

The challenges of implementing cultural-based teaching in remedial education: analyses and recommendations

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Article Info

Article history:

Received Apr 9, 2023

Revised Jun 16, 2023

Accepted Jul 29, 2023

Keywords:

Cultural-based teaching
Culturally responsive teaching
Language literacy
Remedial education
Remedial teachers

ABSTRACT

In remedial education, teachers play a crucial role in ensuring students from diverse backgrounds master language literacy skills. The current implementation of cultural-based teaching is perceived as an effort to assist remedial students from diverse backgrounds and cultures to learn effectively. The study aims to analyze teachers' perceptions of challenges in implementing cultural-based teaching in remedial education for language literacy. The study employed a quantitative approach by distributing questionnaires to 252 remedial teachers recruited randomly from primary schools in the Malaysian middle-state zone. The collected data were evaluated descriptively, and the results revealed that these teachers experienced challenges in four areas, namely teaching resources, remedial curricula, teacher knowledge, and time allocation. Moreover, the findings demonstrated that demographic factors, such as gender, school location, and years of teaching experience, did not produce significant impacts on the aforementioned challenges. Simultaneously, this study explored teachers' perceptions of recommending culturally responsive teaching approaches in remedial education as an alternative to the current cultural-based teaching methodology.

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1. INTRODUCTION

Remedial education is implemented at the primary school level to provide targeted support for students requiring additional assistance to acquire fundamental literacy skills. To account for the increasingly diversified society, the remedial education system has been subjected to significant transformations according to global educational trends. The transformations include incorporating cultural-based teaching practices into the remedial curriculum, thereby ensuring students from all backgrounds receive equitable access to high-quality education catering to unique learning needs. For example, Zhang and Zhou [1] highlighted four aspects to be prioritized to integrate cultural elements into the globalization of language literacy education, namely promoting knowledge and diversity of culture and language, encouraging pluralism and intercultural dialogue, stimulating creativity and cultural innovation and the development of cultural industries, and developing cultural policies in line with the latest trends. Therefore, teachers should ensure respective classrooms consider diverse students' requirements and allow more learning opportunities by incorporating different student backgrounds and cultures. Siregar [2] consented that teachers play an essential role in employing appropriate and effective teaching strategies, approaches, methods, and techniques when cultural elements are included to enhance language literacy among diverse students.

Although the global educational system undergoes numerous changes and improvements each year, the illiteracy issue closely associated with the globalization of education continues to persist in the ever-developing world. According to a study published by the World Bank [3], an average of 87% of the global population aged 15 years old and above was illiterate. Despite the current global schooling system supported by various international institutions (United Nations Educational, Scientific and Cultural Organization/UNESCO, World Bank, and Organisation for Economic Co-operation and Development/OECD) has significantly advanced the internationalization of higher education, the issue was prevalent regardless of whether the country was in the categories of high (99%), middle (96%), developing (87%), or low (61%) incomes. Furthermore, the illiteracy issue is currently emerging at the primary education level, wherein the World Bank and UNESCO estimated that 90% of children from low-income countries could not read and comprehend simple stories even before the coronavirus (COVID-19) pandemic.

The same issue occurred in the Malaysian education system, wherein the literacy rate is at only 95% [4]. Keating [5] conducted a review of curricular strengths and weaknesses to ensure students achieved the basic literacy knowledge and skills required to compete in an increasingly intense global environment while preventing being delayed in educational progress. Hence, educational institutions are compelled to employ drastic measures, such as revamping the current curricula and incorporating added-value content, innovation, revision, and reformation to ensure that illiteracy issues could be resolved immediately. In addition, Fuentes *et al.* [6] discovered that teachers experienced difficulty in designing and implementing lessons with cultural components when educating students with literacy challenges. Similarly, Rampen [7] identified four significant issues encountered by teachers when integrating cultural elements into classroom instruction, namely time allocation, teacher knowledge, teaching resources, and subject curricula. To enhance remedial teachers' cultural teaching experiences, scrutinizing the encountered issues and challenges and evaluating specific cultural teaching approaches are vital to effective classroom instruction.

Cultural-based teaching is a method emphasizing values, norms, beliefs, and practices fundamental to a specific culture, in which learning will be centered on a student's culture [8]. The current implementation of cultural-based teaching focuses on discussing cultural topics related to certain Malaysian ethnicities [9]. Specifically, culturally responsive teaching is a student-centered approach, in which teachers recognize the student's cultural background and experience as an essential learning component [10]. Culturally responsive teaching is characterized by teachers' commitment to cultural competence, the establishment of high standards for student achievement, and the positioning of teachers as learners and classroom facilitators who acquire pertinent knowledge about respective students [11]. Contrarily to existing cultural-based teaching in remedial education classrooms, culturally responsive teaching empowers teachers to promote student engagement, enrich diverse cultural reference materials, respect student diversity, and incorporate student culture in facilitating student learning. Thus, culturally responsive teaching is an enhanced version of culturally-based teaching required to be implemented in remedial education by concentrating on Malaysian cultural values.

2. LITERATURE REVIEW

Cultural-based teaching is an alternative method of teaching and learning that introduces students to various cultural values, such as ethnic celebrations, food, and religions. Owing to the culturally diverse Malaysian society, cultural-based teaching is required for students originating from diverse cultural backgrounds [12]. Nevertheless, Amerian and Tajabadi [13] discovered that the cultural themes in the textbook prioritized the culture of major ethnic groups without elaborating on other diverse components, including minority ethnicities. In addition, previous scholars reported that only certain teachers implemented the cultural teaching approach to instill social values in students during classroom instruction [14]. Therefore, the issue must be resolved by identifying factors that are difficulties or issues encountered by educators in remedial classrooms.

Prior research propounded that time management should be considered when conducting cultural-based classroom instruction [15]. Generally, the teacher's teaching time is divided into two parts, namely the allocated teaching time, including teaching preparation and implementation, and the engaged time to instruct students in deepening respective knowledge and skills. When implementing cultural-based teaching [16], the continuity of allocated and engaged time must be directly correlated with the teaching performance. Graham [17] emphasized that teachers should commence teaching at appropriate and regular times without consuming a prolonged period to prepare cultural teaching materials to prevent negatively impacting teaching quality. Moreover, Grant and Hill [18] discussed several factors preventing the teacher's mastery of time skills when incorporating cultural elements, including ambiguous goals and teaching and learning processes, the lack of teaching objectives, teacher confusion in planning lessons, and discontinuity in the teaching process. As such, teachers' time management should be investigated further to determine relevant impacts on remedial teachers when implementing cultural-based teaching.

Selecting appropriate instructional materials aids teachers in delivering challenging lessons to students [19]. Nonetheless, teachers frequently experience difficulties in effectively utilizing teaching materials with cultural elements [20]. The study by Karousiou *et al.* [21] demonstrated the lack of teaching materials with cultural elements engenders teacher dissatisfaction when implementing cultural elements in the classroom compared to existing teaching materials. The situation was caused by limited information about the required support materials when imparting cultural values and enhancing student learning [22]. Moreover, the lack of knowledge regularly prevents effective classroom instruction [23], which leads to constraints in understanding student background, difficulties in implementing the latest teaching approaches, and obstacles in searching relevant information for specific teaching topics [24]. Freeman-Green *et al.* [25] investigated in-service and pre-service teachers' perspectives on cultural and linguistic diversity among students and relevant impacts on teachers' instructional practices, which uncovered several issues, such as teachers' lack of knowledge and inability to interpret students' non-verbal behaviors and difficulties in providing adequate preparation for teaching students from diverse cultural backgrounds.

Past studies demonstrated that several curricula did not incorporate cultural aspects as part of student learning [26]. For instance, Bensalah and Guerroudj [27] examined the effects of cultural-based instruction on the reading abilities of students from diverse backgrounds. Specifically, students from diverse backgrounds possessed strong language literacy skills. Meanwhile, Oberley [28] revealed that teachers could not effectively incorporate cultural elements or adopt cultural values to provide students with a comprehensive view of respective learning after examining school teachers' perceptions of the need to integrate cultural aspects into student learning and difficulties in delivering cultural-based teaching. Teachers were constrained by rigid and fixed curricular structures when implementing a cultural curriculum for students from diverse cultural backgrounds [29]. Resultantly, the negative outcome diminished teachers' passion for continuing cultural-based teaching.

The curriculum developers' efforts to introduce cultural-based teaching in different subjects reflect the diversity in Malaysia, although the introduced approach remains under development to encompass the entire Malaysian cultural background. Nevertheless, certain teachers are indifferent to Malaysian students' cultural and ethnic diversity [30]. Consequently, the delivery process of teaching and learning could be employed appropriately and effectively. Tezera [31] examined various cultural-based teaching practices through teachers' cultural diversity, which discovered that teachers were familiar with the significance of cultural diversity education. Nonetheless, several improvement areas regarding teaching skills, cultural-based instructional knowledge, and attitudes towards classroom diversity were identified. Accordingly, this study examined three factors, namely gender, school location, and teaching experiences, to compare teachers' perceptions of cultural-based teaching challenges in remedial education. The concept of culturally responsive teaching was implemented in classrooms with students from diverse backgrounds and cultures [32]. Particularly, Karats *et al.* [33] characterized culturally responsive teaching as an approach to understanding students in constructing respective knowledge, learning about student life, being conscious of sociocultural aspects, recognizing diversity, and employing culturally appropriate teaching strategies to support all students. Remedial educators should practice culturally responsive teaching to improve existing remedial educational practices.

3. RESEARCH METHOD

A quantitative approach was employed in this study to collect data online via questionnaires and examined challenges encountered by Malaysian remedial teachers during the implementation of cultural-based teaching. The findings would deepen the understanding of remedial teaching challenges and discover pertinent solutions to fulfill the current study objectives as: i) what are remedial teachers' perceptions of cultural-based teaching challenges in remedial education; ii) do significant differences exist between gender, school location, and years of teaching experience concerning cultural-based teaching challenges in remedial education; and iii) what are remedial teachers' perceptions of culturally responsive teaching approaches in remedial education.

3.1. Location and sampling

This study was conducted in Malaysian central-zone state schools, which consisted of urban and rural educational institutions in Selangor, Kuala Lumpur, and Putrajaya. The classification of urban and rural schools was based on criteria stipulated by the Malaysian Ministry of Education (MOE) and the respective state education departments. Particularly, the school location was in an immediate urban area with the highest population growth in Malaysia [34], which received a high diversity of students due to migration to the central zone of Malaysia [35].

Schools in the central region experienced rapid modernization owing to situating in innovative environments of the metropolis (Kuala Lumpur) and administrative zone (Putrajaya), which increased teachers' accessibility to the latest educational developments [36]. The demographics of the central-zone state populations were also nationally representative [37]. In this study, 252 remedial teachers from Malaysian central-zone state schools were recruited through simple random sampling. The respondents were split into groups depending on respective demographics, such as gender, school location, and years of teaching experience. Table 1 depicts that 208 (82.5%) respondents were female teachers, with 139 (55.6%) teaching in urban areas and 61 (24.2%) possessing one to five years of teaching experience.

Table 1. Respondents' demographics ($N=252$)

Category	Detail	Number of teachers	%
Gender	Male	44	17.5
	Female	208	82.5
School location	Urban	139	55.6
	Rural	113	44.4
Years of teaching experience	1 – 5 years	61	24.2
	6 – 10 years	59	23.4
	11 – 15 years	115	45.6
	16 – 20 years	7	2.8
	21 years and above	10	4.0

3.2. Instrumentation

The questionnaire was adapted and modified from previous studies examining cultural-based teaching in schools [38], [39], which comprised 15 items to explore cultural teaching challenges in remedial education. The questionnaire contained sections on demographics, challenges in cultural-based teaching, and the implementation recommendation of culturally responsive teaching in remedial education. The demographic section collected information about respondents' gender, school location, and years of teaching experience. Moreover, the section on challenges in cultural-based teaching explored four dimensions, namely time allocation, teacher knowledge, teaching resources, and remedial curricula. The final section investigated respondents' opinions on the implementation of culturally responsive teaching in remedial education.

3.3. Validity and reliability

The validation process involved eight experts with heterogeneous backgrounds (curriculum, assessment and measurement, and language) to validate the questionnaire while improving relevant items after collecting the experts' feedback. Experts' suggestions were measured through the content validation index (CVI) with the average agreement and item suitability rate. The total received CVI was 0.95, which was satisfactory according to Grant and Davis [40] who stipulated a moderate acceptance value of at least 0.80. Meanwhile, instrumentation reliability was conducted among 50 remedial teachers who educated students outside the sampling area. The questionnaire reliability was also determined via Cronbach's alpha. Resultantly, the reliability value was high (0.848), including the values for time allocation (0.842), teacher knowledge (0.839), teaching resources (0.850), and remedial curricula (0.844). Furthermore, the reliability value obtained on the culturally responsive teaching recommendation section was (0.865). Table 2 portrays details of CVI and Cronbach's alpha values for each variable.

Table 2. The CVI and reliability coefficients of the study variables

Section	Dimension	CVI	Reliability coefficient (Cronbach's alpha)	Item number
Cultural-based teaching challenge	Time allocation	0.88	0.842	2
	Teachers knowledge	0.92	0.839	3
	Teaching resources	1.00	0.850	2
	Remedial curricula	1.00	0.844	2
Culturally responsive teaching recommendation		0.96	0.865	3

3.4. Statistical analysis

The current study employed the statistical package for social sciences (SPSS) version 26.0 software to investigate the collected data. Descriptive analysis was performed to calculate the average agreement value through the t-test, standard deviation (SD), mean (M), and one-way analysis of variances (ANOVA) for each dimension. All responses were measured through a 5-point Likert scale ranging from strongly agree (5) to

strongly disagree (1). In addition, the scale range was divided into two subranges, namely agreement attitude for an estimate of at least 3.0 and disagreement attitude for an estimate under 3.0 [41].

4. RESULTS AND DISCUSSION

4.1. Results

4.1.1. What are remedial teachers' perceptions of the challenges of cultural-based teaching in remedial education? (RQ1)

Table 3 illustrates that securing teaching materials is the most challenging part of implementing cultural-based teaching approaches in remedial education classrooms ($M=4.17$, $SD=0.497$), followed by the remedial curricula ($M=4.11$, $SD=0.505$). Respondents also identified the lack of teachers' knowledge of employed cultural pedagogical approaches as a significant issue ($M=3.92$, $SD=0.505$). Insufficient time to implement cultural-based teaching for remedial education in schools was another significant challenge for educators ($M=3.84$, $SD=0.677$).

Table 3. The mean and standard deviation values of respondents' perceptions of cultural-based teaching challenges

Teaching challenge	N	Mean	Standard deviation	R
Teaching resources	252	4.17	0.497	1
Remedial curricula	252	4.11	0.505	2
Teacher knowledge	252	3.92	0.505	3
Time allocation	252	3.84	0.677	4

4.1.2. Do significant differences exist between gender, school location, and years of teaching experience concerning cultural-based teaching challenges in remedial education? (RQ2)

An independent sample t-test was conducted to determine gender differences among respondents regarding cultural-based teaching challenges. Levene's test for homogeneity of variance indicated a p-value of 0.05, which suggested that both gender groups achieved the same variance value. Table 4 demonstrates that the t-test analysis for respondents indicates insignificant mean differences between males ($M=4.03$, $SD=0.402$) and females ($M=3.98$, $SD=0.398$). Furthermore, the findings revealed a statistically insignificant difference between respondents' perceptions ($t(250)=0.855$, $p=0.189$), as illustrated in Table 4. Thus, both genders might encounter the same difficulties in implementing alternative teaching approaches, namely cultural-based teaching.

Table 4. Gender differences among respondents

Teaching challenges	Gender	N	Mean	SD	t	df	p
	Male	91	4.03	0.402	0.855	250	0.189
Female	161	3.98	0.398				

Levene's test for homogeneity of variance revealed a p-value of 0.05, which postulated equal variance values between urban and rural schools for the t-test results. The t-test revealed insignificant mean differences ($t(250)=0.418$, $p=0.455$) between urban schools ($M=4.00$, $SD=0.382$) and rural schools ($M=4.00$, $SD=0.421$), as depicted in Table 5. As such, both groups might encounter similar remedial teaching challenges when employing cultural-based teaching.

Table 5. School location differences among respondents

Teaching challenges	Gender	N	Mean	SD	t	df	p
	Urban	139	4.00	0.382	0.418	250	0.455
Rural	113	4.00	0.421				

Table 6 illustrates the mean and standard deviation values for respondents' estimation of respective teaching years to determine the existence of significant differences in perceptions towards cultural-based teaching challenges in remedial education. The data analysis reveals that the age group from 11 to 15 exhibited a notably high level of respondent involvement ($N=115$, $M=4.02$, $SD=0.387$). Similarly, the group with 1 to 5 years of experience ($N=61$, $M=4.02$, $SD=0.391$), the group with 6 to 10 years of experience

(N=59, M=3.95, SD=0.436), the group aged 21 years and above (N=10, M=4.02, SD=0.195), and the group aged 16 to 20 (N=7, M=3.97, SD=0.597). As shown in Table 7, the ANOVA findings demonstrates statistically insignificant differences in respondents' perceptions of teaching years and experiences towards cultural-based teaching challenges ($F=0.321$, $p=0.864$). As such, each age categories might encounter similar remedial teaching challenges when employing cultural-based teaching practices.

Table 6. The mean and standard deviation values for respondents' perceptions of respective teaching years and experiences

Years of teaching experience	N	Mean	Standard deviation
1 – 5 years	61	4.02	0.391
6 – 10 years	59	3.95	0.436
11 – 15 years	115	4.02	0.387
16 – 20 years	7	3.97	0.597
21 years and above	10	4.02	0.195
Total	252	4.00	0.399

Table 7. The ANOVA findings of respondents' perceptions of respective teaching years and experiences

	Sum of squares	df	Mean square	F	p
Between groups	0.207	4	0.052	0.321	0.864
Within groups	39.780	247	0.161		
Total	39.986	251			

4.1.3. What are remedial teachers' perceptions towards culturally responsive teaching approaches? (RQ3)

The present study proposed culturally responsive teaching as a strategy to enhance cultural-based teaching methods. Table 8 indicates respondents consented to introducing culturally responsive teaching for remedial education (M=3.95, SD=0.554). Respondents also agreed more be exposed to a culturally responsive teaching model for remedial education (M=4.04, SD=0.640). Moreover, respondents consented (M=4.01, SD=0.592) to be provided with detailed information about culturally responsive teaching to aid students in acquiring literacy skills. Similarly, respondents agreed (M=3.81, SD=0.665) that integrating students' cultural perspectives into remedial education would assist in mastering language literacy skills when a student's culture and background were revealed through a culturally responsive teaching medium.

Table 8. The mean and standard deviation values for respondents' perceptions of culturally responsive teaching recommendations for remedial education

Item	N	Mean	SD
1. Remedial educational instructions must incorporate the student's culture to enhance the student's basic literacy skills.	252	3.81	0.665
2. Teachers need comprehensive information related to culturally responsive teaching to help improve students' basic literacy skills.	252	4.01	0.592
3. Teachers need to be exposed to culturally responsive teaching models for remedial education.	252	4.04	0.640
Overall mean score		3.95	0.554

4.2. Discussion

4.2.1. Contemporary pedagogical circumstances

The initiative to introduce culture as a pedagogical identity has prompted teachers to modify respective teaching tasks to accommodate various teaching situations and challenges. Although culture-based education presents numerous pedagogical challenges, the teachers in this study could describe encountered challenges when teaching remedial education. The study findings highlighted several challenges, including the lack of teaching resources, limited support for the existing curricular structures, inadequate teaching knowledge related to cultural appropriations, and the issue of allocating time to prepare teaching materials. Furthermore, the result was consistent with other findings demonstrating the difficulty in accessing cultural reference sources for educational materials [42]. When the curriculum only provides a general outline without sufficient details, teachers must adapt instructional strategies in the classroom [43] to provide diverse student learning experiences instead of focusing on the conventional teaching method. Concurrently, teachers encountered challenges in the curriculum structure of remedial education and expressed concern regarding the lack of emphasis on cultural-based learning.

Amalia and Wuryandani [44] reported that the teaching strategies introduced in the subject curriculum structure become challenging during the transition to classroom learning when more teacher creativity would be required to process teaching materials. Students' cultural background diversity awareness should also be incorporated into the curriculum [45]. Therefore, relevant parties must be aware of developing the remedial education curriculum during the drafting process by prioritizing the diversity of students' cultures and backgrounds.

The study findings discovered that teachers experienced significant challenges regarding teacher knowledge of cultural elements. Although teachers are provided with educational guides in the classroom, study by Gong *et al.* [46] highlighted the need for further improvements in teacher knowledge of implementing culturally oriented classroom activities. In addition, Rusilowati and Wahyudi [47] demonstrated that teachers encountered difficulties in matching learning skills with inculcated cultural topics. Strekalova-Hughes *et al.* [48] also explicated teachers' significant challenges in planning and implementing lessons related to students' cultures and backgrounds, due to insufficient knowledge and high reliance on the themes introduced in the textbook. Meanwhile, the study findings also assessed the issue of time allocation among teachers, as the classroom learning atmosphere must be related to effective planning and implementation when designing learning activities. Banks [49], Byram and Wagner [50] delineated that teachers' teaching material preparation time consumed more time compared to other learning themes when teachers were unfamiliar with cultural teaching techniques. Similarly, the implementing cultural teaching elements require a relatively long period, which consumes more teachers' time or continues the learning session in another period [51].

4.2.2. Counsel for teachers

The study uncovered several remedial educational challenges encountered by teachers when adopting a more culturally related pedagogy. This study recommended culturally responsive teaching as an alternative to cultural-based teaching due to the implementation process being more comprehensive, orderly, and simpler. Culturally responsive teaching is conducted by matching the student's cultural compatibility with respective learning. Ladson-Billings [52] argued that culturally responsive teaching necessitates a radical rethinking of established classroom principles, including relevant curricula and pedagogical methods, to provide students with similarly high accessibility to mainstream knowledge. Cultural-based teaching provides a curriculum with general cultural examples that do not necessarily represent students' current lifestyles. Comparatively, most teachers employ the majority culture of a country in classroom instruction. The current situation highlights the requirement to integrate diverse examples involving the backgrounds and cultures of all students to enhance learning effectiveness [53]. Hence, remedial educators should emphasize different cultural elements in the curriculum either directly or indirectly.

Culturally responsive teaching seeks to reinforce the foundations of effective instruction by encouraging student engagement and learning ownership. Muñiz [54] revealed that teaching effectiveness diminished when teacher-centered pedagogy involved students with different personalities and backgrounds, after investigating elementary schools implementing culturally responsive teaching across all 50 American states. Contrasting to culturally responsive teaching, conducting dialogues between teachers and students could reduce the teacher-student gaps while boosting class participation. Larson *et al.* [55] recommended culturally responsive teaching, which encourages teachers to engage students in creating and accumulating knowledge [56]. For students to accept one another, teachers must recognize the significant value of various cultural assets possessed by each student in the classroom. Specifically, culturally responsive teaching refers to the method that actively incorporates the intended audience's (students) cultural perspectives into routine classroom practices and activities.

4. CONCLUSION

The cultural perspective considers remedial education as the solution to the issue of thoroughly mastering the fundamental skills of reading, writing, and arithmetic by reflecting the student's cultural values and norms. Nonetheless, four major challenges were identified in the present study, namely teaching materials, subject curricula, teacher knowledge, and time allocation. The current study postulated a significant difficulty in familiarizing with cultural teaching materials. Moreover, the current curriculum does not emphasize cultural elements in remedial education learning. As such, cultural teaching could not be implemented effectively due to inadequate teacher knowledge. In addition, teaching preparation and implementation are time-consuming compared to traditional pedagogical approaches. Therefore, remedial education should provide comprehensive cultural-based teaching to address the current challenges and improve existing remedial teaching and learning. Thus, this study appraised the changing context of remedial education in Malaysia from a cultural perspective. The in-depth examination of teaching issues and




challenges would be beneficial to teachers by focusing on the vital educational aspects and apprising teachers about the challenges to be surmounted in improving educational quality. Correspondingly, this study identified the most significant challenge in remedial education to bridge the existing gap. Education in the globalization era must be investigated and improved holistically, as the current trend requires teachers to adopt innovative perspectives and paradigms. Particularly, motivating students to achieve excellence in cognitive, technical, spiritual, and social aspects must be performed through high teachers' willingness to assume huge responsibilities posed by the present educational trend, which is dynamic and fluctuating. Curriculum developers are anticipated to resolve the aforementioned challenges and provide professional training by introducing culturally responsive teaching to improve remedial educational quality.

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