Designing 21st Century Language Learning Scenario in Indonesia: A Perspective from Computer-Assisted Language Learning

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Abstract: The integration of international quality assurance standards into Indonesian higher education curricula, together with the enactment of the New Standard of Higher Education (NSHE), are creating new and significant pressures on the curriculum renewal as well as the reconstruction of course syllabus design in foreign language departments in Indonesian universities. Just like any other units (courses) in foreign language departments in Indonesia, Academic Writing course at English Language Teacher Education (ELTE) is impacted by the new government policies. Latest research suggest that both curriculum renewal and syllabus development project are integral part of the quality assurance system where it focuses on the transparency and accountability in curriculum design and delivery. The key elements of the course syllabus that are made transparent and accountable, for instance, gives hints at the shifting knowledge structures, the use of new technologies, the emphasis on the development of students' skills, and the extended responsibility being placed on students for their own learning development. This paper reports how these key elements are inserted into a learner-centred pedagogy of academic writing at ELTE department in Indonesia in order to meet the requirements of the 21st century learning that are individual, personalized, adaptive, modular, integrated, and non-sequential. The establishment of computer-assisted language learning environment combined with the new pedagogy of academic writing, in essence, opposes the existing traditional approaches to language learning and literacy pedagogy in Indonesia. The entire story presented in this paper is a significant excerpt from the preliminary phase of experiment of a PhD research project conducted in Indonesia. The insights presented in this paper should trigger a holistic reform in language teacher education in Indonesia.

Keywords: Quality Assurance, Academic Writing, 21st Century Learning, Curriculum Renewal, New Pedagogy, CALL

Kata kunci: Jaminan Mutu Akademik, Penulisan Ilmiah, Pembelajaran Abad 21, Pembaruan Kurikulum, Pedagogi Baru, CALL

Introduction

Academic writing course in undergraduate English language teacher education (ELTE) programs, and just like any other courses offered at foreign language departments in Indonesia (Arabic, Germany, French, Korean language departments, etc), are currently integrated into the international quality assurance standards as outlined in the country’s higher education curricula (MORTHE, 2015). The New Standards of Higher Education (NSHE) require that on the completion of their studies, undergraduate students demonstrate higher order thinking skills that reflects the students’ capacity to engage in reflective inquiry and communicate its outcomes orally
and through publications (MORTHE, 2015; Alwasilah & Punchochar 2015; Alwasilah, 2012). This governmental mandate, therefore, highlights the emerging prominence of academic writing skills that operate in the formal language of academic genre.

The New Standards of Higher Education (NSHE) enacted by Indonesian government in 2015 precisely ties with the Boyer Commission Report issued in 1998. The Boyer Commission proposes a radical reform of undergraduate education especially at research universities in the United States of America. The report offers 10 amendments for the university to embrace: (1) make research-based learning the standard; (2) construct an inquiry-based freshman year; (3) build on the freshman foundation; (4) remove barriers to interdisciplinary education; (5) link communication skills and course work; (6) use information technology creatively; (7) culminate with a capstone experience; (8) educate graduate students as apprentice teachers; (9) change faculty reward systems; and (10) cultivate a sense of community (Boyer Commission, 1998, p. i). From the outset, the Boyer Commission emphasizes that the ecology of the university should be based on a profound and long-lasting understanding that inquiry, investigation, and discovery are the core activities of universities (p. 18), and that each freshman students must learn how to express the results of their academic works effectively both orally and in writing (p. 27).

Both New Standards of Higher Education (NSHE) enacted by Indonesian government and the Boyer Commission report issued in the United States specifically highlight the significance of research, inquiry, and literacy development of undergraduate students. In Indonesian context even professional lecturers are said to have a low level of creativity in academic publication (Alwasilah, 2012, p. 18), and the university graduates have low capacity in academic writing due to non-innovative (conservative) language teaching practice (p. 19). Furthermore, in the context of English language teacher education programs, students’ research project completion is normally framed in the low-level requirement resulting in the credulous thinking attitude marked by the use of limited set of arguments (Bashtomi 2016). In the context of this study, two key areas of innovation were inserted into the experiment: the adoption of cross-disciplinary new learning theory; the establishment of technological infrastructure.

Current Portrait of Literacy Pedagogy in Indonesia
A brief analysis of the methods currently used in Indonesia to improve academic writing skills shows a scattered approach, partly informed by influences from Systemic-Functional Linguistics (Gunawan & Aziza, 2017; Ningsih, 2016; Widodo, 2006; Emilia, 2005), partly by descriptive linguistics (Pennycook, 2010; Halliday & Mathiessen, 2009; Martin, 2007; Blommaert, 2005; Hyland, 2003; Canagarajah, 2002; Halliday & Martin, 1993), and partly by practices that rely on ready-made tools that come with MS Office (Handoyo, 2006). Overall the tendency is for Indonesian academics to approach academic writing as a linguistic problem, much less as a problem relating to how students think of, and therefore report on, issues relevant to their projects. For example, following the tradition of Systemic-Functional Linguistics, in workshops that teach academic writing, students tend to focus on characteristics of academic writing, with teachers focusing on “relationships among elements of text” (Klein, 1999, p. 203). Students engage in an analysis of the organisation and constituent features of a text sample and are expected to re-create these structures in their own texts (Bruce, 2008, p. 6). The emphasis is placed on the use of language and the goal is for students to acquire language skills that are construed as the style of their specific disciplines (Bawarshi & Reiff, 2010, p. 34).

However, as pointed by Freadman (1994, 2004), relationships among elements of text cannot be reduced to linguistic structures only without the text losing its connection to other organising systems that impact on, if not determine, its structure and the means by which it seeks to assert its relevance. Freadman (1994, 2004) shows that culture and its artefacts (academic or otherwise) are irreducible to local contexts of practice and that comprehension and the means of communication have “nothing to do with the structure of the text and a great deal to do with the predictions a student brought to the reading task” (Freadman, 1994, p. 19). These predictions can be captured by the concept of habitus (Bourdieu, 1995, p. 52). They are the meaning-making mechanisms (Lian, A-P., 2004) that are constructed in the course of one’s life. These meaning-making mechanisms are what makes up a person: they are stored in the form of internal representations that modulate how the world is both experienced, understood and responded to (Peterson, 2002).

The teaching and learning of languages have a propensity to be conventionally governed by linguistic paradigms where the main reference point is the linguistic descriptions crafted by the linguists (Lian, 2000, p. 5). However, language learners, especially when they become proficient, operate functionally through the manipulation of symbolic systems that are frequently not related to the language descriptions created by the linguists (p. 5). In the 21st century learning context, addressing the role of modern technology to foster a personalised language experience is the pre-requisite for creating a better pedagogical approach.

A rethink of language learning and teaching should be initiated by inserting brand-new pedagogical approach that is compatible with the nature of human learning mechanism. This study embraces three key major characteristics of the minimalistic learning principles proposed by Lian & Sussex (2018, p. 44): (1) Recognition of and respect for learners’ individual meaning-making mechanisms; (2) Awareness-raising activities acting in synchrony with one another; and (3) support for individualization in learning to the extent possible (driven by confronting-contrasting-contesting attitude against the observed language phenomena). Furthermore, a comprehensive approach to the 21st century language learning and teaching should encourage an integrated-multisensorial experience that adopts key components such as: enhanced auditory input (verbotonalism); humming and various forms of repetition; whole body exercises and relaxation; manipulation of spoken language; in-class activities; out-of-class activities; and a sense of autonomy (Lian & Sussex, p. 46-48).

Both the minimalistic approach and the key learning mechanism addressed in this study is universal in nature and adjustable for many other foreign language learning mechanism (Arabic, Germany, French, Chinese, Korean, etc) in Indonesian setting and elsewhere. The key shared features to be adopted by other foreign language department, among others, include adoption of integrated language learning (discrete curriculum structures to be removed); the manipulation of spoken language (speech rhythm as the basis for a holistic language learning approach and literacy acquisition); and the adoption of whole-body exercises to foster multisensorial language experiences.
The focus of the study on students learning by “feeling” (experiencing) the patterns rather than understanding them intellectually, draws on interdisciplinary research, primarily from the field of neuroscience. The work of Ramachandran is pivotal in this regard. Just like Thomas (2007) and Swedberg (2016), Ramachandran (1996) does not invest in any specific theory of the brain. Instead he plays with various empirical evidence, and the hypotheses that it may indicate, and metaphors in order to ask questions and, hopefully, open gaps in different theories where they seemed to be closed and vice versa. Ramachandran’s work is world-famous and, by any standards, the evidence on which this study draws, quite old. Nonetheless, the pressure in education studies to “use a theory”, as opposed to “theorising”, created a situation where Ramachandran’s work is not explored in depth or seriously enough to justify an entirely new research direction.

Following the reasoning above, the present study engages in “theorising” and, as such, does not intend result in constructing a method for teaching academic writing. Instead, it is interested in using empirical evidence from neuroscience on the concept of learning in general and investigate its implications to students’ learning. Specifically, it will use the understanding that left and right hemispheres of the brain engage in very different tasks, each supporting the organism in “being in the world”, while also each playing a different role in this process. According to the evidence from neuroscience, and specifically form research by Ramachandran, it is this interaction between the two hemispheres that supports learning. It is currently understood that the left hemisphere stores processes that the organism has mastered, and remembers, and has them ready to apply when called upon: “the left hemisphere ordinarily deals with small, local 'anomalies' or discrepancies by trying to impose consistency in order to preserve the status quo (Ramachandran, 1996, 347).

However, when the anomaly is greater than what the left hemisphere can process, the right hemisphere intervenes and “generates a paradigm shift”, “it results in the construction of a new model using the same data” (p. 347). Learning can be understood to involve such a process of “paradigm shift”. This will mean the need for designing and engaging tools and activities that can challenge the left brain hemisphere, result in experiencing anomaly exceeds its threshold, and, as a result, engage the right brain
hemisphere in the process of learning: “Without this 'correction' or monitoring mechanism in the right hemisphere that looks for global inconsistencies, the organism becomes progressively more and more delusional and can become hopelessly trapped in them” (Ramachandran, 1996, 352).

The tools engaged in this study have been specifically designed to engage the right-brain hemisphere when students are engaged in solving academic writing problems that they experience, not a theory. The study investigates the objective impacts of those tools on students’ success as judged by international raters. It also investigates the opportunities that these tools open up for students to alleviate the stress that they feel when dealing with the problems that the experience in the context of academic writing.

**Three-in-One Tools to Support Learners’ Agency in Academic Writing**

The study engages ground-breaking learning tools designed by Lian A.B. et al (2017), Yang, Wannaruk, and Lian, A.-P. (2017), and Lian, A.B. (2017) with the help of technology specifically to support students in developing language and critical literacy skills in a foreign language. The key purpose of the study is to test the impact of these tools in the context of an academic writing course taught in YEAR 2 of an undergraduate ELTE program in Indonesia as assessed by international experts in academic writing, the students participating in the study and the lectures teaching the students. It is envisaged that by triangulating the different viewpoints the study will gain a richer understanding of the relevance of the tools that it intends to test, with each of the groups offering perspectives that respond to their personal and professional goals and experiences.

Conceptually, these tools (verbotonal method, aesthetics, and reading for emotion) share the understanding that (a) students need access to learning support that enables them to identify and attend to their personal learning needs; (b) language-learning skills involve multisensory processes; and (c) ideas how best to support students’ learning need to build on empirical evidence from a number of science and research fields to ensure quality and informed foundation. The focus on the students, their personal learning needs and contexts is critical in this study as it differentiates it from traditional pedagogies which concern themselves with writing as an object
framed in terms of descriptive linguistics rather than a process involving personal and social transformation. To this end, the study will seek to use the abovementioned research tools to support forms of learning that create opportunities for the students to attend to the goals and perspectives in terms of which they construct and re-construct their own identities when grappling with the challenges that they encounter as they negotiate their positions and status in a foreign language in relation to their interlocutors. These are the concerns raised by Koo (2017) that the present study seeks to address and explore in practice.

The research tools developed by Lian A.B. et al (2017), Yang, Wannaruk, and Lian, A.-P. (2017), and Lian, A.B. (2017) draw on empirical evidence from a number of research fields including neuroscience and perception studies, corrective phonetics, psychology, sociology and L2 and literacy pedagogy.

**Verbotonal model:** The tools conceptualised by Lian A.B. et al (2017) were initially informed by verbotonal research (Guberina, 1972; Lian, 1980). The verbotonal method was first developed to teach hearing impaired children and adults to hear. To this end, the method assumed neuroplasticity of the human brain and sought to identify optimal frequencies of sounds that could stimulate the brain to help patients reorganise their hearing systems and, as a result, the brain’s neural networks (Guberina, 1972; Asp et al., 2012). The method acted on patients’ bodies, not so much ears, and the numerous success of the method provided convincing evidence early in the 1970s that people are multisensory organism (Guberina, 1972). In the context of L2-learning, it was further speculated that “[o]nce learners’ visual, auditory, vibrotactile, vestibular, proprioceptive senses are mobilised simultaneously in the learning process, it will facilitate the restructuring of the neural connectivity of human brain, and thus engender the plastic changes of the brain” (Yang, 2017).

The studies by Yang, Wannaruk, and Lian, A.-P. (2017), He & Sangaru (2015), Sangarun & Lian (2015) provide more recent quantitative and qualitative evidence in support of these intial assumptions. The results showed the experimental groups improving significantly more than the control groups on aspects of L2-use such as comprehensibility and fluency. The most striking results emerged from the final examination on listening, reading, spelling and translation in English held by Gucheng Town China)
for all 403 third graders (10 classes) in the district). The experimental group claimed first place in the district with a mean score of 93.75 out of 100 as against 77.45 for the control group and 75 for all grade 3 students in the district, and "No individual student regressed in the experimental group whereas some students regressed in the control group" (Yang, Wannaruk, & Lian, A-P., 2017). The present study will utilize experiences accumulated by those and earlier studies and will develop tools based on verbotonal pedagogy that may benefit students involved in the present study. In the context of this present study, each student (the experimental group) must complete the entire intonational exercises (5 sentences per week or 75 sentences within 15 weeks). The sentences used for the listening exercises were collected or re-adapted from some academic books and journal articles with various length and number of chunks. Inherent in such exercises were the humming of the filtered and non-filtered intonation, the body movement (the dance) accompany the humming and the recital of the real sentences, and the self-recording experiments.

The neurological theory of aesthetic experience and academic writing: The model was developed by Lian A.B. et al (2017) to examine the capacity of the theory to equip students with a means to analyse the impact of their own patterns of writing on various aspects of texts, such as complexity of sentence structure, logical organisation of sentences and paragraphs, balance and rhythm. The model draws on evidence from neuroscience (Ramachandran & Hirstein, 1999). As explained by Lian A.B. et al (2017, p. 352), the neurological theory conceptualised by Ramachandran and Hirstein (1999) provided the researchers with categories for identifying the communicative/aesthetic qualities of texts. These included: peak shift, grouping, isolation, contrast, symmetry and balance, perceptual problem solving or generic viewpoint (familiarity) and metaphor. The use of intonation graphs as a means to reveal the aesthetic qualities of texts was informed by studies in corrective phonetics and verbotonalism specifically. The understanding that intonation and rhythm offer a temporal dimension to human speech and behaviour (Schwartz & Kotz, 2015; Eagleman, 2011) made it possible to analyse students’ writing in terms of its rhythmic patterns that were mapped out on the intonation curves of the texts spoken by their authors. The pilot study designed by Lian A.B. et al (2017) showed
promising results and its value to students’ learning will be further tested in the present study.

**Reading for emotion model:** The model emerged from Lian’s, A.B. (2017) critique of literacy pedagogies based on the sociocultural approach to learning, including learning to read and writing. The model offers the present study a framework for students’ critical engagement in the ideas that inform their own writing. Lian’s criticism of literacy pedagogies focuses on the issue of student agency. Lian argues that by reducing the concept of learning to discussions and questioning with a more knowledgeable person, the sociocultural approach stifles pedagogic research by ignoring the value of any evidence, especially from the fields of biology, psychology and neuroscience, regarding how human bodies organise information and how people interact with the world and each other, to pedagogy. Lian argues that the political power of the approach results in an entire paradigm of studies that make their approach a norm while relegating everything else to the status of minor curiosity at best. Furthermore, using arguments from sociology, Lian shows the shortcomings of the sociocultural model and opposes what she considers to be a more traditional thinking about critical literacy, as reflected in Professor Allan Luke’s (2000) arguments, with arguments which contextualise human action in individuals’ personal histories and the questions and goals which inform their actions. This approach is very different to that described by Luke where he attributes perspectives to groups thus replacing the social dynamics with “communities” that are not much more than lifeless objects deprived of internal differences inherent in individuals’ histories and experiences. Linking her research in literacy, sociology and neuroscience, Lian offers a powerful research tool that the present study will engage to support students in their own endeavours of learning to be critical participants in their own academic texts.

Reading for Emotions (RoE) is a learning tool that was designed and developed by A-B Lian (2017) to help students to become a better (academic) reader and writer by analyzing and manipulating the emotions of the texts. Inspired by the notion of play circuit in the brain by Panksepp (1995), LeDoux (1996), and Damasio (1998; 2004), Reading for Emotions is a learning tool that encourages each student to explore the ranges of emotions that are apparent in the text by using the list of emotions freely available from the
Internet; and to explore the stages of the texts that are not similar to the common generic structure introduced by genre pedagogists working under the Systemic Functional Linguistics tradition. The text stages adopted in the Reading for Emotions (RoE) include Setting the Focus, Disturbance, Development, Dialogue, Resolution, and Moral.

The main principles in working with this tool is that each student must perform a self-investigative approach towards the texts by exploring the possible emotions by asking these three basic questions: (1) what emotion is the author trying to evoke in the reader when setting the focus of the story? (2) How does this state of the text make me feel? (3) What devices is the author using to make me feel this way? The self-investigation process can be expanded by further asking these questions: (1) Why do you think you feel this way? (2) Where else have you seen a text starting in the same way? (3) Did you feel the same way then? (4) Why do you think you feel this way? And (5) How else could the author express this emotion? Such questions are a critical part of building an engagement with the text without relying on the linguistic descriptions and grammar or vocabulary provided by linguists and grammarian. In the neuroscientific paradigm, vocabulary and grammatical devices are secondary as both of them serve to communicate emotions.

The three academic writing tools – Verbotonal-based Moodle, Reading for Emotions, and Aesthetics – were designed as a holistic system to support a multisensorial language learning experience. The provision of these three-in-one tools was intended to activate various sensors from the body and the brain in relation to the learning of academic writing. The pedagogical approach taken in this study was a holistic pedagogy towards meaning making system, and this contradicts unitary approach to traditional language and literacy learning with the heavy emphasis solely on grammar/linguistic description or vocabulary per se. The singular focus on grammar only activates one single sensor in the left hemisphere of the brain, and unfortunately, this is not compatible with how language learning mechanism actually works.

Language learning (and learning any kinds of things) first and foremost takes place in the right hemisphere of the brain, and the final storage of information from that learning takes place in the left hemisphere of the brain. More specifically, the music of the language (the prosody, intonation, and rhythm) takes place in the right hemisphere of the brain, suggesting that it is
intonation and rhythm (and also emotion) that serve as the initial basis for language processing in the brain, not grammar or vocabulary that is processed in the left hemisphere of the brain. To this end, this study puts a priority on the right hemispheric language processing by activating the sensors for dealing with intonation, rhythm, and emotion for the purposes of academic writing learning.

General Findings and Discussions

Verbotonal-Based Moodle: Sensitization on the Intonation and Rhythm of Academic Writing

The first learning tool, Verbotonal-based Moodle, was designed to help students improve their speech perception as the basis for oral and written language production. In each Verbotonal exercise, each student was exposed to both filtered intonation and non-filtered intonation of academic writing and the samples were taken from the corpus of academic English. Every week, it was compulsory for each student to complete the Moodle exercise. There were five (5) academic sentences in the Moodle for each student to practice. One sentence was normally practiced in the classroom along with the teachers and other students, and the remaining sentences to be completed at home or outside the classroom. In total, there were 75 academic sentences in the Moodle for the entire semester in academic writing course. The Verbotonal exercises were compulsory in nature, meaning that each student in the experimental groups must complete each weekly exercise within 15 weeks.

Verbotonal-based Moodle was designed as a personalized learning tool for sensitizing students’ perception on the rhythm and intonation of academic writing. Each student was given a personal account on the Moodle online system using their own email address and password. Once they accessed ljunction.com/moodle, they could login to the Moodle as “student” where they could also access other related free courses such as “applied linguistics” and “academic writing”. In this Moodle account, each student’s exercises were recorded automatically by the system, including when they accessed the Moodle and how long they spent the time for exercising. The following table illustrates the type of sentences normally found in academic text.
### Figure 1. Chunking Sensitization Exercise Sample from Verbotonal Approach Moodle

<table>
<thead>
<tr>
<th>Learners’ agency is an increasingly important area in applied linguistics.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chunk 1</td>
</tr>
<tr>
<td>Agency is at the heart of our understanding of learner-centeredness pedagogy.</td>
</tr>
<tr>
<td>Chunk 1</td>
</tr>
<tr>
<td>A key aspect of teaching in the 21st century is a biological understanding of cognition and learning.</td>
</tr>
<tr>
<td>Chunk 1</td>
</tr>
<tr>
<td>Recent developments in neuroscience have heightened the need for developing the learners’ agency.</td>
</tr>
<tr>
<td>Chunk 1</td>
</tr>
<tr>
<td>In recent years, there has been an increasing interest in creating conditions that lead to change in a learner’s brain</td>
</tr>
<tr>
<td>Chunk 1</td>
</tr>
</tbody>
</table>
By using Verbotonal approach that was invested in the Moodle, it was expected that students could activate many different sensors on their body to perceive sounds without relying solely on the ears. The concept of bone conduction has put an emphasis that even our bones and muscles are capable of receiving information in the form of sounds to be further processed in the brain. The notion of bone conduction suggests that our body is a multisensorial entity that selects and organizes information through different channels, and it is human brain that instructs those sensors to work this way.

In the traditional language and literacy classroom such as the one used in the control group, a single focus of learning was maintained on the grammatical construction as a closed linguistic system. When nothing else was included to enrich the language learning experience, the traditional language and literacy classroom preserves the mono-sensorial experience that contradicts the nature of human brain and body that run the multisensorial (language) learning experience on a daily basis. In addition, putting too much emphasis on grammar or any linguistic description has narrowed down the opportunities for improving a better speech perception. As grammar takes over the whole language learning experience in academic writing course, there was no opportunities for students to reorganize their speech perception system that serves as the basis for both oral and written language production.

Reading for Emotions: Academic Texts as an Emotional Construct

In the following sample of analysis, the author (Bumela, 2014) evoked the emotion of “alert” in Setting the Focus stage. Some keywords that he used in evoking such emotions include experience, making sense; meaning-making; comprehended and interpreted. However, this alerting stage raises a question whether a reader can find the elements of meanings in the texts. As each reader can have a different scale and range of experience, each text may be read differently by each reader. In Disturbance, the author used the keywords such as investigation and metafunctions without providing any details. He also gave no explanation on how the the investigation was carried out using the thing called metafunctions. Without a set of details, this stage may spark a sense of confusion (due to lack of clarity) as a reader may think that metafunction is a layer of text that sits beyond functions.
In *Dialogue*, the author evoked the emotion of “surprise” as he mentioned how he carried out the research: inviting some EFL learners to read two selected articles from the Jakarta Post. It was a feeling of surprise as the dimensions of experience of readers are unknown to the researcher and there was no explanation, again, on how the tools called “metafunctions” can help readers in revealing their experience. In *Development*, the author sparked the feeling of “shocked” as he compared an orange with an apple: EFL readers with SFL background vs students with no SFL background. This stage may create a havoc because a certain group of EFL learners were equipped with metafunctions knowledge, while the other group of EFL readers were not. It is quite striking that the author never mentioned whether his research falls on experimental study, and there was no treatment whatsoever that was included in his study.

In *Resolution* stage, the author has created a sense of utter surprise and boredom as he unexpectedly mentioned some new keywords that did not reveal the findings of the research: *a discursive activity, textual experiences, background knowledge, and metafunctions of the texts*. In this stage, none of these keywords disclosed how the readers revealed their experiences by using metafunctions as the tool for comprehending and interpreting the texts. None has been mentioned regarding the other group of EFL learners that were not equipped with functional grammar either. In such a case, the author eventually finished his abstract simply by saying that “reading particular texts will in turn the reading of other texts”, which in fact does not conclude anything. Such an inconclusive closing remark on his abstract suggests that unlocking experience when reading texts written in other language was not an easy task at all. The working scheme of the tool called metafunctions have never been addressed in the abstract, thus raises a question whether it was appropriate to compare two unparallel entities in one single research that is not labelled as an experimental study.

The three samples provided in the initial stage of the experiment suggests that an academic text (an abstract in this case) can be viewed as an emotional construct, not merely a linguistic or grammatical construct. Likewise, the three sample of analyses has also exhibited that a good text (like sample analysis 1) has a certain degree of clarity in every stage of text, while other abstracts (abstracts 2 and 3) both lacked clarity that may force a reader to face an incoherent structure of information from the abstract. In
addition, the samples of analysis have also shown that Reading for Emotions (RoE) can used as tool to enhance a self-investigation skill that can be beneficial in reading and writing. The overall analysis of abstract 3 can be found in table 1 below and the remaining section will display the analysis of students’ pretest and posttest essay as administered in the experiment.

Table 1. Reading for Emotions: Sample of Analysis

<table>
<thead>
<tr>
<th>STAGES</th>
<th>SENTENCE</th>
<th>EMOTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Setting the focus</td>
<td>This study was primarily intended to capture the English as foreign language learners” (henceforth EFL learners) <em>experience</em> in making sense of the text: to what extent the meaning-making elements of the texts are comprehended and interpreted by EFL learners as readers.</td>
<td>Interested, curious, amazed, shock, the author tries to make us to alert/focus on the perspective in the study.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>What is the relation between meaning and experience?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Are meaning making elements digged or found in the texts?</td>
</tr>
<tr>
<td>Disturbance</td>
<td>The investigation itself was centered around the notion of metafunctions – ideational, interpersonal, and textual – of the text for several reasons.</td>
<td>Curiosity and confusion?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>What is metafunction?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>What is ideational?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>What is interpersonal?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>What is textual?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The author tries to make us feel to more focused?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Not clear enough as how the analysis was carried out using metafunctions?</td>
</tr>
<tr>
<td>Dialogue</td>
<td>This study tries to reveal how EFL learners make sense of the two selected articles taken from “The Jakarta Post” entitled “Australia Stops Some Cattle Exports to Indonesia” and “Australia”s ban on Cattle Exports to RI Political”.</td>
<td>Surprise?</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td></td>
<td>The two articles were downloaded from thejakartapost.com in June 2011.</td>
<td>What is a certain perspective?</td>
</tr>
<tr>
<td></td>
<td>The main reason why newspaper articles were chosen was because, as Lehtonen (2006) puts it, “newspaper descriptions of reality are always produced from a certain perspective”.</td>
<td>How is experience explored and studied?</td>
</tr>
<tr>
<td></td>
<td>Does experience determine certain types of meanings? Does experience determine certain types of meanings?</td>
<td>How does the tool help students unlock their experience anyway?</td>
</tr>
</tbody>
</table>
### Development

In the context of this study, the two groups of respondents were involved: two respondents who have not taken Functional Grammar class (group one) and two respondents who have attended functional grammar class (group two).

The four respondents are English Department students at one private university in Kuningan, West Java.

The study shows that reading is not simply a matter of recognizing the alphabetical orders of the texts.

<table>
<thead>
<tr>
<th>Shocked?</th>
</tr>
</thead>
<tbody>
<tr>
<td>The author want to make us feel curious on the method of study.</td>
</tr>
</tbody>
</table>

### Resolution

Reading is, in fact, a discursive activity which is influenced by the previous textual experiences.

The quality of interpretation is always affected by the background knowledge of readers, the ability in recognizing the features of the texts, and, of course, the ability to identify the metafunctions of the texts.

An interaction with a discourse will automatically generate a new discourse.

| Confused, stressful, bored, worried. The author want to make us to feel confused. |
| What is a discursive activity? |
| What is generate a new discourse? |

### Moral

The reading of particular texts will in turn trigger the reading

| Excited, enthusiasm, focus. |
Aesthetics: Capturing the Intonations of Academic Text

This section will highlight how students in experimental group (3C and 3D) utilized the third learning tool, aesthetics. Neurological principles of aesthetics was coined and developed by Ramachandran & Hirstein (1999) as a universal neurological mechanism that mediates human artistic experience. Both scholars grounded the principles of aesthetics in the so-called “eight laws of artistic experience” that illustrates the general principles of artistic experience that crossed cultural boundary. A-B Lian (2017) has engineered this law of artistic experience as a basis to understand the rhythm of intonations of academic writing. The two most prominent laws of aesthetic experiences – peak shift and grouping – that Ramachandran invented conform to the pattern of intonation produced by human. In the case of intonation, peak shift is the part of the intonation that receives the highest stress and pitch, and grouping has the resemblance to the chunking mechanism of intonation. The remaining principles of aesthetics such as contrast, isolation, perceptual problem solving, abhorrence of coincidences, orderliness, symmetry, and metaphor may still be relevant in looking at academic writing as a form of art.

This section will also highlight several pieces of academic texts written by some control group students (3A and 3B) investigated from the prosodic components (intonation) using aesthetics. A comparison with the texts from the experimental groups needs to be made in order to generate an insight how intonation can inform the aesthetic quality of a sentence. The teaching/learning approach adopted in the control group was called a genre-based pedagogy that is grounded on Systematic Functional Linguistics (SFL). The focus of this pedagogy is on the generic structure of the text and its clause construction with a rich detail on the lexicogrammatical features. In other words, this approach is grammar-oriented which activates the left hemisphere of the brain. In contrast, this current study adopted a pedagogy that puts a priority on intonation as the key component of prosody as well emotions as the source for thinking and making decisions. In other words, this approach is non-grammatical and activates the right hemisphere of the brain. Neurologically speaking, any types of learning (especially language learning), takes place first in the right hemisphere of the brain where
intonation is the first language component processed by the brain. Therefore, this study places prosody as the main priority to be included in the pedagogy of academic writing.

Unlike traditional literacy pedagogy that orients students’ attention towards the fixed linguistic and grammatical description, this study does not replace students’ meaning-making systems with the semiotic resources of the teachers nor the linguists. Instead, it fosters students to evaluate the communicative impact of their texts on their own terms, namely, by drawing on their semiotic resources. When using the laws of aesthetics into the intonational graphs of their own writing, each student is drawing on their semiotic resources in relation to building their own neural pathway for writing. The following samples will illustrate how experimental students drawing on their semiotic resources using Praat.

Figure 2. Intonation patterns of the text written and read a student

Table 2. The Aesthetics of Intonation: A Sample of Analysis

<table>
<thead>
<tr>
<th>No</th>
<th>Law Applied</th>
<th>Text which was read out</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Isolation (T = Title)</td>
<td>The Effects of Perceptual Training on Identification English Vowels by The Third Semester ELT</td>
</tr>
<tr>
<td>I</td>
<td>Peak shift (marking the start of a sentence)</td>
<td>This study</td>
</tr>
<tr>
<td>II</td>
<td>Grouping (lower than I but with improper use of to be “was”)</td>
<td>was investigated perceptual training</td>
</tr>
</tbody>
</table>
In this sentence, the has attempted to create an isolation on the title of the paper as well as the possible grouping for her own text. However, the author does not seem to make a bright start at this stage as she made an isolation that does not sound English yet. A wrongly phrased part was found, namely, “Identification English Vowels”. A preposition “of” is certainly missing in this isolation component. Likewise, the author was not aware that the head of the very final phrase is also missing: The Third Semester ELT. These four words serve as the premodifier for a noun, a noun that should have been the head was “students”. In creating this complex sentence, the author uses 25 words in one single peak shift and three groupings. As the intonational graph shows, the peak shift is too short as the author unexpectedly and wrongly used to be “was” prior to the main verb, resulting a long gap from the peak shift on to the first grouping. The three groupings after the peak shift, however, seem to work in a typical rhythm of Academic English: the first grouping is higher than the second grouping, and the second grouping is higher than the third grouping. In other words, the groupings work in an unmarked intonation pattern: peak shift receives the highest prominence, and gradually the intonation is going down finally falling at the very final grouping.

**Conclusion**

This paper has suggested that responding to New Standards of Higher Education enacted by Indonesian government in 2015 as a prolonged process to accomplish. Each and every undergrad and postgraduate department in universities across Indonesian archipelago is currently challenged to initiate the foundations for developing the strategic key areas of innovations.

In the context of this study, for instance, the key major areas of innovation in Academic Writing course include (1) the adoption of new cross-disciplinary learning theory; (2) the establishment of accessible technological learning infrastructures; (3) the introduction of new roles of a
Lecturer/teacher in a technologically enhanced language learning (lecturer/teacher as web designer/Moodle creator/content creator/podcast maker). In addition, the use of the three-in-one learning tools in this study suggests that learning academic writing is a multisensorial experience, emphasizing the idea that writing is a visual, aural, and vestibular experience. Such a new trend in language learning and literacy pedagogy is compatible with the biological nature of human learning mechanism. At the end of the first quarter of the 21st century, English language teacher education in Indonesia should embrace the new learning pedagogy that fosters students’ agency as a new landmark for a better quality of education as demanded by the New Standards of Higher Education.

References


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