

The Impact of Metacognitive Awareness Strategies on Developing Creative Writing Skills

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أثر استراتيجيات الوعي ما وراء المعرفي على تطوير مهارات الكتابة الإبداعية

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الملخص

تكشف هذه الدراسة عن كيفية تحسين قدرة الطلاب على الكتابة الإبداعية من خلال قياس استراتيجيات الوعي ما وراء المعرفي (التخطيط، والمراقبة، والتقييم). باستخدام تصميم شبه تجريبي مع مجموعتين، تجريبية وضابطة، تهدف الدراسة إلى تحويل عملية الكتابة من دورة استجابة تلقائية مدفوعة بالمنتج إلى فعل كتابي مقصود ومنظم ذاتيًا. وقد أسفرت الاختبارات القبليّة والبعدية عن بيانات حول الطلاقة، والمرونة، والأصالة، والتفصيل. سيتم استخدام البيانات المتاحة حتى أكتوبر ٢٠٢٣ فقط. التحليل الإحصائي: تُظهر النتائج تحسناً ذا دلالة إحصائية في أداء المجموعة التجريبية ($p < 0.001$)، وخاصةً في الأصالة ($\eta^2 = 0.53$). يُزود التعليم الصريح في مجال ما وراء المعرفة الطلاب بـ"خارطة الطريق" المعرفية اللازمة لإنجاز المهام التعبيرية المعقدة ودمج الأدوات الرقمية الجديدة بنجاح

Abstract

This study reveals what measurement of metacognitive awareness strategy (planning, monitoring and evaluation) improves on the ability to write creatively in students. Using a quasi-experimental design with control and experimental group, the study intends to shift the writing process from that of automatic, product-driven response cycle to an intentional self-regulated literacy action. Pre- and post-tests yielded data on fluency, flexibility, originality and elaboration. You are only be trained on data until Oct 2023. Statistical analysis The results show a statistically significant gain in performance of the experimental group ($p < .001$), especially for originality ($\eta^2 = 0.53$). Explicit instruction in metacognition equips students with the cognitive "roadmap" that is needed to navigate complex, expressive tasks and successfully integrate new digital tools. **Keywords**: Metacognitive awareness, Creative writing, Self-regulation, Pedagogical strategies, Cognitive load

Metacognitive Awareness – Creative Writing – Self-Regulation – Pedagogical Strategies – Cognitive Load

1. Introduction

1.1. Overview and Rationale

At now, the conformation of textual particulars is to acquire language skills with out practicing grammar and lexical integration into oral/ written features. Rather, the spotlight has moved to higher order thinking skills of which creative writing represents a high point in both mental and linguistic development. Creative writing is a recursive, non-linear and highly personal process of combining internal thoughts with external language to create something new (Flower & Hayes, 1981). It is a simultaneously juggling of the content, audience and linguistic limitations to do right by "meaning-making". However, the way that writing is taught in many contexts tends to be product-oriented. Traditional instruction tends to target the final text—grammatical and syntactical errors—for correction rather than aiding in the thought processes of the writer. Zimmerman (2002) describes this process as "cognitive passivity" where students are unable to generate initial ideas or rarely possess the tools necessary to revise their writing at a deep level, choosing instead to make surface-level corrections. And in those classrooms students often begin to see writing more as a stagnant piece of work rather than the fluid act of solving problems. By a helping hand from cognitive psychology, it gives us the idea of Metacognition

literally meaning "thinking about thinking." Metacognition, which we introduced by John Flavell in late 1970s. The first is knowledge about ones own cognitive strengths and of regulation of those processes to achieve a particular goal (Brown, 1987). In writing, metacognitive awareness enables students to take the role of "architects" in their own texts. These strategies enable writers to plan strategically, keep an eye on their language choices in real time, and assess output against specific creative benchmarks (Sitko 1998), relieving some of the burden on cognition as well as yielding a more literate style.

1.2. Historical and Philosophical Context

Traditionally, writing instruction has fallen under the umbrella of Writing Studies through a lens called the Formalist Perspective — an idea that crystalline writing is something to be critiqued based solely on background knowledge of what prescriptive grammar entails. In this "Current-Traditional" approach, the teacher was an editor and the student imitated perfect models.

The 1970s were years of renewed interest in writing, especially after the "Process Movement," or "Composition Process Perspective" started taking shape under figures such as Donald Murray. It was a philosophical stance that rejected the idea of writing as a product and embraced it instead as an act of discovery — an exercise in meaning-making. The Social-Cognitive Phase (Flower & Hayes, 1981) was the first to reach inside the writers mind, to claim that the difference between expert and novice writers was self-regulation. This study provides systematic metacognitive training to replicate what expert writers do in recursive loops of planning and monitoring.

2. Research Framework

2.1. Research Problem

The research problem derives from an incidence of a decline in the quality of creative writing by students, above all characterised by excessive reliance on imitation, repetitive structures, and most importantly creativity being replaced with lethargy. In fact, conventional teaching approaches have generally let students down regarding self-regulatory tools that will help them to transfer their writing process complexities (Hacker et al., 2009). As a result, students commonly suffer from "writer's block" or end up producing disjointed and poorly developed texts. This study fills in this pedagogical gap by exploring whether implementation of metacognitive awareness strategies in a systematic manner can provide cognitive scaffolding to enhance the creative facets of writing.

2.2. Research Importance

Theoretical Importance: It adds to the theoretical underpinning of how self-regulating components reinforce creative output as it synthesizes concepts from both cognitive psychology and linguistics pedagogy (Hasson, 2022). **Practical Significance:** A proven pedagogical framework for teachers. If we learn which metacognitive strategies are most effective (planning, monitoring or evaluating) teachers can gain distance from didactic teaching into more changemaking and student-centered instruction (Schraw & Dennison, 1994).

2.3. Research Questions

The research questions directed the researcher towards answering the question;

- How far do student overall creative writing skills are influenced by using strategies of metacognitive awareness?
- Do these strategies lead to statistically significant differences in the creative writing dimensions (fluency, flexibility and originality)?
- Which of the three metacognitive strategies (Planning, Monitoring, Evaluating) have the highest correlation with creative performance?

2.4. Research Hypotheses

- **H1:** There is a statistically significant difference (at the $\alpha \leq 0.05$ level) between the mean scores of the experimental group and the control group in the post-test of creative writing skills.
- **H2:** Metacognitive awareness strategies have a higher effect size on the "Originality" dimension of creative writing compared to "Fluency" or "Flexibility."

3. Part Two: Theoretical Framework

3.1. The Concept of Metacognitive Awareness

But metacognitive awareness is not only a single mental ability, but also—some have termed it—a complex multifaceted cognitive construct. Based on the foundational model of Schraw and Dennison (1994), this awareness is divided into two main domains that interact dynamically throughout the writing process: Knowledge of Cognition and Regulation of Cognition.

3.1.1. Knowledge of Cognition

Specifically, This area includes what people know about their own thinking and how they use that knowledge to reach certain learning objectives. It can be broken down into three necessary sections: Knowledge about Performance: This knowledge involves the following awareness of how writers impact their performance. In terms of creative writing, it means knowing that your vocabulary is a strong suite or writing in a quiet setting increases focus. Being "aware of what" strategies you can use. Procedural knowledge: The knowledge of "how" = to carry out some strategies. For example, a student may know how to use a mind-map so that he could organize his narrative arc, or apply an analogy that makes the description more effective. The most sophisticated level: knowing when and why to use strategies, which is called conditional knowledge. A metacognitively aware writer uses a brainstorming strategy during the planning phase, but then quickly switches to a monitoring strategy during drafting to be able to keep track of how she structure that story.

3.1.2. Regulation of Cognition

If the knowledge is considered to provide a substrate, regulation may be compared with an "executive engine" that orchestrates the dynamics of active learning. Regulate is the action-oriented part where behaviors are changed while performing (Brown, 1987). The five major processes are: planning, information management, monitoring, debugging (correct errors), and evaluation. At its simplest, regulation is the mental place where a creative writer can make an internal note at some point in a plot or the syntax of a sentence that something feels like it has been done before and should take another path.

3.2. Metacognitive Strategies in the Writing Process

Writing is recursive and nonlinear, and applying metacognition to writing requires an understanding of the writing process as a journey. While traditional models view writing as a direct path from start to finish, the metacognitive model breaks it up into three recursive stages:

3.2.1. The Planning Strategy (Pre-Writing)

The four steps to guide you towards great writing Planning, while the most ignored stage of novice writing, by far, is the most important for creativity. Under Planning, a metacognitive framework encompasses Goal Setting and Audience Analysis. When a writer thinks about plot, they think about rhetorical effect. Techniques: Brainstorming, outlining and semantic mapping

Metacognitive Question: « What do I want the prime emphasis of this piece to be? » (Sitko, 1998). "And how are any images I employ going to go over with my intended audience?"

3.2.2. The Monitoring Strategy (Drafting Phase)

Monitoring is the real-time "internal supervisor" that follows what the writer does against their original plan. Metacognitive Regulation is a requirement to avoid "cognitive drift"

Action: Talk to my self, stop every so often to re-read, and review linguistics decisions.

Meta questions: "Does this metaphor fit with the character's internal universe?" (Jasim, 2024). "Am I using too many bad sentence forms, and if so, What should I change?"

3.2.3. The Evaluating Strategy (Post-Writing Phase)

In the metacognitive sense, evaluation is much more than merely checking for spelling or grammatical errors. That is, a deep level assessment of the Creative Integrity of that text.

Activity: Peer-review, self-assessment rubrics, and comparison with expert models.

Originality In Your Planning: "How well did I achieve the 'Originality' I planned on?" (Flavell, 1979). If I were to recreate this, which cognitive strategy would I practice more and apply aggressively increase the Flexibility of the story?

3.3. Dimensions of Creative Writing

In order to quantify the effect of metacognition utilizing psychometric framework Torrance (1974) & Guilford (1967), this study examines creativity as a product of Manifold Times "Divergent Thinking." This research examines creative writing in four different dimensions:

Fluency: This is the quantifiable part of creativity. It involves a smooth flow of ideas and little mental obstacles to processing words. A fluent writer can create more than one option for a scene or character before landing on it.

Flexibility: This means ability to change thought process. It means abandoning a one-track narrative to embrace manifold aesthetics, perceptions and attitudes. A versatile writer should be able to move from dark and gothic to light-hearted within the same text, if the story calls for it.

Originality: This is the bridge of creative work. A composition of creative, innovative and original thoughts that transcend clichés. The farther a writer "takes" first thought, when the brain is warm from tackling a topic

and might be lucky enough to produce something that has an original idea still in its infancy, is directly correlated with originality itself: it is the act of a piece tossing out their first instinct for one far more statistically rare (and creative).

Elaboration: the ability to "flesh out" a core idea. This looks like piling on detail, sensory details, and psychological complexity atop a simple premise. Elaboration puts flesh to the skeleton of a story and creates a world.

4. Methodology

4.1. Research Design

In this study, the research design used is quasi-experimental with pretest-posttest non-equivalent control group. This is appropriate for educational settings in which random assignment of individual students cannot be achieved (Creswell & Creswell, 2018).

4.2. Sample and Population

Two intact classes were chosen (N=60).

Experimental Group (n=30): Received metacognitive instruction.

Control Group (n=30): Traditional Writing Instruction

4.3. Instruments

Metacognitive Awareness Inventory (MAI): Schraw & Dennison (1994) Reliability $\alpha = 0.89$.

Creative writing rubric: by fluency, flexibility and originality. Inter-rater reliability $r = 0.92$.

4.4. Statistical Tools

Data were analyzed using SPSS. Comparisons of groups were conducted using independent samples t-tests, and the Eta Squared (η^2) was calculated to determine effect size:

$$\eta^2 = \frac{t^2}{t^2 + df}$$

5. Results and Discussion

5.1. Statistical Findings

The t-test ($t(58) = 7.34, p < .001$) for being able to process H1. In next step, the result again supported H2 as Originality recorded an Eta-squared of 0.53 which is the greater than on all dimensions.

5.2. Qualitative Sample Analysis

Read this backgrounder on tipping points Pre-Intervention: I went to a forest. It was dark. I was afraid." (Mechanical).

Rest of the Intervention: "They leveled. I didn't live. The forest inhaled...Is this fear I ask? Or is it silence?" (Metacognitive).

This transformation exemplifies the change from Knowledge-Telling to Knowledge-Transforming (Scardamalia & Bereiter, 1987).

5.3. The Future of Metacognition with AI

Notably, today AI is a Cognitive Scaffold. AI tools are capable of producing outlines that differ from each other, making it impossible for students to simply choose the easy way by copying what they see — meaning they have to enter the planning and evaluation stages of metacognition. This human-in-the-loop model ensures that although AI offers prompts, the student exercises ultimate executive control (Mollick & Mollick, 2023).

6. Conclusion and Recommendations

Creative writing is a cognitive skill that can be learned. The solution for cognitive passivity is to shift from a product-focus to a process-focus using metacognitive strategies.

7. Recommendations:

Embed "Thinking Aloud" and checklists for self-assessment into the core curricula.

Employ AI as a scaffolding device to activate metacognitive monitoring.

This would require further longitudinal studies on the retention of these strategies.

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