



ISSN Online: 2164-2834 ISSN Print: 2164-2818

# How Can the Hayes and Flower's (1980) Model of the Composition Be Applied to the Second Language Writers?

-Based on an Analysis of the Characteristics of the Model

Xiaowei Zhou @

Modern Languages, University of Southampton, Southampton, UK Email: xz5n19@soton.ac.uk

How to cite this paper: Zhou, X. W. (2023). How Can the Hayes and Flower's (1980) Model of the Composition Be Applied to the Second Language Writers? *Open Journal of Modern Linguistics, 13,* 406-422. https://doi.org/10.4236/ojml.2023.133025

**Received:** May 15, 2023 **Accepted:** June 13, 2023 **Published:** June 16, 2023

Copyright © 2023 by author(s) and Scientific Research Publishing Inc. This work is licensed under the Creative Commons Attribution International License (CC BY 4.0).

http://creativecommons.org/licenses/by/4.0/





#### **Abstract**

Prioritizing the acquisition of fundamental writing skills among students is imperative. However, it is equally crucial to allocate significant attention towards imparting metacognitive understanding of ideation and fostering the capacity to monitor one's own progress. The study's results indicate that the acquisition of knowledge, its translation into writing skills, and its application to writing tasks necessitate repeated and extensive training. Thus, it is imperative to possess a comprehensive comprehension that the process of augmenting the compositional proficiencies of students is a protracted and arduous undertaking. This is due to the possibility of the procedure requiring a significant amount of time. The inquiry at hand pertains to the feasibility of utilizing the Hayes and Flower model of composition in the context of second-language writers.

#### **Keywords**

Fundamental Writing Skills, Metacognitive Understanding, Hayes and Flower's Model of Composition, Second-Language Writers, Compositional Proficiencies

#### 1. Introduction

The process of writing entails not only the execution of a set of tangible and observable tasks involved in producing written works, but also encompasses the progression of the writer's internal and non-obvious cognitive processes. For example, the brainstorming, i.e. before putting words on paper, writers engage in internal cognitive processes such as generating ideas, making connections,

and organizing their thoughts. They may brainstorm by listing ideas, creating mind maps, or engaging in freewriting to explore potential directions for their writing. Or planning and outlining. Once writers have a sense of their main ideas, they often engage in the process of planning and outlining. This involves structuring the content, determining the order of ideas, and organizing the overall flow of the piece. Writers may create outlines, storyboards, or story arcs to guide their writing process. The human mind undergoes a multitude of intricate psychological processes, ranging from perception and imagination to image thinking analysis and comprehensive abstract generalization, as well as from internal speech to external speech. The examination of the research process constitutes a crucial aspect of composing works in the field of psychology, including those related to teaching psychology.

Cognitive psychology has emerged as the predominant area of psychological inquiry since the 1960s. Since the 1980s, Western research in psychology has incorporated the cognitive paradigm, which views writing as an internal process of information processing and problem-solving (Ur, 1996). Thus, the process of writing psychology research is oriented towards the entirety of the task. The act of writing involves a preliminary cognitive process known as writing conception, as described by Hayes and Nash (1996). During this process, the writer strategically selects relevant information from their long-term memory system in accordance with the topic requirements, and subsequently organizes and integrates this information into the desired content and formal structure of the written work. The process of conception is deemed to be of paramount importance in cognitive activities that are of a complex nature. The majority of contemporary cognitive psychologists in the Western world have developed writing models that underscore the significance of conception (Emig, 1971; Flower & Hayes, 1980; Gould, 1980; Hume, 1983), with some even considering it to be the central aspect of the writing process.

This study aims to investigate the attributes of Flower and Hayes' cognitive model of composition and its influence on the writing of second language learners, i.e. individuals who compose in a language that is not their primary language (L2), which refers to a language they have acquired or learned subsequent to their first language. Second language (L2) writers frequently encounter challenges and complexities that are distinct from those experienced by native speakers, as they are often individuals who are not native speakers of the language in which they are writing. The essay is organized into five discrete sections, which include the introduction, literature review, analysis of model characteristics, analysis of the impact on second language writing and educational implications, and conclusion.

#### 2. Literature Review

#### 2.1. Research on Writing Process and Conception Process

The sequential partitioning of the writing process is a genuine manifestation of

the researchers' shift in focus from the outcomes of writing to the process of writing. Rohman (1965) presented a writing model that comprises three consecutive phases: pre-writing, writing, and rewriting. The pre-writing phase encompasses the planning or conception of the written work. The writing phase involves the creation of the initial draft. The second rewriting phase entails the process of deleting and revising the written work. The model proposed by Rohman (1965) is currently considered flawed as it conceptualizes writing activities as a unidirectional linear process that occurs sequentially in the aforementioned stages. The process of writing is not a linear and uncomplicated endeavor. According to Kellogg (1988), it is possible for a stage to comprise a combination of multiple processes. Rohman has proposed a tripartite model of the writing process, wherein each stage is characterized by a distinct self-regulation mechanism that exerts a notable impact on subsequent researchers. During the early 1970s, Emig's (1971) utilization of case study and protocol analysis were regarded as more scientific approaches to investigate the writing process. These methods were widely recognized as the inception of cognitive research on the writing process. Emig emphasized the significance of engaging in continuous thinking and revising prior to writing.

During the latter part of the 1970s, Flower and Hayes (1977) conceptualized writing as a means of problem-solving within the initial theoretical framework of research in the field of writing psychology. This study places particular emphasis on conducting a comparative analysis of the cognitive processes involved in writing between individuals who are new to the task and those who possess advanced proficiency. In 1980, a cognitive model of the writing process was proposed through the utilization of oral reports to systematically study the writing process of the subjects.

Furthermore, Bereiter and Scardamalia (1987) have proposed cognitive writing process models that exert a substantial impact on writing process models aimed at elucidating the distinction between expert and novice writing activities. The authors view writing as a recursive problem-solving procedure and underscore the significance of rhetoric and self-regulation tactics for enhancing writing caliber. According to Berninger's (1996) argument, the writing process model proposed by Flower and Hayes (1980) is applicable only to proficient writers and does not account for the writing progression of inexperienced writers. The individual in question modified the writing framework proposed by Flower and Hayes (1980) with the aim of elucidating the process of writing from a developmental standpoint. Simultaneously, it is widely believed that the Flower-Hayes model, established in 1980, has established a fundamental basis for effectively investigating the cognitive aspects of writing. However, it fails to adequately acknowledge the affective and interpersonal aspects of writing. In 1996, Hayes made revisions to the 1980 model and presented a novel framework for individual-environment writing. The purpose of this revision was to provide a more comprehensive explanation of the experimental findings and to encompass a wider spectrum of writing processes. The details of this revision can be found in Appendix.

#### 2.2. Empirical Studies on Writing Conception

Hayes and Nash (1996) categorized the empirical research on writing ideas, which primarily consisted of theoretical research, into two distinct groups: related studies and experimental studies. In previous research, scholars have solely depicted the inherent association between variables without any intervention or manipulation. The researchers conducted an experimental study wherein they manipulated pertinent variables to examine the resultant modifications. A plethora of research materials has been amassed through relevant and experimental studies on the conception of writing.

#### 1) Correlation study

Spivey and King (1987) conducted a study involving participants in grades 6 through 10. The participants were instructed to produce a comprehensive report centered on three papers from diverse academic fields. The study conducted by researchers analyzed various factors involved in the writing process, such as the quantity of writing ideas generated by the participants and the duration of time allocated for their composition. The study revealed that a positive correlation exists between the amount of time and effort allocated to the conception phase, the level of maturity of the concept, and the overall quality of the final output.

According to Kellogg's (1987) research, college students were observed to allocate approximately 25% of their time to the ideation process during writing. While there was some variability in the duration of time spent on various subjects, the findings indicate that the self-monitoring approach to planning is a crucial factor in facilitating writing tasks.

In 1989, Carey and colleagues conducted a study involving 12 writers as participants. The study aimed to investigate the correlation between the quantity and nature of ideas generated during the conception phase and the caliber of the written output. The findings indicate a significant correlation between the caliber and quantity of pre-writing ideas and the ultimate written output (r = 0.655, r = 0.874). The findings indicate that the generation of written ideas holds considerable importance, with the quality of these ideas being of greater significance than their quantity. This is particularly true for the content quality of the ideas.

#### 2) Experimental study

Empirical investigations into writing can furnish evidence on the causal association between idea generation and the quality of composition. This is particularly advantageous for the theoretical development of writing and the formulation of pedagogical approaches pertaining to writing (Hayes & Nash, 1996). The study conducted by Scardamalia and Bereiter (1985) involved utilizing 6th grade students as participants in order to examine the impact of concepts on the caliber of written compositions. All participants were instructed to ideate prior to engaging in formal written expression, however, they were prohibited from producing written documentation. The participants were instructed to engage in

verbalization of their thought processes during the ideation phase. The experimental group of students were provided with planning cues by the researchers, which resulted in a reduction of the level of difficulty associated with the design process. The findings of the study indicated that the participants who were assigned to the experimental group demonstrated a greater degree of reflective thinking in comparison to those who were assigned to the control group. Thus, it can be posited that the endeavors of researchers to alleviate the complexity of comprehension may exert an impact on the writing attributes of pupils.

Kellogg's (1988) comprehensive investigation examined the impact of outlining strategies during the conception phase on both the efficacy of the writing process and the caliber of the resulting works. The objective of the study is to examine the impact of distinct outline conditions on composition performance and to ascertain whether the efficacy of the outline approach is attributable to its emphasis on translation, as evidenced by the analysis of processing time and cognitive effort. It is noteworthy that the experimental group of students allocated less time towards the stages of conception and revision in comparison to the control group, whereas they devoted more time towards the stage of composition in contrast to the control group. Subsequently, the researcher introduced a third experimental condition wherein college students were trained to formulate a psychological framework and its impact on their writing was evaluated. The findings of the experiment indicate that the utilization of two distinct outlining approaches, namely written outline and psychological outline, yield comparable outcomes in terms of their impact on the writing process. Both methods were observed to be effective in enhancing the translation process.

The extant empirical literature pertaining to writing ideas indicates either a demonstrable correlation between writing quality and ideas or a causal link between ideas and writing quality. It is imperative to exercise prudence when interpreting the aforementioned outcomes. Initially, when scrutinizing pertinent literature on writing concepts, it is imperative to acknowledge that mere correlation does not necessarily imply causation. Furthermore, it is important to note that both correlation and causality can potentially be influenced by confounding variables. Scholars have observed perplexing factors, such as linguistic proficiency and duration of task completion (Carey et al., 1986; Spivey & King, 1987). The aforementioned studies, which investigated the relationship between conception and task time, suggest that the impact of conception on article quality can be largely attributed to task time (Kellogg, 1988; Nelson, 1988). Stated differently, it is imperative to consider the crucial factor of task duration when elucidating the efficacy of conception. When the temporal constraints of writing are removed, the impact of ideation on the ultimate written output may be of paramount significance, as evidenced by numerous investigations that have demonstrated its greater importance relative to translation and revision. When composing written works within a designated timeframe, such as student essays or exams, the importance of task time management becomes evident and may even serve as a critical component. Therefore, it is imperative to conduct additional comprehensive research on the correlation between the variables of conception and task duration. Moreover, despite the extensive research and experimentation conducted on the subject matter, various factors that influence the process of conception have been examined, including but not limited to outline strategy, conception hint, text coherence knowledge, detailed objectives, and conception time. Insufficient comprehensive research on the process of conception remains a challenge, rendering these studies intricate and somewhat inadequate in uncovering the fundamental nature and psychological framework of the conception activity (Figure 1).

As per the model, the process of problem-solving in writing can be segregated into three principal constituents, namely the task environment, the long-term memory of the author, and the working memory. The act of writing involves the retrieval and cognitive processing of information from one's long-term memory, resulting in the production of written language within a specific task context. The writing model proposed by Hayes-Flower highlights the significant role played by the interplay among different components. The cyclic nature of the writing process is visually represented through the utilization of arrows. The subsequent discourse presents an exhaustive examination of the three primary constituents encompassed within this framework.

#### 1) Task environment

The task environment refers to the external surroundings in which an individual engages in writing activities, encompassing writing assignments and external means of storing written material.

The act of composing written works encompasses various elements such as subject matter, intended audience, and factors that drive one's desire to write. In brief, the objective of the writing process is to determine the content to be included in the written work. What is the purpose of writing? To whom should I

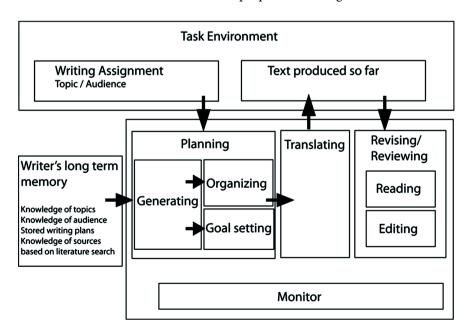


Figure 1. Structure of the writing model (Flower & Hayes, 1981: p. 370).

address my response? The aforementioned scenario presents a challenging circumstance for individuals. A proficient writing assignment has the potential to elucidate the task at hand, invigorate the writer's drive, and trigger the writer's cognitive processes. Supplementary materials, known as external storage, can be utilized by individuals during the writing process. The article content that has been produced pertains to written material authored by an individual and either recorded on paper or displayed on a computer screen. According to Hayes (1996), the act of reviewing one's writing can serve as a prompt for maintaining logical consistency and guiding the continuation of the writing process. Various supplementary materials such as written outlines, cue cards, and other resources are accessible to writers from external sources. During the process of writing, the utilization of external storage significantly alleviates the memory load experienced by the author. The author may periodically access external storage to retrieve necessary information, rather than committing it all to long-term memory.

#### 2) Long-term memory

According to Hayes (1996), an individual's mind retains three distinct types of knowledge pertaining to writing, which are collectively referred to as long-term memory. One aspect pertains to the knowledge associated with the subject matter, specifically, the reservoir of expertise pertaining to the written content. The second aspect pertains to the readers' knowledge, encompassing their level of knowledge, comprehension capacity, and potential responses. The third aspect pertains to the comprehension of writing techniques, encompassing the arrangement of diverse textual forms, the formulation of articles, the utilization of assorted rhetorical strategies, and so forth. The acquisition of these three distinct forms of knowledge is deemed essential for proficient writing. According to Kaufer et al. (1986), experimental evidence suggests that the quality of written articles can vary significantly depending on the declarative knowledge possessed by the individuals on the topic of the article.

#### 3) Working memory

According to Flower and Hayes (1980), the process of working memory is characterized by a dynamic nature, involving complex interactions that form a reciprocating spiral shape, rather than a linear progression. Subsequent to that, Bereiter et al. (1988), Kellogg (2001), and other scholars have conducted a comprehensive investigation of the psychology of writing, utilizing various perspectives grounded in the Hayes-Flower Model. The writing process is comprised of three sub-processes, namely planning, narration, and review, which are all contained within the author's working memory.

The proposed strategy involves identifying writing goals based on the writing tasks at hand, followed by retrieving pertinent ideas from one's long-term memory or external sources in accordance with the established objectives. These ideas are then arranged in a structured manner, akin to the pre-writing phase, prior to the actual composition of the written work. The process comprises of three fundamental components, namely goal-setting, generation, and organization. The

objective is for the writer to formulate a proposal or strategy for their written work. The objective can be either of extended or abbreviated duration, and may transpire throughout the entirety of the writing procedure. The term "generation" pertains to the cognitive process of conceiving and developing concepts and materials for written expression. Concepts can originate from either the individual's long-term memory or the surrounding external environment, serving as a repository of knowledge pertaining to various subjects. The term "organization" pertains to the arrangement and structure of written pieces, which is achieved through the interrelation of sentences, paragraphs, and sections. According to Hayes and Chenoweth (2007), the process of writing involves a continuous interaction between planning, generation, and organization, rather than a one-time completion of these tasks.

During the translation process, intralingual translation occurs, which involves the conversion of content into written form or the transformation of ideas from linear or hierarchical plans into sentences (Flower & Hayes, 1981). During this procedure, the author translated the writing material identified during the preparatory phase into written form. The nomenclature of "translation process" is attributed to the fact that the written material envisaged by the author is frequently not expressed in a lucid and unaltered written format. The author's ideas may be inchoate regarding certain sentences, or the sentences may be expressed in a non-literary manner. Consequently, subsequent to the planning phase, it is necessary to undertake a procedure of re-coding and re-presentation within the linguistic framework. The act of writing involves a series of decision-making processes that are consistently undertaken by the writer. According to Bazerman (2008), the process of intralingual translation enables the writer to progressively refine their ideas and written content, resulting in a clearer and more structured text layout.

The purpose of the review is to assess and amend written articles in accordance with the specified writing goals. During the reading phase, the author engages in a process of re-reading and evaluating the written content, also known as the text. In the event of a negative evaluation, the author will proceed to make revisions to the composition. Typically, the writer will undertake revisions to address any impediments to the attainment of predetermined writing objectives, encompassing the rectification of grammatical inaccuracies and the refinement of written material. The act of scrutinizing and refining written work through deliberate effort is referred to as revision, as described by Flower and Hayes (1981) and Hayes (1996).

As per the findings of Hayes and Bajzek (2008), the writing process encompasses a protocol to oversee the tripartite phases of prewriting, translating, and revising. This procedure entails the determination of the process of planning, translation, and review by the writer. Diverse writers employ distinct supervision procedures and techniques, and such procedures or styles of supervision are indicative of the writing attributes unique to each author. The capacity to oversee the entirety of the writing process is a skill that guarantees the seamless ad-

vancement of writing with a superior level of quality.

### 2.3. Cognitive Process Model of Writing and Intralingual and Interlanguage Translation Behavior in Writing

The cognitive process model of writing proposed by Flower and Hayes posits that the translation stage is the central stage and a distinctive characteristic of the model. According to Flower and Hayes, the act of writing can be considered as a form of translation, thereby establishing a connection between writing and translation behavior. According to Flower and Hayes, the process of writing can be conceptualized as a form of translation. The authors highlight the necessity of incorporating an intralingual act of translation in the writing process. Is there a distinction to be made between intra-lingual translation and translation from one's native language to a foreign language? In the field of translatology, the translation process as described in the Flower and Hayes models is referred to as intralingual translation. This process involves various techniques such as rewording, paraphrasing, and rewriting. Bassnett and Trivedi (2012) proposed a widely accepted tripartite categorization of translation types based on semiotics theory. The three types are intralingual translation, interlingual translation, and intersymbol translation. Intralingual translation is defined as the interpretation of signs within the same language. Intralingual translation frequently employs synonymous expressions, including synonyms, to rephrase the content communicated by the source language at the lexical and syntactic tiers. It is possible to translate complex and technical materials into simplified versions that are accessible to the general public. Similarly, literary masterpieces can be adapted into children's literature to cater to a younger audience. The various instances of speech acts that take place within a single language are categorized as types of intra-lingual translation. According to Flower and Hayes' model, the fundamental stage of a language writing process is characterized as translation. Their interpretation of translation behavior is congruent with that of Bassnett and Trivedi (2012). The profound implication of this comprehension lies in its ability to offer a fresh standpoint or outlook for comprehending and assessing interlingual translation conduct in foreign language composition, and confers validity upon interlingual translation conduct in foreign language composition (Hedgcock, 2012).

Numerous observations indicate that the act of translating from Chinese to a foreign language is widespread among students' foreign language writing, and this behavior is characterized by its persistence. The eradication of this phenomenon from the foreign language writing process of students is a formidable task, if not an insurmountable one, as posited by Sasaki and Hirose (1996) in the context of foreign language pedagogy. One potential explanation that requires further verification is that novice Chinese language learners may lack the ability to engage in foreign language thinking at a level comparable to that of native speakers, particularly in the absence of an immersive language learning environment. Hence, attaining a comprehensive translation of foreign languages into

the target language poses a formidable task. The foreign language writing process for Chinese students involves intralingual translation behavior that occurs exclusively within the foreign language. This type of behavior presents a greater challenge in writing compared to intralingual translation within the mother tongue, as observed in English writing (intralingual translation in mother tongue) and Chinese writing (intralingual translation in mother tongue). Thus, an examination of the translation behavior of Chinese students in foreign language writing reveals a shift from the one-language translation model proposed by Flower and Hayes to an inter-language translation behavior. Regarding the level of complexity, it can be represented on a spectrum ranging from simple to challenging, as illustrated in the subsequent diagram:



The cognitive writing model places significant emphasis on the acquisition and retention of knowledge pertaining to the topic, audience, and writing techniques in the students' long-term memory. The provision of diverse resources to students during the process of composing written works has the potential to mitigate the probability of encountering writing challenges. Notwithstanding its efficacy, the cognitive writing model is constrained by its failure to account for collaborative discourse and collective scrutiny of writing assignments among students in the task environment phase. The lack of peer evaluation, feedback, and suggestions limits prospects for cooperative learning and confines authorship to an individual, impeding potential development through peer interaction. It is noteworthy that the model oversimplifies the reviewing process by bifurcating it into solely two sub-strategies, namely reading and editing. The literature suggests that the process of writing encompasses more than just reading and proofreading, but also includes supplementary tasks such as assessment, modification, and offering overall feedback.

## 3. Exploration of Teaching Mode of Second Language Writing Based on Hayes-Flower Writing Model

The pedagogical comprehension of writing and its instruction within the foreign language teaching community has undergone a progression of evolution. According to Hayes (1996), the understanding of writing has progressed from the initial stage of text analysis to the more structured approach of controlled composition mode, and from the comparative rhetoric mode to the writing process mode. As a result, the cognitive aspect of writing has become increasingly complex. Contemporary scholarship acknowledges that during the process of composing a written work, the writer employs critical thinking to engage in logical reasoning and strategically selects linguistic units and discourse structures to ar-

ticulate their ideas. Hence, the act of writing entails a multifaceted and iterative procedure that involves the generation of innovative ideas. The research on second language writing has undergone a shift in focus from product to process, as noted by Baek et al. (2012).

Factors Affecting Chinese College Students' English Writing

Currently, there is a widespread deficiency in the writing proficiency of college students in China. The absence of a distinct incentive and optimistic disposition towards the act of writing is evident. The cognitive approach is inflexible, and the substance of the composition tends to lack depth during the process of written expression. Drawing upon the theory of the writing process, the present study endeavors to examine the variables that impact the English writing proficiency of Chinese undergraduate students. 1) The writing environment is characterized by a relatively high level of tension. 2) The long-term retention of fundamental knowledge related to English writing, including the selection of appropriate vocabulary and sentence structures in a foreign language, as well as the mastery of basic writing skills such as spelling and punctuation, tends to be diminished among students. According to Chang et al. (2017), students encounter difficulty in expressing their thoughts creatively and logically in a foreign language mode of thinking during the writing process. The tangible expression of this issue is the individual's lack of proficiency in utilizing an outline approach during the design process. During the process of translation, foreign language writing can be significantly impacted by the negative transfer of native language writing. This can result in the expression of "Chinglish" which may be perplexing to individuals from different cultural backgrounds. Moreover, a considerable number of students exhibit a deficiency in their capacity to revise and assess written compositions.

How to Establish an Appropriate Teaching Model for Second Language Writing?

#### 1) Identify the writing task

A significant number of Chinese students tend to write hastily upon encountering a given topic. Infrequently do individuals contemplate it or endeavor to conduct a thorough analysis. Consequently, individuals lack a profound comprehension of the process involved in ascertaining the principal concept of a given article and the significance of the subject matter. Thus, it is challenging for them to produce a written piece that fulfills the stipulated criteria of the writing assignment. As per the Flower-Hayes writing model, it is imperative for educators to direct their efforts towards facilitating students in comprehensively analyzing the subject matter while instructing them in the practice of writing in English as a second language. Given sufficient time, instructors may engage in open discussions to foster critical thinking among students, while also gathering and reinforcing written arguments with relevant source materials from scholarly articles. The conceptualization phase is a fundamental component of the writing model. Numerous studies cited in the aforementioned literature have demonstrated that dedicating significant time and effort to the conception phase results

in a greater level of maturity in the concept and an improved quality of the ultimate output. It is imperative for second language writers to focus on developing their capacity for conceptualization, particularly with regards to the various stages of goal-setting, idea generation, and contextual organization.

#### 2) Enrich the stored knowledge in long-term memory

The Flower-Hayes writing model underscores the notion that written works are not generated ex nihilo, but rather are retrieved from the writers' long-term memory. Hence, it is imperative for individuals who are non-native writers to focus on enhancing and gathering expertise in the realm of subject and discourse knowledge. This encompasses subject-specific resources, rhetoric, lexicon, syntax, and other cognizance, as stated by Carter et al. (2007). Enhancing writing proficiency entails not only honing one's writing aptitude, but also augmenting one's lexicon, acquiring knowledge of rhetoric, and mastering the writing techniques of particular styles of articles.

According to Flower's (1994) cognitive theory of the writing process, it is recommended that during the goal-setting stage, students should engage in writing that is aimed at social objectives. This approach enables students to establish writing objectives that are geared towards facilitating meaningful communication. Within the realm of pedagogy, students are encouraged to shift their approach from a knowledge telling strategy to a knowledge translation strategy. This approach facilitates the integration of goals and their associated meanings into written work, and prompts or tasks are designed in accordance with the demands of knowledge translation, rather than solely focusing on conveying factual information. During the ideation phase, it is recommended to provide external support to students and offer familiar composition topics whenever feasible to facilitate their thinking process. Conventional writing practices prioritize the author's personal thoughts and emotions, while neglecting the intended audience, who are the recipients of the written work. According to Hayes (1996), effective writing necessitates a lucid motivation and a constructive disposition. In professional settings, the author's role and writing style may vary significantly depending on the intended purpose and audience of the written communication. The aim of composing a cover letter is to solicit assistance from others, with the intended audience being an employee of the personnel department. Similarly, a consumer's complaint letter serves to denounce the quality of service, with the intended recipient being the complaint department responsible for receiving feedback. There exists a notable disparity between the two genres. The pedagogical approach to writing instruction should aim to develop students' proficiency in utilizing written language accurately, in accordance with diverse objectives.

#### 3) Strategies for the writing process

The writing process comprises three fundamental stages, namely conception, transfer, and revision, which are crucial in producing a high-quality article. The preliminary stage of organizing one's thoughts prior to writing is commonly referred to as conception or planning. The level of preparedness is directly propor-

tional to the ease of the writing process and the quantity of ideas that can be generated. This approach will facilitate the comprehension of the primary theme of writing for non-native language users and preemptively prevent writing difficulties. The process of translation necessitates a conscientious approach to ensure the cohesiveness and fluidity of the written output. Ur (1996) argues that consistent writing exercises can enhance the automaticity of the translation process. Specialized training can be undertaken by second language writers to attain the objective of effectively utilizing one another's skills. The post-writing revision process is a crucial step in enhancing the quality of written work. A significant number of writers who are non-native speakers of a language have not engaged in the process of revising their written compositions subsequent to their initial drafting. Additionally, educators have not thoroughly scrutinized the articles of these writers following the provision of their feedback. The act of revision involves a cognitive process of reconsideration. Conducting a thorough review of the article can assist the author in identifying any issues, refining the language used, and enhancing the overall quality of the writing. The aforementioned three processes exhibit a mutually reinforcing relationship and can be subject to modification during the initial stages of conception in order to optimize the development of the article's framework. In the course of the translation process, it is possible to modify the outline that was drafted during the conception stage to cater to particular requirements. Hence, it is imperative for educators to instruct non-native writers in the proficient application of diverse writing techniques to effectively accomplish the objective of producing quality written compositions.

4) Strengthen the teaching of Chinese and English social and cultural knowledge

In contrast to writing in one's first language, writing in a foreign language is significantly impacted by the individual's first language system and the surrounding environment during the process of converting internal psychological representations into external linguistic symbols. The phenomenon in question yields both favorable and unfavorable migrations, as noted by Odlin (1989). The author argues that individuals possessing proficient writing abilities in their primary language tend to exhibit a higher level of proficiency in composing written works in foreign languages. Simultaneously, alongside the transfer of the written style system, there will also be a transfer of knowledge pertaining to the structural system and the various cultural customs. Hence, it is imperative for educators to focus on enhancing the instruction of comparative social and cultural knowledge in both Chinese and English languages.

#### 4. Conclusion

Prioritising students' acquisition of fundamental writing skills is crucial in education. Writing proficiency is a crucial skill that enables individuals to express their thoughts, communicate ideas, and participate in academic and professional

pursuits. Teaching metacognitive understanding of ideation and developing self-monitoring skills are crucial in the context of writing instruction.

Scholarly research indicates that consistent and prolonged practise is necessary for individuals to internalise knowledge, develop writing skills, and effectively apply them to writing tasks. The development of writing skills from knowledge acquisition is a gradual process that necessitates consistent practise, constructive criticism, and introspection. Through deliberate and repetitive practise, students can enhance their writing abilities and gain a more profound comprehension of how to proficiently communicate their thoughts in written form.

It is crucial to acknowledge the arduous and time-consuming process of improving children's writing skills. Acquiring writing proficiency necessitates persistent and patient endeavour over time. Becoming a skilled writer entails obtaining a range of writing techniques, mastering diverse writing genres and styles, and cultivating a sophisticated comprehension of audience, purpose, and context. The acquisition of writing skills is not a straightforward progression, but a multifaceted interaction of repetitive procedures, in which learners progressively enhance and broaden their competencies throughout their academic journey.

Highlighting the prolonged nature of the writing development process underscores the necessity for sustained investment in writing instruction. Educators should offer writing practise, feedback, and metacognitive reflection opportunities to students. With continuous training and support, students can internalise and transfer their knowledge to writing tasks, leading to increased confidence, proficiency, and adaptability in writing.

In summary, developing basic writing skills is important, but it is equally vital to prioritise teaching metacognitive understanding of idea generation and fostering self-monitoring abilities. The need for consistent and committed training is emphasised by the time-consuming nature of the writing development process. Educators can enable students to become skilled writers who can express their ideas effectively in diverse contexts by promoting metacognitive awareness and offering sufficient practise and reflection opportunities.

#### **Conflicts of Interest**

The author declares no conflicts of interest regarding the publication of this paper.

#### References

Baek, S. H., Song, J. Y., & Lee, J. H. (2012). Korean Middle School Students' Cognitive Processes during English Writing. *English Teaching*, *67*, 183-205. https://doi.org/10.15858/engtea.67.2.201207.183

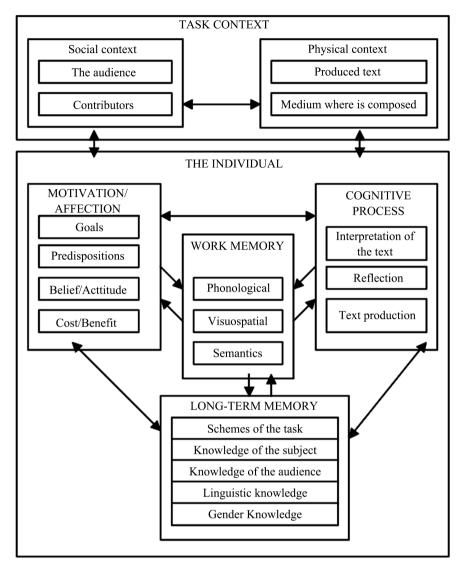
Bassnett, S., & Trivedi, H. (2012). *Postcolonial Translation: Theory and Practice*. Routledge. <a href="https://doi.org/10.4324/9780203068878">https://doi.org/10.4324/9780203068878</a>

Bazerman, C. (2008). Handbook of Research on Writing. Erlbaum.

- Bereiter, C., & Scardamalia, M. (1987). *The Psychology of Written Composition*. L. Erlbaum Associates.
- Bereiter, C., Burtis, P. J., & Scardamalia, M. (1988). Cognitive Operations in Constructing Main Points in Written Composition. *Journal of Memory and Language, 27*, 261-278. https://doi.org/10.1016/0749-596X(88)90054-X
- Berninger, V. W. (1996). Reading and Writing Acquisition: A Development Neuropsychological Perspective. Westview Press.
- Carey, L., Flower, L., Hayes, J. R., Schriver, K., & Haas, C. (1986). *Differences in Writers' Initial Task Presentations*. ONR Tech. Rep. No. 2, Carnegie Mellon University.
- Carter, M., Ferzli, M., & Wiebe, E. N. (2007). Writing to Learn by Learning to Write in the Disciplines. *Journal of Business and Technical Communication*, *21*, 278-302. https://doi.org/10.1177/1050651907300466
- Chang, W. C., Liao, C. C., & Chan, T. W. (2017). Improving Children's Textual Cohesion Based on Game-Based Writing Environment. In *The 2017 6th IIAI International Congress on Advanced Applied Informatics (IIAI-AAI)* (pp. 1019-1020). The Institute of Electrical and Electronics Engineers. https://doi.org/10.1109/IIAI-AAI.2017.78
- Emig, J. (1971). *The Composing Process of Twelfth Graders*. National Council of Teachers of English.
- Flower, L. (1994). *The Construction of Negotiated Meaning: A Social Cognitive Theory of Writing.* Southern Illinois University Press. <a href="https://doi.org/10.2307/358881">https://doi.org/10.2307/358881</a>
- Flower, L., & Hayes, J. R. (1977). Problem-Solving Strategies and the Writing Process. *College English*, *39*, 449-461. https://doi.org/10.2307/375768
- Flower, L., & Hayes, J. R. (1980). The Dynamics of Composing. In L. W. Gregg, & E. R. Steinberg (Eds.), *Cognitive Processes in Writing* (pp. 31-50). Lawrence Erlbaum Assoc.
- Flower, L., & Hayes, J. R. (1981). A Cognitive Process Theory of Writing. *College Composition and Communication*, 32, 365-387. <a href="https://doi.org/10.2307/356600">https://doi.org/10.2307/356600</a>
- Gould, J. (1980). Experiments on Composing Letter: Some Facts, Some Myths, and Some Observations. In L. Gregg, & E. Steinberg (Eds.), *Cognitive Process in Writing* (pp. 97-127). Erlbaum.
- Hayes, J. R. (1996). A New Framework for Understanding Cognition and Affect in Writing. In C. M. Levy, & S. Ransdell (Eds.), The Science of Writing: Theories, Methods, Individual Differences, and Application (pp. 1-27). Lawrence Erlbaum Associates.
- Hayes, J. R., & Bajzek, D. (2008). Understanding and Reducing the Knowledge Effect: Implications for Writers. Written Communication, 25, 104-118. <a href="https://doi.org/10.1177/0741088307311209">https://doi.org/10.1177/0741088307311209</a>
- Hayes, J. R., & Chenoweth, N. A. (2007). Working Memory in an Editing Task. *Written Communication*, *24*, 283-294. https://doi.org/10.1177/0741088307304826
- Hayes, J., & Nash, J. (1996). On the Nature of Planning in Writing. In C. Levy, & S. Ransdell (Eds.), *The Science of Writing Theories, Methods, Individual Differences, and Applications* (pp. 29-55). L. Erlbaum Associates.
- Hedgcock, J. S. (2012). Second Language Writing Processes among Adolescent and Adult Learners. In E. L. Grigorenko, E. Mambrino, & D. D. Preiss (Eds.), Writing a Mosaic of New Perspectives (pp. 221-239). Taylor and Francis.
- Hume, A. (1983). Research on the Composing Process. *Review of Educational Research*, *53*, 201-216. <a href="https://doi.org/10.3102/00346543053002201">https://doi.org/10.3102/00346543053002201</a>
- Kaufer, D. S., Hayes, J. R., & Flower, L. (1986). Composing Written Sentences. *Research in the Teaching of English*, *20*, 121-140.

- Kellogg, R. (1987). Writing Performance: Effects of Cognitive Strategies. Written Communication, 4, 269-298. https://doi.org/10.1177/0741088387004003003
- Kellogg, R. (1988). Attentional Overload and Writing Performance: Effects of Rough Draft and Outline Strategies. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 14*, 355-365. <a href="https://doi.org/10.1037/0278-7393.14.2.355">https://doi.org/10.1037/0278-7393.14.2.355</a>
- Kellogg, R. T. (2001). Long-Term Working Memory in Text Production. *Memory & Cognition*, 29, 43-52. https://doi.org/10.3758/BF03195739
- Nelson, G. (1988). Examining the Practices That Shape Student's Writing: Two Studies of College Freshmen Writing across Disciplines. Unpublished Doctoral Dissertation, Carnegie Mellon University.
- Odlin, T. (1989). *Language Transfer: Cross-Linguistic Influence in Language Learning*. Cambridge University Press. <a href="https://doi.org/10.1017/CBO9781139524537">https://doi.org/10.1017/CBO9781139524537</a>
- Rohman, G. (1965). Pre-Writing: The Stage of Discovery in the Writing Process. *College Composition and Communication*, *16*, 106-112. https://doi.org/10.2307/354885
- Sasaki, M., & Hirose, K. (1996). Explanatory Variables for EFL Students' Expository Writing. *Language Learning*, 46, 137-174. https://doi.org/10.1111/j.1467-1770.1996.tb00643.x
- Scardamalia, M., & Bereiter, C. (1985). The Development of Dialectical Processes in Composition. In S. Rosenberg (Ed.), *Advances in Applied Psycholinguistics* (pp. 143-175). Cambridge University Press.
- Spivey, N. N., & King, J. R. (1987). Readers as Writers Composing from Sources. *Reading Research Quarterly*, 24, 7-26. https://doi.org/10.1598/RRQ.24.1.1
- Ur, P. (1996). *A Course in Language Teaching* (Vol. 1, No. 998, p. 41). Cambridge University Press.

#### **Appendix**



Writing model of Flower & Hayes (Hayes, 1996: p. 4)