ACCOUNTING THE THEORIES OF WRITING IN THE CLASSROOM

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Abstract*: Theoretical frameworks can be credited for not only the organization of phenomena but also for guiding future research and practice. Frameworks from the 1980's have explored the technicalities of the English Language, and it was not until the mid-1990 that theories began shedding light on cognitive processes integrated in the act of writing. Hence, the purpose of this research is to assess the practicality of theories of writing in the context of the modern-day classroom. The literature review narrowed down on three commonly occurring theories which are socio cultural theory, social cognitive theory and cognitive theory of writing. Each theory was analysed using a triangulation of criteria laid down by Dudley-Brown (1977) and Dennis and Kintsch (2007). The analysis shows that frequent modification is not an appealing trait for any theory, yet most theories of writing have undergone varying levels of modification. Despite outlining various segments of writing, no theory could hold the title of "completion". The most complete theory is the social cognitive theory of writing as it proves to be viable for use in the contemporary classroom. However, this niche requires in-depth empirical research on the efficacy of such theories and on the factors inhibiting and elevating their effectiveness.*

Keywords*: Writing, Assessment, Theories of writing, Practicality*
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Introduction

A theory is a mental activity that explains the construction of reality and the processes within (Turner, 1986). The path followed by science dictates that theories originate from deductive reasoning; thus, the scientific method expresses the formation of theories in the following manner: Research Question > Statistics > Correlation > Causality / Law / Theory. According to Popper (1934), the scientific methodology involves explaining an identified problem using the hypothetico-deductive method. Echoing the works of Popper (1934), many researchers have agreed that theories should explain the 'what', 'how' and 'why' of a given phenomenon (Ary et al., 2010; Kitchel & Ball, 2014). However, the scientific world has recently been exposed to the concept of M-theory, which in itself is not a single theory but is a family of theories that are restricted by certain situations (Mlodinow & Hawking, 2010). This is as close as we have gotten to the concept of a 'final theory' for any phenomena.

Despite accounting for postmodernity, discrepancies about the definition and evaluation of theories exist. The absence of a holistic framework of evaluation is what allows for a litany of theories attempting to explain the same phenomenon. As it stands, all theories are false, but some are falser than others (Popper, 1959). The challenge now is to filter out the relatively falser theories, leaving those that are closer to the truth which is the concept of falsification (Popper, 1959). Since then, researchers have produced a variety of evaluation criteria that test theories. Fawcett (1989) claimed that expression of purpose via explanation or prediction of irrefutable phenomena is the perfect metric for the evaluation of a theory while Chinn and Kramer (1983) relied on interdependencies of variables and systematic propositions for the evaluation of a theory. Nevertheless, Strickland (2001) argued that a theory is considered to be useless only if it is not testable. With these complexities in mind, it makes sense to take a holistic approach to evaluating theories of writing which have been rarely put under the microscope.

For the most part of the twentieth century, writing instructions have focused on the mechanics of writing (grammatical and syntax errors) (Nystrand, 2006). Since then, writing has increasingly be seen as a thought process that is writer oriented or 'an activity of the mind' as Foster (1983) puts it. The field of writing research witnessed a new dawn as the 1980s became home to a writing research movement (Nystrand, 2006). Writing as a skill took the spotlight not only as an important aspect of research, but also of education and practice. This skill is a major factor in determining a person's eligibility for reputed institutes across the globe and in many cases, it is the factor that dictates a candidate's suitability for a key position in the corporate world.

As far as writing is concerned in an undergraduate program, English for Academic Purposes (EAP) courses have shown to help students develop a complex integration of knowledge and skills so that students can communicate and participate effectively in higher education (Ding & Bruce, 2017). Moreover, there are no fixed criteria for academic writing, but it certainly differs from the writing styles common to newspapers or novels. Bailey (2011) stated that academic writing attempts to be accurate and objective whereupon the author should express their ideas clearly and effectively, keeping the audience in mind. Despite the significance of the aforementioned skill, theories fail to provide promising evidence that supports writing education, let alone its application. By means of a comprehensive theoretical framework, it will be possible to collect empirical data and make informed decisions in pedagogy based on the available information.

In relation to the studies of academic writing, several research gaps have been identified. Firstly, there are discrepancies in defining and evaluating theories due to the absence of a holistic evaluation framework, which leaves room for multiple unvalidated theories attempting to explain the phenomenon (Bundsgaard & Hansen, 2011). In addition, despite the growing importance of writing as a skill and its critical role in academic contexts, existing theories fail to provide robust empirical evidence that directly supports writing education and its practical applications (Luft et al., 2022). On top of that, Lund et al. (2022) also asserted that theoretical underpinnings of English for Academic Purposes (EAP) courses are not well supported or grounded in systematically evaluated theories of writing. As such, there is a need to bridge the gap between writing theories and their application in modern classrooms and educational contexts since without a comprehensive theoretical framework, informed decisions in pedagogy are challenging (Bundsgaard & Hansen, 2011).

The absence of a comprehensive and systematic evaluation framework for writing theories limits their contribution to writing education and practice. Consequently, this creates challenges in identifying theories that can be reliably applied to develop effective pedagogical methods for teaching academic writing in diverse contexts. Therefore, the purpose of this study is to merge the works of Dudley-Brown (1977) and Dennis and Kintsch (2007) in an attempt to put the prominent theories of writing through a rigorous evaluation process. By using the findings as guides, it is not only applicable in modern-day writing research but for use in contemporary classrooms as well. Subsequently, the research objectives of this study are:
1. To identify the theory evaluation criteria that can be used to evaluate the writing theories
2. To evaluate the prominent theories of writing, and
3. To speculate the potential applications of the evaluated theories.

Literature Review

Writing is a "recursive, cognitively demanding, and problem-solving task" that constantly jumps between preparation, organization, and revision (Hirvela, 2016). The complexity of this process explains why Riswanto (2016) claimed that 'learning to write' is a far more challenging task than 'learning to speak'. Diving deeper into the writing process, "academic writing" or writing from sources is a challenge influenced by each individual's native language, experiences, educational, and cultural background (Cumming et al., 2016).

Academic writing requires an understanding of the textual, social, and cultural features of discourse within the academic domain alongside an in-depth understanding of the tone and register adopted by modern day academia. Writing from sources has been a contentious problem for many years. Li (2013) documented that within the framework of activity theory, university students apply the on-going tensions, contradictions, and the multiple strategies during the process of source-based academic writing. Other researchers like Cumming et al. (2016) have also identified the need for students to be able to engage with the sources to write effectively in academic literacies. This need is rooted in the student's ability to conform in a different culture of an academically rich environment to continue their academic studies. Additionally, undergraduates usually lack experience with the challenges related to academic writing, such as creating an argumentative essay or using secondary sources. Academic writing in the English language aims to teach students how to write coherent texts that reflect their comprehension through the means of essays, reaction papers, or annotated writing. These evaluations, which are a component of academic writing, concentrate on the text's organization, grammar, punctuation accuracy, and suitability of language. As proposed by Cumming et al.

(2016), one major determinant of this problem is the mismatch of students' social and educational backgrounds with university requirements. Having looked at what it means to write in the academic context, it is imperative for researchers to look at the most prominent theories that dominate the writing paradigm.

For the purpose of this study, the following three recurring theories of writing are being analysed:
1. Cognitive process theory of writing
2. Social cognitive theory of writing, and
3. Socio cultural theory of writing.

Cognitive Process Theory of Writing

Cognitive process of theory was proposed by Flower and Hayes (1981) which is a deterministic model that comprehensively analyses writer's trivial thinking processes and their organizing strategies. The model critically focuses on assessing the key thought process incorporated in the act of writing as a problem-solving process.

The model comprises of three components as depicted in Figure 1. Task environment relates to external factors such as the topic of the writing assignment or the guidelines that affect the task performance. The second component is the cognitive process involved in writing such as planning for strategies to organize the ideas and information, paraphrasing the ideas into a written text, and revising the ideas by critical thinking. Hence, this component reveals the mental operations which the writer goes through with several steps directly monitoring their own progress. This component does not follow a linear scale during writing; for example, there are higher levels of fluidity in the combinations of paraphrasing and reviewing. If the writer feels the need of an additional writing goal while reviewing and editing text, they are likely to alter one or more segments of the cognitive process. The third component is writing the text, which entails editing the material that has been originally prepared, fixing any grammatical errors, and analysing and resolving any production-related issues. It is important to note that this component factor is in the writer's long-term memory which does not include their knowledge about the topic but also an understanding of planning and writing for a particular audience. The acres of information stored in the brain are not all accessible but the relevant pieces that are available suggest that writing is pre-dominantly a goal-directed process. Having described writing as a "goal-directed process", Flower and Hayes (1981) defined it as an overarching hierarchical structure that writers consistently refer to as knowledge develops.
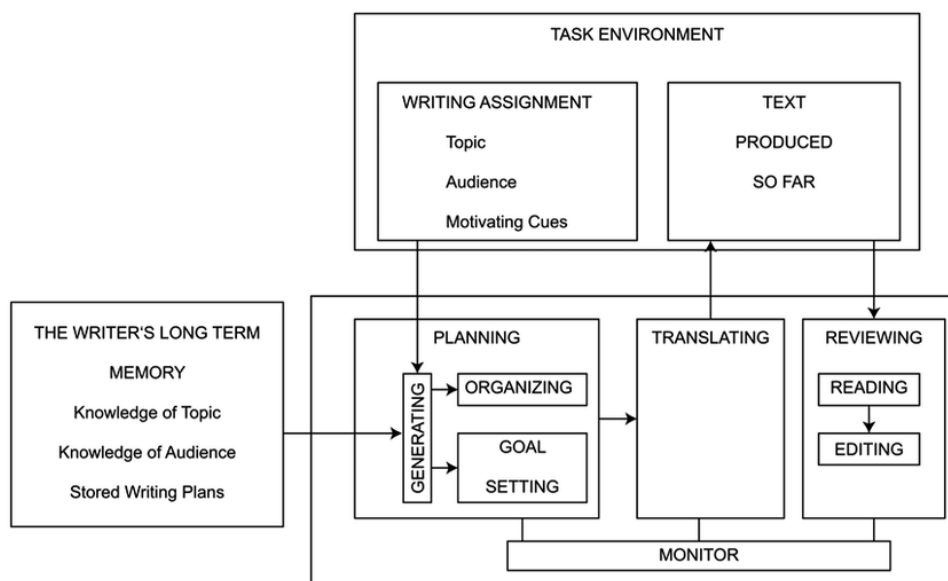
Figure 1: Cognitive Process Theory of Writing

Source: (Flower & Hayes, 1981)

The dynamic process of writing is depicted in the cycle of Figure 2 below which aptly describes how the development of knowledge affects the writing process. The model proposed by Flower and Hayes (1981) revolutionized the understanding of the writing process by comprehending how writers create, retrieve, modify, and consolidate their goals throughout the writing process.
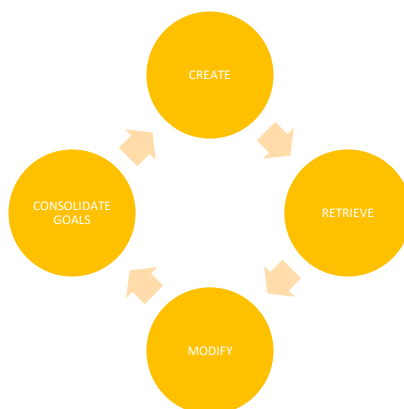

Figure 2: The Writing Model as a Dynamic Process

Flower and Hayes (1981) found their theory fruitful based on what it produces which consist of phenomena, hypothesis, potential research opportunities, and integral problems associated with the theory. Nevertheless, McEwen and Will (2014) asserted that the substantive theory categorizes the cognitive process theory of writing as a middle-range. The theory was found to be accepted into the dominant paradigm due to its descriptive and elaborate nature. Moreover, the theory presented its practicality but failed to tie itself to sociocultural utility. Despite establishing its dominance by becoming the base research model for many, it ignores the impact of social factors on the writing process.

Stapleton (2010) first analysed the composing process in writing a research task as it comprises of planning, innovative thinking, formulation of generated thoughts and ideas into words and

revision/final changes. He noted that students are often unaware of their writing problems and are entirely dependent on their instructors to indicate problem areas. Thus, it is imperative to fuse active reading, paraphrasing, and writing for a successful writing session.

Hayes (2011) outlined some of writing restraints that are common phenomena during the composing process by noting that as the writer progresses, the written text limits the scope of the topics that could have been explored in the text that followed. For Hayes (2011), all of it boils down to the coherence, completeness, and concreteness of the ideas established in the previous text. As the writer approaches the paraphrasing stage, they are likely to pay more attention and in doing so rhetorically question the concepts already penned. This concept shapes paraphrasing into a process that supports the planning and construction of a new sentence in a growing text in the presence of knowledge constraints. A litany of cognitive strategies was studied by Khrismawan and Widiati (2013), who noted that strategies such as changing syntax, information sequence, and revising word choices are time consuming. According to Zarrabi and Bozorgian's (2020) study on behavioral indicators during the writing process, it revealed that a high frequency of revision and pausing at word boundaries contributes to inefficient writing practices. On the other hand, it was noted that a habit of active writing with planned pauses in the middle allows for the most efficient use of available time in the context of writing argumentation.

The cognitive process theory of writing expresses its claims with utmost consistency, fruitfulness, and acceptability (Dudley-Brown, 1997). However, it does not account for the impact of context on writing which makes it inaccurate in the 21st century. The theory's consistency comes from its logical and coherent explanation of relevant terms and concepts.

Social Cognitive Theory of Writing

Writing under the Social Cognitive Theory by Flower (1994), in her book of "The production of negotiated meaning", urged the convergence of social and cognitive theory, particularly in education. This is because "neither social nor cognitive theory makes genuine sense without the other", which is a social cognitive theory of writing (Flower, 1994, p.33). Writing is a constructive process that is frequently influenced by the attitudes and sentiments of the writer as well as the culture and individuals in his or her immediate surroundings (Flower, 1994). "The forces gathered around the poles of self and society, public and private, custom and innovation, social and cognitive, are all forces that can give structure to a writer's meaning, direct composition, or set criteria..." (Flower, 1994, p.34). By using this architecture, the writer is forced to engage with various pressures and actively negotiate meaning to give significance to a scenario (Flower, 1994); thus, social meaning is shaped through reproduction, discourse, and negotiation. Reproduction is one-way communication, but dialogic activities like discourse and bargaining involve two-way communication. Reproduction is a method of knowledge creation that is unconsciously used in the creation of texts (Flower, 1994). "New texts can be characterized as a reconfiguration of past texts" (Flower, 1994, p.56), which is an illustration of knowledge transformation, occurring when old meaning is combined with fresh information to create new meaning (Bereiter & Scardamalia, 1987).

For Brandt (1990), conversation results in interaction. Discussion and dialogue are used by conversation partners to create meaning, and at times they explain where the topic is headed and decide to proceed. A largely undirected process in which meaning is fed, developed, and enlarged by living within a stream of possibilities is highlighted by meaning via dialogue;

however, meaning is best constructed through negotiation, and writers engage in both internal and outward meaning negotiation (Flower, 1994). "Negotiation focuses our attention to an effort to generate meaning in the face of forces that are dilemma-driven and goal-directed" which means people are ready-to-share freethinkers with special knowledge and conceptualization of information when there is negotiated meaning present (Flower, 1994, p.66). Outside factors (e.g., language, teachers, collaborators, discourse convention) and voices or knowledge have an impact on the process of creating negotiated meaning (e.g., goals, constraints, opportunities, experiences, wisdom, conflict (Flower, 1994).

According to research studies, writing development is influenced by culture and cognitive processes, theorists are unaware of it. Flower (1994) also offered a theory that is consistent in assumptions and premises, linked, and logically sound and the theory was successful because it showed novel phenomena and the previously unrecognized connection between social context and writing-related cognitive processes. It also reviewed the literature that inspired its creation, demonstrated its ability to address issues, and offered suggestions for additional research. Flower (1994) argued that the theory was sophisticated and went on to describe numerous elaborate notions, occurrences, and linkages. Since the theory addressed a sizable number of pertinent concepts and facts, it was classified as middle range (McEwen & Wills, 2014). The social cognitive theory of writing also satisfies the criteria for acceptance because Google Scholar (2022a; 2022b; 2022c) indicated that it has been cited 1023 times. Additionally, it might be beneficial for research, education, and practice paradigms. Finally, the theory satisfies the requirements for sociocultural utility because it represents an important social practice and has the capacity to influence how society approaches writing education. The approach is adaptable and in line with educational institutions that uphold cultural values and beliefs.

Socio Cultural Theory of Writing

The initial research on writing did not aptly reflect the intricacies of the process and thus set the stage for further research along the lines of "social, historical, and political" contexts of the process (Prior, 2006, p.54). It has been identified that this concept is not entirely new and has been previously conducted under the paradigm of sociocultural theory.

Prior (2006) asserted that sociocultural theory expresses writing activity as a product of interactions that are concurrently moulded by historical practices. This activity can be broken down into three key elements:
1. Externalization through communication
2. Co-action through collaboration with the environment
3. Internalization through perspective in which people view and comprehend phenomena through the lens of their beliefs and values.

Prior (2006, p.57) also proposed that the approach involves dialogic processes of invention and categorizes texts as components of "multimodal activity" where individuals engage in something that extends beyond their selves (knowledge distribution). To contextualize this, we can refer to the case of a school where teachers are equally involved in the writing process as they set deadlines and mentor their protégés during the entire process (Prior, 2006).

According to Daiute (2000), learning the writing process is the equivalent of internalizing a "set of values, practices, and symbol systems" as group practices as opposed to universal

practices. This is further backed by Deane et al. (2008) who addressed the influence of sociocultural forces on how writing tasks are perceived and structured.

Prior (2006) has redrawn the sociocultural theory with three major themes: demarcating the boundaries between the oral and literal aspects of communication, new schooled literacies, and writing in educational institutes and beyond. The theme of schooled literacies emphasizes on the participation under social structures like peer groups, schools, and the society at large, gradually shaping writing as a sociocultural practice. The complexity of emerging literacies demands that writers are continually challenged with new genres and textual practices.

Summary of the Theories of Writing

The analyses of the theories above can be summarised as the following. Cognitive Process Theory of Writing focuses on the cognitive activities that writers engage in, which help the educators to support students at different stages of writing; however, the model may oversimplify the complexities of writing by not adequately addressing the social context or emotional aspects involved in writing (Cheung et al., 2021). While it provides a robust framework for understanding cognitive functions, it lacks integration with social influences on writing practices, which are vital for a comprehensive understanding of the writing process (Cheung et al., 2021).

Social Cognitive Theory of Writing highlights the importance of self-efficacy beliefs in motivating writers and influencing their writing outcomes, but it may place too much focus on cognitive elements while underplaying emotional and contextual factors that also affect writing, which lead to ambiguities regarding its application in specific educational contexts (Mello et al., 2024). As such, the theory may not sufficiently address how cultural differences impact writing practices and learning environments, which can be crucial for understanding diverse student populations (Cheung et al., 2021).

Socio Cultural Theory of Writing effectively incorporates social interactions and cultural contexts into the understanding of writing processes, which enhance the students' adaptability in various writing situations (Cheung et al., 2021). Nevertheless, the emphasis on social interaction can make it challenging to implement effectively in traditional educational settings where individual assessment is prioritized (Han, 2017). Therefore, there is a need for stronger connections between socio-cultural perspectives and cognitive theories to provide a more integrated approach to writing instruction that acknowledges both individual cognition and social interaction (Han, 2017).

Each theory presents valuable insights into the multifaceted nature of writing. Cognitive Process Theory of Writing excels in detailing cognitive activities but lacks attention to social contexts. Social Cognitive Theory of Writing offers a comprehensive framework but may overlook emotional factors. Finally, Socio Cultural Theory of Writing emphasizes social influences but faces challenges in implementation. Consequently, a more integrated approach that combines elements from all three theories could enhance the understanding and teaching practices related to writing.

Methodology

This study is part of a pilot study of greater research that intends to build upon the identified research gaps in order to establish an efficient model of writing pedagogy in the contemporary world.

Evaluation Framework

Drawing from the key ideas of Dudley-Brown (1997), Dennis and Kintsch (2007), and Kuhn (1977), an evaluation framework was produced to help rank theories in terms of their position in society today. Dudley-Brown's (1997) rigorous evaluation is fit for the nursing sector and required to be tweaked. To modify the criteria so that it fits the needs of this research, an extensive literature review process is engaged. The descriptions provided an insight into what is being inquired, allowing the researcher to produce a well-suited description for each criterion in the context of writing. The daunting task of theory evaluation requires a triangulation of secondary quantitative and qualitative sources to uncover the strengths of each theory in contemporary society. The utilized quantitative and qualitative resources range from citational statistics to prior evaluations of the identified theories.

The review and evaluation processes occurred concurrently. To comprehend the principles within each theory, the researcher immersed herself in the frameworks as part of the review procedure. While reading and analysing each theory and its supporting literature, the researcher used a duplicate of Table 1 to take notes. It aims to identify criteria and examples that met the criterion. If a theory did not fulfil the evaluation standards established for a certain criterion (e.g., accuracy, post diction), the theory's failure to meet those criteria is reported. Regarding a certain criterion, the theory is declared as either satisfied or did not fit a specific set of defined criteria and offered a verified example. After doing a thorough analysis of each theory, a narrative from the notes is generated which outlines the essential aspects of each framework in relation to the outlined evaluation criteria.

Table 1: Evaluation Framework

Criterion	Explanation	References
Precision and Interpretability	Is the theory concise and easily interpretable?	Dennis & Kintsch (2007)
Prediction and Falsifiability	Is it designed in a way that potentially leaves room for rejection?	Dennis & Kintsch (2007)
Post diction	Does the theory explain existing results?	Dennis & Kintsch (2007)
Parsimony	Is it expressed as simply as possible?	Dennis & Kintsch (2007)
Originality	Is it a restatement of an existing theory?	Dennis & Kintsch (2007)
Scope	Does the theory apply to a broad range of phenomena?	Dennis & Kintsch (2007)
Usability	Does the theory have applied implication?	Dennis & Kintsch (2007)

Rationality	Does the theory make reasonable claims about the architecture of the mind in light of environmental contingencies that have shaped our evolutionary history?	Dennis & Kintsch (2007); Ary et al. (2010); Barnum (1998); Ellis (1968); Hardy (1974); Kuhn (1977); Laudan (1977); Newton-Smith (1981)
Acceptability	On what level has the theory been adopted and accepted in research practice?	Ary et al. (2010); Barnum (1998); Ellis (1968); Fitzpatrick & Whall (2005); Laudan (1977)
Sociocultural Utility	Does it factor in values, beliefs, norms, and figments of other social strata?	Fawcett (1989); Johnson (1974); Meleis (1985)
Accuracy	Is the theory a true representation of what it claims to represent?	Kuhn (1977)

Assumptions: All theories are and shall forever remain non-parsimonious until a single theory establishes the dominant paradigm.

The chosen criteria are particularly suitable for evaluating the theories as writing theories need to be clear and concise to ensure researchers, educators, and practitioners can understand and apply them effectively. Dennis and Kintsch (2007) emphasized that a sound theory must offer predictions that can be tested and potentially disproven, is able to explain past findings and phenomena in the field of writing research, avoids unnecessary complexity, contributes new insights to the field, addresses a wide range of phenomena related to writing, and is able to solve real-world problems. Moreover, the theory should also align with cognitive and evolutionary perspectives, reflects its relevance in research practices (Ary et al., 2010), incorporates sociocultural perspectives into theoretical work (Fawcett, 1989), and reflects reality as closely as possible to maintain their credibility and practical applicability (Kuhn, 1977). Therefore, this framework evaluates theories from multiple perspectives - scientific, practical, and sociocultural - ensuring a holistic assessment and a robust analysis that serve both academic and practical purposes.

Findings and Discussion
The cognitive process theory of writing proposed by Flower and Hayes (1981) is consistent, fruitful, complex, middle-range (scope), and acceptable. However, it lacks accuracy when explaining 21st century phenomena as it fell short on contextual influence. The theory makes reasonable claims alongside coherent and cogent terms and concepts. Moreover, the fruitfulness of the theory is evident in its ability to satisfy post diction requirements and predict results. Additionally, the hierarchical structure of the theory complements its explanation of the writing process as it paints the process as a layered process with multiple relationships.

Referring to the "circle of contagiousness" (Meleis, 1985), the theory has been accepted widely in the writing community. However, it lacks sociocultural utility as it ignores elements of transfer, the writer's relationship to society, and the impact of communal practices and norms

on the activity of writing. Arguably, the cognitive process theory has served as the foundation for many writing models, and the absence of societal influences weakens its accuracy.

This brings us to the sociocultural theory of writing (Prior, 2006) which is consistent, fruitful, simple, acceptable, and most importantly, has sociocultural utility. It uses coherent and connected terms to explain phenomena in light of social context and interactions. It portrays its fruitfulness with a potential to generate hypotheses, solve problems, and provide further research recommendations. Its simplicity is evident in its ability to align and organize isolated studies. Prior's (2006) sociocultural theory of writing further satisfies the criterion of acceptability as it has been cited a total of 749 times. Yet, it fails to incorporate the integral element of "cognition" into its model which prevents it from being an accurate model for the current writing epoch.

Flower's (1994) social cognitive theory is proven to be accurate, consistent, and categorized as a middle range theory (in terms of scope) while fulfilling the requirement for sociocultural utility. Its key feature is that it signifies the importance of both elements: cognition and societal influences. The theory portrays its fruitfulness with potential application in educational and research dimensions, identification of key developments, explanation of new phenomena, and consistent conventions and propositions. Flower's (1994) theory as an amalgamation of the two theories is transferable and predominantly consistent with the diverse value and belief systems existing in the educational ecosystem. In terms of acceptability, it has been cited a total of 1023 times, expressing its acceptance in the research community. However, it is far from the ideal unified theory and takes a complex turn on a variety of occasions.

Conclusion

The 1980s were characterized by writing research tailoring theories to paint a better picture of the writing process, its concepts and relationships (Nystrand, 2006). Recently, the focus of writing research has shifted from empirical research on grammar and mechanics to cognitive processes involved in writing and the role of society in the writing process (Prior, 2006). The review and evaluation of well-known writing theories showed that the frameworks are different in how they describe the ideas, concepts, and relationships of writing, as well as the structure and level of theory (McEwen & Wills, 2014) and how they grouped the frameworks according to Raimes' (1991) four elements. Each writing theory represented writing in its era and offered a unique perspective on writing research. Flower's (1994) social cognitive theory of writing is the most comprehensive writing theory since it includes an in-depth examination of writing as a socially situated outcome of cognitive processes. Without the other, neither social nor cognitive theory makes meaningful sense (Flower, 1994). Its framework covers both the influence of society on writing and the cognitive processes involved in the evolution of writing. Upon evaluation, it seems that despite Flower's (1994) cognitive process model being incomplete in terms of factoring in the impact of social elements on the writing process, it is far easier to strengthen than the non-unified social cognitive theory as proposed by Prior (2006).

Limitations and Recommendations

This research was confined by funding and the availability of resources. Furthermore, relying on secondary resources brings the question of reliability and representation. Secondary data may not be representative of what it claims to represent, and users are restricted by the researcher's definitions of the subjects under study. Moreover, reliance on secondary data may

create a pervasive wave of errors which can distort findings. In light of the outlined limitations, a qualitative case study researching the impact of societal elements and cognitive processes is recommended. Writing is a complex cognitive process which is compounded further when considering the demands of writing in English as a second or additional language because L2 writing requires more problem solving than L1 writing as far as the range of problems is concerned. The constant involvement of cognitive energy while paraphrasing is not only formidable but challenging for students with their first language not being English. This can be assessed by the gauging the participant's abilities over the course of the study via reading and writing instruments. Adopting this mode of research will improve the overall relevance and representativeness of the research while strengthening the ecological validity of the research conclusion.

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