

A REPLICATION STUDY OF LANGUAGE DEVELOPMENT
IN THE WRITING OF MALAYSIAN CHINESE
LEARNERS OF ENGLISH

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ABSTRACT

The present study is an approximate replication of Larsen-Freeman's (2006) research entitled "The Emergence of Complexity, Fluency, and Accuracy in the Oral and Written Production of Five Chinese Learners of English". Larsen-Freeman investigated the language development that takes place in learners' writing over time based on Complex Dynamic Theory. Learner language development is found to be neither consistent nor stage-like. It fluctuates. Language resources of learner change through use and thus, give rise to a novel version. The study replicates the procedure of data collection and qualitative data analysis of Larsen-Freeman's study, but changes the data production. The writing of five Malaysian Chinese L2 learners based on a picture series were analysed using the idea unit analysis of the original study. In addition, the narratives of the participants were assessed by three raters using the current holistic scoring in Form Three Assessment Examination or PT3. The purpose of this research is to find out whether the changes observed from the learners' writing over time based on the idea unit analysis concur with the original research. It is also aimed to see the differences between the results of the idea unit analysis and the results of holistic scoring. The replication study showed that the results of Larsen-Freeman's (2006) study apply to these five participants. However, a comparison of the results from the idea unit analysis with the scores from holistic scoring showed that there are some disparities between the two methods of assessing. The idea unit analysis helps teachers observe language development of the learners in details and may be used as an alternative to holistic scorings.

Keywords: Complex Dynamic Theory, language development, replication research, idea units, non-linear, holistic scoring.

ABSTRAK

Kajian ini merupakan satu replikasi anggaran penyelidikan Larsen-Freeman (2006) bertajuk "Kemunculan Kerumitan, Kelancaran, dan Ketepatan dalam pengeluaran lisan dan bertulis Bahasa Inggeris lima pelajar Cina". Larsen-Freeman menyiasat perkembangan bahasa yang berlaku secara bertulis pelajar dari semasa ke semasa berdasarkan Teori Kompleks Dinamik. Perkembangan bahasa pelajar didapati tidak konsisten atau berperingkat linear. Ia turun naik. Sumber bahasa pelajar berubah melalui penggunaan dan dengan itu, menimbulkan versi novel. Kajian ini mereplikasi prosedur pengumpulan data dan analisis data kualitatif kajian Larsen-Freeman, tetapi mengubah pengeluaran data. Karangan yang berdasarkan kepada satu siri gambar lima pelajar L2 Malaysia (bangsa Cina) dianalisis dengan menggunakan analisis idea unit kajian asal. Di samping itu, tulisan-tulisan para peserta juga dinilai oleh tiga penilai dengan menggunakan rubrik pemarkahan holistik semasa yang dilaksanakan dalam Peperiksaan Tingkatan Tiga atau PT3. Tujuan kajian ini adalah untuk mengetahui sama ada perubahan diperhatikan dari penulisan pelajar dari semasa ke semasa berdasarkan analisis idea unit sesama dengan penyelidikan asal. Kajian ini juga bertujuan untuk mencari perbezaan di antara keputusan analisis idea unit dengan keputusan pemarkahan holistik. Kajian replikasi menunjukkan bahawa keputusan lima peserta selari dengan kajian Larsen-Freeman (2006). Walau bagaimanapun, perbandingan di antara keputusan daripada analisis idea unit dengan skor daripada pemarkahan holistik menunjukkan bahawa terdapat beberapa jurang antara kedua-dua kaedah menilai. Analisis idea unit boleh membantu guru melihat perkembangan bahasa pelajar secara terperinci dan boleh digunakan sebagai alternatif kepada pemarkahan holistik.

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List of Symbols and Abbreviations

CAF	Complexity, Accuracy, and Fluency
CT	Complex Theory
DST	Dynamic System Theory
EFL	English as a foreign language
ESL	English as a second language
L1	First Language
L2	Second Language
SLA	Second Language Acquisition
TL	Target Language
T1	Time 1
T2	Time 2
T3	Time 3
T4	Time 4
#	Idea Unit
*	Idea unit not according to chronological order
<i>Abc</i>	word(s) in bold and italic are original writing of participants

CHAPTER 1: INTRODUCTION

1.1 Overview

The Second Language Acquisition (SLA) field was traditionally featured by theories that presumed there is static, uniform native language and target language (see Larsen-Freeman, 2006, pp. 590-591). For example, second language (L2) learners are expected to conform to a target language (TL) in their learning and it was presumed that they progress through distinct stages in a linear fashion (Larsen-Freeman, 2006, 2015). However, Complex Theory (CT) or Dynamic System Theory (DST) challenges these views and argues that language learning system is non-linear (Larsen-Freeman, 1997; de Bot et al., 2007a).

De Bot, Lowie and Verspoor (2007a, p. 8) claim that DST describes a couple of language learning phenomena that challenge some long-held beliefs by teachers and researchers. For instance, the ‘butterfly effect’ explains why learner’s language development does not progress consistently; there is fluctuation (chaos) over time. According to Dornyei, MacIntyre and Henry (2015, p 1), instead of following the convention of examining the relationship between well-defined variables by comparing them separately, DST observes the joined and interactive process of the relevant various elements or conditions according to particular situations.

The present study replicates a study conducted in the tradition of DST by Larsen-Freeman (2006). As argued by Schneider (2004, p. 1473), insufficient replication and research of previous studies weakens “the community’s ability to accumulate knowledge”. Replication research not only validates research; it is also a criterion set to accept new theories and knowledge (Language Teaching Review Panel, 2008; see also

Porte, 2012). In addition, it serves as a learning tool and gives valuable experience for new researchers (Polio and Gass, 1997; Porte, 2010).

In the 2006 study, Larsen-Freeman demonstrates how changes in language development can be captured in the writing of five Chinese adult learners of English through a DST perspective. Her study is among the first studies that draw attention to DST using the idea unit analysis (see Chapter 2 for further discussion). The present study attempts to find out the extent to which findings of this study would be similar to, or different from, those of Larsen-Freeman (2006). In addition, a comparison between the results from the idea unit analysis (refer to Chapter 3 for more details) with the results from holistic marking is carried out to see the differences between the two ways of assessing L2 writing.

1.2 Background to the Problem

In SLA, DST is being promoted as a solution to the conflict between cognitive approaches and interactionist approaches as it is claimed to include both approaches and also the use of L2 in real time (Larsen-Freeman, 2002). It gives an alternative opinion of language development for both L1 and L2 by believing that language is a constantly evolving complex system. DST appears to be an effective perspective of looking at change in language development which occurs in the L2 learner system (Larsen-Freeman, 2006).

The conventional way of measuring bilinguals or multilinguals with native speakers of target language (Corder, 1967) has been dominating the SLA discipline. L2 learners who fail to conform to the set norm in either written or spoken production would be considered as failures (Cook, 2013). Bley-Vroman (1983) regards such comparison as “comparative fallacy”. Such comparison in SLA is considered an inappropriate

approach because it does not allow researchers and teachers to see the remarkable and special characteristics of bilingual or multilingual students (Larsen-Freeman, 1997). Cook (2013) posits that L2 speakers or users should be treated as different speakers of distinct language. His ideas are well advocated by applied linguistic researchers.

Kramersch (2006) opines that language learners are living individuals with their own emotions, memories, dreams, loyalties and identities. Hence, learners' writing are not just symbols of their vocabulary resources or communication tactics (symbolic competence); they contain learners' "*experiences, emotional resonances, and moral imagining*". Larsen-Freeman (2011) views that currently; L2 learners are still being treated as mere "*hosts*" of the TL and as "*learners who make errors not language users who innovate*". She proposes for a full empowerment of learners and a respectful view of the creativity of all language users and learners based on a CT/DST perspective where L1 is considered as a resource to be used by L2 learners instead of a source that interferes in their L2 learning (Larsen-Freeman, 2011, p. 297).

According to Verspoor and Smiskova (2012), L2 writing is a mirror of L2 development. It is important to look at L2 writing from a new perspective. Teachers and researchers may fail to take advantage of the chance to examine the quality of learner dynamics, by not paying attention to L2 writing (Yasuda, 2011, p. 115). Ortega (2004, p. 8) posits, neglecting L2 writing diminishes the potential of L2 writing as an area to generate theoretical knowledge in different settings. It means the research on L2 writing can set a direction for future study through the experience of others. However, there are not many empirical studies exploring how L2 or multilingual learners apply their linguistic system dynamically as well as how they progress in their use of language longitudinally (Dornyei et al., 2014). The purpose of this study is to address this gap by exploring the

change in the writing of five Malaysian Chinese learners of English longitudinally. It is an approximate replication of Larsen-Freeman's (2006) study.

1.3 Research Objectives and Research Questions

The main objective of this research is to investigate language development, which takes place over time, in the writing of five Malaysian Chinese learners of English. The present replication study is also aimed to assess whether the results of Larsen-Freeman's (2006) study apply to these five participants. It looks at learners' errors as innovation (Larsen-Freeman, 2012b; 2015). Unlike the original study, the study also compares whether the results from the idea units analysis of student texts are the same or different from the results of holistic marking of the same student texts by three raters, who are experienced school teachers (see Chapter 3.3 for more details).

The research questions are:

1. What are the changes observed from the learners' writing at Time 1, Time 2, Time 3 and Time 4 based on the idea unit analysis?
2. How different are the results based on the idea units analysis from the results of holistic marking of the same student texts by three raters?

1.4 Significance of the Study

The rationale for conducting this replication of Larsen-Freeman's (2006) research is because it has widened the horizon of SLA researchers and teachers. The study has invited the applied linguistics community to look at learner writing "those messy little details" from a different perspective. The article highlights CT/DST which perceives language use or acquisition as dynamic adjustment to a specific situation. De Bot, Lowie and Verspoor (2007a) posit DST is a consistent and orderly approach to different issues in SLA, which considers the social cognitive features of language development. Replicating Larsen-Freeman's (2006) study indicates the significance of this study and it may provide pedagogical implications for L2 teaching and learning.

The study acknowledges learners' autonomy and learners have the opportunity to use L2 and their creativities to express themselves without worrying about their language. Researchers or teachers are freed from the conventional way of using a TL or "native speakers" yardstick to measure language learners. They observe language development of the learners instead of carrying out error analysis. From the changes observed via the idea unit analysis, they would know how to help learners develop their knowledge of the L2. Assessing students' text using the idea unit analysis is a more student friendly approach compared to holistic markings.

CHAPTER 2: LITERATURE REVIEW

2.1 Overview

Chapter 2 reviews the new paradigms in SLA and compares it to the conventional theories of SLA. It gives details of CT/DST and its dynamic principles in development. It touches on task repetition and Trade-off Hypothesis. It also reviews some recent studies based on DST. Finally, it gives a brief account of the original research study and introduces the present study as well as the theoretical framework or hypothesis.

2.2 New paradigms in SLA

According to Larsen-Freeman (2006, p. 590), most researchers in SLA have carried out their work within a 'developmental ladder' metaphor that is from one stage to another systematically. Developmental ladder, according to Fischer Fischer, Yan and Stewart (2003, p. 491), characterizes development as a simple fixed sequence which increases in value consistently and step by step in a single direction and in a single straight line. The three features in a developmental ladder-like path are: (1) a single straight line; (2) fixed steps, one step follows the other; and (3) forward progression. Larsen-Freeman (2006) posits that the linguistic competence assumptions and principles which they applied are from conventional L1 and SLA research. One assumption is the existence of static, uniform native and target languages. The learning process of SLA is strictly conformed to a homogenous TL. The progress of learners is measured in distinct stages and progress is accuracy in morphosyntax instead of fluency, complexity, vocabulary, discourse, phonology or the interplay of all these features. In addition, language is considered as entirely a cognitive asset and learners acquire language in a constant way. Last but not least, it is also assumed that research in language can be carried out by focusing on understanding learning first and then on explaining for learners' distinctive

achievement (refer to Larsen-Freeman, 2006, pp. 591-594). These assumptions have been questioned over the years.

Larsen-Freeman (2006) identified some researchers who have challenged these traditional assumptions such as Bley-Vroman (1983), Stauble and Larsen-Freeman (1978) and Selinker (1972). One argument is that it is not proper to select a target-centric angle and make assumptions that learners' language progresses through stages very similar to the TL (Bley-Vroman, 1983). Another one is that the putative stages in SLA are indiscrete (Stauble & Larsen-Freeman, 1978). Selinker (1972) argued that it is not acceptable to disregard individual differences among learners. The other arguments that challenged the old assumptions about SLA are: variability in learner production (R. Ellis, 1985, 1987); a phase shift and restructure that takes place in interlanguages (McLaughlin, 1990); and the availability of prior cognitive resources that affects development (Pienemann, 1998).

In the 1990s, due to the rapid growth of English as an international lingua franca; the roles of English in economic opportunity globalization; and the social sciences disciplinary shifts, SLA processes were greatly influenced by these social aspects called the social turn by Block, 2003 (Kramsch & Whiteside, 2007, p. 909). As a result, theories such as the Sociocultural Theory, Language Emergence Theory (DST), Conversation Analysis, Language Socialization and Language Ecology emerged in the various fields of SLA research to study the social aspects of language (Kramsch & Whiteside, 2007, p. 910).

Recent research and current thinking in SLA are also looking at SLA from new perspective. For example, Ortega (2013) maintains that the multilingual student should not be judged as 'deficient' speaker of the TL and there is no 'standard' English that

everyone is obligated to follow. Atkinson (2011) posits that language is a tool for social action and language learning is a sociocognitive process, it is better to incorporate learner's social physical and cultural norms in his learning. Lantolf and Thorne (2007) note that in sociocultural theory, the individual is fundamentally a social being emerges from social interaction. Canarajah (2007, p. 94) points out that language is sensitive to environmental factors, it is constantly reconstructed to meet the demand of social communication. Nieto (2009) submits that learning develop from the social, cultural and political environments where it happens as a result of learner-teacher interactions and relationships. Chau (2015, p. 180) maintains that the developing language of a learner ought to be respected and considered as another type of human language which is natural and should not be gauged against a TL or native-speaker's yardstick or an outer point of reference.

Fischer, Yan and Stewart (2003) postulate that DST not only rejects the traditional assumptions, it sees development as a process which is complex and dynamic within different ranges in different directions. Larsen-Freeman (1997) posits that in addition to internalize a ready-made system, learners are capable of creating their own styles with meanings and uses of a specific language They also have the ability to develop its meaning potential. Larsen-Freeman (2006, cited in Larsen-Freeman 2011) demonstrates that there is learner autonomy as "learners set their own goals, and pursue them, charting their own paths".

Larsen-Freeman (2012b) argues that errors and innovations are both responsible for language change but innovations are socially sanctioned. The three factors that influence the selection of innovations according to Larsen-Freeman are: (1) It takes time to accept the new form. (2) The acceptability depends on who the interlocutor is. (3)

Not everything can be accepted as innovations. Errors are always measured based on an idealized system perspective. However, a learner's system with its unique individual speaker language background and language learning path, never matches the TL, and will never be similar to the system of another speaker. Therefore, the comparison between learner language and nonlearner language is measured in terms of degree of differences only. Learning involves changes in the learner not just the discovery of patterns intrinsic in a constant object (Larsen-Freeman, 2012b, p. 303).

2.3 Complexity Theory (CT) or Dynamic System Theory (DST)

The DST, which was created from mathematics and physics, sees learner language development as a process which is complex and dynamic (Fischer et al., 2003). The process occurs inside multiple fields in multiple directions non-linearly. The development and transformation of the complex systems are analyzed and modelled using DST (Thelen & Smith, 2006; de Bot & Larsen-Freeman, 2011). The following sub-sections discuss the special features of the complex dynamic systems.

2.3.1 Self-organizing system

Van Geert (2008) posits that DST is a very common approach to describing and explaining change and has been introduced to the research of human behaviour development and cognition. Language development is a part of human development feature (de Bot, 2008). Thelen and Smith (1994) as well as van Geert (1994) applied DST to developmental psychology based on the ideas of development as a self-organizing system. According to Mitchell (2003):

Self-organization refers to any set of processes in which order emerges from the interaction of the components of system without direction from external factors and without a plan of the order embedded in an individual component. (Mitchell, 2003, p. 6)

Larsen-Freeman (2014, p. 493) asserts that language is a system which is complex. As people use it, it grows and organizes itself like the water molecules self-organize through the flow in an eddy. Thelen and Smith (1994) postulate that speakers “soft-assemble” language patterns at a particular time of an event using their language resources. Hence, during communication, they patch together their language resources in order to respond and adapt to the possible demands and pressures of the situation. Language patterns emerge as a result of coadaptation between and among interlocutors, that is, they self-organize.

2.3.2 Dynamic and dependent on the environment

From a DST perspective, the language and language acquisition theories differ fundamentally from the conventional theories (de Bot, Lowie, & Verspoor, 2007a). DST sees the process of language acquisition as dynamic and nonlinear; with plenty of unpredictable variability appear from language development rather than distinct phases in which the performance of learners is constant (Larsen-Freeman, 2006). Language is alive and as it adapts to local communities, variegated structure, meaning and pragmatics emerged. Hence, SLA is not a process that conforms to homogeneity (Larsen-Freeman, 1997, 2003, 2006). Language is found to be a sociocognitive phenomenon because of its innate characteristic of depending on internal and external qualities. Language acquisition is hence affected by factors such as learners’ memory capacity, motivation, identity and learning environment (Larsen-Freeman, 2006; de Bot & Larsen-Freeman, 2011).

2.3.3 Many components

Caspi and Lowie (2010) define a dynamic system as a system with many interconnected subsystems which are made up of many highly entwined components. Verspoor, Lowie and van Dijk (2008) submit that the development and the interactions among these constructs are dynamic and change over time. The end result of such behaviours is nonlinear, chaotic, and shows a high level of variability. According to van Dijk, Verspoor and Lowie (2011, p. 58), variability is a 'prerequisite to development' as it shows how the system adapts to changes. De Bot and Larsen-Freeman (2011) posit that the amount of changes in variability of the trajectory shows the mechanisms in the changes and indicates how development takes place.

2.3.4 Interacting variables

DST theorists such as de Bot, Verspoor and Lowie (2005) describe complex systems as "sets of interacting variables". Therefore, a change in one variable in the system, will have an effect on all the other variables (de Bot et al., 2005, 2007). From a DST perspective, L2 learners would show differences in their language development, they would have different individual path and a great deal of 'trials and errors' in their development process. L2 acquisition is assumed to be determined by the interactions of many independent variables. For instance, L1, age, intelligence, motivation, verbal capability, environment, or context. (Verspoor et al., 2014, p. 241).

2.3.5 Complexity is emergent

According to Larsen-Freeman (2009, p. 583), in a dynamic system, the components and the ways they interact with one another as well as the surroundings change with time. Therefore, language changes over time and the interacting variables of the system are in continuous change and the end results over time are unpredictable. The unpredictability explains how some subdivisions of SLA continue to generate very diverse results.

Larsen-Freeman (2006, 2011) posits that language patterns become fixed as learners continue to use the language and are changed with further usage. Language system is never static, it is continuously changing and finally settle in certain preferred patterns and stabilize (Larsen-Freeman, 2006, 2011). As there is great variation at all times in all features of language, Larsen-Freeman (2011, p. 301) opines that linguistic signs are “contextualized products of the integration of various activities by individuals in particular communicative situations” created to meet new demands and situations continually. There is no stable end state in language (Larsen-Freeman, 2006).

2.3.6 Iterations and dependent on the initial states

De Bot, Verspoor and Lowie (2005) posit, as dynamic sub-systems develop over time, there are two states in which they seem to settle: (1) ‘Attractor states’- preferred but unpredictable states. (2) ‘Repeller states’- neither preferred nor settled in states. The dynamic system development process is based on iterations (repetition of sequence towards a desired result) and greatly dependent on the initial state. Hence, even small changes at the initial stage can have great effects at the final stage of the investigation duration (butterfly effect). The “butterfly effect” (de Bot et al., 2007, p. 8) is a result of the interconnected subsystem where small changes in any one element can influence all other elements within the system. Just like in natural systems, language development is inseparable from the resources available and will become disorganized when no new resources are combined to the system. As a result of environment interaction and self-reorganisation, the dynamic systems develop and vary depending on the inputs at the point of time.

Publications on language and the learning of language based on DST by researchers such as Larsen-Freeman (1997, 2011, 2012a); de Bot, Lowie and Verspoor (2007a); and Verspoor, de Bot and Lowie (2011) show that the language system is dynamic and language is found to be sensitive dependence on initial states; autonomous; total interconnectedness; not linear and chaos in development. It also depends on social, cognitive means as well as emergent characteristics.

2.4 Dynamic principles in development

Verspoor, Schmid and Xu (2012) postulate that from the DST perspective, L2 development is based on two common assumptions.

First, development is defined as the growth or increase of more developmentally advanced or complex variables and the decline or decrease of less developmentally advanced variables. Second, growth, or change, depends on the availability of resources such as the amount of input or motivation, which are limited. For instance, a resource factor for lexical growth is not only the language spoken in the environment, but also the learner's language aptitude or motivation. (Verspoor et al., 2012, p. 244)

According to them, a minimal developmental system consists of one single component. Therefore, a learner's knowledge of vocabulary may be affected by his or her knowledge of syntax or the language used in his or her L2 class (environment). To study a learner's vocabulary acquisition, the acquisition of less frequently used new words or the varieties of words in his or her writing has to be examined. In order to produce longer and more complex sentences, it is necessary for the learner to acquire more difficult words. That is, to trace the lexical development, the relationships of the variables (two components and their subcomponents) or "growers" need to be studied (Verspoor et al., 2012, p. 242). The present study considers the multidimensional development of the learners' writing over different time scales in order to capture the dynamics of language development as proposed by Larsen-Freeman and Cameron (2008); and van Dijk, Verspoor and Lowie (2011).

2.5 Task Repetition

Studies by recent researchers such as Mackey, Kanganas and Oliver (2007); Bygate (2009) and Hawkes (2012) have shown the benefits that L2 learners gained from task repetition (similar or a bit different). Task repetition is found to improve complexity or accuracy and fluency of construction. Bygate (1996) finds that the repeated performance has higher accuracy and there is improvement in fluency and the use of lexical repertoire. Bygate (2009) finds that complexity and fluency increased in exact repetition. Bygate and Samuda (2005) argue that the repeated performances allow learners to look at different perspectives and elaborate the intentions of the characters; write more coherent stories and give previews, summaries, and background information. These studies highlight that exact task repetition made learners prioritize appropriate formulations (form) over message content (Bygate, 1996). Bygate and Samuda (2005, p. 67) reveal that in repeated tasks, the learner works differently on the same material rather than the 'same' thing resulting parallel increases in complexity and fluency. The present study uses task repetition to observe the changes that occur in learner's writing, not to examine the different effects of repetition tasks like the ones carried out by the researchers mentioned above.

According to the Trade-off Hypothesis (Skehan, 2009), in task repetition, as a result of capacity limitations, speakers or learners have to divide their awareness among all the required processes. If the different task demands are more than the resources available, competition occurs between the processes and related performance (CAF) which are in progress. Speakers or learners will give priority to specific performative aspects over others. Hence, those aspects which are being given enough attention will achieve optimal performance while those being given limited attention will become erroneous. Van Patten (1990) argues that in order to communicate, learners prioritize meaning

instead of form (complexity and accuracy). Therefore, a conflict between form and fluency will occur (Skehan, 2009). If the L2 learners' goal is fluency, they will pay less attention to complexity and accuracy of language. Similarly, a trade-off between complexity and accuracy occurs because of the limited resources the learners have. Task repetition, according to Bygate and Samuda (2005), enables L2 learners to give priority to form over meaning.

2.6 Recent Studies based on DST

There are many recent studies based on DST. Spolman and Verspoor (2010) investigate complexity and accuracy development in L2 written production of a learner of Finnish from Holland using DST techniques. Vyatkina (2012) examines the longitudinal and cross-sectional development of lexicogrammatical complexity in the written production of L2 German learners at college level. Vercellotti (2012) studies the development of CAF over time in an instructed environment using English L2 oral data of students who speak Arabic, Chinese, and Korean language. Verspoor, Schmid and Xu (2012) examine the dynamic process of language development in the written texts of L2 Dutch learners. Polat and Kim (2014) study the connection of complexity, accuracy and lexical variety over time in the oral production of a Turkish immigrant in the USA in an untutored situation. Lara (2014) explores the L2 oral development of a group of adults who were learning English as a foreign language. The learners took part in Study Abroad programmes, which differ in the length of stay (LoS), in English-speaking countries. Rosmawati (2014) traces the development of complexity and accuracy constructs in L2 academic writing of four advanced English learners in Australia. Yang and Sun (2015) examine the development of complexity, accuracy, and fluency in L1 (Chinese), L2 (English) and L3 (French) writing of five undergraduate multilingual learners throughout an academic year. What is common among all these studies is that, they all

use the CAF tools employed by Larsen-Freeman (2006) in her quantitative analysis of the data.

In CAF, according to Wolfe-Quintero, Inagaki and Kim (1998, p. 4), “complexity refers to the learners’ language knowledge while accuracy describes the appropriateness of language use and fluency the automaticity of language use”. CAF gauge the learners’ development in terms of frequency counts, ratios, and indices (Norris & Ortega, 2009). The triad is both descriptive and normative (Ortega, 2003). Ellis and Barkhuizen (2005); Housen, Kuiken, and Vedder (2012); and Skehan (2009) consider the CAF as a good yardstick for measuring L2 production as it offers greater perceptibility of changes and allows better comparability across studies.

However, as CAF tools measure learners’ language from a TL perspective, it is against CT/DST which is the theory this research is based on. Furthermore, Larsen-Freeman (2014, p. 502) argues that the process of development can neither be understood correctly by investigating interconnections between variables across populations nor by calculating group means only. According to her, the averages conceals the individual differences between learners and causes researchers to overlook interesting and relevant behaviour of statistical ‘outliers’.

It is found that none of the recent research on DST replicates Larsen-Freeman’s (2006) qualitative analysis. The qualitative analysis is in the form of idea units. The idea unit analysis allows researchers or teachers to observe the change that occurred in learners’ writing in details. Hence, it will be good for the researcher to use Larsen-Freeman’s idea unit analysis to trace the language development of the five English learners.

2.7 The Original Study

In her 2006 article, Larsen-Freeman studied the “emergence of complexity, fluency, and accuracy in the oral and written production of five Chinese learners of English”. She used the dynamical description approach by van Gelder and Port (1995, p. 17). The approach supplies a conceptual apparatus for observing the process nonlinear systems change longitudinally. A time series designed by Thelen and Corbetta (2002, p. 61) was used to capture the developmental process. In addition, she improvised their time series by getting students do the same task over time. The study was aimed to capture and examine the 'fuzziness' and dynamism of language development (Larsen Freeman, 2006, p. 594).

The results of her study show that CAF emerge due to the system adjusting to a changing background and the transformation of each learner's language capabilities with constant use. Language is seen as a complex, dynamic system. Learners use and acquire language as they adjust to certain situation dynamically. The features of learner language development (based on a TL) are: non continuous; not in stages; increases and diminishes inconsistently; fluctuation in progress and change; the end results is something new and different from its original version.

In a nutshell, as Larsen-Freeman (2015, p. 494) posits, language development is not a procedure of acquiring abstract rules; it is the process in which language abilities emerge through real time use. Structures in learner production emerge from repeated patterns that arise as a result of language use in a bottom-up manner. DST respects language users and learners' creativity; errors and innovations are both independent productions as both affect language change but errors are socially sanctioned (Larsen-Freeman, 2012b).

2.8 The Present Study

This study replicates Larsen-Freeman's (2006) study. It closely follows the research procedures. The participants, setting, tasks, data collection and coding are comparable to those in the original research. However, it only uses her idea unit analysis (qualitative) to look at students' language development and does not look at CAF. Another difference from the original research is that, the data analysis does not look at learner language from a TL perspective; it is based on the ideas of Larsen-Freeman's 2012b and 2015 studies.

An added feature in this study not found in the original study is that the written production of the participants are also rated by three experienced English language teachers holistically according to the current Form Three Assessment Format or PT3. The results of the rating are compared to the results of the idea unit analysis to see their differences.

It would be interesting to see what changes take place in the language of the five Malaysian Chinese teenage learners and to see if results hold for both Larsen-Freeman (2006) and the present study.

The assumptions or theoretical framework made in the present research are similar to Larsen-Freeman's (2006) article. The assumptions are as follows:

1. The language system is dynamic, it is not static. The language resources of each learner (L1 and L2) are transformed uniquely through use. Language evolves and changes like an organism. Different stable variety of structure, meaning and pragmatics emerge due to adaptation in local communities.
2. The process of SLA is not about conformity to a target language or to imitate the norms of native-speaker according to Cook (2002) and Seidlhofer (2004). Larsen-Freeman (2005) posits that there is no rigid and uniform target end condition to language development. It also involves the creation of new, interesting and seeming slightly strange forms (Larsen-Freeman, 2003). Learners do not just obey the rules of linguistic; they also change it continuously (Donato, 2000).
3. There are no distinct stages in SLA and learners' performance is variant. However, according to Marchman and Bates (1994), there are certain grammatical forms which need to be acquired sufficiently in order to move to a different form stage. The dominant structures may arise gradually or fluctuate and then followed by a phase change (threshold) in the system which triggered reorganization. This shows that the complex system is nonlinear.

4. There is competition among the subsystem such as complexity, accuracy and fluency due to the intrinsic limited resources such as working memories, consideration, and time-on-task that humans have to deal with acquiring a new skill or clearing up a task (Robinson & Mervis 1998).
5. Language is a cognitive as well as a social resource (Atkinson, 2002; Larsen-Freeman, 2002). Cameron and Deignan (2006) maintain that language performance is affected by factors such as the burden of physical or mental distress and affordances, learners' characters, goals and emotional states.
6. Learners progress in a dynamic system with variation and fluctuation which are important features of dynamic systems (Thelen & Smith, 1994; van Geert & van Dijk, 2002). The inconsistency is not an error of measurement; it shows that the linguistic resources of language learners are dynamically adapted to the ever changing context (Tarone 1979). Thelen and Smith (1994) describe the contingent performance as 'a make-do' solution to the stated situation.
7. There is variation in individual developmental paths. Individuals keep choosing and manipulating the circumstances in which they operate (van Geert & Steenbeek, 2005). Lewontin (2000) posits that learners decide what features of the world outside are related to them, build a world around them actively and also keep changing it. Generalizations about learning are not practical and not applicable despite individual differences.

(Larsen-Freeman, 2006, pp. 591-594)

In addition to Larsen-Freeman's (2006) article, this study is also based on the ideas posit by Larsen-Freeman's two latest studies, they are:

- (i). The emancipation of the language learner (Larsen-Freeman, 2012b).
- (ii). Saying what we mean: Making a case for 'language acquisition' to become 'language development' (Larsen-Freeman, 2015).

In the first article, Larsen-Freeman (2012b) highlights the trend to ascribe to language learners increasing power and responsibility for their own learning in language education. She opines that learners should not be treated as being mere '*hosts*' of another's language. Instead, the errors they made should be treated as '*innovative*', based on DST (Larsen-Freeman, 2012b, p. 297).

In the second article, Larsen-Freeman (2015) suggests to replace the term "**Multilingual or Second Language Acquisition (SLA)**" with "**Multilingual or Second Language Development (SLD)**". This is because a CT/DST perspective:

- (i) Rejects the term 'acquisition' which treats language as a commodity, the term 'development' is more apt as it implies that language is dynamic and ever-growing.
- (ii) Accepts the variability and interconnected characteristics of bilinguals and multilinguals.
- (iii) Respects regress in learner production as a feature of development, similar to progress.
- (iv) Recognizes that there is no standard endpoint to development because in addition to obeying their linguistic world; learners also transform it actively. (Larsen-Freeman, 2015, p. 491)

CHAPTER 3: RESEARCH METHODOLOGY

3.1 Overview

This section is about the data production of the study. It gives an account of the study design, the instruments for data collection and the participants. It also highlights how the data collection and data analysis are conducted, refer to the flow chart of data collection in figure 1.

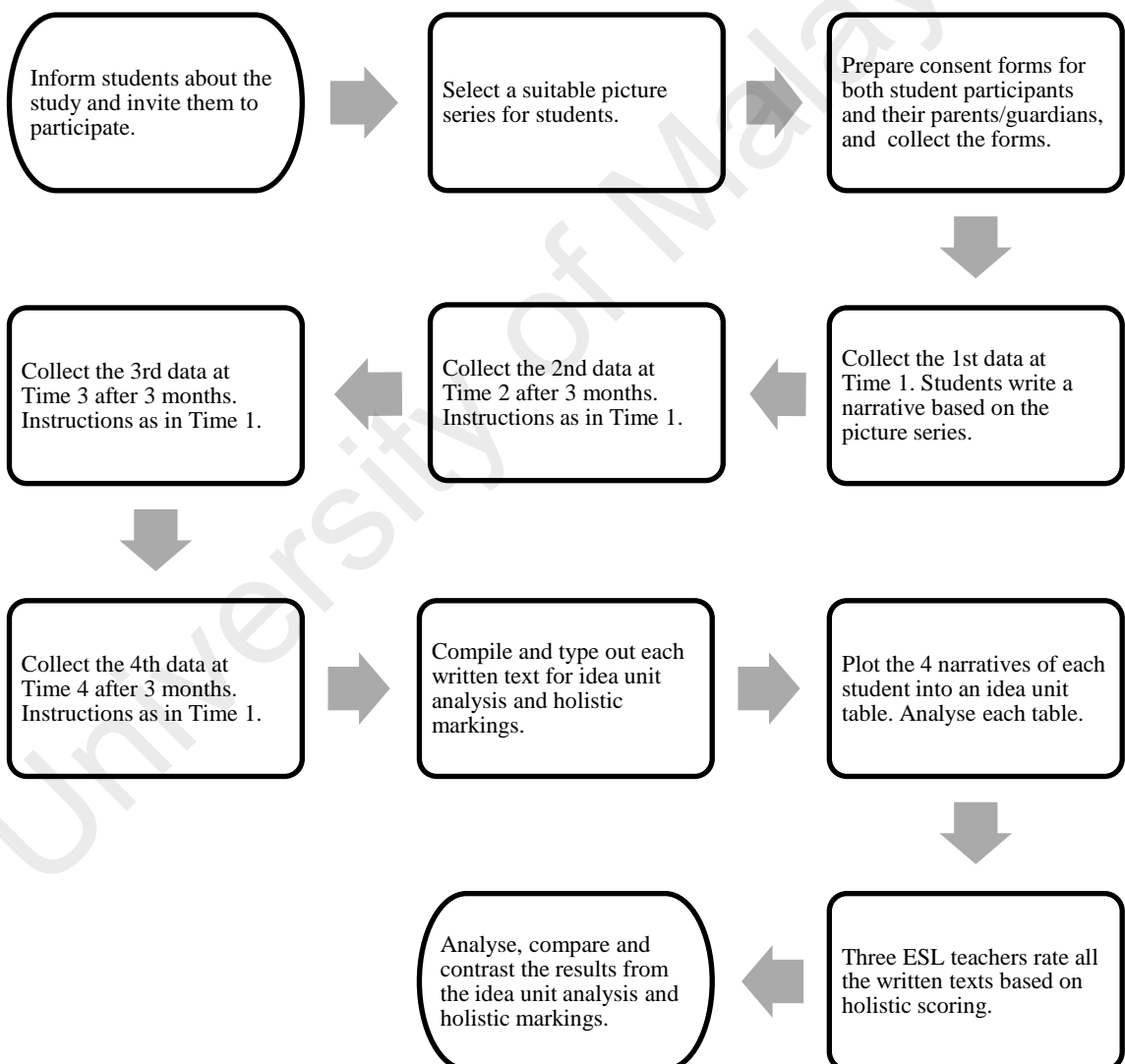


Figure 1: Flow chart of data collection

3.2 The Design

Like Larsen-Freeman, a time-series design was used to capture the developmental process of the participants. However, unlike her exploration where participants were asked to recall a past experience, in this study a picture series was used to guide the participants in their narratives. The picture series consists of six pictures about an incident that happened to five teenagers at a park. The picture series reflects the kind of tasks those teenage participants typically encounter in a Malaysian context. The feature 'familiarity of information', according to Skehan (2001), allows learners to draw on ready-made content schema which can enhance fluency in writing.

As mentioned in section 2.8, an additional feature introduced into the present study, not found in Larsen-Freeman's (2006) study, is that same writing of each participant were marked by three experienced raters using holistic scoring. The results of the holistic scoring would then be compared to the results based on the idea unit analysis.

3.3 The Participants

The participants in the original study (Larsen-Freeman, 2006) were five female learners of English from China, age 27 to 37 years old. They were all professionals with high intermediate level of English language proficiency. However, the participants in this replication study were five Malaysian Chinese students (two male and three female) from a secondary school in Selangor. They were about fifteen years old and were studying in Form Three. The teenagers were receiving private tuition in English conducted by the researcher. They attended the class once a week and the duration was one and a half hour.

Chinese (Mandarin) is their mother tongue; they learned English and Malay language as second languages simultaneously when they were in Chinese primary school. At the age

of five, they started learning English as an L2. They were keen learners of English. Their English language proficiency was considered as intermediate in their school. Mandarin is the language used at home and in school with their classmates except their Malay and Indian teachers. English is hardly used outside the classroom.

Student A is a boy. His father is a businessman and his mother is a Chinese primary school teacher. He has a brother and four sisters. They speak Mandarin at home. He scored straight As (7) in his UPSR (primary school) examinations.

Student B is a girl. Her father is a mechanic and her mother is a Chinese primary school teacher. She has a brother and a sister. They speak Mandarin at home. She scored 6As (inclusive of English) in her UPSR examinations. She is a St John society member at school.

Student C is a girl. Her father is a businessman and her mother runs a chicken rice stall at a coffee shop. She has three sisters only, she is the eldest. They speak Mandarin at home. She scored 5As (inclusive of English) in her UPSR. She is a St John society member.

Student D is a Chinese girl. Her father is a building contractor and her mother is a housewife. She has a brother and a sister who are studying in college. They speak Mandarin at home. She scored 6As (inclusive of English) in her UPSR.

Student E is a boy. His father is a mechanic and his mum is a clerk. He has a brother and a sister. They speak Mandarin at home. He too scored an A in English in his Year 6 UPSR exam. He is good at sports and is a St John club member.

3.4 Data Collection

In the original study, the participants were told to perform the same task once every six weeks, a total of four times over duration of six months. The participants were requested to write and tell about a past experience, without worrying about their English grammar; without consulting a dictionary; without time limit and without feedback on their production. Their oral production was recorded and transcribed, but only the data from the written narratives was being analysed and reported in the study.

In this study, the longitudinal data was collected at four different points in time, over twelve months, once every four months. The data collection began in October 2015 when the students were in Form Two (secondary two) at the age of 14, and ended in October 2016 when they were in Form Three and became 15 years old. From Table 3.1, the points of data collection were October 2015 (Time 1), February 2016 (Time 2), June 2016 (Time 3) and October 2016 (Time 4).

Table 3.1: The points of data collection

Point of collection	Time 1 (T1)	Time 2 (T2)	Time 3 (T3)	Time 4 (T4)
Date	October 2015	February 2016	June 2016	October 2016

Unlike Larsen-Freeman's exploration, in this study a picture series was used to guide the participants in their narratives. The rationale is that in the field of task-based research, according to Chihiro Inoue (2010), narrative tasks with picture sequences are mostly used to compare different performance and to measure the features of spoken language such as accuracy, fluency and complexity etc.

The stages for narrative structures are: scene setting; characters identification and reference making about them; main events identification and narration of the events in a coherent sequence (Luoma, 2004, p. 144). Raimes (1983, p. 36), maintains that a picture sequence supplies the content for writing narrative and for thinking and making guesses about the story away from the pictures in the strip. Therefore, in this study a picture series is chosen to capture the language development, which takes place over time, in the written production of the five Malaysian Chinese learners of English.

The five participants were told to write a narrative based on the picture series (Appendix A) given. They were gathered in a classroom and were asked to write the narrative at the same time. The researcher administered the picture series and was present in the class throughout the writing session. The time given per session was one hour. Students were told to write as much as possible without worrying about their grammar. They were neither allowed to discuss the story nor consult a dictionary. In addition, no feedback was given for each session. Students were not informed about when they were going to write the story for each session. The same procedure was repeated at each time of data collection.

3.5 Qualitative Data Analysis

The learner essays were considered in two different ways, to answer the two research questions posed in Chapter 1. The first one is based on Larsen-Freeman (2006)'s idea unit analysis and the second one is based on the results of holistic scoring of the same texts.

3.5.1 Idea unit analysis

The present study replicates Larsen-Freeman's (2006) idea unit analysis. The analysis of written narratives by the participants was an exact replication of the original study.

An idea unit is "a message segment consisting of a topic and comment that is separated from contiguous units syntactically and or intonationally" (Ellis & Barkhuizen, 2005, p. 154). All sentences produced by the participants were put into idea units. This process for displaying narrative structure is suitable for the purpose and data of this study (refer to Table 4.1 and the tables of idea units in the appendices for examples of how an idea unit analysis of the student texts was conducted). To carry out comparison, first the most syntactically concise idea unit was entered into the table. Next, the other idea units were plotted against this one. Thus, the concise anchor unit in one narrative might be expressed as a few idea units in another version of the story. However, to aid comparability, in the table, the single idea unit and the multiple idea units were mapped side by side in single rows.

When the idea in an idea unit was not retold from one story to the others, the cells were left open. Unlike the original study, when the same idea unit was present, but not told in the same chronological order from one writing to the next, the idea units were aligned to the particular cells and an asterisk (*) was put in front of the idea units. It allowed the ease to compare idea units (refer to Table 4.1 in Chapter 4).

3.5.2 Holistic markings

In addition to the idea unit analysis of the original study, the data collected in this study was rated by three raters according to holistic scoring. Holistic rating is a qualitative process to sort or rank samples of writing quickly and impressionistically (Charney, 1984, p. 67). It neither corrects nor edits a piece and diagnoses its weaknesses. Holistic rating is a set of methods for allocating a mark or value to a written text based on the criteria created (Charney, 1984). A holistic scoring rubric normally consists of four to ten bands or levels. Each band equals to a score and a group of descriptors which can be either general or specific.

Elliot, Plata and Zelhart (1990) define holistic assessment as:

To view a sample of writing holistically is to attempt to view the writing as more than the mere sum of its elementary parts. In considering a sample of writing from a holistic perspective, readers do not judge separately the singular factors--treatment of topic, selection of rhetorical methods, word choice, grammar and mechanics--that constitute a piece of writing. Rather, raters are asked to consider these factors as elements that work together to make a total impression on the reader. It is this total impression that is sought in holistic scoring. (Elliot et al., 1990, p. 17)

Holistic scoring is more cost-effective than analytic scoring because raters need to award a single score (make only one decision) for each sample of writing. Thus, holistic scoring is usually employed in large-scale assessment of writing such as in the English essay of Malaysia's Form Three General Assessment Examination or PT3.

According to Charney (1984), the assumptions used for holistic scoring to be valid and reliable are:

- a. The design of the training and rating sessions are reliable.
- b. The readers are qualified, and have similar backgrounds.
- c. The readers are trained (calibrated) to conform to agreed upon criteria of judgment;
- d. The criteria (rating guide) determined by the readers as a group are appropriate; and
- e. Readers work quickly, under supervision. (Charney 1984, p. 69)

In this study, three English language teachers, who have been teaching and assessing Form Three students in public schools for more than twenty years, were invited to rate the writing of the participants using the current (PT3) holistic grading rubrics. The teachers have had training and experience in holistic scoring. The three teachers are from three different districts. They do not know one another.

The original written narratives of the five students were typed (recommended by McColly [1970] to remove the influences of handwriting and neatness), anonymised, and given to the raters. They were asked to rate all the narratives (from T1, T2, T3 and T4) of the five participants at the same time. A copy of the picture series and the rubrics were given too. No information was given regarding the fact that the 20 essays were actually written over a year by five students only. The teachers were told to grade the papers according to the rubrics given based on merits. Their results were tabled and analysed. The final score of each text was determined by the average of the three scores. The results of the average rating were compared with the results from the idea unit analysis.

The marking scheme is one that is used in the same Malaysian context to assess student writing performance (including the participants in this study). Each text was manually marked according to the five criteria stated in the rubrics (refer to Appendix G). The five criteria are:

- (i) How well is the task fulfilled?
- (ii) How well are the ideas developed and organised?
- (iii) Whether the sentence structures are varied and used effectively?
- (iv) How wide and precise is the vocabulary?
- (v) Whether interest is aroused and sustained?

There are five proficiency levels from Band A to E corresponds to excellent, good, satisfactory, weak and very weak respectively. The maximum mark for each text is 30 (refer to Appendix G for the allocation of marks for each band)

3.6 Ethical Consideration

A consent form was signed by both the participants and their parents. Students were told that they participated in this research voluntarily and they had the right to quit anytime they liked. They were informed that their identities will remain anonymous and their narratives will be only be used for this research only. At the end of their participation, Rm 20 was given to each of them as a token of appreciation.

CHAPTER 4: RESULTS AND ANALYSIS

4.1 Overview

Like the original research, this section draws on the data selectively to demonstrate the approach and highlights certain language performance features that could be found from a complex system approach (Larsen-Freeman, 2006, p. 606). It will take up a lot of space to compare and contrast all the idea units, consider the time and word limit given. Another reason is that certain features (e.g., those empty cells and L1 as resources) are common across the tables of idea units and therefore may be repetitive.

The first part of this chapter displays the results of the idea unit analysis of the texts written by Students A, B, C, D and E, respectively. As in the original research, the opening lines or the first five idea units of each student are presented to show how the idea unit analysis is carried out and also to compare the language development of each student over time and among the group. In addition, any special features or changes found in the original texts of each student are highlighted and discussed. Attention is given to learner's language dynamism; "variegated-morphemes, words, phrases, clauses, partial utterances, abstract semantic categories"; language resources (competence in conventional sense); novel forms; variability and 'make-do' solutions; "ephemeral language form which maybe L1 or L2 form or differ from both the L1 and the L2" (Larsen-Freeman, 2006. p. 608-614).

Unlike Larsen-Freeman's (2006) study which looks at learner language from a TL perspective, the texts in this study are analysed based on the concepts to empower learners (Larsen-Freeman, 2012b; 2015) and therefore they are analyzed in their own terms.

The growth in language development of the students in this analysis is based on DST studies by Larsen-Freeman; Chau; and Verspoor, Schmid and Xu's (refer to Chapter 2). The differences in length of each text, the vocabulary repertoire and the dynamism or how students 'make do' with their resources to adapt to context are reported. The changes (increase or decrease) of more or less complex variables are also taken into account.

The second part of the chapter (section 4.9) discusses the results of holistic scorings by the three raters. It compares and contrasts the marks awarded by the three raters to each text. It also looks at the average score of each text and analyses the results of each participant.

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4.2 Student A

Table 4.1 displays the first five idea units from Student A's original writing, neither alterations nor corrections have been carried out.

Table 4.1: The first five idea units from Student A's original written

	Oct 2015	Feb 2016	June 2016	Oct 2016
	It was a sunny day.	* This Saturday was a sunny day. The weather was suitable for outdoors.	It was a sunny Sunday. The warm breeze was refreshing and the whole town was in busy.	It was a windy day. The breeze was rejuvenating and it was a good day for outing.
2.	Lisa has a science project to do.	Last Friday, Lisa's Science teacher had give her a homework. The teacher wanted Lisa to collect a wide array of flower from the river near Lisa's house.	Lisa had a thought for an outing suddenly.	
3.			She asked her young sister to follow her for a attractive and adventurous journey.	Amenda invited her best buddy, Jenny for an outing. Jenny jumped at the chance.
4.	She need some flower to complete the last part of project.	The flowers were needed for teacher to show the characteristics of flowers to the students.	* Along the journey, they discussed about what they wished to do at the river. After a debate, they agreed to pluck some colourful flowers for their beloved mum.	
5.	To ensure her safety, Lisa's sister, Niza followed her to pick the flower.	Go to the river alone is banned by Lisa's mother. So, Lisa invited her sister, Jenny, to join her.	Without permission of their parents, they started their journey to a river near their town.	Soon, they gathered at the school and their adventure started off.

*Ideas not arranged in chronological order

From Table 4.1, the empty cells indicate that idea units #2 (the purpose of going to the river) and #4 (the purpose of plucking some flowers) in the October 2015 version are not retold in the October 2016 version. Likewise, the June and October versions contain idea units not found in the other two versions, for example idea unit #3 (inviting someone). This feature suggests the complexity and dynamism of language (Larsen-Freeman, 2006; Dörnyei et al., 2015). Dörnyei, MacIntyre and Henry (2015) found in their work that in a complex dynamic system, sometimes learners appear to have progress in their language use, when in fact “at other times it led only to minimal progress, if any, uptake at all” - the “butterfly effect”. According to Larsen-Freeman (2006, p. 590), in a complex dynamic system, development is noncontinuous and not stage-like.

In the October 2015 and June 2016 versions, Student A starts his narration with the phrase, *It was a sunny....* In the February 2016 version, the idea is preserved but not according to the same chronological order and the sentence structure is slightly changed *This Saturday was a sunny.....* However, in the October 2016 version the adjective *sunny* has been replaced with *windy*, *It was a windy....*

Apart from that, in the February, June and October 2016 versions, he also adds a sentence to describe the weather to make the opening line more complex:

The weather was suitable for outdoors. (Feb 2006)

The warm breeze was refreshing and the whole town was in busy. (Jun 2006)

The breeze was rejuvenating and it was a good day for outing. (Oct 2016)

The data shows how the participant uses his linguistic resources at one time and over time. It also shows that at T4, from a target language (TL) perspective, Student A has

improved linguistically. From the DST perspective, he has developed his language resources over time (Larsen-Freeman, 2006).

It is found that in the June and October 2016 narratives, the purpose of plucking flowers for school science lesson which is found in idea unit #3, October 2015 and February 2016 versions is not preserved. It becomes a sudden thought for an *outing* and then decided to *pluck some colourful flowers for their beloved mum* in June 2016 version; and in October 2016 version, the idea of plucking flowers is abandoned, it is an *outing* to their *secret site*. These sophisticated structures indicate that the writer is quite versatile.

Another noticeable difference is in the ending of the narrative (refer to Appendix B), all four versions have different endings. The February 2016 one has a happy ending. Student A has sophisticatedly given the sad ending a twist by inventing the *secret site* which is *fulled with colourful flowers* and *mermerising* scenery in idea unit #25. Student A shows that he is very dynamic and he has a good vocabulary repertoire here.

It is interesting to see how Student A used his L1 resources to express himself in English (L2). For example in the October 2015 version:

They are in a mess to do the emergency treatment for the patient. (idea unit #35)
[They hurriedly performed first aid on the victim.]

This is cannot be paid with a hand at all. (idea unit #46)
[It could not be compensated with an arm at all.]

Niza was sad because her slip had crush a hot-hearted boy's hand. (idea unit #49)
[Niza was sad because her fall had broken a helpful boy's arm.]

These sentence structures are considered as erroneous from a TL perspective, but any readers can understand what the writer is trying to say. Those 'different expressions' have their roots in the language they use at home. After all, like what Atkinson (2011)

posits, language is basically a social and communicative tool. Student A's writing suggests that he is making meaning with language: he is "producing and using the language" to communicate his "intentions and thoughts" (Chau, 2015).

The feature of nonlinearity in language development (Larsen-Freeman, 2006) is found by examining the participles used by Student A in the narratives. For example, in the October 2015 version, he writes: *have seen* (idea unit #14); *had break* (idea unit #38); *had destroy* (idea unit #48) and *had crush* (idea unit #49). In the February 2016 version, he writes: *had jumped* (idea unit #36) and *had done* (idea unit #60). In June 2016, he writes: *had not bring* (idea unit #15), *had not fainted* and *had take* (idea unit #31). However, in the October 2016 version, no participle is used, instead Student A uses passive voice frequently, for example: *was silenced* (idea unit #31); *was placed* (idea unit #35) and *was awake* (idea unit #37).

An interesting detail in student A's rendition is the phrase *bring along a basket to house the flower*, idea unit #10, June 2016. What can be seen is a new form, which is neither English nor Mandarin. '*house*' is used instead of the verb 'carry' or 'hold' in English. In Mandarin a basket is used to 'contain' something instead of 'carry', and a house is used to 'shelter' people. This is an evidence of how the language learner uses a word in the TL to make meanings. Another example is *accepted her sorry and thanks* (idea unit #24, Jun 2016) instead of 'accepted her apology' in both English and Mandarin. Student A can be said to be very innovative (Chau, 2015). It shows that learners do not just obey the rules of linguistic, they keep transforming it (Larsen-Freeman, 1997; Donato, 2000).

Table 4.2, idea unit #15 is another indication of how student A has become more sophisticated in writing the narrative. The description of the event jumping into the river changes from an adverb [*immediately* (Oct 2015)] to an idiom [*without further ado* (Feb 2016)]; a simile [*leaped like a tiger* (Jun 2016)] and to a phrase [*took prompt action* (Oct 2016)].

Table 4.2: Idea unit #15 of Student A

	Oct 2015	Feb 2016	Jun 2016	Oct 2016
15	One of them <i>immediately</i> took out his shoes and took a dip into the river	<i>Without further ado</i> , he took out his shoes and took a dip into the river.	He <i>leaped like a tiger</i> into the river and dragged the victim, Lisa to the shore.	Amongst them, there was a samaritan <i>took prompt action</i> . He took a dip into the river and swam towards Amenda.

Other idioms such as: *in the nick of time* (idea unit #14, Jun 2016); *a uphill task* (idea unit #27, Feb 2016); *face the music* (idea unit #25, Feb 2016); *To compound the matter* (idea unit #25, Jun 2016); *Out of the blue* (idea unit #31, Oct 2016); and *from the bottom of her heart* (idea unit #52, Oct 2016) show that Student A has quite a good repertoire of English idioms and there is growth in his language resources over time.

Table 4.3 is a collection of the vocabulary used by Student A from T1 to T4. The table shows that there is development in his vocabulary repertoire over time. His vocabulary at T3 and T4 indicate that there are a lot of changes in his T3 and T4 renditions. At T3, in addition to idioms, Student A also uses similies such as *its yellow-white-coloured petals were like a smiling lady* and *leaped like a tiger*. At T4 he adds in longer phrases such as *jumped at the chance; to appreciate the enchanting flower up close; express her appreciation from the bottom of her heart; and the longest one minute in her life*.

Table 4.3: Vocabulary repertoire of Student A

Time	Vocabulary
T1	To ensure her safety, ideal, swallow enough, afiamado, immediately, at the top of his voice, the shore, patient, emergency treatment, passed out, lousy accuse, destroy, her slip had crush, hot-hearted boy's
T2	characteristics, Go to the river alone is banned, invited, weather, outdoors, refreshing breeze, incidentally, approached, without further ado, took a dip into the river, kind-hearted boy, riverbank, coughed out, stamina was regenerated, secret site, extremely beautiful, mesmerizing, paid back, snacks and beverage, a uphill task, achieve her goal
T3	had a thought for an outing suddenly, a attractive and adventurous journey, without permission, discussed about, after a debate, agreed, after toiling for half an hour, God blessed them! The flowers were liked a group of ladies, took the initiative, to regret, to house the flower, Lisa's eyeballs were attracted by, yellow-white-coloured petals were like a smiling lady, stigma and anther, cannot controlled, walked straight, stepped into the river! Opps! dropped into the river, fruitful rewards, sensed any sadness, found her body was started to sink, seek the help from, took action in the nick of time, leaped like a tiger, dragged the victim, to the shore, said sorry and thank you, may drowned and died, To compound the matter, face the music again
T4	was rejuvenating, jumped at the chance, their adventure started off, headed for a river, played in this heaven and enjoyed their own pleasure, put aside every worry and stress, birds were chirping, the warm breeze was roaring to their ears, chased with each other, screaming to each other, bursted out their laughing heartily, all in a sudden, caught Amenda's attention, to appreciate the enchanting flower up close, had a shock of her life, may drown in the river and loss her precious life, a matter of life and death, was astonished, rebooted her mind, took prompt action, expelled the water from the lung, the boy was her hero! express her appreciation from the bottom of her heart, the longest one minute in her life, unforgettable event, bear in mind, careless can be fatal

Features of fluctuation and inconsistency in language development (Larsen-Freeman, 2006) are shown by the number of idea units Student A writes based on each picture in the picture series. In the October 2015 narrative, he writes more about the picture which depicts the scene of rescuing the girl (picture 5) and the sad ending of the story (idea unit #18 to #23). However, in the February 2016 version, he concentrates on the aftermath of rescuing the girl and gives it a twist to happy ending (idea unit #24 to #27). In June 2016 version, Student A describes the flowers and the girl's feeling for the flowers in detailed (idea unit #8 to #11), but in the October 2016 version, Student A writes the story in eight paragraphs adding more details to the girl's feeling after being saved:

Amenda had a great shock in her life. It was the longest one minute in her life. She would never be careless again until she forget this unforgettable event. Bear in mind, careless can be fatal.

Student A's efforts show that learners determine what features of the world outside are related to them, build a world around them actively and also keep changing it (Lewontin, 2000). Chau (2015) considers developing language users as storytellers who are versatile. They sometimes 'conform to traditional, long-winded constructions and sometimes create their own orientations'.

4.3 Student B

The second set of data (refer to Appendix C) comes from Student B. Table 4.4 displays the first five idea units of her original writing.

Table 4.4: The first 5 idea units of Student B

	Oct 2015	Feb 2016	Jun 2016	Oct 2016
1		Last weekends, Mary and Lisa was given a project by their science teacher to pluck a wide array of flowers to have an experiment about the plants.	This was a fine morning. June and Jennie made up their mind to pick some flower for their mother's birthday present.	Last week, Jane and Amanda made up their mind to go for a walk after the exam to let their hair down.
2		They were excited because this was their first time to have experiment and they take action immediately.		
3	Last month, Mary and Jessie went to their house's nearby river to take some photo.	They went to a nearby riverside to pluck flower.	They went to the river behind their home without telling their mother.	After discussion, they decided to go to the river which is just a stone throw away from their house. They went there together quietly as they did not inform their parents.
4			They thought their mother will be happy with their masterpiece.	
5	They needed some plants's photo to complete their science project.			They were excited and eager to go there. They also brought along their camera to snap some pictures there.

It is found that the February, June and October 2016 versions contain idea units not found in the October 2015 version (idea units #1 and #2). Similarly, idea unit #5 (the needs for some photos of plants for science project) in the October 2015 version is not conveyed in the February and June 2016 versions as indicated by the empty cells. This feature confirms the complexity and dynamism of language (Dörnyei et al., 2015; Larsen-Freeman, 2006), that is, development is noncontinuous and not stage-like.

In the four narratives of Student B, the purpose of going to the river is different. The idea changes from taking photos for *science project* (Oct 2015) to plucking flowers for science *experiment* (Feb 2016); plucking flowers for *mother* (Jun 2016); and *go for a walk after the exam* (Oct 2016). It shows that Student B is using language for social action. The June version was written after Mother's Day and it might probably give her the ideas of plucking flowers for mum and the October version was written after their PT3 trial exams and it probably gave her the idea of going to the river to *let her hair down*. Her attempts show that language is both a cognitive and a social resource (Larsen-Freeman 2002; Atkinson 2002).

It is observed that the opening line of the narrative also gets more complex in February, June and October 2016 texts. In October 2015 version, Student B writes, *Last month, Mary and Jessie went to their house's nearby river to take some photo. They needed some plants's photo to complete their science project.* In February 2016 version, in addition to the purpose of going to the river, she adds, *They were excited because this was their first time to have experiment and they take action immediately.* In June 2016 she adds, *They went to the river behind their home without telling their mother. They thought their mother will be happy with their masterpiece.* In October 2016 she writes, *After discussion, they decided to go to the river which is just a stone throw away from*

their house. They went there together quietly as they did not inform their parents. The feature here supports the assumption that language changes just like how an organism changes and reorganises itself, it is not static (Larsen-Freeman 2006; Atkinson, 2011).

Another salient difference is the role of the three boys in the picture series. In the October 2015 version, they are just *three boys* (#27) that the girls saw fishing by the river; in the February 2016 version, they are the girls' *classmates* (#7); and in the June 2016 version, they are just *three passer-by* (#18). However, in the October 2016 version they are *three boys who wanted to go for a fishing passed by* (#27). This shows that as she writes, Student B keeps changing her perspective.

Similarly in the October 2015 version, she gives the story a sad ending (refer to Table 4.5), *The doctor diagnosed that Mary's brain was knocked seriously and she will fainted for a long time or forever*, whereas in Feb 2016 she writes, *Mary was only fainted temporarily*; in June 2016 she says, *June was saved and free from injury*; and in October 2016 she writes, *the doctor said that Jane was save and away from dangerous*. This feature shows that Student B is very dynamic.

Table 4.5: Idea unit #53 of Student B

	Oct 2015	Feb 2016	Jun 2016	Oct 2016
53	The doctor diagnosed that Mary's brain was knocked seriously and she will fainted for a long time or forever.	After checked, the doctor told that Mary was only fainted temporarily. He told us not to worry too much about her.	Luckily June was saved and free from injury.	Luckily, the doctor said that Jane was save and away from dangerous.

In idea units #14 (refer to Appendix C), Student B gets more sophisticated in describing the flowers, from *beautiful* (Oct 2015) to *different in colours* (Feb 2016) to *in different species and in different colour* (Jun 2016) to *colourful flower* (Oct 2016). The above examples show that individuals keep choosing and manipulating the contexts in which they operate (van Geert & Steenbeek, 2005).

The use of idioms such as *had a butterfly in their stomach* (idea unit #51, Feb 2016); *lend them a hand* (idea unit #18 Jun 2016); *Out of the blue* (idea unit #21, Jun 2016); *a stone throw away* (idea unit #3, Oct 2016) and *jumped out of her skin* (idea unit #22, Oct 2016) indicates that she gets more skillful in her writing. She also starts using similes in June 2016 version. For examples, *ran as fast as her spindly leg could carry her* (idea unit #32) and *at a lightning speed* (idea unit #36). This shows Student B has a good repertoire of vocabulary.

An example of the “emergence of language abilities through use in real time” (Larsen-Freeman, 2006) is shown from idea unit #34 to #45, October 2015 below. Student B uses her L1 resources to describe the scene in English when one of the girls went to ask the boys for help and the scene when one of the boys saved the girl who fell into the river. A lot of efforts have been put in to write the story.

Jessie told them loudly that Mary was fall into the river. They all shocked about hearing this. Without any delay, they rushed towards Mary. A boy who is the eldest jumped into the river to save Mary without a word. The water flows more faster and Mary was pushed by the river further and further. The boy swam towards Mary hardly. Unfortunately, there was a big stone there. Mary's head was knocked by the stone and she immediately fainted. She sink into the water. The boy snork into the water and finally managed to save her from the river. (idea unit #34 to #45, Oct 2015)

Note the use of *was fall, shocked about, without a word, flows more faster, was pushed by the river further and further, hardly, sink and snork*. (*snork* is a spelling mistake for the word **snorkle**. The student was asked about the word by the researcher after the fourth data collection). From a TL perspective, these sentence structures are considered as erroneous but any readers can understand what Student B is trying to say. SLA is not conformity to a target language (Larsen-Freeman, 2006). From a DST perspective, she is considered as innovative.

The June 2016 narrative (349 words) is the shortest among the four texts. However, it consists of idioms, similes and more concise words to describe the incident. For examples:

without telling; made up their mind; masterpiece; lend them a hand; declined; at a lightning speed; ran as fast as her spindly leg could carry her; shouted at the top of her voice; drown; Samaritan; do CPR; inform; unconscious; will become worsen and could not be imagined.

Most of these words and phrases are not found in the other three versions. They show that the participant has developed greater linguistic skills and vocabulary repertoire as she writes (refer to Table 4.6). She is able to condense her writing. In other words, writing shorter texts does not imply a lack of linguistic knowledge – on the contrary, as this June 2016 text shows, this might be considered as among the best texts in terms of the linguistic knowledge on display.

The longest narrative is the October 2016 version (499 words). However, there are only five paragraphs. Student B describes the scenery at the river in details:

They could see the big tree with green leaves stand steadily on the riverbank. There are also some birds stopped on the tree and also some of them flying happily in the sky. The river was crystal clear, they could see some fish swimming in the river. There were also some beautiful water lily on the river. They felt refreshing when the wind blew through their faces. (#8 to #12)

These ideas are not found in the other three versions. Note that she has managed to identify the name of the flowers in the river. It shows that Student B looks at the picture series from a new perspective and she has taken greater interest in writing the narrative. Her efforts indicate that repeated tasks allow learners to look at different perspectives and elaborate the intentions of the characters; write more coherent stories and give previews, summaries, and background information (Bygate & Samuda, 2005). Her four texts show that there is competition among the subsystem because of the intrinsic limited resources she has to deal with the writing task (Robinson & Mervis, 1998).

Table 4.6: Vocabulary repertoire of Student B

Time	Vocabulary
T1	came across, attracted her very much, many algae, was shocked and frightened, on top of their voice, regreted, at this moment, no response, make a beeline, without any delay, without a word, snork into the water, managed to save, admitted into the hospital, Especially her mother, diagnosed, will fainted for a long time or forever, cannot accepted this news, seriously injured, the effect might be more serious.
T2	have an experiment, take action immediately, a nearby riverside, unwind themselves, did not realized on it, her legs was cramed, ran to the source of the sounds, a samaritan mastered up his courage, anxiously, had a butterfly in their stomach, fainted temporarily, relaxed after hearing this, from that time onwards.
T3	made up their mind, birthday present, without telling, happy with their masterpiece, in different species and in different colour, three passer-by, lend them a hand, declined, under their effort, out of the blue, slipped and lost her balance, icy cold, at the top of her voice, ran as fast as her spindly leg could carry her, rush towards, at a lightning speed, without thinking, as fast as he could, started to drown, fainted and unconscious, do CPR, prevent internal injured, inform, become worsen, could not be imagined, without permission.
T4	go for a walk, to let their hair down, discussion, a stone throw away, eager to go, brought along, snap some pictures, chatted and sung happily, beautiful view there, flying happily in the sky, water lily, felt refreshing, mooted, aweded to jane's suggestion, scared she would fall, passed by, adviced them stopped this action, put their advices on deaf ears, accidentally, jumped out of her skin, very nervous, to draw people's attention for help, in a lightning speed, aghasted, plunged into the river immediately, without any hesitation, what was transpired, in a split second, ammitted to the hospital, what was happening, within minutes, anxious, away from dangerous, heaved for a sight of relief, rely to lent a hand, maybe tragedy will happen, learnt a lesson.

Table 4.7 contains idea unit #57 of Student B. It indicates how Student B describes the feeling of the parents of the girl who was nearly drowned. The empty space shows that the idea is not conveyed in February 2016 version. Student B shows that her language resources have increased as she keeps writing. In October 2015, she writes “*if did not have their help, the effect might be more serious*”; in June 2016, she writes “*If there were no their help, the condition will become worsen and could not be imagined*” and in October 2016 she puts it this way, “*Without them, the condition will become worsen and maybe tragedy will happen.*” In a nutshell, idea unit #57 not only shows that language is dynamic, it also shows that progress is non-linear (Larsen-Freeman, 2006).

Table 4.7: Idea unit #57 of Student B

	Oct 2015	Feb 2016	Jun 2016	Oct 2016
57	Mary’s parents also thanked Jessie and the three boys although Mary was seriously injured, <i>if did not have their help, the effect might be more serious.</i>		Their mother thanked the three boys for their help. <i>If there were no their help, the condition will become worsen and could not be imagined.</i>	Jane’s parents thank the three boys for rely to lent a hand to Jane. <i>Without them, the condition will become worsen and maybe tragedy will happen.</i>

4.4 Student C

Table 4.8 contains the first five idea units of Student C's original writing, neither alterations nor corrections have been carried out (refer to Appendix M for a sample of original writing). It is found that the timeline in October 2016 is different from the other three versions. Instead of beginning with *Last...*, Student C writes *It was a sunny day*. In addition, in the October 2015 version, the venue is *a pond*, whereas the other three versions is *a park*. The empty cells indicate that the idea in idea unit #3 (*pull out all the plants*) is not retold in the other three versions.

Table 4.8: The first five idea units of Student C

	Oct 2015	Feb 2016	Jun 2016	Oct 2016
1	Last Sunday, Lisa and her friend, Lynn were going to a pond.	Last school holiday, Janet and Susan were going to the park to have their morning walk.	Last Sunday, Joey and her neighbour, Jessie had a morning walk at the nearby park.	It was a sunny day. Joey and Jenny went to the park. They wake up early and had a morning walk.
2			Joey and Jessie chatted happily and sang sweetly.	They chatted happily.
3	They pull out all the plants that beside the pond.			
4	There were three boys passer by.	Besides, there had three boys went to fishing with took their fishing rod and pail.	Besides, there were also three boys took their fishing rod and pails.	Besides, there were three boys seen like went to fishing. They took their fishing rod and pail.
5	They look like wanted to fishing because they took with the fishing rod and pails.		They seen like wanted to have a fishing.	

The opening line of the story is more complex in the February, June and October 2016 versions as the writer adds in the purpose of carrying out the activity to the timeline:

to have their morning walk (Feb 2016)

had a morning walk at the nearby park (Jun 2016)

They wake up early and had a morning walk (Oct 2016)

It is observed that the relationship of the two girls is *friend* in the October 2016 version and *neighbour* in June 2016. However, their relationship is not mentioned in the February and October 2016 versions.

The table of idea units of Student C (refer to Appendix D) shows that Student C conveys most of the ideas in the October 2015 to the other three versions. For example, in idea unit #4 the idea of *three*; in idea unit # 11 *out of the blue*; and idea unit #12 *was shocked*. These ideas are preserved from one telling to the others but in different context.

In the February 2016 version, the idea of a deserted park (Table 4.9), *There only had three boys and two girls* is retold in the June 2016 version as *a few people in the park* but not in the same chronological order. The idea is not present in the other two versions as shown by the empty spaces in the row. This shows that language development is not linear (Larsen-Freeman, 2006).

Table 4.9: Idea unit # 6 of Student C

	Oct 2015	Feb 2016	Jun 2016	Oct 2016
6		There only had three boys and two girls.	*But, there were only a few people in the park because it was early in the morning. All of the people were sleeping in the house due to it was weekend.	

In the February and June 2016 versions, it is interesting to note that Student C adds a direct speech in her story. She writes:

Janet and Susan shouted ‘Help! Help! Help!’ loudly to hope can hear by nearby people. (#14, Feb 2016)

The doctor told Joey’s parent: “She will wake up after a few hours, she only drink a lot of water.”. (#27, June 2016)

She is the only participant among the five, who uses this style in narrative writing. It can be said that there are variants in her sentence structures.

Table 4.10, idea unit #27, shows how Student C uses her L1 resources to express ideas in English. Note the variants of the phrase, *only drink a lot of water*, in the four versions. It can be said that there is growth in her language skills over time though the growth is not consistence (Larsen-Freeman, 2006).

Table 4.10: Idea unit #27 of Student C

	Oct 2015	Feb 2016	Jun 2016	Oct 2016
27	The doctor told them that Lisa did not have any problem, <i>only drink a lot of water</i> in the pond.	After checking by the doctor, the doctor said that Janet <i>was drinking too much water</i> , so she should take out the extra water.	After rescused by doctor, Joey was saved. The doctor told Joey’s parent: “She will wake up after a few hours, she <i>only drink a lot of water.</i> ”	After rescued by doctor, she was saved. The doctor told her parent she was saved, <i>only drank a lot of water.</i>

Another example is the expression, *Joey's parent were put down their stone from heart* in idea unit #28, June 2016. It is interesting to see how Student C presented the expression in the extract below:

The doctor told Joey's parent: "She will wake up after a few hours, she only drink a lot of water." (#27)

Joey's parent were put down their stone from heart. (#28)

They also thanked to the three boys that rescued Joey. (#29)

Any reader will not have difficulty in understanding what Student A is trying to say. In Mandarin (student's home language as well as L1), feeling worried is compared as *a stone in the heart* and feeling relieved is *put down the big stone in the heart* [Fàngxià xīnzhōng de dà shítou]. It is interesting how Student C negotiates meaning using the knowledge that she has from both her L1 and L2. The English preposition "from" is used when taking out something from a place (*put down their stone 'from' heart*). However, in Mandarin, the preposition "from" is not needed when you "*put down the big stone in the heart*". In other words, the learner used the English preposition "from" for taking out a stone from the heart and added to it the Mandarin expression of *putting down a big stone in the heart*.

The example shows the influence of L1 on L2 lexical and syntactic production. Via translation, Student C has used her L1 strategies and knowledge (resources) to put her meaning across. L1 is a resource to be used by L2 learners instead of a source that interferes in their L2 learning (Larsen-Freeman, 2011, p. 297). According to Larsen-Freeman (2006, p. 609), in performance data, the presence of a transient language form "which may be an L1 or L2 form or which may differ from both the L1 and the L2", is a pattern common in SLA.

From a DST perspective, “such linguistic innovations are characteristic of both development and use” (Larsen-Freeman, 2015) or “natural language of an emergence language user” (Chau, 2015). Cook (2013) posits that L2 speakers or users should be treated as different speakers of distinct language.

Table 4.11, idea units #11 and #12, shows how the process of language development of Student C develops over time. By looking at the sentences constructed carefully, Student C is said to have “developed greater language resources with which to accomplish the task” (Larsen-Freeman, 2006, p. 613). All the sentences in idea unit #11 about how the girl falls into the water are variant. Likewise, the idea units about the feeling of the girl’s friend after she has fallen into the water (idea unit #12) are variant.

Table 4.11: Idea units #11 and #12 of Student C

	Oct 2015	Feb 2016	Jun 2016	Oct 2016
11	Out of the blue, when Lisa pull out the last plant, she <i>fall into the pond</i> .	Out of the blue, Janet knick a stone and <i>fall into the river</i> .	Out of the blue, Joey was <i>fall into the river</i> when she want to pick the last flower.	Out of the blue, when Jenny wanted to pluck the last flower, she <i>fall into the river</i> .
12	Lynn <i>was shocked</i> and did know what she can do it for Lisa.	Susan <i>was shocked and scared</i> because she did know what can she did.	Jessie <i>was shocked</i> when she saw Joey fall into the river.	Joey <i>was shocked</i> and she did not know what she could do.

Table 4.12 shows the vocabulary used by Student C from T1 to T4. It is found that most of the words or phrases used are simple and repeated. Student C's vocabulary repertoire has increased over time.

Table 4.12: Vocabulary repertoire of Student C

Time	Vocabulary
T1	a pond, pull out all the plants, passer by, look like wanted to fishing, took with, fishing rod and pails, out of the blue, was shocked, to attract people come to help, heard the scream sound, as fast as they could, without further ago, took a dip, a few minutes ago, informed, was shocked, only drink a lot of water, any problem, had done a good deed.
T2	morning walk, besides, fishing rod and pail, clear and crystal, fresh and cool, along the river, beautiful and special in colour, out of the blue, knick a stone, shocked and scared, 'Help! Help! Help!' nearby people, luckily, want to fishing, put down, followed the sounds came, take a deep, another, to informed, heard this message, a lot of question, how to answer, the ambulance was came, after checking, drinking too much water, take out the extra water, on the other hand, done a good deed, nothing on her healthy.
T3	morning walk, nearby park, chatted happily and sang sweetly, fishing rod and pails, seen like, tried to pick, did not think about, very dangerous, out of the blue, was fall, pick the last flower, saw Joey fall into the river, hoped to attract somebody for help them, only a few people, early in the morning, due to it was weekend, screaming for helped, put down, followed the sound, where came from, took a deep and jumped into the river, action was brave, were telephon, asked them came quickly, heard this message, asked a lot of question, declined to answer, the adress, was arrived, were followed, wake up, were put down their stone from heart, rescued, had done a good deed.
T4	a sunny day, went to the park, wake up early, morning walk, chatted happily, seen like went to fishing, fishing rod and pail, saw the flowers were beautiful, pluck them up, stoped this action, it was dangerous, heard the Joey's advise, Out of the blue, wanted to pluck the last flower, fall into the river, did not know what she could do, crying and scared, hoped can heard by passer-by, were going to fishing, shocked to hear the loudly shouted sound, followed the sound to the sence, Without further ado, rushed to the phone tooth, fall into the river, hoped the hospital reached the sence as fast as they could. After three minutes, informed, accident, sent into the hospital, was saved, only drank a lot of water, asked Joey why, told all the situation that happened, thanked to, If not them, will not had people know Jenny fall into river, gave them a treat, for thanked them, had done a good deed.

4.5 Student D

The idea unit table of Student D (refer to Appendix E), shows Student D's original writing (refer to Appendix M for a sample), neither alterations nor corrections have been carried out. The data shows how learner language develops dynamically. In the October 2015 version, Student D starts the story with the girls going for a walk to the river but, in the February, June and October 2016 versions, she begins with a boy who goes fishing with his friends. There is a change in subjectivity. In October 2015 version, the three boys going fishing are only mentioned briefly in idea unit #20. It is not in the same chronological order as the other three versions. It is noted that Student D changes the venue of the story from a *river* (Oct 2015) to a *lake* (Feb 2016) to a *pond* (Jun 2016 and Oct 2016). These features and the present of a lot of empty cells in her first five idea units (Table 4.13) and across her table of idea units in Appendix E show that the writer looks at the picture series from a different perspective each time she writes. Student D can be considered as very dynamic as those empty cells show that certain idea units are not retold or found in the other versions. In other words, from T1 to T4 the opening lines are very different.

Table 4.13 shows that idea unit #4, in February 2016 (a beneficial activity) is retold in June 2016 version. Idea unit #5, February 2016 (the idea of fishing), is conveyed to the June and October 2016 versions but not found in the October 2015 version. This feature also shows that language development is nonlinear (Larsen-Freeman, 2006).

Student D is found to be observant as she has described the scenery in picture one of the picture series in details. For example in idea units #17 #18 and #19, Oct 2015 (refer to Appendix E) :

The river was clean and the water was crystal clear. There were some water lilies on the river that is pink in colour. A big and shady tree was situated beside the river.

She even takes the trouble to identify the flowers, *water lilies*, in the river. In the February and June, 2016 versions, she describes the the flowers as *beautiful* but in October 2016, she identifies the flowers as *lotus*.

Table 4.13: The first five idea units of Student D

	Oct 2015	Feb 2016	Jun 2016	Oct 2016
1		It was school holidays.		
2		All the students were very excited because they had look forward for this day since they were sitting for their examination.		
3		Everyone seems to be happy like a clark.		
4		Jason decided to spend his holiday by doing some activities that gain benefits.	During school holiday, Jason felt bored at home. He wanted to spend his holiday by carrying out a beneficial activity,	
5		So, he had invited two of his fellow friends, Jack and Thomson to fish at a park	such as fishing. So, he decided to invite his fellow friends, Spencer and Mark.	Last Sunday, Jason and his friends went to a beautiful park. *They decided to fish in the park.

It is noted that the idea of picking flowers is preserved from one telling to the others (idea unit #26) in different sentence structure as shown in Table 4.14. In October 2015, *They picked the flowers joyfully*; in February 2016, *They were picking the flowers beside the lake happily*; in June 2016, *Jason and his friends saw their classmates, Joyce and Heidi picking some beautiful flowers beside the pond*; and in October 2016, *The girls were picking some colourful flowers beside the pond. The flowers are very pretty and attractive*. This shows that Student D has developed greater skills as she writes though the development is inconsistent.

Table 4.14: Idea unit #26 of Student D

	Oct 2015	Feb 2016	Jun 2016	Oct 2016
26.	They picked the flowers joyfully.	They were picking the flowers beside the lake happily.	Jason and his friends saw their classmates, Joyce and Heidi picking some beautiful flowers beside the pond.	The girls were picking some colourful flowers beside the pond. The flowers are very pretty and attractive.

Idea unit #55 (Table 4.15) shows how Student D has become more sophisticated as she writes over time. She has also included some of her social skills in her texts. Her sentence structures and ideas have become more complex. For example, from merely the phrase, *thanked the boy* in October 2015 version, she changes to *grateful* and *praised* in February and June 2016 versions. In the October 2016 rendition, she adds in her social and cultural knowledge of *buy a gift* to show appreciation and an idiom *good act never need to pay* into her description. This shows that language is a sociocognitive resource (Larsen-Freeman 2002; Atkinson 2002). The phrase, *good act never need to pay* looks like a self-created idiom with the participant's L1 resources. Larsen-Freeman and Cameron (2008, p. 116, cited in Larsen-Freeman, 2015) argue that in addition

to acquire a system which is already created, all learners have the talent to generate their own styles with meanings and uses of a specific language, and develop its source of meaning potential.

The table (Table 4.15) shows more details have been added to the idea unit #55 in October 2015, from one sentence to two and three, there is growth in her vocabulary repertoire over time in October 2016 as shown by the phrases: *save the day, buy a gift* and *good act never need to pay*. Chau (2015, p. 142) claims as the emergence language learner writes longer text over time, more ideas of different kind are introduced. Larsen-Freeman (2006, p. 613) posits that a learner or user's language resources change synchronously with their use.

Table 4.15: Idea unit #55 of Student D

	Oct 2015	Feb 2016	Jun 2016	Oct 2016
55	Maria parents <i>thanked the boy</i> who saved Maria's life.	Joyce and their parents were <i>grateful</i> to Jason and his friends. Joyce's parents <i>praised</i> Jason for his bravery.	They were very <i>grateful</i> and <i>thanked Jason</i> for his kindness. They <i>praised</i> Jason because he is a brave boy.	They were very grateful because Jason had <i>save the day</i> . They decided to <i>buy a gift</i> for Jason and his friends but they had rejected it. They realized that <i>good act never need to pay</i> .

Just like the other students, Student D is found to have relied on her L1 resources to write her narratives. For example:

She screamed on top of her voice hoping somebody will assist a help. (#32 Jun 2016)
 [She screamed at the top of her voice hoping for somebody to come and give a help.]

She scream on top of her voice hoping someone to save Jessie's life. (#32 Oct 2016)
 [She screamed at the top of her voice hoping for someone to come and rescue Jessie.]

The above sentences show how Student D used the sentence structures and phrases of her L1 and L2 to express herself. In Mandarin no preposition is necessary for shouting loudly, yet Student D used “*on top of her voice*” which is an English phrase. “*hoping somebody will assist a help*” and “*hoping someone to save Jessie’s life*” are phrases with Mandarin sentence structures. The sentences are erroneous from a TL perspective, but any reader can understand what she is trying to say. Her attempts can be considered as innovative from the DST point of view (Chau, 2015).

Another instance is the sentence *Joyce informed Heidi’s parents and explain the about accident* (idea unit #46, Jun 2016). The phrase “*explain the about accident*” [explain what happened] is a direct Mandarin translation in English. Larsen-Freeman (2006, p. 609) considers such ephemeral language form, “which may be an LI or L2 form or which may differ from both the LI and the L2” as a pattern common in SLA.

From her idea unit analysis (refer to Appendix E), it is found that there is competition among the subsystem due to the intrinsic limited resources (Robinson & Mervis, 1998). She writes more about the introduction and scenery of the story (first picture in the picture series) in all her four versions. Her falling scene and drowning scene are simpler and shorter when compared with the ending of the story (refer to sections 4.73 and 4.7.4 to see the examples). There is a “trade-off” as the time and space given, as well as the nature of the picture series, forces her to choose.

In the October 2015 version, she begins the story with the two girls who went for a walk along the river. In the other three versions, she begins the story with the three boys who went fishing. The change in subjectivity affects the other three versions of her story. She focuses more on the activities and emotions of the boys in the picture series instead

of the girls as in her first version. This suggests that language development is sensitive dependent on the initial stages, the “butterfly effect” (de Bot et al., 2007, p. 8).

Student D is found to be inconsistent in her productions. Her February 2016 (413 words) and June 2016 (334 words) versions are much longer and more interesting than the October 2015 (307 words) and October 2016 (297 words) versions (refer to Table 4.24). Both versions have a detailed introduction and conclusion. There are many empty cells in her table of idea units (Appendix E) and many of the ideas are not retold in the same chronological order. The above features show that language is dynamic; there is variation in individual developmental paths (Larsen-Freeman, 2006) and individuals keep choosing and manipulating the situations in which they perform (van Geert & Steenbeek, 2005).

It is interesting to look at the vocabulary used by Student D in narrating the story (refer to Table 4.16). She uses words and phrases such as:

crystal clear; at the same time; spotted; waved her hand frantically; did not know how to swim either; as white as a sheet; look forward; fishing equipments; a splash sound; such a relief; a memorable holiday; a beneficial activity; think twice; suffer from difficulties; meaningful, grateful and good act never need to pay.

These words or phrases are not found in the writing of the other participants. Therefore, it can be said that Student D has a good repertoire of vocabulary, hence, can write more efficiently (Wolfe-Quintero et al., 1998). As she continues writing, her vocabulary becomes more sophisticated, though inconsistently.

Table 4.16: Vocabulary repertoire of Student D

Time	Vocabulary
T1	decided to go out, walk along the path, crystal clear, some water lilies, was situated beside the river, had spotted some beautiful flowers, various in type and colour, attractive, joyfully, unfortunately, step forward and fell, shouted loudly for help, waved her hand frantically, did not know how to swim either, without any hesitation, rushed towards the spot, took a relief, as white as a sheet, was fainted, was admitted to the hospital, anxious, woke up, thanked, saved Maria's life, get hurt in this accident.
T2	look forward, happy like a clark, gain benefits, had invited, essential fishing equipments, serene, a splendid spot, crystal clear, had spotted two girls, screaming panicly, on the edge, unfortunately, on top of their voice, spotted them, without any hesitation, face was pale, reached the spot, drank to much water, had treat, medicine, such a relief, had informed, had fell into, immediately rushed to, glad, safe and sound, had adviced, too dangerous, terrible experiance, did not dare, apologized, grateful, praised, bravery, a memorable holiday, done a good deed.
T3	during school holiday, felt bored, spend his holiday, a beneficial activity, fellow friends, fishing equipments, headed to a pond, serene, gracefully, environment, a perfect spot for fishing, spotted, decided to fish, accidentally stepped on, lost her balance and fell, struggled, was panicked, assist a help, luckily, heard her scream, without any hesitation, rushed to the spot, fortunately, managed to save, drowning, was relief, a check up, explain, rushed to the hospital, grateful, kindness, praised, brave, advised, a dangerous act, promised, think twice before she act, glad, enjoyed, had done a good deed, suffur from difficulties, very meaningful, after this incident.
T4	decided to fish, serene, a crystal clear pond, many lotus, to relax and clear our mind, fishing equipments, met, pretty and attractive, suddenly, a splash sound, unfortunately, was panic, on top of her voice, save Jessie's life, strugling for help, heard the loud scream, without any hesitation, rushed to the scene, managed to save, such a relief, safe and sound, a medical check up, arrived at the clinic, grateful, had save the day, buy a gift, rejected, realized, good act never need to pay, glad, done a good deed, a memorable lesson, very dangerous, went home happily, a meaningful day.

4.6 Student E

Table 4.17 displays the first five idea units of Student E. The time line of the October 2015 version is different from the other three versions. Student E starts with *One day* in the October 2015 version whereas in the other three versions he changes it to *Last Saturday*.

Table 4.17: First five idea units of Student E

	Oct 2015	Feb 2016	Jun 2016	Oct 2016
1	One day, Baba and his two best friends, John and Johnny wanted to a nearby river for fishing.	Last Saturday, Johnny and his two friends were planning to go to fishing at the river where near Johnny house.	Last Saturday, John and Johnny invite me to have a fishing at the nearby river.	Last Saturday, It was a boring day so I decided to have fishing with my two best friends Johnny and James at the nearby river.
2	They prepare their own fishing rod and walked to the river together.	They took three fishing rods and a bucket to put the fish.	I accepted their invitation so I quickly prepare my fishing rod.	Before going to the river we prepare three fishing rod and one bucket to put in the fishes.
3		After the preparing, they walked to the river together.	After a few minutes, they come to my house and we walked to our destination together.	After prepared we walked to the river happily.
4			On the way, we chat with each other happily.	On the way we walked to the river we chatted happily.
5			After 5 minutes. We reached the river that we wanted to fishing.	After 5 minutes, we reached the river

In the opening line, the ideas of three boys wanted to go fishing in October 2015 version and February 2016 version are changed to *John and Johnny invite me to have a fishing* (Jun 2016) and *I decided to have fishing with my two best friends Johnny and James* (Oct 2016). There is a shift in the subjectivity in these two versions. In addition, in October 2015, the boys' names are mentioned, *Baba, John and Johnny* but in the February 2016 version, he writes *Johnny and his two friends*. The examples show a variegated form of learner's writing. It also shows that language grows just as humans grow and it is not static (Atkinson, 2011).

From the idea unit analysis of Student E (refer to Appendix F), Student E shows that he is using English for social purpose when he uses the phrase, *said hello to* (idea unit #8, Feb and Jun 2016) when the boys met the girls. Another example is in idea unit #21 June 2016; *I quickly took out my phone to call ambulance*. The examples show that language is inseparable from the environment (Larsen-Freeman, 2015).

Table 4.18, idea unit #9 indicates that there is waxing and waning in language development (Larsen-Freeman, 2006). For example in October 2015, he writes *slip and fell into the river*, but in February 2016 he writes *slipped and dropped into the river*; in June 2016 he writes *dropped into the river* and in Oct 2016, he writes *slipped and jumped into the river*.

Table 4.18: Idea unit # 9 of Student E

	Oct 2015	Feb 2016	Jun 2016	Oct 2016
9	When Lili and Sasa played happily, suddenly Sasa <i>slip and fell into the river</i> .	Suddenly, Eunice <i>slipped and dropped into the river</i> .	When Merry was plucking the flower, suddenly she <i>dropped into the river</i> .	Suddenly, Ami <i>slipped and jumped into the river</i> .

Student E shows that as he writes over time, he gets more skillful. In other words, his language resources have increased. For example in idea unit #6, October 2015 and February 2016 (Table 4.19), he uses a compound sentence to describe the scene when the boys met the girls. However, in June 2016, he uses a complex sentence to describe the scene: *When we reached there, we saw our classmate, Merry and Cynthia were plucking some flower for their school project at the river.*

Table 4.19: Idea units #6 and #7 of Student E

	Oct 2015	Feb 2016	Jun 2016	Oct 2016
6	When they reached the river they saw their friends Lili and Sasa.	When they arrived the river, they met their classmates, Sammy and Eunice.	When we reached there, we saw our classmate,	After 5 minutes, we reached the river and we saw our classmates Lily and Ami.
7	Lili and Sasa were plucking the flowers at the river.	Both of them were plucking some flower for their science project.	Merry and Cynthia were plucking some flower for their school project at the river.	Both of them were plucking some beautiful flowers at the side of the river.

Student E uses his knowledge as a St John Ambulance member in describing how to save the girl from drowning. For example:

Johnny's friends used a fishing rod to help Johnny and pull them up. (#16, Feb 2016)

Lili helped to do CPR for Sasa. (#18, Oct 2015)

Because Sammy was a St John team member she help Eunice to do CPR luckily Eunice was still alive. (#18, Feb 2016)

Another example of how Student E uses his general knowledge to write is found in idea unit #27, October 2015, a description of the scene at the hospital:

They waited at least 4 hours, a doctor walks out of the emergency room.

None of the other participants writes such ideas. This illustrates that language is a social cognitive resource (Larsen-Freeman 2002; Atkinson 2002).

Idea units #11 and #12 (Table 4.20) show how Student E tries to describe the drowning scene in the picture series. Here, he has used his L1 resources to describe the scene. For example in idea unit #12, the phrases *did not know swimming* (did not know how to swim), and *shouted loudly for anybody to rescue Eunice* (shouted loudly for help). The two idea units in Table 4.20 show that there is growth in Student E’s writing over time, though the growth is inconsistent. In idea unit #11, the phrase *there were nothing* in October 2015 version is written as *there had nothing* in February 2016 ; *don’t had any tools* in June 2016; and *there was nothing* in October 2016. In idea unit #12, the phrase *shouted for help loudly* in October 2015 version is written as *shouted loudly for anybody to rescue Eunice* in February 2016; *shouted for help loudly to let the passerby know* in June 2016; and *shouted for help from us* in October 2016. The two examples show how Student E negotiates meaning using his vocabulary repertoire as well as his L1 resources. The variants show language is not static, it is dynamic (Larsen-Freeman, 2006).

Table 4.20: Idea units #11 and #12 of Student E

	Oct 2015	Feb 2016	Jun 2016	Oct 2016
11	Lili tried to find something to rescue Sasa but <i>there were nothing</i> around her.	Sammy was shocked and she tried to find something to rescue Eunice but <i>there had nothing</i> around her.	Cynthia was very shocked she <i>don’t had any tools</i> to help Merry.	Lily was shocked, she tried to take something to rescue Ami but <i>there was nothing</i> around her.
12	Lili knows that Sasa <i>did not know swimming</i> so she <i>shouted for help loudly</i> .	Without further ado, she <i>shouted loudly for anybody to rescue Eunice</i> .	So she <i>shouted for help loudly to let the passerby know</i> .	So she <i>shouted for help from us</i> .

Table 4.21 shows the vocabulary used by Student E from T1 to T4. It is found that Student E has used simple words and phrases to write his narratives. There are some variations from T1 to T4. There are only a few misspelled words.

Table 4.21: Vocabulary repertoire Student E

Time	Vocabulary
T1	a nearby river, for fishing, prepare their own fishing rod, reached, plucking the flowers, suddenly, slip and fell, tried to find something, to rescue, nothing around her, did not know swimming, shouted for help loudly, fishing rod, without further ado, rescue, tried to pull Sasa up, do CPR, very anxiety, immediately, arrived to the scene, arrived hospital, waiting at the outside, pray for, hope she did not anything happen, arrived to the hospital, waited at least 4 hours, a doctor walked out, emergency room, still weak, felt very lucky, woke up, was safe, promises her parents, won't went to river again.
T2	were planning to go to fishing at the river, where near Johnny house, three fishing rods and a bucket, after the preparing, walked to the river together, arrived the river, met, said hello to, continued pluck, started chat with, suddenly, slipped and dropped, find something, there had nothing around, without further ado, shouted loudly for anybody, during she was shouting, to use her hand to catch, heard Sammy shouted, quickly rush to there, what thing had been happened, were shocked, jumped into the river, a fishing rod, was rescued, a St John team member, do CPR, was still alive, arrived the scene, reached the hospital, what was happened, had rescued, said thank you, done a good deed.
T3	invite, have a fishing, the nearby river, accepted their invitation, prepare my fishing rod, destination, on the way, chat with each other, wanted to fishing, reached there, classmate, school project, said hello, replied them, continued walk, the further way, plucking the flower, dropped into the river, don't had any tools, shouted for help loudly to let the passerby know, heard Cynthia shouted, put all the fishing rods and bucket on the ground, run faster to the scene, what was happening, reached the scene, stragling, find something, there was no anything, good in swimming, without any tools, jumped into the river, rescued Merry successfully, took out my phone, reached the scene, immediately, know this happen, came to, reached hospital, asked us about the happen, said thank you, promised, never went to the river.
T4	a boring day, decided to have fishing, at the nearby river, before going, three fishing rod and one bucket, after prepared, on the way, chatted happily, reached the river, both of them, plucking, at the side of the river, shouted our name loudly, greating with us, continued walked, a shady place, suddenly, slipped and jumped, was shocked, take something to rescue, nothing around, shouted for help, ran to there, saw what was happened, reached the scene, found that, not enough long, among three of us, know how to swim, without further ado, to rescue, success to rescue, the member of St John Ambulance, carry out first aid, reached the scene, to check, there was nothing, know the happened, thanks us for helped, promised, will never went.

4.7 A comparison of the five participants' idea unit analysis

4.7.1 Overview

As mentioned in the overview of Chapter 4 (section 4.1), this section will first compare and contrast the opening lines of each participant from T1 to T4 as what Larsen-Freeman (2006) has done in the original research. From this section onwards, the four points of data collection will be also referred to as T1 (October 2015), T2 (February 2016), T3 (June 2016) and T4 (October 2016) to aid comparison. The first five idea units of each table of idea units, which are part of the opening lines, have been discussed in the first part of section 4.2 to 4.6 of this chapter. It also looks at the only two idea units which are conveyed in all the texts (from T1 to T4) of every participant. The two idea units are based on picture two (the falling scene) and five (the rescuing scene) of the picture series (refer to Appendix A). A main reason for comparing these two idea units is to facilitate comparison of how each participant depicts the scenes from T1 to T4. Idea units which are not common or shared among the participants or are missing at certain time are not considered here as the trajectory of growth of each participant is variant. The ending of the story or picture six, where participants are asked to speculate what happened after the drowning girl is saved, is also discussed.

4.7.2 A comparison of the first five idea units of the participants

A comparison of the different tables of the first five idea units of the participants (refer to the discussion in section 4.2 to 4.6 and also Appendix H) reveals that Students A, B and D are very dynamic. Their time line, opening line and purpose of going to the park are very different from T1 to T4. The time line, opening line and purpose of going to the park of Students C and E are less complex as shown by the repetition of certain words such as *morning walk, fishing rod and pail* (Student C); *nearby river, prepare and walked to* (Student E) and shorter sentences. For Student D and E, there is a change of subjectivity in their opening lines. In addition, the present of empty cells across each table of idea units shows that some ideas are not conveyed or found in certain versions. There are 12 empty cells in Student D's first five idea units (Appendix J); 9 empty cells in Student B's; 7 empty cells in Student C's; 5 empty cells in Student D's and 4 empty in Student A's first five idea units. The many empty cells show that the participants keep changing their perspectives as they write over time. All the features mentioned above show that just like humans, language grows and it is not static (Atkinson, 2011). Language is also complex and dynamic (Larsen-Freeman, 2006).

4.7.3 A comparison of the idea units on the falling scene of the picture series

Table 4.22 is a comparison of the descriptions on picture 2 (the falling scene) of the picture series by the five students from T1 to T4. It is about how one of the girls falls into the water. The learners show variability and variation in their development. For example the phrase “fall into”, appears in different sentences across the table. The different variations of how the girl in the picture falls into the river are:

slipped and fell down into; fell down into; dropped into; lost her balance and fall into; step forward and fell into; had fell into; lost her balance and fell into; slipped and dropped into and slipped and jumped into.

Variability is also found in the expression of how the boy jumps into the water to save the girl in picture 5 (the rescuing scene) of the picture series. For examples: *took a dip; leaped like a tiger into; jumped into; plunged into and take a deep into* (refer to Table 4.23). There is variability in each rendition, inter individually and intra individually (refer to Appendix B to F). This variability indicates that “learners or users of a language actively transform their linguistic world; they do not merely conform to it” (Larsen-Freeman, 2015, p. 502). The comparison also reveals that as learners keep writing; they become more skillful in using the language (Larsen-Freeman, 2006, 2012a). However, the growth is inconsistent. The T3 version of Student A and the T2 version of Student B and D indicate that these students are very resourceful and they have a robust vocabulary repertoire (refer to Table 4.22).

Table 4.22: A comparison of the idea units on the falling scene written by the five students

	Time 1	Time 2	Time 3	Time 4
SA #24	Unfortunately, Niza <i>slipped and fell down into</i> the river.	Lisa <i>fell down into</i> the river.	Opps! Her mind suddenly become clear but she cannot stop her fall. She <i>dropped into</i> the river and her fruitful rewards, the flowers were all separated by the river.	Unfortunately, she ran too fast and <i>fell down into</i> the river.
SB #21	Suddenly, Mary <i>slipped and fall into</i> the river.	Suddenly, Mary heard a frog's sound. She looked around her surrounding and she saw a frog was looking at her. As Mary was very scared to the animals especially frogs, she was shocked and <i>lost her balance and fall into</i> the river.	Out of the blue, June <i>slipped and lost her balance.</i> She <i>fell into</i> the river.	*Accidentally, Jane <i>slipped and slipped and lost her balance and fall into</i> the river.
SC #11	Out of the blue, when Lisa pull out the last plant, she <i>fall into</i> the pond.	Out of the blue, Janet <i>knick a stone and fall into</i> the river.	Out of the blue, Joey <i>was fall into</i> the river when she want to pick the last flower.	Out of the blue, when Jenny wanted to pluck the last flower, she <i>fall into</i> the river.
SD #29	Unfortunately, Maria <i>step forward and fell into</i> the river.	Suddenly, they heard a loud voice screaming panicly. The boys were shocked because Joyce <i>had fell into</i> the lake. She was standing on the edge of the ground and she accidentally <i>slipped.</i>	Unfortunately, Heidi accidentally stepped on a rock. She <i>lost her balance and fell into</i> the pond.	Suddenly, Jason and his friends heard a splash sound. They were shock to see Jessie <i>fall into</i> the pond.
SE #11	When Lili and Sasa played happily, suddenly Sasa <i>slip and fell into</i> the river.	Suddenly, Eunice <i>slipped and dropped into</i> the river.	When Merry was plucking the flower, suddenly she <i>dropped into</i> the river.	Suddenly, Ami <i>slipped and jumped into</i> the river.

SA (Student A), SB (Student B), S(Student C), SD (Student D), SE (Student E)

4.7.4 A comparison of the idea units on the rescuing scene of the picture series

A comparison of the idea units on how the boys try to save the drowning girl in the rescuing scene (picture 5) shows that what the participants wrote indirectly reflect their social and cognitive skills (refer to Table 4.23). Among the five participants, Student D is the only one who wrote the scene in detail at T3 and T4. The phrases: *tried to find something that can help Merry from the river* (T3), *and tried to take our fishing rod to rescue Ami* (T4) show that Student D knows something about life saving skills. Student A's renditions, *'took out his shoes'* (T1 and T2); *leaped like a tiger into the river and dragged the victim, Lisa to the shore* (T3); *and swam towards Amenda* (T4) are a reflection of his knowledge about life saving skills too. The idea units of Student D (T3 and T4) and Student A show that language is a sociocognitive tool (Atkinson, 2011). Language is sensitive to environmental factors; it is constantly reconstructed to meet the demand of social communication (Canarajah 2007, p. 94).

Table 4.23 reveals that Student B, C and D write very briefly about the rescuing scene, common phrases used by Student B and D to describe the scene are *jumped into* and *to save*. As for Student C, she writes:

took a dip and jumped into pond to save (T1),

take a deep into the river to save (T2)

took a deep and jumped into the river to rescue (T3)

jumped into the river to rescued (T4)

The four different descriptions of Student C show that language development is non-linear and that the variability indicates that "learners or users of a language actively transform their linguistic world; they do not merely conform to it" (Larsen-Freeman, 2006). Chau (2015) argues that such feature shows that "learners are meaning makers".

Table 4.23: A comparison of the idea units on the rescuing scene written by the five students

	Time 1	Time 2	Time 3	Time 4
SA #30	One of them immediately took out his shoes and took a dip into the river.	Without further ado, he took out his shoes and took a dip into the river.	He leaped like a tiger into the river and dragged the victim, Lisa to the shore.	Amongst them, there was a samaritan took prompt action. He took a dip into the river and swam towards Amenda.
SB #38	A boy who is the eldest jumped into the river to save Mary without a word.	Ali who was a samaritan mastered up his courage to jumped into the river.	One Samaritan jumped into the river immediately without thinking.	One of the samaritan plunged into the river immediately to save Jane.
S.C #20	Without further ago, a boy took a dip and jumped into pond to save Lisa.	One of the boys, John, take a deep into the river to save Janet.	One of the boy took a deep and jumped into the river to rescue Joey. His action was brave.	Without further ado, one of the boy jumped into the river to rescued the girl.
SD #39	A boy called David immediately jumped into the river.	Jason jumped into the lake and saved Joyce from the lake.	Jason is a good swimmer. He jumped into the water immediately to save Heidi's life.	Jason jumped into the pond to save Jessie.
SE #15	Without further ado, Johnny jumped into the river and rescue Sasa.	When they reached there, they were shocked and Johnny jumped into the river immediately to rescue Eunice.	When, we reached the scene we saw Merry was stragling in the river. We tried to find something that can help Merry from the river but there was no anything. Luckily, Johnny is good in swimming. Without any tools, he jumped into the river to rescue Merry.	When we reached the scene we tried to take our fishing rod to rescue Ami but we found that the fishing rod was not enough long to reach Ami's hand. Among three of us, James was the only one who know how to swim. Without further ado, he jumped into the river to rescue Ami.

SA (Student A), SB (Student B), SC (Student C), SD (Student D), SE (Student E)

4.7.5 A comparison of the ending of the story written by the participants

The last picture (picture 6) of the picture series shows a big question mark. Participants speculate the ending based on their own imaginations. From the tables of idea units in Appendix B to F, it is surprising to find that except for the four narratives of Student A, all the narratives end with variants of the ideas below :

- One of the teenagers called the ambulance.
- The girl who fell into the water was brought to a hospital for treatment or check-up in an ambulance.
- The parents of the girl were informed.
- Then the parents rushed to the hospital to see their daughter.
- The parents thanked the boy for saving their daughter's life.
- The boy felt happy because he had done a good deed.

There are of course individual variations and variability in each text. For example, in the T1 version of Student B and T3, T4 versions of Student D. In idea unit #48 October 2015 or T1 (refer to Appendix C), instead of an ambulance, Student B writes, ***Mary was admitted into the hospital by the three boys and Jessie.*** Similarly, in her idea unit #45, June 2016 or T3 (refer to Appendix E), instead of an ambulance, Student D writes, ***Jason and his friends sent Heidi to a hospital nearby for a check up.*** In her T4, instead of hospital, she writes: ***They decided to send Jessie for a medical check up at the nearest clinic.***

Another variant is the way the participants express gratitude. Each rendition is slightly different. For example:

Their mother thanked the three boys for their help. If there were no their help, the condition will become worsen and could not be imagined. (Student B, T3)

Jenny parent thanked to the Joey and the three boys. If not them, will not had people know Jenny fall into river. (Student C, T4)

They were very grateful because Jason had save the day. They decided to buy a gift for Jason and his friends but they had rejected it. They realized that good act never need to pay. (Student D, T4)

Ami's parents thanks us for helped. (Student E, T4)

Larsen-Freeman (2015) posits that:

Language development is not a process of acquiring abstract rules; it is the EMERGENCE of language abilities through use in real time. Constructions emerge in learner production in a bottom-up fashion from frequently occurring patterns of language use rather than as *a priori* components of fixed, autonomous, closed, and synchronic systems.

(Larsen-Freeman, 2015, pp. 494-495)

Larsen-Freeman (2015) illustrates how the patterns arise by explaining why the viewpoint of photographs taken by tourists of the Forbidden City in China seems consistent although there is no marking on the pavement for them to take images of the building. It may be due to the fact that they are socially conditioned, that is, they have seen pictures of the Forbidden City earlier, for example, in postcard or travel brochures. It is a product of overlapping images. By analogy, “each exemplar that a language user or learner encounters is similar to earlier ones, but also a bit different”. Larsen-Freeman concludes that due to previous encounter, learners create their own version with similarity, but slightly different, to writing examples that they have seen or read. Through iteration, a dynamic system is constructed similar to the way the image of the

Forbidden City is constructed (Larsen-Freeman, 2015, p. 494). This may explain why even without any guidance (just a question mark) from the picture, the endings written by the four participants (except Student A) contain quite similar ideas.

From a sociocognitive aspect, the tendency to write such ending by the participants may be due to their social and cultural backgrounds. Language is a tool for social action and language learning is a sociocognitive process (Akinson, 2011). Canarajah (2007, p. 94) points out that language is sensitive to environmental factors, it is constantly reconstructed to meet the demand of social communication.

The last part (after thanking the boy) of the table of idea units of Student A (idea unit #53 to #62), Student B (idea unit #51 to #58) and Student D (idea unit #55 to #62) contains a lot of empty cells (refer to Appendix B to Appendix F). They show that a lot of ideas are not conveyed from one telling to the others, that is, the ending of each version is also dissimilar as the writers have added other new ideas to the endings. This suggests that the students are very versatile and imaginative.

The last part (after thanking the boy) of the table of idea units of Student C (idea unit #26 to # 30) and Student D (idea unit #33 to # 34) are much shorter than those of the other students as shown by the amount of idea units. There are not many empty cells in their tables, that means, most of the ideas are conveyed from one telling to the others. Therefore, the ending of each version of the story written by Student C and E is not very different because not many new ideas are added.

The features discussed above suggest that language is a complex dynamic system (Larsen-Freeman, 2006), there are individual variations and variability, iteration or recursion and non-linearity in development.

4.8 Summary of the results of the idea unit analysis

All in all, the results of the idea unit analysis of each participant show that there is growth over time in the language development of each participant. The growth is found to be non-linear. Each participant has carried out the task of writing a story based on the picture series given. From the idea unit analysis, it is found that some idea units are kept from T1 to T4. However, in each rendition, there are idea units that are not retold in the other versions. The variations may be due to the participants' state of emotions; personal experience; environment and learning that took place over the period of data collection (Larsen-Freeman, 2006). The tables of idea units show that there is individual variation in growth too. Not all the five participants progress at the same rate.

The idea unit analysis of each student's texts traces the growth that takes place in the student's language development. Most of all, it reflects Larsen-Freeman's views that learners should not be treated as being mere *hosts* of another's language, the errors they made should be treated as *innovative*, based on DST (Larsen-Freeman, 2012b, p. 297). It also concurs with Chau's ideas that "the learner's developing language should be treated with respect, it is to be viewed as another form of natural, human language in its own right and should not be measured against a native-speaker norm or an external point of reference" (Chau, 2015, p. 180).

The variations or growth in language development of the participants can be seen clearly from Table 4.24 which is a summary of students' results using idea unit analysis.

Student A

Student A is found to have written longer sentences and used more sophisticated vocabulary as he continued to write (see Table 4.3 in this Chapter). For examples: *at the top of his voice, emergency treatment, passed out (T1); stamina was*

regenerated, secret site, mesmerizing (T2); took the initiative, to compound the matter, face the music again (T3); to appreciate the enchanting flower up close, had a shock of her life, a matter of life and death (T4).

There are variations in his opening line and ending of the story from T1 to T4. He shows that he has a good vocabulary repertoire when he used idioms [*in the nick of time* (#14, Jun 2016), *from the bottom of her heart* (#52, Oct 2016)]; similes [*leaped like a tiger* (#15, Jun 2016), *like a smiling lady* (#20, Jun 2016)]; and longer phrases over time (refer to section 4.2).

He is found to be very dynamic as indicated by the empty cells and the number of idea units in his table of idea units (refer to Appendix B). He is found to have used his L1 as resources to write his narratives as indicated by the use of the word *house* (idea unit #10, Jun 2016); *accepted her sorry and thanks* (idea unit #24, Jun 2016); and other expressions described in Section 4.2 of this chapter. He is quite innovative based on the DST perspective.

Student B

Student B too shows that she has become more sophisticated in using words as shown in her T3 (Jun 2016) version (shortest text) in which she uses idioms [*lend them a hand* (idea unit #18), *Out of the blue* (idea unit #21)]; similes [*ran as fast as her spindly leg could carry her* (idea unit #32), *at a lightning speed* (idea unit #36)]; and longer phrases [*made up their mind* (idea unit #1), *slipped and lost her balance* (idea unit #21)] to narrate the story (refer to Appendix C).

Her T4 rendition is the longest (499 words) and more detailed as there are nine idea units which are not found in the other versions (idea units #6, #9 to #12, #15, #28, #29 and #58). The nine cells show that Student B has more new ideas at T4. According to

Chau (2015, p. 142), when emergence language learners produce longer narratives over time, more ideas related to thoughts and emotion instead of description of actions are introduced; a greater amount of redundancy and a greater number of characters whose activities and emotions are introduced. Last but not least, the longer narratives suggest that the writers have changed their perspectives.

Her vocabulary repertoire has increased over time but non-linearly. For examples: *Without any delay, the effect might be more serious* (T1); *a samaritan mastered up his courage, had a butterfly in their stomach* (T2); *ran as fast as her spindly leg could carry her, do CPR* (T3); *a stone throw away, in a split second* (T4) [refer to Table 4.6 for more examples]. Her narratives (from T1 to T4) show that she has become more skillful in writing as she writes over time.

She is found to be very dynamic as there are distinctive changes in the beginning and ending of her story in each rendition. She is found to have used her L1 as resources to write too as shown in the scene when one of the girls went to ask the boys for help (idea unit #34 to #45, October 2015), and the scene when one of the boys saved the girl who fell into the river (refer to the discussion on Table 4.7 in Section 4.3 above). She is quite innovative based on a DST perspective.

Student C

Student C is found to perform the task using simple vocabulary (refer to Table 4.12 in this chapter). Her vocabulary repertoire has increased over time. For examples:

took a dip, had done a good deed (T1); *beautiful and special in colour, out of the blue* (T2); *hoped to attract somebody for help them, followed the sound* (T3); *without further ado, gave them a treat* (T4).

The idiom *Out of the blue*, and phrases such as *took a dip*, *done a good deed* are repeated in the four versions. Her narratives show that she has always relied on ideas and sentence structures from her L1 to express herself in English, that is, her L1 is her language resources (refer to section 4.4). For example the expression: *Joey's parent were put down their stone from heart* (idea unit #28, Jun 2016) [refer to section 4.4 for a detailed discussion]. From a DST perspective, she is quite innovative. She has put in efforts to write the story as indicated by the consistent increased in length of her text from T1 to T4. She is the only student using a direct speech in her T2 and T3 versions (refer to section 4.4 in this chapter). Thus, there are variations in her sentence structure.

Student D

Student D is found to be inconsistent in her productions. Her T2 (413 words) and T3 (334 words) versions are much longer and more in details than her T1 (307 words) and T4 (297 words) versions. There is a change in subjectivity in her opening lines. She is the only student who began the story with the girls in the picture series at T1 but at T2, T3, and T4 she began the story with the boys. She is very dynamic as can be seen by the large numbers of empty cells across her table of idea units. The empty cells indicate that the idea units are not conveyed in the other versions.

There are only ten common idea units found in her table of idea units (refer to Appendix E). There is variation in her opening line and ending of the story. The phrases [*waved her hand frantically* (T1), *such a relief* (T2)]; idioms [*on top of her voice* (T4), *save the day* (T4)]; similes [*as white as a sheet* (T1), *happy like a clark* (T2)]; and the expression [*good act never need to pay* (T4)] in her renditions show her vocabulary repertoire has become more sophisticated as she continues to write, though the rate is inconsistent (refer to Table 4.16 above). She is found to have shown her social skills via

her writing as in the examples given to express gratitude from T1 to T4 (refer to the discussion on Table 4.15 in section 4.5 above). There is growth in her writing skill over time but nonlinear. Like the others, she has used her L1 as resources to write as shown in the examples: *She screamed on top of her voice hoping somebody will assist a help* (idea unit #32, T3) and *Joyce informed Heidi's parents and explain the about accident* (idea unit #46, T3) [refer to section 4.5 above]. From a DST perspective, she is quite innovative too.

Student E

Student E shows that there is inconsistent growth in his writing (refer to section 4.6 of this chapter). He is quite dynamic as the beginning and ending of his four renditions are different. His four versions of the story show that he is using his knowledge as a member of St John Ambulance [*do CPR, emergency room* (T1), *carry out first aid* (T4)]; his social skills [*said hello to, said thank you* (T2)]; and his knowledge about swimming and fishing [*three fishing rods and a bucket* (T2), *jumped into the river* (T3)] to narrate the story.

There is growth in his vocabulary over time nonlinearly. For examples: *slip and fell, without further ado* (T1); *was still alive, done a good deed* (T2); *accepted their invitation, without any tools* (T3); *a boring day, was shocked* (T4). His idea units on the rescuing scene at T3 and T4 are more vivid than the other participants (refer to the discussion in section 4.7.4). Like Student C, he is found to have used his L1 resources to make meanings as shown in the phrases such as *did not know swimming* (idea unit #11, October 2015) and *shouted loudly for anybody to rescue Eunice* (idea unit #12, February 2016) [refer to Table 4.20 in section 4.6 above]. He is quite innovative from a DST perspective.

Table 4.24: Summary of students' results using idea unit analysis

Name	Student A	Student B	Student C	Student D	Student E
Features					
Length of text	T1 (384w) T2 (355w) T3 (478w) T4 (385w)	T1(443w) T2(405w) T3 (349w) T4 (499w)	T1(258w) T2(291w) T3 (345w) T4(347w)	T1(307w) T2(413w) T3 (334w) T4(297w)	T1(304w) T2(296w) T3 (303w) T4(309w)
Opening line T1 to T4	getting more complex over time	getting more complex over time	getting more complex over time	getting more complex over time. The subjectivity in T1 is different from the other versions.	getting more complex over time. There is a shift in the subjectivity in T3 and T4 versions.
Sentence structure T1 to T4	inconsistent variation over time - with longer phrases using L1 resources	inconsistent variation over time - with longer phrases using L1 resources	some inconsistent variation - with longer phrases, a direct speech at T2 and T3. using L1 resources	inconsistent variation over time - with longer phrases using L1 resources	some inconsistent variation- with longer phrases using L1 resources
TL perspective T1 to T4	at T4 has improved linguistically. Quite good command of the TL compared with the others.	has progressed because she is able to condense her writing at T3. Quite good command of the TL compared with the others.	has improved her syntax as she writes more.	use more precise words and phrases to write the story over time. Quite good command of the TL compared with the others.	has improved his sentence structure over time.
Special features/ Phrases/ proverbs	<i>'to house the flowers'</i> (idea unit #10, June 2016); <i>'accepted her sorry and thanks'</i> (idea unit #24 June 2016)	the longest narrative at T4, 499 words.	<i>Joey's parent were put down their stone from heart</i> (idea unit #28 June 2016)	creates her own idiom/proverb. E.g, <i>good act never need to pay</i> (# 55 Oct 2016)	show ability to include his social skills and knowledge in his narratives.
Dynamic, fluctuation and inconsistency T1 to T4	begin and end the story with different versions each time. narrate the story using TL and L1 resources, growth in language skills over time though the growth is inconsistency	begin and end the story with different versions each time. narrate the story using TL and L1 resources, growth in language skills over time though the growth is inconsistency	convey most of the ideas in T1 to the other three versions but in different context. narrate the story using TL and L1 resources, growth in language skills over time though the growth is inconsistency	begin and end the story with different versions each time. narrate the story using TL and L1 resources, show inconsistency in growth, T2 and T3 are much longer and more interesting than T1 and T4.	convey most of the ideas in T1 to the other three versions but in different context. narrate the story using TL and L1 resources, growth in language skills over time though the growth is inconsistency
Vocab repertoire T1 to T4 (refer to individual table)	good-increased use of idioms, similies and longer phrases over time at T3 and T4	good- increased use of idioms, similies and longer phrases at T3 and T4	simple vocabularly a slight increase at T3 and T4	good- increased use of idioms, similies and longer phrases at T2 and T3	simple vocabularly a slight increase at T3 and T4

4.9 Results of the holistic marking by three raters

4.9.1 Overview

This section shows the scores of the texts of the participants awarded by the three raters using holistic marking. The original grades and marks awarded by the three raters to each text are displayed in Table 4.25. A comparison of the scores awarded by each rater to each piece of text is carried out. Finally a table showing a summary of the average score (the total marks of three raters, divided by three) for each of the essays at each point in time (T1 to T4) is done (refer to Table 4.26). The aim of the table is to get an overall view of the results and to facilitate comparison with the results of the idea unit analysis.

4.9.2 A comparison of the scores awarded by the three raters

Table 4.25 is a display of the grades and marks of each student's four narratives awarded by the three raters (refer to the rubrics in Appendix G for the criteria of awarding grades and marks). A close look at the marks given by Rater A, Rater B and Rater C show that there is not much difference in marks among the four pieces of writing produced by each student except for Student B, Student D and Student E. Student B's narratives marked by Rater C scored D 7, D 10, C 18 and A 25. Student E's writing were awarded C 15, C 18, C 13 and C 16 by Rater A. The scores of Student D's narratives over four times, marked by Rater B, are D 11, C 18, B 20 and D 11.

Table 4.25: The grades and marks of students' writing by three raters (30 marks)

Time Name	T1			T2			T3			T4		
	RA	RB	RC	RA	RB	RC	RA	RB	RC	RA	RB	RC
Student A	C 16	C 14	D 9	C 17	C 16	D10	C 15	C14	D8	C 16	C 18	B20
Student B	C 16	C 13	D 7	C 15	C 14	D10	C 17	C 13	C18	C 16	C 16	A25
Student C	C 14	D 10	E 5	C 14	D 9	E6	C 14	D 10	D7	C 14	D 11	E6
Student D	C 18	D 11	C14	B 19	C 18	B23	B 20	B 20	A25	B 20	D 11	C15
Student E	C 15	C 13	D 8	C 18	C 12	E 6	C 13	D 10	D12	C 16	D 10	D12

One surprising finding is the marks awarded to Student C by the three raters. Rater A has graded all her narratives as Band C; Rater B has awarded her 3 Ds and 1 C; whereas Rater C has given her 3 Es and 1 D. Another disparity is Rater C's scoring, she has awarded two Band A and four Band E to certain narratives, whereas the other two raters do not award any Band A or Band E to any of the narratives. It is found that despite following the rubrics given, the opinions of Rater A, Rater B and Rater C regarding certain pieces of writing are grossly apart.

The main reason for the disparity in scores might be due to the emphasis Rater A, Rater B and C put on certain criteria in the rubrics. For instance,

- (i) Some comments Rater A wrote at the bottom of some of the students' texts (refer to Appendix K for the texts) are: *Most of the candidates used the expression "Without further ado" which is inappropriate in this situation; Task is fulfilled but sentences are distorted; Many awkward expressions; vocabulary is sufficient but lacks precision; Started out well but too ambitious in the use of expressions/vocabulary.*

- (ii) Rater B did not write any comments on the students' texts (refer to Appendix K) but she underlined every grammatical error, misspelling, missing word, inappropriate or wrong expression, and punctuation error. She told the writer that the students' grammar was not good.
- (iii) As for Rater C, she told the researcher that she was very strict in her markings. Some common comments found at the bottom of the students' texts (refer to Appendix K) rated by her are: *distorted sentence structure; error in basic structure; sentence structure lacks variety; vocab is limited; vocab is wide and precise; vocab is inappropriate.*

From the comments given by Rater A and Rater C, Rater A might have placed more emphasis on lexical items whereas Rater C was probably more particular about syntax and lexicon. As for Rater B she was probably more concern about syntax based on her verbal opinion about the participants' writing.

In conclusion, all those comments and those red ink marks on each sheet of the students' narratives indicate that the raters were looking for errors. The researcher finds the comment '*Started out well but too ambitious in the use of expressions/vocabulary*' (refer to Appendix K) written by Rater A on Student A's T4 narrative hurtful. The comment reminds the researcher of the remarks she used to get for her essays during her first three years in an English secondary school decades ago. Her English teachers used to write, "Your ideas are good but you have made a lot of grammatical errors!". Student A was given a score of C 16 for that T4 narrative by Rater A, but Rater B gave him C 18 and Rater C gave him B 20 (Table 4.25). The comments written by Rater C on this text are: *ideas well developed with supporting details; language is mostly precise*. No marks was given to the "*too ambitious*" efforts as noted by Rater A in this narrative.

Another reason for the disparity in scores given by the raters might be because Rater B and C marked the essays in more than one sitting whereas Rater A marked the essays in one sitting, as reported by the raters. Charney (1984), points out that readers' judgments and rating sessions are also factors that can influence holistic scoring.

4.9.3 A comparison of the average scores

Table 4.26 displays the average score of each text of the participants clearly. It also shows the total score of each participant. The data shows that the majority of the students' writing (65%) scored Band C (refer to Appendix G for the criteria); three narratives (15%) scored Band B and four texts (20%) scored Band D. The results show that Student A and D are displaying irregular growth. Student B's grades show that she has progressed consistently. Student C's grades show that there is no progress whereas student E's grades show that there is only a slight improvement at T4.

Table 4.26: The average grades and marks of Students' writing (30 marks)

Name \ Times	T1	T2	T3	T4	Total marks
Student A	C 13	C 14	C 12	C 18	57
Student B	C 12	C 13	C 16	B 19	60
Student C	D 10	D 10	D 10	D 10	40
Student D	C 14	B 20	B 21	C 15	70
Student E	C 12	C 12	C 12	C 13	49

From the table, Student D's performance among the participants has dropped at T4 although compared with her T1, there is a slight improvement. From T1 to T3, she has been the top scorer. At T4, Student A and Student B become the top scorers instead. It can be concluded that both students' writing skills and language development have improved a great deal with use.

From the total marks calculated, Student C is the weakest student (40 marks) among the group and Student D (70 marks) is the best student. Student B (60 marks) is ranked second in position, Student A (57 marks) is third and Student E (49 marks) is in the fourth position. The scores from holistic markings discussed above, allow researchers or teachers to get a quick impression of learners' proficiency in the TL based on the agreed criteria.

4.10 A summary of the main findings

This chapter has assessed a total of 20 narratives composed by the five participants using idea unit analysis as well as analysing the scores of the same narratives awarded by three raters using holistic scoring. In Larsen-Freeman's (2006) study, the learners' production is analysed based on a TL perspective. However, the analysis in this study is based on Larsen-Freeman's latest views (2012b and 2015) in which learner autonomy is respected and the 'errors' they made are considered as 'innovation'.

The results of the idea unit analysis of the participants show that there is irregular growth in the participants' writing over time. There is individual variability in the language development of the participants. The features of language development found in Larsen-Freeman (2006) such as dynamic, nonlinearity, non continuous; non stage-like, inconsistency, fluctuation in progress and change, and emergence of a novel form are also found in this study. A comparison of the students' idea unit analysis shows that Student A, B and D are found to be very dynamic. They have developed greater skills in writing and larger vocabulary repertoire over time. However, the development is non-linear. Student C and E too show some irregular growth over time, their vocabulary repertoire has increased significantly though the rate of increase is inconsistent.

The results from the holistic scorings show that there is inconsistent growth in Student A and Student D's writing. Student B's scores show that her writing skills have improved consistently. The results suggest that there is no growth in Student C's writing and there is only a slight improvement in student E's writing at Time 4. Their total marks show that Student D is the best student among the five, followed by student B, A, E and C.

It is easy to rank students using holistic scorings but it is not easy to do so with the idea unit analysis. Holistic scoring is an objective way of assessing writing samples, whereas the idea unit analysis is subjective. For the idea unit analysis, there are no agreed rubrics and it takes time to spot the change that takes place as the raters need to read through every cell in the table of idea units. As shown in the different tables of idea units (Appendix B to F), the amount of data can be overwhelming to the teachers. However, tracing language development using idea unit analysis allows researchers or teachers to observe the change in vocabulary repertoire, sentence structure, ideas and emotions in details. Most of all they can discover the 'innovations' of the writers.

A single score from holistic markings indicates the grade or ranking of the writing sample based on the criteria created. Holistic scoring neither corrects nor edits a piece and diagnoses its weaknesses (Charney, 1984, p. 67). Raters do not judge the elements of a writing such as 'treatment of topic, selection of rhetorical methods, word choice, grammar and mechanics' separately (Elliot et al., 1990, p. 17). Raters only need to award a single score (make only one decision) for each sample of writing based on how these elements work together to make a total impression on the reader. Thus, holistic scoring is cost effective and is usually employed in large-scale assessment of writing as in our ESL classroom and the PT3 examination.

CHAPTER 5: DISCUSSION AND CONCLUSION

5.1 Overview

This section discusses the findings from the data analysis in Chapter 4 and how they answer the two research questions and the assumptions of language development based on Larsen-Freeman (2006). It also draws conclusion to the study and discusses the pedagogical implications of the study. Finally, it touches on the limitations of the research and its implications for future research.

5.2 Research Question 1

What are the differences observed from the learners' writing at Time 1, Time 2, Time 3 and Time 4 based on the idea unit analysis?

By examining and analysing those idea units, a great deal of language development processes that occurred among the five Malaysian Chinese students can be traced over time (across participants and at the individual level). For example, the variants in timeline and opening of the story; the description of how the girl fell into the water; how the girl was saved and the conclusion of the story in the picture series given; show that what the participants chose to write or their behaviour is not consistent and it depends on context (de Bot et al., 2005b). Those empty cells found across the tables of idea units and those adjacent idea units indicate that change can occur gradually or suddenly (Larsen-Freeman, 2006). Most of all, the results have shown that over the time the students have developed greater language resources with which to accomplish the task and their language resources change simultaneously with their use. However, development is neither linear nor in stages. This is shown clearly by the length of the narratives written and those empty spaces in the tables.

Just like the original study, the differences that occurred in students' writing might be due to factors such as students forgot what they have written in the previous story; the influence of what students learnt in their L2 class recently; and the different perspectives of the picture series they looked at or emphasized over time. Conventionally, in repeated tasks, it can be said that the improvement in learner performance is because a learner's language competency has become closer to the native speaker norm. Whereas, from a DST perspective, the improvement on a specific task over time is due to the fact that "the student has developed greater language resources with which to accomplish the task" (Larsen-Freeman, 2006). It shows that the change of a learner language resources occur at the same time with their use.

Some of the variations can be attributed to social factors outside the linguistic system and some to internal restructuring of the system (Larsen-Freeman, 2006). Student E, for example, showed that he knows quite a lot about fishing, swimming and life saving skills (social cognitive skills) as he had no difficulties in describing the events in the story. Whereas Student A, B and D, concentrated their writing in describing the scenery and the ending of the story. Even in writing the beginning of the story, Student A who is a boy began the story with the girls and Student D who is a girl and yet she chose to begin the story with the boys except for the October 2015 version. The reasons for doing so were entirely arbitrary and beyond the researcher's control.

According to Lantolf and Thorne (2007, p. 197), developmental processes occur when "learners participate in cultural, linguistic, family life and peer group interaction, and in activities organised during schooling, sports and at work". From the idea units, it is found that the students are showing some social, physical and cultural norms rooted in their ordinary lives. For example, Student A and B changed the purpose of 'plucking

flowers for science project’ to ‘plucking flowers for mother’ probably because the text was written after Mother’s Day in June; and later to relax after exams as the narrative was written immediately after their school exams in October 2016 version. Student E, who is a St John Ambulance member, incorporated what he has learnt as a St John Ambulance member into his writing as shown in the description of how the girl and boy in the story applied CPR and first aid to help the girl who was unconscious.

Those idea units in the study reveal that the growth (progress) of learners is not consistent, it is dynamic with variation and fluctuation as indicated in the original study. There is emergence of a new form which is qualitatively different and novel. According to Fischer and Yan (2002), in the dynamic system of cognitive development, complex, emergent, and self-organized changes are generated by four key aspects that work together. The four aspects are “multiple factors, complex interactions, multilevel contexts, and multilevel time scales”.

The findings from this study are similar to that of Larsen-Freeman (2006) although the participants in this study are younger. From the DST perspective, the participants are found to be dynamic. With their L1 resources and their L2 vocabulary repertoire and constructions, they are able to narrate the story based on the picture series given.

According to Chau (2015):

Innovative instances by emergent language users constitute part of natural language use, reveal what language resources they have at their disposal at a given point in time as well as how these resources are made use of, and should therefore be given no less attention and consideration in the study of the developing language than the conventional instances of use. (Chau, 2015, p. 80)

Characteristics of a dynamic language system according to the original study are also found in the students' written production. For instance:

1. Language is a dynamic system in which learners adapt to local communities and thus some variegated structure, meaning and pragmatics emerged. For example the phrase *fall into*, appears in different forms and sentences across Table 4.22 (refer to section 4.7.3 above). Table 4.22 is a comparison of the idea units on how the girl in picture 2 of the picture series *falls into the water*, from T1 to T4. The different variations of how the girl in the picture falls into the river are: ***slipped and fell down into; fell down into; dropped into; lost her balance and fall into; step forward and fell into; had fell into; lost her balance and fell into; slipped and dropped into; and slipped and jumped into.***
2. SLA is not conformity to a TL (Larsen-Freeman, 1997, 2003). Although learners' progress in SLA is judged by the level their interlanguage falls in line with the TL, the two systems will never become similar completely. However, the process of SLA also involves the construction of new patterns (Larsen-Freeman, 2003), that is, learners keep on transforming their world of linguistic other than conforming to it (Larsen-Freeman, 1997; Donato, 2000). For example, Student A in his use of *house* in the phrase ***bring along a basket to house the flower*** (idea unit #10, Jun 2016); and Student C in expressing feeling relieved, ***Joey's parent were put down their stone from heart*** (idea unit #28, Jun 2016).

3. There are no distinct stages in SLA. Learners' production is variant with certain forms being dominant at certain periods in the acquisition of particular grammatical structures. There is fluctuation follow by a phase shift, the system is nonlinear. For example the use of participles by Student A, *had break down*, *had not bring*, *had destroy*, *had crush*, *had not fainted*, *had done* and *have seen*. In the October 2016 version, no past perfect tense is used, instead Student A uses passive voice frequently, for example *was silenced* in idea unit #31; *was placed* in idea unit #35; and *was awake* in idea unit #37.
4. There are variations and nonlinearity in learners' performance. Performance depends on learners' dimensions of L2 proficiency and goals at different times (Skehan, 1998; Robinson, 2001). There is competition between the sub-systems due to the limited resources which humans have in learning or investing a new skill (Robinson & Mervis, 1998). For example, in Student B's narratives over time, it is found that the June 2016 version is the shortest and the October 2016 version is the longest. The June 2016 version contains idioms, similes and more concise words to describe the incident (refer to Table 4.6), whereas in the October 2016 version the writer is found to write more about the scenery.
5. Language is a sociocognitive resource (Atkinson, 2002; Larsen-Freeman, 2002). Firth and Wagner (1997) opine that language is used for social action and factors such as "pressures and affordances, learners' identities, goals and affective states" have a great effect on language performance (van Lier, 2004; Cameron & Deignan, 2006). This is clearly shown by how the students changed their purposes of going to the river over time and the ending of the story. For example Student B, the idea of plucking flowers for science lesson was abandoned in the

June and October 2016 versions. The June version was written after Mother's Day and it might probably give her the ideas of plucking flowers for mum and the October version was written after their PT3 trial exams so she wanted to *let her hair down*.

6. Progress of learners is not consistent, with variation and fluctuation. They should not be judged as measurement error but as dynamic adaptation of language learners to the ever changing context (Tarone, 1979). The complex system is instable (Percival, 1993) due to learners' use. For example Student D, her second and third narratives are longer and more interesting than the first and last versions.
7. There is individual difference in developmental paths. This is because learners tend to select and manipulate the contexts in which they use (van Geert & Steenbeek, 2005a). In a nutshell, they determine what features of the environment are relevant to them and keep changing them (Lewontin, 2000). For instance, Student A, B and D keep changing the purposes of going to the river/park and the ending of the story.

5.3 Research Question 2

How different are the results based on idea unit analysis from the results of holistic marking of the same student texts by three raters?

Holistic rating, according to Charney (1984, p. 67), is a quick qualitative procedure to sort or rank writing samples based on impression. Its aim is to assign a score to a text sample according to agreed TL criteria and not to correct, edit or diagnose its weaknesses. So, in assessing the writing, the raters have to look for errors.

A comparison between the summary of the results of the idea unit analysis (Table 4.24) and the results of the average scores from holistic marking (Table 4.26) has been carried out to examine how the grades or scores correspond to the essays written over time.

The idea unit analysis shows that all the students are able to carry out the task given. They have written the story based on the picture series interestingly. There is development in their language over time though not consistent (refer to sections 4.2 to 4.6 of Chapter 4). Student A, B, C, D and E are found to have progressed (though inconsistently) from T1 to T4. Their timeline, opening lines and sentence structures get more complex over time and their vocabulary repertoire is shown to have increased with use from T1 to T4. However, the change in their linguistic resources is not the same.

The average grades and marks from the holistic markings (Table 4.26) show that most of the students' writing (65%) scored Band C (refer to Appendix G); it means the language performances of the students are only satisfactory. Three narratives (15%) scored Band B, it means that the language performance of the students is good and four texts (20%) scored Band D, it means that the language performance of the students is weak. Table 4.26 shows that Student B has progressed consistently, her best narrative is at T4 and the worst is at T1. Student A and D have progressed inconsistently. Student

A's best text is at T4 but the text with the lowest score is at T2, whereas Student D's best narrative is at T3 and her text with the lowest score is at T1. The average score table shows that Student C does not have any progress at all over time, and Student E has a slight improvement at T4.

The results from holistic scoring and the results from idea unit analysis can be said to be quite different. The following section will compare and contrast both results of each participant to examine how the grades or scores correspond to the essays written over time.

Student A

Student A has written the longest narrative at T3 (478 words). Only ten idea units at T1 are retold at T2, T3, and T4. It shows that Student A is very dynamic. The story at T3 and T4 are more interesting with many new ideas and the vocabulary used is wide and precise (refer to Table 4.3 of Chapter 4). The story at T2 has a happy ending. The T3 version is more innovative but the T4 version shows greater change in linguistic resources. However, the holistic scoring shows that Student A's story at T4 (C18) is better than the T3 version which has the lowest score (C12). It does not reflect the results from idea unit analysis.

Student B

Student B has written the longest narrative among the group at T4 (499 words). It is very detailed and interesting. 13 idea units from T1 are retold in the other three versions. The T3 version is the shortest among her four texts. However, the T3 version shows that she has become more sophisticated in using words as she uses idioms, similes and longer phrases to narrate the story. Her T4 version shows that as she writes over time, she has become more skillful. She adds in a lot of details in her T4 version

and it is her longest narrative (499 words). From the average score table, it is found that her T4 scores B 19 but the T3 rendition only scores C 16. However, the grades from the average score table show that Student B's language development is consistent; there is progress over time. It reflects the results from the idea unit analysis.

Student C

From the summary of the results of the idea unit analysis (refer to Table 4.24), Student C is found to have conveyed most of the ideas in T1 to the other three versions but in different context. There is growth in her language skills over time though the growth is not consistent. Although she uses mostly simple and compound sentences she is able to carry out the task given. She is the only student among the group who used a direct speech in her story at T2 and T3. She is found to have improved her syntax at T4. Her rendition at T3 is found to be quite innovative. However, these changes are not reflected in the average scores given by the three raters. Her average grades from holistic scoring can be said to be grossly unfair, she scores D 10 for all her texts. D 10 according to the rubrics (refer to Appendix G) means she is weak in English as "the task given is partially fulfilled"; "the ideas are partially developed and lack organisation"; "the sentence structures are repetitive and lack variety". In addition, her "vocabulary is limited and interest is partially aroused".

Student D

From the idea unit analysis table of Student D (refer to Appendix E), Student D is found to be inconsistent in her productions. Her T2 and T3 versions are much longer and more interesting than T1 and T4. She is the only student who began the story with the girls in the picture series at T1 but at T2, T3, and T4 she began the story with the boys. There is variation in her opening line and ending, this shows that she is very dynamic. Her narrative shows that she is able to use more precise words and phrases to narrate the

story over time. She has increased her vocabulary repertoire and as she writes over time, she becomes more skillful in writing story as shown in the different versions of opening and ending in her narratives.

From the average holistic scoring table (Table 4.26), her best writing is at T3 (B 21) and her weakest is at T1 (C 14). Overall, there is progress, though the rate is inconsistent. Once again, there is disparity between the results from idea unit analysis and holistic marking. Her idea unit analysis shows that all her renditions are interesting. Her T2 and T3 narratives are longer and more detailed. She has put in efforts to write each story. The only difference among her texts is the length. She scores B 20 for her T3 narrative and C 15 for her T4 narrative. It can be said that her scores at T1 and T4 do not reflect her idea unit analysis results.

Based on both the idea unit analysis and the holistic rating, Student D's overall performance shows there is inconsistent growth in language development.

Student E

From the summary of the idea unit analysis (refer to table 4.24), Student E shows that there is inconsistent growth in his writing. He is able to perform the task required using simple and compound sentences. He is found to have conveyed most of the ideas in T1 to the other three versions but in different context. The opening line and ending of his narrative get more complex over time. There is a shift in the subjectivity in T3 and T4 versions. His four versions of the story show that he is using his knowledge as a member of St John Ambulance, his social skills and his knowledge about swimming and fishing to narrate the story. The longest writing is T4 and the best writing is at T2, his worst piece is T3.

From the average holistic scoring table, Student E's first three writing score C 12. His T4 rendition scores C 13. Band C means his language performance is only satisfactory. According to the rubrics (refer to Appendix G), it means that his writing has fulfilled the task; his "ideas are sufficiently developed with some organisation and supporting details" and his "sentence structures are sufficiently varied". However, his "vocabulary is sufficient but lacks precision" although "interest is sufficiently aroused". The scores show that there is only a slight development in his language over time. Once again the scores do not reflect the results of his idea unit analysis because all his scores are almost the same but based on the idea unit analysis, his rendition in T2 is better than his T4 version and his T3 shows not much growth.

The findings show that some of the scores given do not reflect the actual abilities of the students and do not give credits to the efforts made by the students. The differences are caused by the fact that holistic scorings may be influenced by superficial features of the writing samples (Charney, 1984, p. 75). The main disadvantage of holistic scoring is that the single score gives no details except ranking information. According to Charney (1984), it is not possible for holistic scoring to supply useful feedback about a person's creativity, syntax mastery, vocabulary ability and organization of a writing sample because a single score only represents a general impression of the rater on the writing sample. Hence, even if the raters apply the rubric strictly and consistently, the same score awarded to two different texts may represent two totally different well-defined sets of characteristics.

Holistic scoring is reliable, if the administration of the training of rater and the scoring session faithfully follow the guidelines (Perkins, 1983; White, 1994). There are various views on the validity of holistic scoring. Charney (1984, p. 67) argues that "the validity

of holistic scoring remains an open question”. Perkins (1983, p. 652) claims that “holistic scoring has the highest construct validity when overall attained writing proficiency is the construct assessed”.

5.4 Pedagogical Implications

The implication of this research is that based on DST/CT approach or idea unit analysis, those linguistic errors made by the students in their narratives can be looked from their positive aspects (refer to sections 4.2 to 4.6, results of Student A, B, C, D and E) and credits should be given to learner’s writing (Larsen-Freeman, 2015). Charney (1984) opines that despite the rubrics given and training, holistic marking can be very subjective and unfair. In this study, it is found that holistic scoring is based on rubrics with TL criteria which are in contrast with DST/CT approach. According to Ortega (2013), when the multilingual student is no longer seen as ‘deficient’ speaker, there is no ‘standard’ English that everyone is obligated to follow. Language is basically a tool which humans used for communication, a social cognitive resource (Larsen-Freeman 2002; Atkinson, 2011), it is dynamic and development is not stage-like (Larsen-Freeman, 2006).

Most importantly, tracing language development of learners using the idea unit analysis instead of a single score from holistic scoring as is carried out currently in public examinations is more learner friendly. Students would feel discouraged and dislike writing essays if they always score a grade C or D in their writing. Another advantage of the idea unit analysis is that students get to relook at what they have written over time. Students may find it more interesting than the single score from the error finding holistic marking. The writer still remembers how the participants in this study smiled

when they looked at their own four pieces of essays and the table of idea units at the end of the data collection. They could not believe what they have written and achieved!

Looking at L2 learner writing from DST approach is one way to free the field from using a TL or “native speakers” yardstick to measure language learners, in order to see the good in L2 learner and bilinguals or multilinguals (Ortega, 2013). The findings indicate that there are changes in learners’ writing over time and the idea unit analysis helps teachers to observe language development of the learners instead of carrying out error analysis such as the holistic scoring which only focuses on errors and ignoring learners’ efforts in using the TL. Furthermore, DST approach encourages SLA teachers to focus their goals of language teaching to producing successful language learners instead of producing natively like speakers (Cook, 2013).

Based on the views of Larsen-Freeman (2012b, 2015) and Ortega (2010), the idea unit analysis approach may be brought into our multi-racial ESL classrooms. Getting students to write the same story or topic over time (task repetition) and the idea unit analysis would help ESL teachers in their jobs. They would be able to identify the changes made by their students easily, and hence know what to teach and when to supply scaffolding to students in and out of the classroom to help them improve their knowledge of the L2 or TL (Tarone & Swierzbin, 2009). The different developmental trajectories of the five participants indicate that individual differences are a part of learning. Therefore, ESL teachers and course designers would know that they have to prepare learning materials which are suitable for students in the same age group but with different levels of language development instead of one book for all.

In the Malaysian ESL classrooms, implementing the idea unit analysis to assess students' writing might be difficult at first glance due to the large number of students per class and hence the amount of essays written. However, ESL teachers can look at students' work selectively so that they will not be overwhelmed by the large amount of data and the number of students. Converting each text into idea units and table might be time consuming but the efforts are definitely rewarding. In times to come, new apps may be invented to help teachers plot the tables of idea units and trace the growth after all at this age of high technology, nothing is impossible!

Last but not least, the emancipation of learners in this study acknowledges learners' autonomy and that learners have the ability to construct individual styles with language and develop the language meaning potential, in addition to acquire a system that is already created (Larsen-Freeman, 2012b, p. 301). ESL teachers or researchers must keep in mind that they ought to examine learners' work by standing in the learners' shoes because learners may not be using the language for learning purposes, that is, in terms of linguistic (Larsen-Freeman, 2015, p. 502). Learners may just use language to put their meanings across.

5.5 Future Research

According to Larsen-Freeman (2015):

Language development is not a process of acquiring abstract rules; it is seen as the EMERGENCE of language abilities through use in real time. Syntactical arrangement develop in learner production in a bottom-up way from regularly existing patterns of language use instead of a priori components of rigid, independent, closed, and synchronic systems. (Larsen-Freeman, 2015, p. 494)

Larsen-Freeman (2015, p. 494) posits if the process of language development changes over time continuously, researchers could carry out studies based on (1) the comparison of real time language learning to longitudinal language development; (2) the source of novel language behaviours and (3) the types of motors of change.

Larsen-Freeman (2015) maintains that the process of development can neither be understood accurately by examining relationships between variables throughout the samples nor by calculating group means solely to get the full picture. This is because the process conceals the individual differences among learners and overlooks the interesting and relevant behaviour of statistical ‘outliers’ (Larsen-Freeman, 2015, p. 502). Larsen-Freeman supports Ortega’s (2010) call to analyse complete collections of bilinguals across languages to study ‘more’ in bilinguality and to regard L2 and L1 as mutable or not fixed. In the paper, Ortega also encourages non-conforming comparisons of the learning profiles of multilingual natives and other distinct multiple language in life.

From the above ideas of Larsen-Freeman (2015) and Ortega (2010), future studies analysing language performance of bilinguals or multi-linguals are paved. It would be interesting to see non conventional way of analysing learner production.

5.6 Conclusion

The idea unit analysis allows readers to “take in a view from below where the messy little details lie” (Larsen-Freeman, 2006). Quoting from Diana Larsen-Freeman, the growth that takes place in a tree may not be obvious from the outside even if we observe the tree for a long period. However, there is actually a lot of growth taking place in the roots at the level below the soil (Larsen-Freeman, 2006, p. 612). It speaks truth about this study.

Just like the original study, this study indicates that language development is complex and dynamic. It resembles the growth of an organism which reorganizes itself over time. Therefore, learners’ language grows and changes continually and dynamically over time, it is not static (Larsen-Freeman, 2006; Atkinson, 2011). This is shown by the fact that the four narratives written by each student at T1, T2, T3 and T4 are not the same. Halliday and Matthiessen (2004) opine that the major function of language is communication or meaning making. The five students were expressing what they saw in the picture series and providing an ending to the story using their imaginations. Readers will have no difficulties in understanding their narratives.

The picture series allowed students to consider each performance anew. The task is partly stable and predictable as well as “variable, flexible, and dynamically” modified to suit the circumstance. According to Larsen-Freeman (2006):

The messiness is not 'noise', but rather a natural part of dynamically emergent behaviour assembled by the individual with a dynamic history of engaging in such tasks, with his or her own self-identified (or jointly identified) target of opportunities for growth. (Larsen-Freeman 2006, p. 615)

The results of the idea unit analysis are similar to those of the original study. The language development of the students is found to be non-linear, indiscrete, inconsistent and variant, grow with use and emergent. It is found that in SLA, the LI and L2 complexity and frequency; and their dynamic state gives rise to patterns in interlanguage which are formed as a result of distinct learner aspects and variables in context (Larsen-Freeman, 2006, p. 615).

The results of holistic scoring (the added feature) are quite different from the results of the idea unit analysis. The language development of the participants as indicated by the scores show that Student C and Student E have no growth over time; Student B has consistent development; and Student A and Student D have inconsistent development. The disparity is due to the different methods of assessing learners' writing. Holistic scoring is aimed to rank the learners' texts according to an established rubric but the idea unit analysis is used to trace the change that took place over time.

References

- Abd. Samad, A., Hassan, F., Mukundan, J., Kamarudin, G., Syd. Abd. Rahman, S. Z., Md. Rashid, J., & Vethamani, M. E. (2002). *The English of Malaysian school students (EMAS) corpus*. Serdang: Universiti Putra Malaysia Press.
- Abrams, Z., & Rott, S. (2016). Variability and variation of L2 grammar: A cross-sectional analysis of German learners performance on two tasks. *Language Teaching Research*, 21(2), 144-165.
- Akindele, A. (2015). *Complex dynamic mini project*. Unpublished manuscript, University Malaya Malaysia.
- Atkinson, D. (2002). Toward a sociocognitive approach to second language acquisition. *The Modern Language Journal*, 86(4), 525-545.
- Atkinson, D. (2011). A sociocognitive approach to second language acquisition. In D. Atkinson (Ed.), *Alternative approaches to second language acquisition* (pp. 143-166). Abingdon, OX: Routledge.
- Atkinson, D., Crusan, D., Matsuda, P. K., Ortmeier-Hooper, C., Ruecker, T., Simpson, S., & Tardy, C. (2015). Clarifying the relationship between L2 writing and translingual writing: An open letter to writing studies editors and organization leaders. *College English*, 77(4), 383.
- Bygate, M. (2001). Effects of task repetition on the structure and control of oral language. In M. Bygate, P. Skehan and M. Swain (Eds), *Researching Pedagogic Tasks*. Harlow: Longman
- Bley-Vroman, R. (1983). The comparative fallacy in interlanguage studies: The case of systematicity. *Language Learning* 33(1), 1-17.
- Bulté, B., & Housen, A. (2012). Defining and operationalising L2 complexity. In A. Housen, F. Kuiken, & I. Vedder (Eds.). *Dimensions of L2 performance and proficiency: complexity, accuracy and fluency in SLA*. Amsterdam: John Benjamins.
- Butler, Y. G. (2012). Bilingualism/multilingualism and second-language acquisition. In T. Bhatia, & W. Ritchie. *The handbook of bilingualism and multilingualism* (2nd ed.) (pp.109-136). Malden, MA: Blackwell.
- Caspi, T., & Lowie, W. M. (2010). A dynamic perspective on (Academic English) L2 lexical development. In R. Chacón-Beltrán, C. Abello-Contesse, & M. Del Mar Torreblanca-López (Eds.), *Insights into non-native vocabulary teaching and learning* (pp. 41 - 60). Multilingual Matters Ltd.

- Charney, D. (1984). The validity of using holistic scoring to evaluate writing: A critical overview. *Research in the Teaching of English*, 18(1), 65-81.
- Chau, M. H. (2015). *From language learners to dynamic meaning makers: A longitudinal investigation of Malaysian secondary school students' development of English from text and corpus perspectives*. Unpublished doctoral thesis, University of Birmingham, UK.
- Chu, C. C. (1998). *Discourse grammar of Mandarin Chinese*. New York: Peter Lang Publishing Inc.
- Chomsky, N. (1965). *Aspects of the theory of syntax*. Cambridge, MA: MIT Press.
- Cook, V. (2002). *Portraits of the L2 user*. Clevedon: Multilingual Matters.
- Cook, V. (2013). *Second Language Learning and Language Teaching*. Routledge.
- Corder, S. P. (1967). The significance of learners' errors. *International Review of Applied Linguistics in Language Teaching*, 5(4), 161-170.
- De Bot, K., Lowie, W., & Verspoor, M. (2005a). *Second Language Acquisition, an advanced resource book*. London: Routledge.
- De Bot, K., Verspoor, M. & Lowie, W. (2005b). Dynamic Systems Theory and applied linguistics: The ultimate so what? *International Journal of Applied Linguistics*, 15 (1), 116-118.
- De Bot, K., Lowie, W. & Verspoor, M. (2007). A dynamic systems theory approach to second language acquisition. *Bilingualism: Language and Cognition*, 10 (1), 7- 21.
- De Bot, K., & Larsen-Freeman, D. (2011). Researching second language development from a dynamic systems theory perspective. In M. H. Verspoor, K. de Bot & W. Lowie (Eds.), *A dynamic systems approach to second language development* (pp. 5–23). Amsterdam/Philadelphia: John Benjamins Publishing Company.
- Donato, R. (2000). Sociocultural contributions to understanding the foreign and second language classrooms. In J. Lantolf (Ed.), *Sociocultural theory and second language learning* (pp.27-52). Oxford: Oxford University Press.
- Dörnyei, Z., MacIntyre, P. D., & Henry, A. (2014). *Motivational Dynamics in Language Learning*. Bristol: Multilingual Matters.

- Dörnyei, Z., MacIntyre, P. D., & Henry, A. (2015). Introduction: Applying complex dynamic systems principles to empirical research on L2 motivation. In Z. Dörnyei, P. D. MacIntyre & A. Henry (Eds.), *Motivational dynamics in language learning* (pp. 1-7). Bristol: Multilingual Matters.
- Durgunoğlu, A. Y., Mir, M., & Ariño-Marti, S. (2002). The relationships between bilingual children's reading and writing in their two languages. *Studies in Writing New Directions for Research in L2 Writing*, 81-100.
- Eckerth, J. (2009). Negotiated interaction in the L2 classroom. *Language Teaching*, 42 (1), 109-130.
- Ellis, N. C. (2011). The emergence of language as a complex adaptive system. In J. Simpson (Ed.), *Handbook of Applied Linguistics* (pp. 666-679). London: Routledge
- Ellis, R. (2003). *Task-based Language Learning and Teaching*. Oxford University Press.
- Ellis, R., & Barkhuizen, G. (2005). *Analysing Learner Language*. Oxford: Oxford University Press.
- Elliot, N., M. Plata., & P. Zelhart. (1990). *A Program Development Handbook for the Holistic Assessment of Writing*. Lanham, MD: UP of America.
- Fischer, K. & Z. Yan. (2002). Darwin's construction of the theory of evolution: Microdevelopment and explanations of variation and change in species. In N. Granott and J. Parziale (eds), *Microdevelopment: Transition Processes in Learning and Development*. Cambridge: Cambridge University Press.
- Fischer, K., Z. Yan, & J. Stewart. (2003). Adult cognitive development: Dynamics in the developmental web. In J. Valsiner and K.J. Conolly (eds), *Handbook of Developmental Psychology*. London: Sage.
- García, O. (2014). TESOL translanguaged in NYS: Alternative perspectives. *NYS TESOL Journal*, 1(1), 2-10.
- Gass, S., & Mackey, A. (2007). Input, interaction and output in second language acquisition. In B. VanPatten & J. Williams (Eds.), *Theories in second language acquisition: An introduction* (pp. 175-200). Mahwah, NJ: Lawrence Erlbaum.
- Halliday, M. A. K., & Matthiessen, C. (2004). *An introduction to functional grammar* (3rd edn). New York: Arnold.
- Housen, A., & Kuiken, F. (2009). Complexity, accuracy, and fluency in second language acquisition. *Applied Linguistics*, 30(4), 461-473.

- Huebner, T. (1985). System and variability in interlanguage. *Language Learning* 35(2), 141-163.
- Inoue, C. (2010). Investigating the sensitivity of the measures of fluency, accuracy, complexity, and idea units with a narrative task. In G. Bota, H. Hargreaves, L. Chia-Chun, & R. Rong (Eds.), *Papers from the Lancaster University postgraduate conference in Linguistics & Language Teaching* (pp. 129–153). Lancaster: Lancaster University.
- Kobayashi, H., & Rinnert, C. (2013). L1/L2/L3 writing development: Longitudinal case study of a Japanese multicompetent writer. *Journal of Second Language Writing*, 22(1), 4-33.
- Kramsch, C. (2006). From communicative competence to symbolic competence. *The Modern Language Journal*, 90(2), 249–252.
- Kramsch, C. & Whiteside, A. (2007). Three fundamental concepts in second language acquisition and their relevance in multilingual contexts. *The Modern Language Journal*, 91(s1), 907–922.
- Krashen, S. (1985). *The Input Hypothesis: Issues and Implications*. London: Longman.
- Kuiken, R., & Vedder, I. (2012). Syntactic complexity, lexical variation and accuracy as a function of task complexity and proficiency level in L2 writing and speaking. In A. Housen, F. Kuiken, & I. Vedder (Eds.), *Dimensions of L2 Performance and proficiency: Complexity, accuracy and fluency in SLA* (pp.143-169). Amsterdam: John Benjamins.
- Lantolf, J., & Thorne, S. L. (2007). Sociocultural Theory and Second Language Learning. In B. van Patten & J. Williams (eds.), *Theories in Second Language Acquisition* (pp. 201-224). Mahwah, NJ: Lawrence Erlbaum.
- Lara, A. R. (2014). *Complexity, accuracy and fluency development through study abroad programmes varying in duration* (Unpublished doctoral thesis). Universitat Pompeu Fabra, Barcelona, Spain.
- Larsen-Freeman, D. (1997). Chaos /complexity science and second language acquisition. *Applied Linguistics*, 18(2), 141-165.
- Larsen-Freeman, D. (2002). Language acquisition and language use from a Chaos/Complexity theory perspective. In C. Kramsch (Ed.), *Language acquisition and language socialization* (pp. 33–46). London: Continuum.

- Larsen-Freeman, D. (2003). *Teaching language: From grammar to grammaring*. Boston: Heinle/Thomson.
- Larsen-Freeman, D. (2005). Second language acquisition and the issue of fossilization: There is no end, and there is no state. In Z.-H. Han and T. Odlin (eds), *Studies of fossilization in second language acquisition*. Clevedon: Multilingual Matters.
- Larsen-Freeman, D. (2006). The emergence of complexity, fluency, and accuracy in the oral and written production of five Chinese learners of English. *Applied Linguistics*, 27(4), 590-619.
- Larsen-Freeman, D. (2009). Adjusting expectations: The study of complexity, accuracy, and fluency in second language acquisition. *Applied Linguistics*, 30(4), 579-589.
- Larsen-Freeman, D. (2010). The dynamic co-adaptation of cognitive and social views: A complexity theory perspective. In R. Batstone (Ed.), *Sociocognitive perspectives on language use and language learning* (pp. 40–53). Oxford: Oxford University Press.
- Larsen-Freeman, D. (2011). A complexity theory approach to second language development/acquisition. In D. Atkinson (Ed.), *Alternative approaches to second language acquisition* (pp. 48–72). London & New York: Routledge.
- Larsen-Freeman, D. (2012a). Complex, dynamic systems: A new transdisciplinary theme for applied linguistics. *Language Teaching*, 45(2), 202-214.
- Larsen-Freeman, D. (2012b). The emancipation of the language learner. *Studies in Second Language Learning and Teaching SSLT*, 2(3), 297-309.
- Larsen-Freeman, D. (2015). Saying what we mean: Making a case for ‘language acquisition’ to become ‘language development’. *Language Teaching*, 48(4), 491-505.
- Larsen-Freeman, D., & Cameron, L. (2008). *Complex systems and applied linguistics*. Oxford: Oxford University Press.
- Larsen-Freeman, D., & V. Strom. (1977). The construction of a second language acquisition index of development. *Language Learning* 27(1), 123-134.
- Leki, I., Cumming, A., & Silva, T. (2008). *A synthesis of research on second language writing in English* (Vol. Routledge): New York.

- Long, M. (1996). The role of the linguistic environment in second language acquisition. In W. Ritchie & T. Bhatia (Eds.), *Handbook of second language acquisition* (pp. 413-468). San Diego, CA: Academic Press.
- McLaughlin, B. (1990). Restructuring. *Applied Linguistics*, 11(2), 113-128.
- Mody, C. C. (2001). A little dirt never hurt anyone; Knowledge-making and contamination in materials science. *Social Studies of Science*, 31(1), 7-36.
- Nieto, S. (2009). *Language, culture, and teaching: Critical perspectives*. New York, NY: Routledge.
- Norris, J. M., & L. Ortega. (2009). Towards an organic approach to investigating CAF in instructed SLA: The case of complexity. *Applied Linguistics*, 30(4), 555-578.
- Ortega, L. (2004). Feature article: L2 writing research in EFL contexts: Some challenges and opportunities for EFL researchers. *Applied Linguistics Association of Korea Newsletter*.
- Ortega, L. (2010). *The Bilingual Turn in SLA*. Plenary delivered at the Annual Conference of the American Association for Applied Linguistics. Atlanta, GA, March 6-9.
- Ortega, L. (2013). SLA for the 21st century: Disciplinary progress, transdisciplinary relevance, and the bi/multilingual turn. *Language Learning*, 63(s1), 1-24.
- Pienemann, M. (1998). *Language processing and second language development*. Amsterdam/Philadelphia: John Benjamins Publishing Company.
- Polat, B., & Kim, Y. (2014). Dynamics of complexity and accuracy: A longitudinal case study of advanced untutored development. *Applied Linguistics*, 35(2), 184-207.
- Polio, C., & Gass, S. (1997). Replication and reporting: A Commentary. *Studies in Second Language Acquisition*, 19(4), 499-508.
- Porte, G. (2012). *Replication research in applied linguistics*. Cambridge: Cambridge University Press.
- Replication studies in language learning and teaching: Questions and answers. (2008). *Language Teaching*, 41(1), 1-14.
- Rosmawati. (2014). Dynamic development of complexity and accuracy: A case study in second language academic writing. *Australian Review of Applied Linguistics*, 37(2), 75-100.
- Sample, E., & Michel, M. (2015). An exploratory study into trade-off effects of complexity, accuracy, and fluency on young learners' oral task repetition. *TESL Canada Journal*, 31(8), 23-46.

- Schmidt, R. (1990). The role of consciousness in second language learning. *Applied Linguistics*, 11 (2), 129-158.
- Schmidt R. (1993). Awareness and second language acquisition. *Annual Review of Applied Linguistics*, 13(1), 206-226.
- Schneider, B. (2004). Building a scientific community: The need for replication. *Teachers College Record*, 106 (7), 1471-1483.
- Scrembau (2015). SBP PT3 trial bahasa inggeris skema 2015. Retrieved May 28, 2017, from <https://www.scribd.com/doc/282219357/SBP-PT3-trial-bahasa-inggeris-skema-2015>
- Selinker, L. (1972). Interlanguage. *International Review of Applied Linguistics*, 10(4), 209-231.
- Skehan, P. (1998). *A cognitive approach to language learning*. Oxford: Oxford University Press.
- Skehan, P. (2009). Modeling second language development: Integrating complexity, accuracy, fluency, and lexis. *Applied Linguistics*, 30(4), 510-532.
- Skehan, P., & Foster, P. (1999). The influence of task structure and processing conditions on narrative retellings. *Language Learning*, 49(1), 93-120.
- Skehan, P., & Foster, P. (2001). Cognition and tasks. In P. Robinson (Ed.), *Cognition and second language instruction*, (pp.183- 205). Cambridge: Cambridge University Press
- Skehan, P., & Foster, P. (2007). Complexity, accuracy, fluency and lexis in task-based performances: A meta-analysis of the Ealing research. In S. V. Daele, A. Housen, F. Kuiken, M. Pierrard & I. Vedder (Eds.), *Complexity, accuracy and fluency in second language use, learning and teaching* (pp. 207-226). Brussels: Contactforum.
- Skehan, P., & Foster, P. (2012). Complexity, accuracy, fluency and lexis in task-based performance: A synthesis of the Ealing research. In A. Housen, F. Kuiken, & I. Vedder (Eds.), *Dimensions of L2 performance and proficiency: Complexity, accuracy, and fluency in SLA* (pp. 199-220). Amsterdam/Philadelphia: John Benjamins Publishing Company.
- Spoelman, M., & Verspoor, M. (2010). Dynamic patterns in development of accuracy and complexity: A longitudinal case study in the acquisition of Finnish. *Applied Linguistics*, 31(1), 1-22.
- Stauble, A. & Larsen-Freeman, D. (1978). The use of variable rules in describing the interlanguage of second language learners. *Workpapers in TESL*, University of California, Los Angeles.

- Swain, M. (2005). The output hypothesis: Theory and research. In E. Hinkel (Ed.), *Handbook of research in second language teaching and learning* (pp. 471-483). Mahwah, NJ: Lawrence Erlbaum Associates.
- Tarone, E. (1979). Interlanguage as chameleon. *Language Learning*, 29(1), 181-191.
- Tarone, E. (1988). *Variation in Interlanguage*. London: Edward Arnold.
- Tarone, E., & Swierzbin, B. (2009). *Exploring learner language*. Oxford: Oxford University Press.
- Thelen, E. (1995). Time-scale dynamics and the development of an embodied cognition. In R. Port and T. van Gelder (Eds), *Mind as motion*. Cambridge, MA: MIT Press.
- Thelen, E., & E. Bates. (2003). Connectionism and dynamic systems: Are they really different? *Developmental Science* 6(4), 378-91.
- Thelen, E., & D. Corbetta. (2002). Microdevelopment and dynamic systems: Applications to infant motor development. In N. Granott and J. Parziale (eds), *Microdevelopment: Transition processes in development and learning*. Cambridge: Cambridge University Press.
- Thelen, E., & Smith, L. (1994). *A dynamic systems approach to the development of cognition and action*. Cambridge, MA: MIT Press.
- Thelen, E., & Smith, L. B. (2006). Dynamic systems theories. In W. Damon, & R. M. Lerner (Eds.), *Handbook of child psychology, volume 1: Theoretical models of human development* (pp. 258-312). New York: Wiley-Blackwell.
- van Dijk, M., Verspoor, M. H., & Lowie, W. (2011). Variability and DST. In M. H. Verspoor, K. de Bot & W. Lowie (Eds.), *A dynamic approach to second language development: Methods and techniques* (pp. 55–84). Amsterdam/Philadelphia: John Benjamins Publishing Company.
- van Geert, P. (1994). *Dynamic systems of development: Change between complexity and chaos*. New York: Harvester.
- van Geert, P. (2008). The dynamic systems approach in the study of L1 and L2 acquisition: An introduction. *The Modern Language Journal*, 92(2), 179-199.
- van Geert, P. (2009). Nonlinear complex dynamical systems in developmental psychology. In S. J. Guastello, M. Koopmans & D. Pincus (Eds.), *Chaos and complexity in psychology: The theory of nonlinear dynamical systems* (pp. 242–281). Cambridge: Cambridge University Press.
- van Geert, P. (2011). The contribution of Complex Dynamic Systems to Development. *Child Development Perspectives*, 5(4), 273–278.
- van Geert, P. (2014, March). L2 acquisition and the study of change in complex systems. In K. de Bot & D. Larsen-Freeman (Chair), *From universality to*

variability in second language development. Colloquium conducted at the meeting of the American Association for Applied Linguistics 2014, Portland, Oregon.

- van Geert, P., & van Dijk, M. (2002). Focus on variability: New tools to study intra-individual variability in developmental data. *Infant Behavior and Development*, 25, 340-374.
- van Geert, P., & Steenbeek, H. (2005). Explaining after by before: Basic aspects of a dynamic systems approach to the study of development. *Developmental Review*, 25(3-4), 408-442.
- van Geert, P. (2008). The dynamic systems approach in the study of L1 and L2 acquisition: an introduction. *The Modern Language Journal*, 92(2), 179-199.
- van Geert, P., & van Dijk, M. (2002). Focus on variability: New tools to study intra-individual variability in developmental data. *Infant Behaviour and Development*, 25(4), 340-374.
- van Geert, P., & van Dijk, M. (2003). Ambiguity in child language: The problem of inter-observer reliability in ambiguous observation data. *First Language*, 23(3), 259-284.
- van Geert, P., Steenbeek, H., & van Dijk, M. (2011). A dynamic model of expert-novice co-adaptation during language learning and acquisition. In M. S. Schmid & W. Lowie (Eds.), *Modelling bilingualism: From structure to chaos: In honor of Kees de Bot*. Amsterdam/Philadelphia: John Benjamins Publishing Company.
- Verspoor, M. H., Lowie, W., & Van Dijk, M. (2008). Variability in second language development from a dynamic systems perspective. *The Modern Language Journal*, 92(2), 214-231.
- Verspoor, M. H., Lowie, W., & de Bot, K. (2009). Input and second language development from a dynamic perspective. In T. Piske & M. Young-Scholten (Eds.), *Input matters in SLA*. Bristol: Multilingual Matters.
- Verspoor, M. H., & van Dijk, M. (2011). Visualizing interactions between variables. In M. H. Verspoor, K. de Bot & W. Lowie (Eds.), *A dynamic approach to second language development: Methods and techniques* (pp. 85-98). Amsterdam/Philadelphia: John Benjamins Publishing Company.
- Verspoor, M.H, Schmid, M.S., & Xu, X. (2012). A dynamic based perspective on L2 writing. *Journal of Second Language Writing*, 21(3), 239-263.
- Verspoor, M. H., & Smiskova, H. (2012). Foreign language writing development form a dynamic usage based perspective. In R. M. Manchón (Ed.), *L2 writing development: Multiple perspectives* (pp. 17-46). Boston/Berlin: Walter de Gruyter

- Vyatkina, N. (2012). The development of second language writing complexity in groups and individuals: A longitudinal learner corpus study. *The Modern Language Journal*, 96(4), 576-598.
- Vyatkina, N. (2013). Specific syntactic complexity: Developmental profiling of individuals based on an annotated learner corpus. *The Modern Language Journal*, 97(s1), 11–30.
- Wenxing, Y., & Ying, S. (2015). Dynamic development of complexity, accuracy and fluency in multilingual learners' L1, L2 and L3 writing. *Theory & Practice in Language Studies*, 5(2), 298-308.
- Wolfe-Quintero, K., Inagaki, S., & Kim, H.-Y. (1998). *Second language development in writing: Measures of fluency, accuracy, and complexity*. Honolulu, HI: University of Hawaii, Second Language Teaching & Curriculum Center.
- Yasuda, S. (2011). Genre-based tasks in foreign language writing: Developing writers' genre awareness, linguistic knowledge, and writing competence. *Journal of Second Language Writing*, 20 (2), 111-131.
- Yuan, F., & R. Ellis. (2003). The effects of pre-task planning and on-line planning on fluency, complexity, and accuracy in L2 monologic production. *Applied Linguistics* 24 (1), 1-27.