Development and Validation of Teaching Module to Enhance Reading Comprehension and Self-Efficacy for Students with Learning Disability in Malaysia

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Abstract: *Effective teaching methods are crucial in educating students with learning disabilities, especially in special education classrooms. Different teaching methods are used, such as the utilization of modules. Utilizing instructional modules during class enhances the learning process, making it more engaging and significant. Moreover, special education teachers face challenges in teaching reading comprehension and enhancing the self-efficacy of students with learning disabilities. Moreover, students with learning disabilities face challenges when it comes to comprehending information or reading passages and show low self-confidence. Hence, the research aims to create a teaching module that will assist special education teachers in teaching reading comprehension and improve the self-confidence of students with learning disabilities. The module follows Sidek's Module Development Model, which consists of two stages: preparing and testing the draft module. The initial phase consists of nine consecutive steps along with the validation process. At the same time, experts' content validation confirms that the module is suitable for data collection, with an average accuracy rate of 91.5%. The teaching module may help special education teachers enhance the reading comprehension and self-efficacy of students with learning disabilities.*

Keywords: reading comprehension, self-efficacy, teaching module, learning disability, special education teacher
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1. Introduction

Authors A component in reading skills includes reading comprehension, phonemic awareness, phonics, fluency, vocabulary, and comprehension (Wolf, 2008). Reading comprehension is a stage of understanding the importance of combining words and expressions and finding a link between the two to make a significant and coherent sentence (Menachem, 2015). Reading comprehension describes students' ability to understand the meaning of reading outcomes (Conway, 2017). Learning disability students tend to experience issues in understanding the information or the reading passage (Narkon & Wells, 2013).

Students with difficulty reading comprehension struggle to demonstrate understanding during the learning process (Conway, 2017). Moreover, reading comprehension is critical for students to understand the questions and instructions in sentence form. Answering questions or following instructions require students to understand the verse structure before responding to

or obeying instructions (Caldwell, 2010). Hence, reading comprehension is a vital part of students' learning process.

Self-efficacy is also vital in students' learning process. Bandura (1977) described self-efficacy as an individual belief in self-ability to accomplish a task or challenge. Unfortunately, Seyed, Salmani, Motahari Nezhad and Noruzi (2017) stated that students with learning disability hold low self-efficacy. Self-efficacy is affected by an individual's unsatisfactory experience in finishing a specific task, which usually happens to students with learning disability (Abbaszadeh & Sardoie, 2016) due to weak intellect compared to typical students (Chauhan, 2011). Therefore, students with learning disability need to enhance their self-efficacy.

Teaching strategies influence students with learning disability' academic performance (Toran, Westover, Sazlina, Suziyani & Mohd Hanafi, 2016). Past studies emphasised that teachers' teaching strategies were conventional and less interesting (Liu & Long, 2014). Special education teachers also lack knowledge and skills in teaching students with learning disabilities (Gee & Gonsier-Gerdin, 2018). Specifically, teachers must utilise engaging teaching strategies to stimulate students' interest in focusing and collaborating in the classroom. The Ministry of Education Malaysia (2015) suggested using a module to facilitate students with the learning process. Mahmud, Noah, Ahmad and Ahmad (2016) mentioned that using modules in the teaching and learning process creates more interesting and meaningful teaching and learning process. Thus, the study develops a reading comprehension teaching module to aid special education teachers and students with learning disability.

1.1 Collaborative Strategic Reading Model

Two models are used in the teaching module: the collaborative strategic reading (CSR) model (Klingner & Vaughn, 1998) and self-efficacy sources (Bandura, 1977). In Figure 1, collaborative reading strategies combine reciprocal teaching methods and cooperative learning. Abidin and Riswonto (2015) stated that the strategy involves students undergoing two learning stages. The first stage consists of the teacher demonstrating and teaching four steps until the students understand all the steps (reciprocal teaching). In the second stage, the students will be divided into groups comprising four people (cooperative learners) following the number of steps in the model. Based on the two stages, the teacher and students will undergo four steps in CSR: 'Preview the Text', 'Click and Clunk', 'Get a Gist', and 'Wrap Up'.
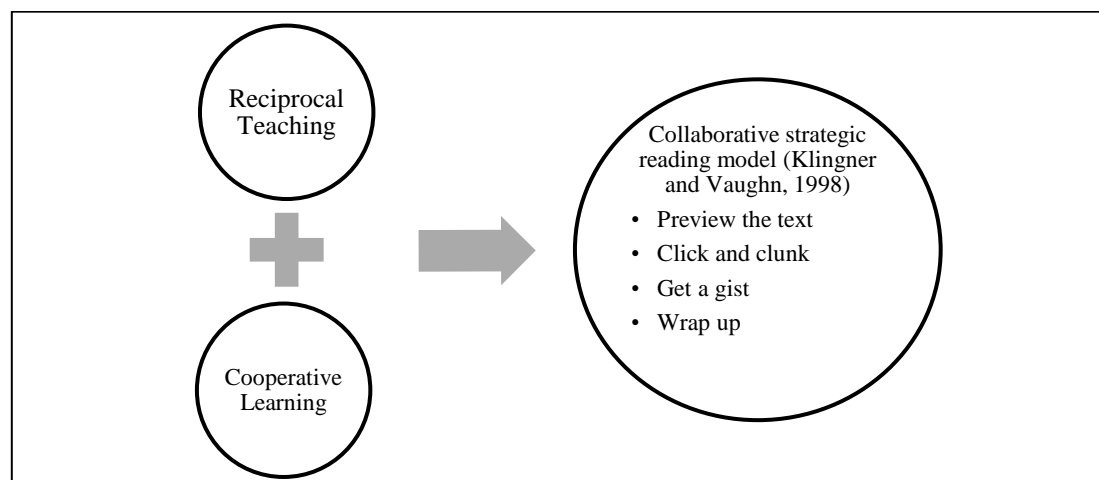

Figure 1: Collaborative Strategic Reading Model (Klingner and Vaughn, 1998)

The first CSR step is to 'Preview the Text' before perusing to initiate earlier information, stimulate interest, and form easier expectations about the subject. The second step is 'Click, and Clunk' actualised during the understanding procedure. 'Click' is when students understand a verse, while 'Clunk' is when students do not understand a verse and need to identify the not understand verse. The third step is to 'Get a Gist' where students explore how to recognise key focuses during the understanding procedure. Lastly, 'Wrap Up' is when students begin creating thoughts from reading by posing and noting questions regarding the section. The strategy is applied in the teaching module to improve students with learning disability' reading comprehension.

1.2 Self-Efficacy Sources

Self-efficacy sources are also integrated into the teaching module. Figure 2 illustrates four self-efficacy sources: mastery experience, vicarious experience, verbal persuasion, and emotional and physiological state. Mastery experience denotes an individual's experience performing the same or similar tasks (Bandura, 1989). Students with learning disabilities who follow the learning process have personal experiences, such as group activities in the classroom. Vicarious experience explains the other person's observation through the experience (Bandura, 1989). For instance, when students observe that their peers can complete the task, they will feel confident about finishing the task.
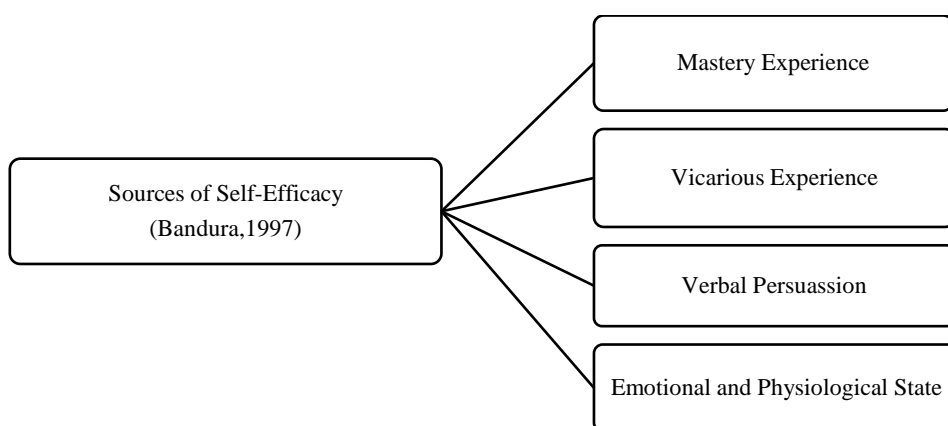

Figure 2: Self-Efficacy Sources (Bandura, 1997)

Verbal persuasion means encouragement from closest individuals to the students, specifically, teachers (Bandura, 1989). Encouragement from teachers and peers are crucial in improving self-efficacy. Additionally, individual emotional and physiological conditions impact an individual's self-efficacy (Bandura, 1977). Emotions denote the mental state and physiology regarding physical health. Hence, the four sources are the components integrated with the teaching module to enhance students with learning disability' self-efficacy in class.

2. Research Objectives

The study aims to examine the development and validation of the reading comprehension and self-efficacy teaching module for students with learning disability in primary schools.

3. Methodology

The methodology is divided into two sections: module development process and module validation process.

3.1 Module Development Process

Figure 3 presents Sidek's (2005) module development model in two stages, Stage 1: draft module preparation and Stage 2: module testing and evaluation.

3.1.1 Develop Aim of the Module

The first step in the first module development phase involves identifying the aims of the module development. Every module must have a goal before being developed and implemented. Sidek and Jamaludin (2005) stated that the aim of the development module is according to the researcher's interest. Conversely, the objective setting is more specific and complex. Aim development was initiated by examining the researcher's general interest, which is in special education. Therefore, the study produces a product to aid special education students with low public attention. Additionally, the study aims to develop the module to assist the special education teachers in teaching the students to provide the best and most effective teaching strategy.

3.1.2 Identify Theories, Rational, Philosophy, Concept, Target and Time Allocation

The second step in preparing the draft module is the theories, rationale, philosophy, concept, target, and time allocation. The study applied two theories to develop the module: Bandura's (1989) social cognitive theory and Vygotsky's (1978). social constructivism theory. Rationale refers to the rational reason for taking action. The rationale for developing the module is to aid special education teachers in teaching reading comprehension and enhance students with learning disability' self-efficacy.

The philosophy of the module development is for the students with learning disability to develop good reading comprehension skills along with reading fluency and improve self-efficacy level and cognitive development. Several types of module concepts include lectures and programmes. The concept of the study module is a teaching module for special education teachers to use in the classroom.
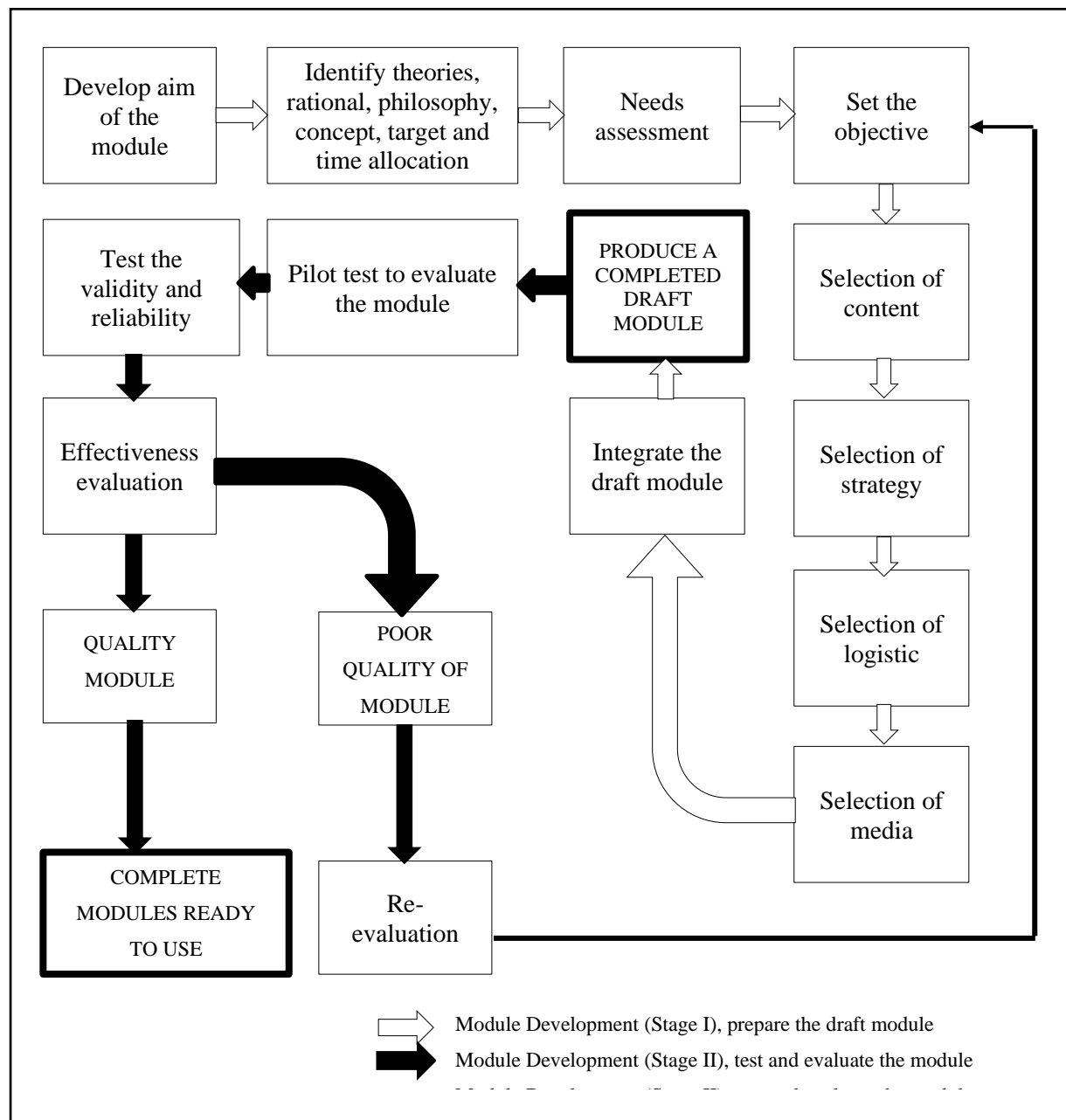
A draft module should include a target specifically used in the classroom by special education teachers for students with learning disabilities. Hence, the target groups for the module are special education teachers and students with learning disability. Furthermore, the study proposes two months or eight weeks for the duration of implementing the teaching module. Meyer (1988) mentioned that the module implementation could not be too short and too long; hence, eight weeks is a suitable period to implement the module.

3.1.3 Conduct Needs Assessment (Preliminary Study)

Needs assessment is a preliminary study and is the most significant step in module development. The needs assessment identifies the study needs and the content requirements included in the module. The study surveyed 56 special education teachers from various states, including Melaka, Johor, Sabah, Sarawak, Kuala Lumpur, Terengganu, and Selangor. The survey utilised Google Form as it is a simpler and more cost-effective method. The survey is designed to identify the module that needs to be developed for the teaching process in special education classrooms. The survey structure is objective with two subjective questions to gain insight from the special education teachers on the need to develop the teaching module.

The results from the needs assessment reveal that most special education teachers require teaching assistance in teaching reading comprehension for special education classes (Zainudin et al., 2020). Furthermore, special education teachers suggest teaching modules to facilitate the teaching and learning process. The module creates more interesting and meaningful teaching

and learning process and guides the teachers' teaching process. Thus, the study highlights the importance of developing a reading comprehension and self-efficacy teaching module for students with learning disability and teachers in special education.

Figure 3: Sidek's Module Development Model (2005)

3.1.4 Set the Objective

The next step in the first module development phase is based on Sidek's (2005) model to set the objectives. Setting the objective differs from aim development, where the process is more specific. The objective is crucial to determine the direction of the module development. Sidek and Jamaludin (2008) highlighted that objective determination determines the content included in the module. The analysis of teaching and learning contexts in special education lists several objectives for the module development:

a. As a guide to special education teachers in improving reading comprehension of students with learning disabilities;
b. As a guide to special education teachers in improving students' self-efficacy with learning disabilities;
c. Provide an explanation of reading strategies in a collaborative effort to improve the effectiveness of teaching reading comprehension in the Malay Language subject; and
d. Provide students with learning disabilities opportunities to gain new experiences through collaborative reading strategies that integrate systematic self-efficacy sources.

3.1.5 Content Selection

The content selection in the teaching module development follows content standards and learning standards of the Malay Language subject according to the Special Education Curriculum for Learning Disability Student (2020). The module content combines content standards and selected learning standards for Year Four, Year Five, and Year Six. The standards are selected based on the study context and the module target, which emphasises the reading comprehension of students with learning disability. The Malay Language subject comprises listening and speaking skills, reading and writing skills, and arts and language aspects. Therefore, the content is tailored to the study by selecting content and learning standards emphasising reading and writing to incorporate into the teaching module.

The content in the module follows the six themes in the Malay Language subject for Year Four to Year Six. The study develops a six-unit module based on the themes: 1) Self, Patriotism and Citizenship, 2) Culture, Arts and Aesthetics, 3) Agriculture and Livestock, 4) Environment and Green Technology, 5) Science and Technology in Life, and 5) Entrepreneurship Economics and Management Financial.

3.1.6 Strategy Selection

Strategy selection is selecting steps that facilitate the module implementation. The module development involves selecting an appropriate school with the target users of the teaching module. The study will be performed in a classroom with students with learning disability of similar skill levels. Additionally, the study develops strategies to facilitate the module implementation to provide information and demonstration to special education teachers. The module description is designed to be implemented smoothly. Selecting the right strategy aids the module implementation.

3.1.7 Logistics Selection

Logistics selection is selecting materials that aid module implementation. The study uses narrative reading material included in the module, flashcards as the tool, and laptops to broadcast the demonstration video. The materials assist in implementing the teaching module.

3.1.8 Media Selection

Media usage in modules is highly effective in attracting and stimulating target groups. Media selections are made individually or combined with various media inserted in the module. For instance, the study uses interactive videos to demonstrate the collaborative reading strategies of the module.

3.1.9 Draft Module Integration

For the last step in the first stage of Sidek's (2005) module development model, the teaching module is divided into two sections: Part A (Teacher's Guidelines) and Part B (Lesson Plan).

(A) Teacher's Guidelines

The unit explains the main concepts of collaborative reading strategies and self-efficacy sources that should be used for students with learning disability. Additionally, the unit discusses the rationale of collaborative reading strategies implemented with self-efficacy sources according to the reading reviews.

(B) Lesson Plan

The module highlights teaching reading comprehension in the Malay Language subject following the Content and Learning Standards of Special Education Curriculum for Learning Disability Students (2020). Teaching activities are provided based on the curriculum.

3.2 Module Validation Process

After completing the draft, the validation process will be performed by appointing experts. Five experts in the related fields are involved, including three special education teachers and two lecturers. The module validation process is performed before the pilot study commences to obtain expert evaluation and comments. The study uses content validity by obtaining validity from experts in the relevant field (Heale & Twycross, 2015). The study utilises a module evaluation questionnaire to evaluate the module.

Data analysis will be performed after retrieving the module evaluation questionnaires from the experts. The data analysis method is conducted using the Module Content Validity Calculation Formula (Sidek & Jamaludin, 2005). Figure 4 illustrates the formula used in the study to obtain the validation score.

$$\frac{\text{Total of Expert Score (x)}}{\text{Total of Overall Score (y)}} \quad \text{X} \quad 100 \quad = \text{Content Validation Score}$$

Figure 4: Module Content Validity Calculation Formula (Sidek & Jamaludin, 2005)

The data is analysed according to the assessments from the validity experts. Figure 5 demonstrates the percentage values of each expert.

Expert 1 $\quad \dfrac{112}{120} \quad$ X $\quad$ 100 $\quad$ = $\quad$ 93.33%

Expert 2 $\quad \dfrac{86}{120} \quad$ X $\quad$ 100 $\quad$ = $\quad$ 71.67%

Expert 3 $\quad \dfrac{117}{120} \quad$ X $\quad$ 100 $\quad$ = $\quad$ 97.50%

Expert 4 $\quad \dfrac{120}{120} \quad$ X $\quad$ 100 $\quad$ = $\quad$ 100.00%

Expert 5 $\quad \dfrac{114}{120} \quad$ X $\quad$ 100 $\quad$ = $\quad$ 95.00%

Figure 5: Score Percentage from Experts

Figure 5 demonstrates that the content validity score from each expert exceeds 70%, which is considered a good level. Sidek and Jamaludin (2005) suggested that the content validity score is satisfactory when the score exceeds 70%. Subsequently, the study calculates the average score of content validity from experts by computing all the scores and dividing it by the number of experts involved. Resultantly, the content validity average score of the teaching module is 91.5%, which is considered high and good as the score exceeded 70%.

5. Discussion and Conclusion

The study develops a teaching module to facilitate special education teachers in teaching reading comprehension and improve self-efficacy among students with learning disability. The module is developed according to the Social Constructivism Theory using the collaborative strategic reading model (Klingner & Vaughn, 1998) and Social Cognitive Theory using self-efficacy sources (Bandura, 1997). Reading comprehension is essential in the learning process for every student, including students with learning disability. Students must master reading comprehension to understand reading material and questions and instructions (El Zein, Solis, Vaughn & McCulley, 2014). Furthermore, self-efficacy is crucial for students with learning disability in the learning process. Self-efficacy is one motivation component that influences students' academic performance in the school (Ben-Naim, Laslo-Roth, Einav, Biran & Margalit, 2017). Thus, the reading comprehension and self-efficacy teaching module was developed to aid special education teachers in teaching reading comprehension and improve self-efficacy among students with learning disability.

The study applies to Sidek's module development model (2005) as a guideline in developing the teaching module. The model is selected due to the two stages with detailed steps. The study describes the first stage of module development, which is the draft module preparation. All the steps are performed based on the model, and the content is derived from the theory and subject syllabus. The experts will validate the module before stage two (a pilot study and an actual study). The validation process is vital to ensure the instrument validity. The results from the experts indicate a good and high validity score.

The module could meet the demand of learning considering the special characteristics of students with learning disability. The course could be a good teaching aid for special education teachers in the teaching and learning process. Moreover, existing teaching materials could be enhanced to allow students to participate in collaborative learning with peers and teachers. Furthermore, the module could develop students' reading comprehension and enhance self-efficacy. Nonetheless, the teaching course using collaborative strategic reading integrated with self-efficacy sources is unavailable for special education (learning disability) to teach the Malay Language subject in Malaysia.

The module is well-structured with a comprehensive guide for special education teachers that contributed to its strength. The module is also tailored to the curriculum that can be utilized by the special education teachers in teaching a specific chapter in class. Nevertheless, a weakness of the module includes being developed in only one language, which is the Malay language. Therefore, translating the module into English or other common languages in Malaysia could minimise language barriers. The teaching module is also developed solely for special education teachers of Year Four, Year Five, and Year Six among students with learning disability. Therefore, the module cannot be implemented for all students with learning disability. For future implementation, the content of the module should be expanded to Year One until Year Three students for all students with learning disability in primary school to use the module.

Conclusively, the study describes the development process of the reading comprehension teaching module for students with learning disability. Sidek (2005) included two stages in the module development process. The first stage of the module development process involves developing the module's aim, identifying theories, rationale, philosophy, concept, target, time allocation, needs assessment, setting the objective, selecting content, strategy, logistics, media, and integrating the draft module. The study explains all the steps in detail. The study also elaborates the validation process of the teaching module involving experts in the related field. Ultimately, the reading comprehension teaching module could facilitate special education teachers to teach students with learning disability and improve their reading comprehension and self-efficacy.

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