writing* with the researcher during that period. The instrument used to collect the data was a writing text. The student, nicknamed Mera, was asked to write an essay on any topic at home which was supposed to be about 500 words long.

In order to make her writing more natural, the student had one week to write/rewrite her essay that she had to type; so, it was not hand-written. When writing/rewriting it, she was free to use any English dictionary or any structure books, and/or to discuss it with her peers, parents, siblings or anyone else. It turned out that she wrote an essay entitled "My motivation to be an English Education student." It consists of 527 words, 24 sentences, and five paragraphs.

It is the essay that the researcher analysed in this article using Odell's classic theory (1977), that is, finding out the student writer's cognitive processes based on the linguistic cues she has used in her essay. Such linguistic cues are related to focusing, contrasting, classifying, changing, physical context, and sequencing.

Findings and Discussions

In order to properly answer the problem stated above, this section is divided into six sub-sections showing the writer's cognitive processes in her writing, namely: (1) focusing; (2) contrasting; (3) classification; (4) change; (5) physical context; and, (6) sequences. These are described below.

Kinds of Cognitive Processes Used

Focusing

Mera's essay shows that there are 61 focuses she has used, i.e., grammatical subjects of each clause, indicating her cognitive processes. Those 61 focuses function as subjects of each clause (i.e. of simple sentences, complex sentences and/or a compound sentences).

Some of the grammatical words, which are underlined below, as her focusses can be seen in the following sentences 1-9:

- I have many dreams to achieve in this life (S. 1).
- One of them is to become a knowledgeable English teacher, but not just a teacher I also want to be a singer, and a musician (S.2).
- Since elementary school I liked English, since my sister used to sing English song, and I was always used to hearing them (S-3).
- I honestly love English, because it is so challenging, and it is different in pronunciation and writing, and so interesting that I have the motivation to be a qualified English teacher (S.4).
- In my opinion I can get this through the world of education (S.5).
- Education is an important activity to transfer knowledge to the wider community in order to realize the welfare of society (S.6).
- My parents were vegetarian farmers, where I could not continue my desire to be an English teacher, after I graduated I attend the SBMPTN program, and I received a scholarship to attend the University of Nusa Cendana (S.7).
- It was an unspeakable joy that I finally got to college, that I realized my dream (S.8).
- This scholarship has enabled me to feel a strong passion to boast about my parents and to hope for what I have dreamed of achieving (S.9).

Focusses of simple sentences can be seen in sentences 1, 5, and 6 above, whereas focusses of complex sentences can be seen in sentence 8 above and the following sentences 25 and 26:

S-25: If we never try, we will never know.

S-26: If you fail, try, try, and try again.

Focuses of compound sentences can be seen in sentence 2 above and the following S-24:

S-24: There may be some constraints in realizing our dreams or desires, but whatever they are, we must be brave to try and try.

Compound-complex sentences can be seen in sentences 3, 4, and 7 above and in the following sentence 20:

S-20: Many people are highly educated but arrogant, and there are some people who go to college so they don't be looked down on by other people, whatever it's all different people principles.

Contrasts

Linguistic cues for contrasts as suggested by Odell (1977) are as follows

- Connectors: but (S.2; S.11; S.15; S.19; S.20; S.24)
- Comparative and superlative forms: wider (S.6)
- Negative: not (S.2; S.7; S.11; S.15; S.19; S.20; S.21); no (S.15; S.21); never (S.25)
- Negative affixes: unspeakable (S.8)
- Lexicon (noun, verb, adjective, and adverb forms of such words as *contrast*, *paradox*, *distinction*, *difference* and their synonyms): different (S.4; S.20)

Classifications

Classifications with the following linguistic cues can be seen in the following elements:

- Syntax (linking verbs): S.2,4,6,7,8,10,11,12,14,18,19,20,21,22,23,24
- Use of phrases, for example etc.:
- Lexicon : noun, verb, adjective, and adverb forms of such words as *similar*, *resemble*, and *class* and their synonyms: all circles; various regions (S.19)

Changes

Linguistic cues for changes can be seen in the following sentences:

- Verb, noun, adjective, or adverb forms of the word *change* or a synonym for *change*: *grows* (S.23)
- Verb phrases which can be plausibly rewritten so as to include *become* (e.g. *realize-become aware*): to become; to be (S.2); to be (S.4); realise (S.6); realized (S.8); highly educated, but arrogant (S.20)
- Verb phrases which include *began* (or a synonym) or *stop* (or a synonym) plus a verbal: to continue (S.16); to apply (S.17)???

Physical Contexts

Linguistic cues are geographical location, an object in a physical setting, and a sensory property: English song; hearing them (S.3); UNIVERSITY OF NUSA CENDANA (S.7); human weapons (S.12); foreigners (S.18); in Indonesia (S.19); from being my heart (S.22).

Sequences

Time and logical sequence can be seen in the following sentences as indicated by its linguistic cues.

- Time (past, present, future): in this life (S.1); after (S.7)
- Logical sequence: cause-effect relationship, if .. then: since (S.3); because (S.4; S.11, S.22); so (S.10); therefore (S.19; S.21); if ... (S.23; S.25; S.26);

Conclusions

In conclusion, it is worth stating here that Mera has used all kinds of cognitive processes in her essay. Yet, the cognitive processes she has used most are grammatical subjects (namely 61) followed in successive order by contrast (20), classification (17), sequences (12), and change (4). The only cognitive process that she has never used in her writing is the phrase "for example" as an element of classification.

In that sense, Mera's cognitive processes when writing her essay are various, yet they have different qualities concerning how she has used such linguistic cues to express her cognitive processes. Some linguistic cues have been perfectly used as in the following example of grammatical subjects (focuses):

- I have many dreams to achieve in this life (S. 1).

- One of them is to become a knowledgeable English teacher, but not just a teacher I also want to be a singer, and a musician (S.2).
- Since elementary school I liked English, since my sister used to sing English song, and
- In my opinion I can get this through the world of education (S.5).
- Education is an important activity to transfer knowledge to the wider community in order to realize the welfare of society (S.6).
- It was an unspeakable joy that I finally got to college, that I realized my dream (S.8).
- This scholarship has enabled me to feel a strong passion to boast about my parents and to hope for what I have dreamed of achieving (S.9).

They are good because there is a perfect agreement between a subject and its predicate. This, in turn, makes her sentences are logical and, therefore, easy to understand.

Yet, in other cases, she has failed to use those linguistic cues well as in the following example:

- Learning English is not too much theory, but practice because the way we interact with people through practice (S.11).
- People of learning but no manners, they could not use his knowledge to create a good environment for the crowd (S.15).

In S.11, her dependent clause is without a verb. So, it should be like this: ... the way we interact is through practice. That is, the word "is" is used after the word "people" in which it is a verb for the phrase/subject "the way we interact with people." In S.15, she fails to build an effective sentence, that is, she has tried to create a complex sentence which is not necessary in that sense. Her use of "his" is irrelevant when she has to use "their" and the word "they" should not be used as well because she can just change the whole sentence into a simple sentence. So the sentence can be changed into, "People of learning without manners could not use their knowledge to create a good environment for the crowd."

So, to improve her cognitive processes it is a good idea that Mera focuses her essay writing improvement on such problematic cues.

References

- Bechard, S., Karvonen, M., & Erickson, K. 2021. "Opportunities and Challenges of Applying Cognitive Process Dimensions to Map-Based Learning and Alternate Assessment." <https://www.frontiersin.org/articles/10.3389/feduc.2021.653693/full>. Downloaded on May 20, 2022.
- Borg, W. R. & Gall, M. D. 1989. *Educational research: An Introduction*. London: Longman.
- Cherry, K. 2020. "What is Cognition?" VeryWell Mind. Available at: <https://www.verywellmind.com/what-is-cognition-2794982>. Accessed May 24, 2022.
- Clark, R. & Harrelson, G. L. 2002. "Designing Instruction That Supports Cognitive Learning Processes." *NATA (National Athletic Trainers Association) Journals/Journal of Athletic Training*, October-December, 37(4), pp. 152-159. Available at https://www.ncbi.nlm.nih.gov/pmc/articles/PMC164417#_ffn_sectitle. Accessed on May 23, 2022.
- Cummins, J. "Linguistic Interdependence and the Educational Development of Bilingual Children." *Review of Educational Research*, 49(2), pp. 222-251.
- Gort, M. 2006. "Strategic Codeswitching, Interliteracy, and Other Phenomena of Emergent Bilingual Writing: Lessons from First Grade Dual Language Classrooms," *Journal of Early Childhood Literacy*, 6(3), pp. 323-354.

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- Green, J. L. & Harker, J. O. (Eds.). 1988. *Multiple Perspective Analysis of Classroom Discourse*. New Jersey: Ablex Publishing Corporation.
- Hymes, D. H. 1972. "On Communicative Competence." In Pride, J. B. & Holmes, J. (Eds), *Sociolinguistics*. Harmondsworth: Penguin, pp. 269-293.
- Indeed Editorial Team. 2021. "What Are Cognitive Processes: Definition, Types and Uses." Available at <https://www.indeed.com/career-advice/career-development/cognitive-processes>. Accessed on May 24, 2022.
- Kameo, R. M. 2007. "Critical Thinking in Classroom: Some Cultural Constraints." *Journal of Language Teaching and Research*, 7(1), pp. 1-13.
- Krch, D. "Cognitive Processing." 2011. In Kreutzer, J. S., DeLuca, J. & Caplan, B. (Eds). *Encyclopaedia of Clinical Neuropsychology*. Available at https://link.springer.com/referenceworkentry/10.1007/978-0-387-79948-3_1443. Accessed on May 23, 2022.
- Kristono, L. 2006. "Critical Thinking: From Theory to Practice." *Journal of Language Teaching and Research*, 6(1), pp. 1-15.
- Ofelia, G. & Wei, L. 2014. *Translanguaging: Language, Bilingualism and Education*. Basingstoke: Palgrave Macmillan.
- Refnita, L. 2005. "Developing Critical Thinking Skills through Questions in Linguistic Class at the Formative Assessment." *Jurnal Pendidikan Bahasa dan Sastra*, 9(17), pp. 174-182.
- Reyes, M. D. L. L. 2001. "Unleashing Possibilities: Biliteracy in the Primary Grades". In M.D.L.L Reyes and J.J. Halcon (Eds.), *The Best for Our Children: Critical Perspectives on Literacy for Latino Students*. New York: Teachers College Press, pp. 96-121.
- Sapitri, R. 2017. "Cognitive Process of the Students in Writing Argumentative Text." *Journal of English Teaching and Research*, Vol. 2(1), pp. 1-12. Accessed on May 30, 2022. Available at <https://ojs.unpkediri.ac.id/index.php/inggris/article/view/726>.
- Tans, F. 2007. "Writing in EFL: An Analysis of Cognitive Developing Cognitive Processes." *Jurnal Ilmu Pendidikan (JIP)*, 14 (3), pp. 166-174.
- Tans, F. 2008. *Biliteracy: Teaching, Learning, and Research Insights*. Kupang: Gita Kasih.
- Titscher, S., Meyer, M., Wodak, & Vetter, E. 2000. *Methods of Text and Discourse Analysis*. London: Sage Publications.