

## Negotiated Pedagogic Space Via Teacher Conceptual Scaffolding in Strategies-Based Reading Instruction

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### ABSTRACT

*The main objective of this study was to examine the extent to which teacher conceptual scaffolding of strategy use helps facilitate the learners' effort at comprehending academic texts. Its main focus was to determine the impact of teacher conceptual scaffolding on the learners'. By conceptual scaffolding, the teacher informed the learners not only features but also rationales (why, how & when) of applying each strategy deemed appropriate for the reading tasks; equipping the learners with conditional knowledge of strategy use. The study adopted a quasi-experimental approach involving two groups of Malaysian ESL tertiary learners: control and experimental groups. The experimental group attended ten (10) hours or five reading sessions, intensive with teacher conceptual scaffolding, while the control group only attended conventional reading sessions. Scaffolding process in the experimental group was measured by means of structured observations which were scored using descriptive statistics for mean average. Both groups were pre-tested and post-tested on recall and comprehension of propositions from selected academic texts. The results obtained were analysed using Wilcoxon Matched-Pairs Signed-Rank Test (WMPSRT) for changes in level of significance, established at  $p < 0.05$ . The results indicate that there was significant increase in terms of scores between the pre-test and post-test for the experimental group. The findings suggest clearly that teacher conceptual scaffolding provides positive impact on the learners' reading performance.*

*Keywords: reading; strategy; scaffolding; intersubjectivity; collaboration*

### INTRODUCTION

In an increasingly diverse country that is inextricably connected to a larger “global” community, we must reconsider what it now means to be an active and productive member of society. As colleges and universities have recognized and responded to these trends, their mission statements have undergone a process of rather dramatic transformation. Increasingly, institutional mission statements at colleges and universities across the country affirm the role that diversity has in enhancing teaching and learning in higher education (Alger, 1998). By the wave of Education 5.0, learners are becoming progressive thinkers.

As progressive thinkers who take responsibility of their own learning via meaning making and negotiated interactions, learners need to scaffold each other's ideas and gravitate to the social support of effective peer interaction. Teachers need to recognise the freedom accorded to learners and should take the role of providing conceptual scaffolding in the classroom. By teacher conceptual scaffolding learners can have honoured voice through active participation in the classroom community, the learner experiences a sense of self-competence as a literate person, achieving satisfactions about gaining knowledge. The fact that learners enjoy the freedom to participate actively in classroom interactions helps enhance their self-determination as they find opportunities for autonomy. Feeling self-competent and self-determined, the learners will experience social visibility which involves feeling “real” to oneself and feeling recognised by others. More importantly, participation with others in the literate community serves as a mirror

that enhances learners' sense of self, and the reciprocity of roles in contributing to meanings of the group (Oldfather & Dahl, 1994). Lian (2017) believes that everything that one does is based on acts of meaning-making, that is, the meanings that one creates and lives by are internal, individual and unknowable by others. This gives enough reason for teachers to allow ample freedom for individual learners to participate in interactions in order to share meanings and understanding; sharing of knowledge. It is crucial for learners to learn how to co-participate in the classroom community to co-construct meaning and knowledge via constant negotiations either with the teacher or fellow learners.

## PURPOSE OF THE STUDY

This research investigates the impact of *teacher conceptual scaffolding* on the learners' comprehension of academic reading texts. Teacher conceptual scaffolding principle works in such a way that eventually learners adopt as their own, the thinking processes and patterns teachers have modelled and assisted learners in using, provided that the scaffolding teachers know when and where to provide hints, prompts, explanations, and modellings that they provide, and it is all contingent on the emerging needs of the learner (Pressley and McCormick, 1995). The teacher's support allows learners to operate within the Zone of Proximal Development (ZPD), the area between what a learner can accomplish unaided and what the same learner can accomplish with assistance (Hogan & Pressley, 1997; Sabel, 2020). In this respect, the metaphor of scaffolding is appropriate because scaffolding is an external structure that supports another structure under construction; when the new structure is completed and capable of standing on its own, the scaffolding is removed.

Vygotsky's theory regarding the notion of scaffolding however, "requires not only a difference in level of expertise but an understanding on the part of the more advanced partner of the requirements of the less advanced child, for information presented at a level too far in advance of the child would not be helpful" (in Tudge & Rogoff, 1989; Mounir, 2017). It means that ideal partners in an instructional enterprise, then, should not be equal in terms of their present level of knowledge and skill. The more advanced partner, whether adult or peer, will function to bring about cognitive development in the less advanced partner. For example, in a strategies-based instruction context, a teacher initially might do most of the work, after which the teacher and the learners share responsibility. The teacher should provide the guidance required for learners to bridge the gap between their current ability to use strategies effectively and a desired strategic ability level. This, in a way, enables learners to be challenged to learn within the bounds of the ZPD (Schunk, 2000). The key element is to ensure that the scaffolding keeps learners in the ZPD, which becomes altered as they develop capabilities. As learners become more competent strategy user, the teacher gradually withdraws the scaffolding so learners can perform independently (Campione et al., 1984; Hammonds & Gibbons, 2005). It means that as learners become strategic and are able to apply strategies on their own, which they could not initially do without assistance, teacher guidance can gradually be withdrawn (Greenfield, 1984). In other words, the teacher gradually turns over more responsibility to learners and ultimately for the teacher to fade out of the picture so that learners can apply the strategy independently (Pearson & Fielding, 1991). Scaffolding acts as facilitative structures and boards for the learners (Harraqi, 2017). But even so, the teacher should remain in the picture because scaffolding is a result of continuous and mutually responsive interactions between learners and teachers in a joint decision-making fashion (Shoaib, 2017). The research was aimed at investigating the impact of teacher conceptual scaffolding on

the learners' comprehension of academic texts. The first part will look into the theoretical underpinnings of the study, followed by the method section and then the discussion of results and finally some concluding remarks.

## LITERATURE REVIEW

### SCAFFOLDING

Hogan and Pressley (1997) defines “scaffolding” as:

Scaffolding means explaining, demonstrating, and jointly constructing an idealized version of a performance. Scaffolding includes recruiting the students' interest, reducing the number of steps so the task is manageable, maintaining students' persistence toward the goal, making critical features evident...(p.47)

Hogan and Pressley's definition implies that the scaffolding tutor demonstrates and models successful performance while keeping the task at a proper level of difficulty, avoiding unnecessary frustration and encouraging children's independent functioning. Similarly, Engin (2014), views scaffolding as occurring both at macro as well as micro levels in the form of teacher's interventions that are required for a learner to extend their ZPD.

### ADULT-CHILD/TEACHER-CHILD LEARNER INTERACTION

Specifically, teachers both model and provide subtle hints and prompts to learners when they (children) cannot manage on their own. They also divide the task at hand into simpler and more accessible components, directing the learner's attention to the essential and relevant features. Thus, teachers direct learners' attention to important dimensions of problems they are attempting to solve when the learners do not attend to those dimensions in the absence of direction (Al Mamun, 2017). Scaffolding is basically, “what teachers say or do to enable children (learners) to complete complex mental tasks they could not complete without assistance” (Pearson & Fielding, 1991, p. 842) (cited in Hogan & Pressley, 1997, p.45). In providing the assistance, the teacher sometimes suggests a strategy to the learner. There exist teacher-learner interactions which promote initial learning on the part of the learner within a social context. Since learning is interactive, the teacher (expert) is able to judge the learner's present level of performance and to support active involvement in a task that moves the learner towards a more mature level of functioning (Henderson, 1986). In scaffolding the role of verbal interaction is key, emphasizing the significance of the patterns of interactions, which shape classroom discourse. According to Gulubba, Ahmed and Mustafa (2019), what is required is an interaction that is two-way or dialogic in nature, characterized by different types of teacher questions that offer greater opportunities for scaffolding to occur. Open and probing questions particularly encourage students to expand their answers, to elaborate their points and to make arguments. Patterns of interactions in which good questioning is employed do create chances for scaffolding to take place.

Many (2002) provides a more elaborate meaning to scaffolding in which he (Many) introduces what he calls “conceptual scaffolding”. Many (2002) states that the process of conceptual scaffolding refers to scaffolding episode where both the teacher and peer-learners move the learner to the point where he or she can be fully involved in meaning making as a co-participant. In conceptual scaffolding, according to Many (2002), scaffolding episodes can become multidirectional in that multiple participants present during the event may be supported

simultaneously. As such, not only do scaffolding episodes occur through planned activities but also are embedded in spontaneous instructional conversations. Scaffolding in this context is indeed multidimensional in that threads of diverse scaffolding categories often are simultaneously interwoven in discussions. Even one-on-one conversations are typically carried out in the presence of other learners which have potential of becoming multidirectional as learners observe and/or listen to the conversations (Many, 2002). As a result of shared negotiation of meaning through conceptual scaffolding, peer-learners learn how to scaffold from the modelling of the teachers in that they would repeat scaffolding for similar areas and use techniques similar to those modelled by teachers. In fact, the nature of scaffolding used by learners moves from “labelling and praising responses of others to demanding more complex and rich responses through use of questions and prompting.” (Many, 2002, p. 402).

Evidently the social interactions in these contexts provide support for learners not only as they assume responsibility for their own learning but also as they gain expertise in aiding others to develop as learners (Meyer, 1993) (cited in Many, 2002, p.403). Through conceptual scaffolding, the direction of scaffolded instruction is not only unidirectional, from teacher to learner, but also multidirectional, from teacher to learners or even vice-versa, and multidimensional, one learner to another or learners to learners, all occurring within the context of intersubjectivity.

#### INTERSUBJECTIVITY WITHIN CLASSROOM CULTURE/COMMUNITY

By intersubjectivity, Vygotsky meant that partners must come to some degree of joint understanding about the task at hand (cited in Werstch, 1984). It is not enough, in other words, for the partners to simply work together or for one partner to dominate and demonstrate solutions to the other. Instead, according to Driscoll (1994), learning partners must co-construct the solution to a problem or share in joint decision-making about the activities to be coordinated in solving the problem. Driscoll stresses that the apparent requirement of intersubjectivity is that it must denote a different relationship between social partners in instruction than is typical between teacher and learner or between a tutor and tutee. What intersubjectivity implies therefore, is shared power and shared authority, where inequality between partners resides only in their respective levels of understanding (Driscoll, 1994). The teacher is seen as a facilitator of learning and as a coequal with learners in a classroom community. In this view, readers (learners) hold the ultimate authority and bear the ultimate responsibility for meaning (Pearson & Fielding, 1991). This concurs well with Vygotskian (1978) views which emphasise reciprocity between the individual and the social context, and the role of the more knowledgeable other (teacher/ more capable peer) in facilitating learning and meaning making.

#### CONDITION OF HONOURED VOICE

Meanings are constructed and negotiated within the uniqueness of each classroom culture (Oldfather & Dahl, 1994: 141). According to Oldfather and Dahl (1994), the most salient aspects of classroom culture relate to socially constructed beliefs about what constitutes learning. These include what it means to participate as teachers and learners, what roles and relationships are appropriate among classroom members, and whether learning is viewed as an interesting and worthwhile pursuit. Oldfather and Dahl (1994) introduce a concept called ‘honoured voice’ which they define as, “...a condition of deep responsiveness in the classroom environment to students’ oral, written and artistic self-expression. Through honoured voice the community of learners invites, listens, responds to, and acts upon students’ thoughts, feelings, interests, and needs”

(p.143). Oldfather and Dahl explain further that the condition of honoured voice is evident in teacher's careful attention to learners' questions and in responses learners make to each other as they consider their classmates' ideas. It means that there exist coparticipation between the teacher and learners as they collaborate in making meanings.

The honoured voice also reflects classroom culture which involves issues of knowledge and authority. This element is known as sharing the ownership of knowing (Oldfather & Dahl, 1994). It means that the authority for knowing is shared by learners and teachers alike as they own and exchange ideas in the classroom within the context of joint-decision making (Driscoll, 1994). As the ownership of knowing is shared, the teacher invites and affirms diverse opinions, rather than positioning himself/herself as the sole source of truth in the classroom. In other words, the teacher facilitates understanding of the complexity of issues and acknowledges multiple viewpoints and constructions about specific issues.

#### INTERPERSONAL COLLABORATION

Another broad dimension of classroom culture identified by Oldfather and Dahl (1994) is the ways in which participants enact the generative literacy curriculum. Oldfather and Dahl explain that in a generative literacy curriculum, the focus of classroom literacy experiences is on the generation and sharing of meaning through oral and written language experiences. The social exchanges of personal responses serve as central features of a generative literacy curriculum. What most important is that the supportive social structures of the class include learner-centred group discussions and many opportunities for interpersonal collaboration (Oldfather & Dahl, 1994, p.147).

The interpersonal interactions and exchanges address the relationships among learners as they engage in literacy learning together. Within such interpersonal collaboration, there exist according to Oldfather and Dahl (1994), three interlocking dynamics that are reflected in learner patterns of activity. These include: constructing meaning as clusters of learners engage with the literacy curriculum, self-expression as individuals discover and share personal interpretations, and learning from and with others as learners work collaboratively (Oldfather & Dahl, 1994, p.147).

#### SHARED OWNERSHIP OF KNOWING - EPISTEMOLOGICAL EMPOWERMENT

As learners work together in a learning situation, it is important that the Me-selves are appropriately warranted in the situation in order to facilitate the process of learning from and with others, the third dynamics of learner pattern of activity identified by Oldfather & Dahl, 1994. It involves teaching and learning among peers, including quiet exchanges of information, pooling of ideas, and vicarious learning as learners observe each other. The individual's intrapersonal constructions of Me-self come about through his/her interactions with others and as he/she negotiates meanings with others, and constructs and reconstructs a sense of his/her place as a literacy learner in the classroom culture.

Within the intrapersonal domain (and through interaction with other domains) the learner gains a sense of what he/she can do, who he/she is, and who he/she may become. And within the intrapersonal domain also, are located the learner's emerging beliefs and values concerning the nature of literate activity, and his/her sense of what it means to "know." This leads to the learner beginning to form notions about who can know, how one comes to know, and whether knowledge is transmitted or constructed in a real context of shared ownership of knowing (Oldfather & Dahl, 1994, p.150).

Lee and Chin (2018) developed synergistic scaffold to help learners to connect, integrate and share ideas among themselves. Ultimately, shared ownership of knowing encourages the construct of epistemological empowerment on the part of learners. Epistemological empowerment is defined by Oldfather (1992) (cited in Oldfather & Dahl, 1994, p.152) as “a sense of intellectual agency and ability to know that emerges from a strong sense of the integrity of one’s processes of constructing meaning.” One who is epistemologically empowered believes that he or she is able to synthesise ideas, to make judgments, and to develop opinions that deserve to be heard. It means that learners can have their voices heard as they also share the power of knowing. Through shared ownership of knowing, Oldfather and Dahl (1994) also identify the learner’s intrapersonal constructions to include the learner’s sense of self-competence as a literate person, the learner’s sense of self-determination as a participating learner in classroom culture, the learner’s sense of personal and social visibility and the learner’s sense of epistemological empowerment (1994, p.151). The learners can develop their own perspectives through interactions and interdependence, achieving what Hall and Beggs (1998) identify as learner autonomy. Learners gain their rights to develop their own voices in response to their social classroom contexts, that is to negotiate their meanings interdependently (Hall & Beggs, 1998, p. 29).

## METHODOLOGY

This research is part of a larger study that investigates the effectiveness of metacognitive strategy instruction. Since this paper is limited in its scope, the article focuses specifically on the use of teacher conceptual scaffolding in strategies-based instruction and its impact on the learners’ performance in reading practice.

## SAMPLE POPULATION

The sample population used in this study was selected from a group of undergraduates reading business administration at one branch campus of a public university. These undergraduates had previously completed their diploma courses at the same university. They were in their first year of a three-year BBA (Bachelor in Business Administration) study programme. English is used as the main medium of instruction. These students need to complete a number of English Language courses, one of which is an Academic Reading course. The main rationale for having academic reading as part of their English Language requirements is that these students need to use reference and textbooks written in English. It is important that these students are equipped with the appropriate skills for academic reading.

## CRITERION FOR SELECTION OF SAMPLE POPULATION

The main criterion used to select the students to participate in this study was their performance in an English paper, which they took in the final part of their Diploma years. The main reason for using the English paper results as criterion is to determine their proficiency level which is deemed more relevant as the students were not fresh from Sijil Pelajaran Malaysia (SPM, equivalent to British GCE ‘O’ Level). It is no longer relevant to use their SPM English subject grade to determine their proficiency level because they had gone through many levels of English courses throughout their progression in their diploma programmes. It was important that the subjects fulfilled the requirement of a 100% attendance for both groups.

#### GROUPS

The selected sample was divided into two main groups namely, strategies-based instruction (SBI) as the experimental group (45 subjects), and non-strategy instruction (NSI) as the control group (57 subjects). There were altogether 102 students involved in the study but only 72 students could satisfy the requirement of this study in terms of attendance and were deemed suitable for the purpose of data analysis. At the end of the experiment, it was found that 10 subjects did not fulfil the 100% attendance requirement. Only 35 subjects were used for the purpose of data analysis. Out of those 35 subjects, 18 were high-proficient (HP) learners and another 17 low-proficient (LP) learners. In the NSI group, at the end of the experiment, only 37 students fulfilled the 100% attendance requirement. Out of 37 subjects, 17 were high proficient and the other 20 low-proficient learners.

#### INSTRUMENTATION

Two main instruments were used to collect data namely, structured observation scheme for assessing scaffolding process, and written recall protocol for identifying the learners' recall and comprehension of propositions from the reading texts. Both instruments were pilot tested prior to the experiment and were found suitable for use.

#### THE EXPERIMENT

The SBI group underwent ten (10) sessions of strategy instructions where teacher conceptual scaffolding (strategy scaffolding) formed the fabrics of classroom interactions. The NSI group on the other hand, underwent the regular English language proficiency classes. Both groups (SBI & NSI) were pre-tested using written recall protocols as they identified propositions in academic texts. At the end of the experiment, the two groups were post-tested on recall and comprehension of propositions from academic texts.

#### DATA COLLECTION AND ANALYSIS

The current study collected the quantitative data in the forms of structured observations and propositions from reading texts. The quantitative data were scored using descriptive statistics to establish mean scores. The data were also analysed for level of significance by means of a non-parametric test of Wilcoxon Matched-Pair Signed-Rank Test (WMPST)(Green & Salkind, 2003).

#### RESULTS AND DISCUSSION

##### RESEARCH QUESTION 1

**What is the degree of implementation of *Scaffolding (SCAF)* component of SBI over five instruction sessions?**

The results in Table 1 below demonstrate the degree to which the SCAF component of SBI was being operationalised by the SMMSI teacher. The table shows that the degree of SCAF

implementation is at a level of **4.5**, which clearly denotes a very high level of implementation. The results imply that the SBI teacher had operationalised the important features of scaffolding to an almost maximum level throughout the SBI sessions. With such a very high degree of implementation (at level 4.5), it is possible to deduce that the teacher must have provided a reasonable amount of support through favourable feedback on the learners' success in strategy use. It can be inferred as well that the teacher had provided much support in explaining how and when to use strategies effectively.

The degree of operationalisation, at a level of 4.5, implies that the teacher must have given not only comprehensive explanation of strategies but also re-explanations as and when needed. A high degree of implementation of SCAF component also strongly suggests that the teacher had become a resourceful reference for the learners who needed extra help to understand the strategies better. The teacher must have shown concern about learners' difficulty in understanding how strategies could be applied more effectively. As a result of such support from the teacher, the learners were made to become aware that they could possibly realise their learning potential. In other words, the learners were made to realise that they received enough support to enhance their learning abilities through strategy use. This was possible because the SBI teacher, via scaffolding, provided the right amount of supportive guidance to learners who were in need in order to ensure skilful strategy applications. Through SCAF, the teacher must have demonstrated to learners how to use strategies effectively in actual learning contexts when learners failed to apply strategies successfully. Basically, what the high degree of SCAF implementation implies in this study was that the teacher had provided the required guidance for learners to realise their actual capabilities in using strategies. This also means that the teacher had allowed the learners much freedom as well ample opportunities to discover their true abilities. It may be understood that the major function of the SBI teacher in this study was to ensure that the learners received the right amount of SCAF which was evident from the results as shown in Table 1 below. Another significant implication is that SCAF is pedagogically operational, thus contributing to the operational value of SMMSI in actual classroom context.

The findings imply that the SBI teacher had managed to successfully operationalise the SCAF component throughout the five sessions. When scaffolding for strategy use, a teacher normally has the objective to support the learner's strategy use until support can be withdrawn (Many 2002). One of the teacher's goals is to scaffold for conceptual understanding of strategies which involves building on learners' ability to draw on ways of knowing how to apply strategies appropriately. Conceptual scaffolding can effectively be carried out through shared negotiation of meaning or conceptual scaffolding (after Many 2002). In this way, learners can become active contributors to the dialogue as participants in socially constructed meaning. The SBI teacher did not withdraw support, rather he continued to be participants in the conversation, weaving understanding of the concepts with learners. As Many (2002) puts it, the purpose in conceptual scaffolding is not simply to bring learners to the point where learners are developing understandings individually and in isolation but facilitate learners' full participation in the social construction of meaning. So, within the SBI instructional framework, scaffolding on conceptual understanding of strategies was less reflective of a gradual withdrawal of responsibility but rather a "movement toward shared negotiation of meaning through consideration of diverse ways of knowing." (Many 2002: 402). Through the process of conceptual scaffolding, the teacher and peers move the learner in his/her ZPD to the point where he or she can be fully involved in meaning construction.



TABLE 1 Degree of SCAF implementation

Scaffolding (SCAF)						
Observers	*Mean Score	Overall Mean Score	Standard Deviation	Degree of Implementation	Constructed Scale Degree of Implementation	
Researcher	70.4	68.6	3.11	4.5	Degree	Mean Score
Observer 1	65.0				Very High	4.5 to 5.0
Observer 2	71.4				High	3.5 to 4.4
					Average	2.5 to 3.4
					Low	1.0 to 2.4
Observations were based on 5 SBI sessions*.						

## RESEARCH QUESTION 2

**What are the effects of *SBI* as compared to *NSI* on both the HP and LP learners' recall and comprehension of main propositions from the reading text?**

In Table 2 below, the WMPSRT test results on the SBI group show a significant difference between the pre-test and the post-test of recall of main propositions, at a  $p = .007$  level of significance. This positively shows that the SBI group had significantly gained an increase in their recall of main propositions over time. However, the WMPSRT test results on the NSI group indicate a non-significant difference between the pre-test and the post-test of recall of main propositions, at a  $p = .524$  level of significance. This implies that the NSI group had not obtained any significant gain in terms of recall of main propositions. The most likely reason why the results favour the SBI group is that the learners in the group received direct, explicit and informed strategy instructions, which must have helped equip them with the appropriate strategies to approach the text strategically.

The SBI learners were also trained through conceptual scaffolding of strategic processing approach that helps organise their processing of the text. This training gave the SBI group an extra advantage in terms of strategic processing ability as compared to the NSI group. The NSI group however, lacked the opportunity to learn to become strategic in their reading approach. They went through a conventional reading lesson whereby no attempt was made by the teacher to explicitly teach the learners useful reading strategies.

TABLE 2 Recall &amp; comprehension of propositions

GROUP	MAIN PROPOSITIONS						NPAR TEST
SBI HP & LP	PRE-TEST			POST-TEST			WMPSRT z = -2.68 p = .007
	N	M	SD	N	M	SD	
	35	44.8	18.9	35	54.2	23.7	
NSI HP & LP	PRE-TEST			POST-TEST			WMPSRT z = - .637 p = .524
	N	M	SD	N	M	SD	
	37	17.7	7.1	37	16.9	9.2	
Legend: N – Number of Learners; M – Mean; SD – Standard Deviation							

## CONCLUSION

The Strategies-Based instruction (SBI) sessions provided the learners with ample opportunities to practise using the instructed strategies. The practice opportunities, which were supported by the teacher via conceptual scaffolding, throughout the sessions, must have enabled learners to discover their own strength in using the strategies to a maximal level of effectiveness. Working within the framework of negotiated space via teacher conceptual scaffolding, and through those practice opportunities, these learners experiment using the strategies during which they ought to have discovered success or even failure in strategy implementation. Success in strategy implementation in such negotiated space between teacher-learner and learner-learner would often lead learners into believing in their self-efficacy of using the strategies. As they discovered their true ability, they also began to recognise their own strength and weakness, and consequently they were in a better position to strategise their learning process. They began to feel more self-efficacious in their learning approach, and eventually becoming strategic in their strategy use. Clearly enough, learners in the experimental group outperformed those in the control group in recall and comprehension of propositions from academic texts with a strong likelihood of a consequence of negotiated interactions via teacher conceptual scaffolding.

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