



# Life's More Fun with Colours: Research Writing Using Coloured Scaffolds

Noor Hanim Rahmat\*

Academy Pengjan Bahasa, University Technology MARA, Shah Alam, Selangor, Malaysia

\*Corresponding Author

DOI: <https://doi.org/10.47772/IJRISS.2025.922ILEIID0041>

Received: 26 September 2025; Accepted: 03 October 2025; Published: 22 October 2025

## ABSTRACT

Aristotle once said “colours have the capacity to cause themselves to be seen”. Colours have been used in many areas to facilitate information sharing. Colours are also used in teaching and learning to help learners focus their attention on desired information. One of the main reasons why lecturers do not engage in research is that they needed guidance; at least to start off the research journey. Research engagement here refers to the progress of carrying out research which begins with choosing instrument, collecting data, analyzing data and writing up the research for publication. In lieu of that, a project called ‘coloured Scaffolds’ was implemented to guide lecturers through their research journey. This project was implemented to help lecturers write research for publication for indexed journals. What is concept that backs up the implementation of these coloured scaffolds project? This paper explores the concept behind using colours to complete research write-up. The paper begins by stating the need to explore the issue. It then progresses to explore theories to support the conceptual framework. Self-determination theory and ZPD theory are used to anchor the concept of this paper. The paper ends with a proposed conceptual framework to portray the conceptual framework of the project.

**Keywords:** colours, scaffolds, self-determination theory, ZPD theory, research.

## INTRODUCTION

“Either write something worth reading, or do something worth writing about” -Benjamin Franklin. In the context of academicians or teachers, in order to write something worth reading, they need to first do something worth writing about; which is research. Research engagement is a tedious process and or many academicians, the teaching and other non-teaching responsibilities demand most of their time. However, over the years, in order to improve teaching and learning, many are jumping on the bandwagon of SoTL (Scholarship of teaching and learning). According to Potter & Kustra (2011), SoTL includes aspects of professional development in the teaching world. This development includes improving the teachers’ expertise through researching the best teaching methods for their respective areas. In order to explore best teaching methods, teachers need to engage in research. Research engagement includes research related activities such as preparing instrument, collecting data, analyzing data and writing up the research to be published in academic journals. To many lecturers, teaching and non-teaching duties take up most of their time that engaging in research activities is a burden.

According to Vergara & Sublay (2024), teachers could not engage in research because they were bound by their time and workload. They also reported that teachers avoided research due to their limited research knowledge and skills. In addition to that, Guzman (2025) reported a major challenge for teacher research as lack of mentor. What is interesting is amidst workload, there are some teachers who did engage in research activities. What motivates them? According to Giang, et.al. (2024), teachers’ engagement motivation depends on their autonomy, and self-perceived competence. In addition to that, Salter and Tett (2022) reported that teachers participate in research activities to be a part of a community. Hence this paper is done to explore the challenges that teachers face to engage in research. This paper proposes a framework to guide teachers to begin research engagement.



## LITERATURE REVIEW

### Theoretical Framework

#### Colour and Selective Attention

Colours help attention modification in two ways. First, it diverts a person's attention away from other factors that do not deserve observation. Secondly, Dzulkifli and Mustafar (2013) states that the brain captures colours in a unique way. Colours are used by the brain to divert the person's attention from unintended elements. Colours also help the brain to focus on selected information. Rahmat (2018) uses the SAW approach-Selective Attention Writing approach to guide writers in their writing. Colour is used in this concept paper to scaffold the different steps writers need to adhere to complete the write-up.

#### Self-Determination theory

The Self-determination theory (SDT) was introduced by Deci & Ryan (2012) to explain motivation in people. Motivation depends on three main factors such as autonomy, competence and relatedness. Deci & Ryan (2021) also adds that motivation can be intrinsic or extrinsic. In the context of lecturer's research engagement among lecturers, intrinsic motivation refers to the inner feelings of having autonomy over their time amidst their busy schedule to embark in research activities. In addition to that having the competence to do so helps boost their intrinsic motivation Nevertheless, external factors such as relatedness is needed so that the lecturers know what they are doing (research) is related to their basic teaching duties and that the research engagement is supported by the faculty environment.

#### Zone of Proximal Development (ZPD Theory)

ZPD is a concept in learning to describe the difference between what a learner can do independently and what they can achieve with guidance. According to Vygotsky (1978), there are three activities that can be used to improve ZPD. The first is scaffolding. In learning, scaffolding acts as a temporary structure to guide learners step-by-step to complete an otherwise difficult task. Secondly, ZPD can be improved by reciprocal teaching. This is done through dialogue among learners. The discussion helps learners clear their queries on learning. The third activity is collaborative learning. Vygotsky (1978) emphasizes the benefits of teamwork to maximize learner. The conversation among learners in the dialogue encourages critical thinking and problem-solving skills.

### Past Studies

This section explores past studies on demotivation and motivation for research engagement among teachers

#### Demotivation & Motivation

Zhou, et.al. (2024) explored the motivations and challenges teachers face in conducting research in China. 49 instructors responded to a questionnaire. Motivations were measured by the constructs in the questionnaire. Challenges were measured by open-ended questions. Findings revealed three types of motivation profiles and they are (a) high autonomous and controlled motivation, (b) high autonomous and low controlled motivation, and (c) low autonomous motivation. Five categories of challenges were found and they are (a) researcher identity, (b) research knowledge and skills, (c) research climate in schools, (d) workload and family care and (e) resources and financial support

Next, Bialen (2024) investigated the motivations and challenges academicians face when conducting research. Five teachers were chosen from a purposeful sampling. Data was analyzed qualitatively. Thematic analysis revealed four motivation factors and they are (a) desire for positive change, (b) real-world-engagement, (c) skill enhancement, and (d) personal growth. Five challenges were reported and they are (a) Time constraints due to heavy workload, (b) Resistance to change from colleagues and administrators, (c) Sustainability issues in

implementing research findings, (d) Negative perception and attitudes towards research activities and (e) Lack of conceptual knowledge about research methodologies

## DISCUSSION

Coloured-scaffolds is based on the concept that combines Selective Attention, SDT theory, and ZPD theory. Three main factors drives the formation of this concept; (a) autonomy, (b) perceived competence and (c) Team work.

Figure 1 below shows the concept behind the formation of the “coloured-scaffolds” method to write a journal article for teachers. The concept is anchored from a main theory-SDT. Each component of the theory provides a driving factor and justification for the implementation of each stage in the writing process.

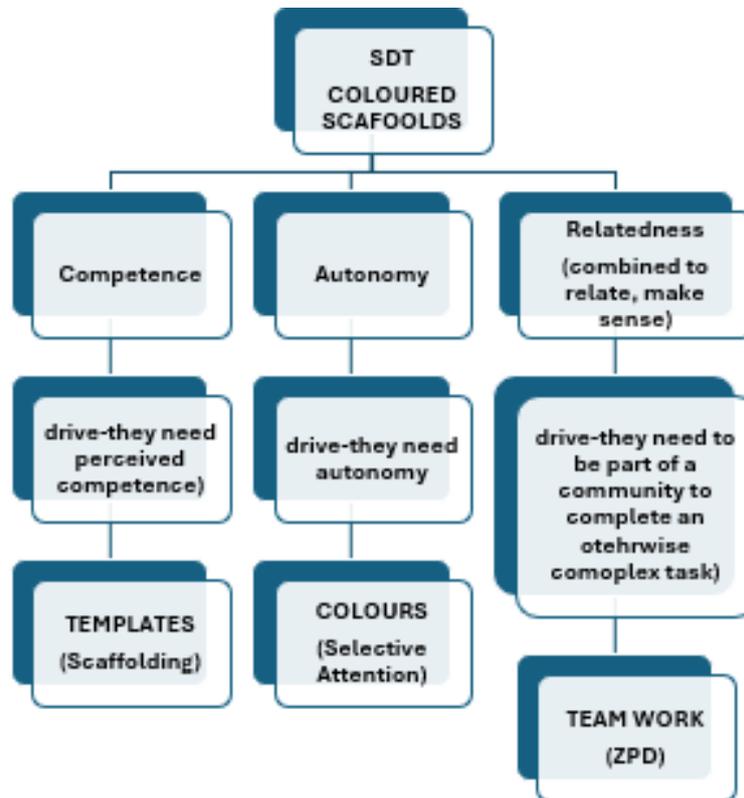


Figure 1- Concept behind Coloured-Scaffolds Method

### Perceived Competence

Competence is the ability to do something successfully or efficiently. Zhou, et.al. (2024) reported that one of the demotivating factors for research engagement is lack of research knowledge and skills. Bialen (2024) also reported similar findings that states teachers lacked conceptual knowledge about research methodology. Coloured scaffolds approach begins with the use of templates for research write-up. The templates contain (a) a ready-made survey to collect data, (b) step-by step template to analyze data, and (c) a step-by-step guide for the writers on what to write and tips on how to write each section of the journal article.

### Autonomy

In order for teachers to feel engaged with research, they need autonomy. Zhou, et.al. (2024) reports that one motivating factor for teacher research engagement is autonomy. To the layman, autonomy refers to the ability of the person to make his or her own decisions. An inexperienced researcher would feel they lack autonomy to make decisions.

How does the colour codes help? The template given begins with an assignment of colour to each writer. Each section of the write-up is then given colours that corresponds to the assigned colours given to authors. Through selective attention of the brain, the assigned colours assist the authors to concentrate on their section only. This is helpful as beginning authors do not get overwhelmed by the vast amount of content (to write) in a journal article. Having to concentrate on particular sections gives the writer autonomy over his or her own parts only.

### Team Work

“If you cannot do great things, do small things in a great way.” This quote shows that joined effort from different writers writing on one journal article eventually leads to the completion of the task. Hence the completed first draft looks like a colourful, completed journal article.

## CONCLUSION

### Theoretical and Conceptual Implications

The theory of Self-Determination by Deci & Ryan (2012) helped researchers to understand why teachers are not actively engaging in research activities. With reference to Figure 2 below, the three main components (competence, autonomy and relatedness) are connected to one another. Although heavy workload has always been used as relevant reason, there is more than meets the eye. Teachers need competence. Many either do not have research knowledge and skills to carry out research or they have the knowledge but are not confident to do on their own. Besides competence, they also need autonomy when it comes to research engagement. Having knowledge about research is not sufficient. Some teachers need to be able to make decisions on their own when it comes to research engagement. They need to feel they can carry out research activities independently. Lastly, engaging in research activities demand a lot of the teachers’ time and energy. For those who persevere amidst heavy workload to complete the research, they need to be assured that their time spent is still connected to their actual duties; teaching. The institutions’ efforts to provide the conducive research engagement environment would help teachers embark in research.

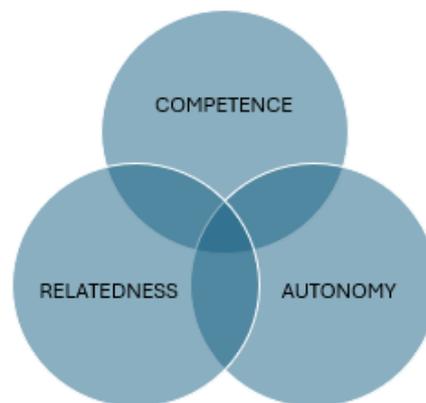


Figure 2- Self-Determination Theory (source: Deci & Ryan, 2012)

The concept of coloured scaffolds is anchored from the self-determination theory (SDT) by Deci & Ryan (2012). The conceptual framework for coloured scaffolds is presented in figure 1A below. The figure clarifies the function of each component in SDT. The components helped to build the base for each step in the coloured scaffolds process.

To begin with, to provide teachers with a sense of competence, templates are designed to scaffold the writing process of the journal article. Next, to help teachers gain autonomy over their work, colour-codes were added in the templates to give a sense of selected attention as they go through their writing journey. Finally, Vygotsky (1978) proposes that learners achieve more in group work than they do alone. These coloured scaffolds concept is better done as team work so the writers can share the writing burden.

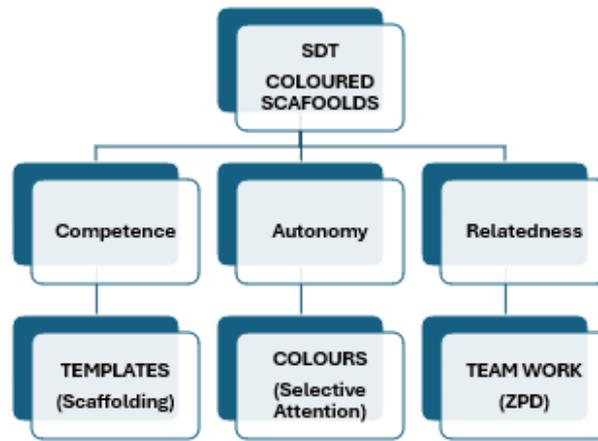


Figure 1A- Proposed Conceptual Framework for Coloured Scaffolds

### Practical Implications

Figure 2 depicts the processes in the “coloured-scaffolds” method. In step 1, the teachers (writers) are given ready-made instruments and templates to analyze data. In step 2, the writers work as a team and each team gets a coloured template to write a journal article. Step 3, each writer writes their assigned parts based on the given colours. This step ends with the completion of the first colourful draft of a journal article.



Figure 2-Coloured-Scaffold Process

This concept of coloured scaffolds is transferable for any group writing. Teachers need to prepare clear template and signal colour codes at prominent places in the writing to guide writers through the writing journey. The next stage of this concept is to actually implement on a group of writers, prepare the instrument, collect data , analyse data and write a full research report in the implementation of this coloured scaffolds.

### ACKNOWLEDGEMENTS

The author wishes to thank academy Pengajian Bahasa, University Technology MARA for allowing her to be a part of this publication project.

### REFERENCES

1. Bialen, V. (2025) Teachers’ Motivations, Challenges and Difficulties in Action Research: A Narrative Study. *Journal of Interdisciplinary Perspectives*, 3(2), 382-391. <https://doi.org/10.69569/jip.2024.0693>
2. Deci, E. L., & Ryan, R. M. (2012). Self-determination theory. In P. A. M. Van Lange, A. W. Kruglanski, & E. T. Higgins (Eds.), *Handbook of theories of social psychology* (pp. 416–436). Sage Publications Ltd. <https://doi.org/10.4135/9781446249215.n21>
3. Dzul kifli, M.A. and Mustafar, M.F. (2013) The Influence of Colour on Memory Performance: A Review. *The Malaysian Journal of Medical Sciences*, 20(2). pp 3-9. Retrieved from <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3743993/>



4. Giang,N.T., Nhung,T.T.P., & Xuan,L.T. (2025) Factors Influencing Scientific Research Motivation of Lecturers at Dai Nam University. *International Journal of Research Publication and Reviews*, 6(7), 1650170. <https://ijrpr.com/uploads/V6ISSUE7/IJRPR50024.pdf>
5. Guzman,R.B. (2025) Research Challenges among higher education teachers: basis in developing policy intervention. *Diversitas Journal*, 10(1), 274-292. <https://doi.org/10.48017/dj.v10i1.3030>
6. Potter,M.K. & Kustra, E.(2011) The Scholarship of teaching and learning (SoTL): Defining the field. *International Journal of the Scholarship of Teaching and Learning*, 5(1), Artcils 7. <https://digitalcommons.georgiasouthern.edu/ij-sotl/vol5/iss1/7/>
7. Rahmat, N. H. (2018) Scaffolding Colour Codes and SAW Approach in ESL Academic Writing. *European Journal of English Language Teaching*, 4(1), 22-34. <https://oapub.org/edu/index.php/ejel/article/view/1881/4520>
9. Salter,E., and Tett,L. (2022) Sustaining teacher engagement in practitioner research. *Journal of Education for Teaching*, 48(3), 287-299. <https://doi.org/10.1080/02607476.2021.1959267>
10. Vergara, L. V., & Sublay, E. J. (2024) Teachers ‘Challenges in Research Engagement: Basis for a Proposed Technical Assistance Plan. *JPAIR Multidisciplinary Research*, 58 (October 2024). <https://doi.org/10.7719/jpair.v58i1.910>
11. Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press
12. Zhou, N.; Liu, X.; Jin, X.; Li, T.; Wang, C.; Admiraal, W. (2024) Motivation for and Challenges in Teacher Research in Underdeveloped Areas of Northwest China: An Exploratory Study. *Behav. Sci.* 2024, 14, 1064. <https://doi.org/10.3390/bs14111064>