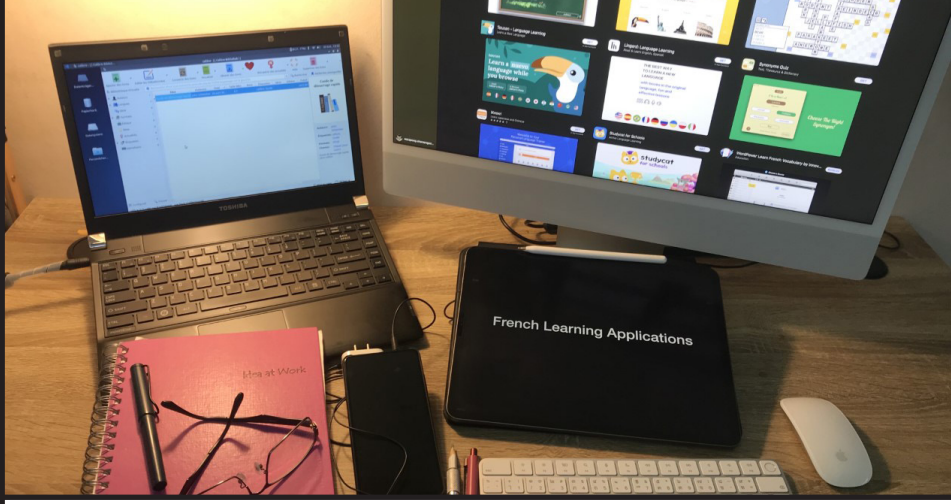


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แนวทางการพัฒนาแอปพลิเคชันสอนภาษาฝรั่งเศสและภาษาเยอรมันสำหรับผู้เรียนชาวไทย

Guideline for Developing French and German Learning Applications for Thai Learners

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บทคัดย่อ

สื่อการเรียนออนไลน์หนึ่งที่ผู้เรียนจำนวนมากสามารถเข้าถึงและใช้งานได้อย่างสะดวกสบายคือแอปพลิเคชันที่สามารถใช้ได้บนอุปกรณ์เคลื่อนที่ เช่น โทรศัพท์มือถือ ดังนั้นการพัฒนาสื่อดังกล่าวให้มีประสิทธิภาพและสามารถสร้างแรงจูงใจในการเรียนให้แก่ผู้เรียนจึงเป็นเรื่องที่จำเป็นแม้จะมีอุปสรรคก็ตาม ดังนั้นผู้วิจัยจึงได้ตั้งจุดประสงค์ของการศึกษาครั้งนี้ไว้ 2 ข้อ คือ 1) เพื่อนำเสนอและอภิปรายเกี่ยวกับความคาดหวังต่อแอปพลิเคชันสอนภาษาของผู้เรียนภาษาฝรั่งเศสและภาษาเยอรมันชาวไทย ในเรื่องคุณลักษณะ (features) และเนื้อหา และ 2) เพื่อเสนอแนวทางในการพัฒนาแอปพลิเคชันเพื่อสอนภาษาฝรั่งเศสและภาษาเยอรมันที่เหมาะสมกับผู้เรียนชาวไทย ผู้เรียนภาษาฝรั่งเศสและภาษาเยอรมันจำนวน 1,390 คน ได้ตอบรับทำแบบสอบถามเพื่อให้คณะผู้วิจัยศึกษาทัศนคติต่อแอปพลิเคชันสอนภาษาทั้งด้านคุณลักษณะที่เห็นและด้านเนื้อหา คณะผู้วิจัยพบว่าผู้เรียนมีทัศนคติที่ดีต่อแอปพลิเคชันสอนภาษา คุณลักษณะของแอปพลิเคชันที่ผู้เรียนภาษาฝรั่งเศสและภาษาเยอรมันปรารถนาเป็นไปในทิศทางเดียวกัน ซึ่งก็คือเนื้อหาที่สมบูรณ์ คุณลักษณะที่น่าสนใจ ใช้งานได้ง่ายและราคาที่เหมาะสม

คำสำคัญ: แอปพลิเคชัน, ภาษาฝรั่งเศส, ภาษาเยอรมัน, การเรียนด้วยอุปกรณ์เคลื่อนที่

Abstract

One of the online learning materials that many learners can easily access and use are applications that can be used on mobile devices such as smart phones. It is therefore crucially important to develop mobile applications that could motivate learners to engage with lessons. The researchers have set the objectives of this study as follows: 1) to present and discuss Thai French and German language-learners' expectations towards features and content of French and German learning applications and 2) to propose a guideline for developing French and German learning applications which fit with Thai learners. The researchers collected the answers focusing on attitudes toward French and German language learning by using applications, their features and content, and exercises from 1,390 participants. The results show that participants exhibited positive attitudes toward French and German learning applications. The desired characteristics of applications suggested by French and German learners were in the same direction, namely complete content, interesting features, great useability, and a reasonable fee.

Keywords: Applications, French Language, German Language Mobile Learning

1. Introduction

Nowadays, mobile phones are the most powerful communication medium (Chachil et al. 2015). If they are connected to the internet, learning would be even more convenient and effective. The learners can choose from many applications available on the App Store and Play Store. According to the researchers' survey, most applications aim at teaching vocabulary with a focus on memorizing skills, such as Drops, Memrise, LinGo Play, Flashcards by remember, 6000 Words, 5000 Phrases, Mondly, Pimsleur, Ling and LingoDeer. Therefore, the initiative to develop high-quality applications is an interesting topic and should be taken seriously to motivate learners to learn and practice their skills even outside of the classroom. In this study, the research question is, "What could define the most suitable applications for learning foreign language?". The research objectives include, 1) to present and discuss French language and German language Thai learners' expectation towards features of French and German learning application, and

2) to propose a guideline for developing French and German learning applications which fit with Thai learners.

2. Literature Review

2.1 Mobile learning

Mobile learning is a form of distance learning which has been increasingly adopted since 2014 before the COVID-19 pandemic. Holubnycha & Baibekova (2020) have categorized distance learning into three types. There are, 1) an integration between a traditional form and an online form which uses information and communications technologies. 2) a complete online learning in some subjects. 3) a complete online learning in all subjects listed on any curriculum. It is assumed that some learners had no experience with online learning until the COVID-19 pandemic. However, the situation has pushed all educational programs all over the world to fully adopt the online form in all subjects. Wang et al. (2021) define online learning as Computer-Assisted Language Learning (CALL).

That means learning by using a computer. Along with the advancement of information and communications technologies, more applications are available on mobile devices, e.g., mobile phones which almost every student carries with them and have internet access both at home and outside.

After thoroughly reviewing available related literature, the researchers have found five reasons why mobile learning should be further investigated and why foreign language learning applications must be improved, both in terms of completeness of the content and in terms of quality. The first reason is because many learners prefer mobile learning (Chachil et al. 2015). A lot of learners agree that online learning is challenging because they must manage the learning process by themselves (Gluchmanova 2015). The second reason is because of language barrier. Chachil et al. (2015) posit that any language where the number of speakers is limited, availability of language teaching applications for that language would be limited. Applying this point of view to the situation in Thailand, it can be assumed that any language where the number of speakers is abundant, such as French and German, but the number of speakers of the learner's native language is limited, such as Thai, applications aimed at teaching this target group will be limited as well. The third reason is because study on the effects of emotions while learning foreign languages, especially vocabulary, are abundant Kamenická (2021), but study on other topics, e.g., grammar, conversation, and culture, in the realm of foreign language learning is scant. The fourth reason is the lack of grammar skills

practice in Computer-Assisted Language Learning (Wang et al. 2021). The researchers think that is an important skill in foreign language learning for effective communication. The fifth reason is because currently available mobile applications for language learning are underdeveloped as these are text-based and lack of aspects that could draw learners' attention (Chachil et al.w 2015). Kamenická (2021) reveals that learners' good attitudes and good first impression could greatly define the future of language learning. Therefore, using these "underdeveloped" mobile applications could result in negative impression towards foreign language learning.

Moreover, many researchers have mentioned the advantages of mobile learning which may persuade instructors to apply mobile learning in their courses. The researchers have summarized the issues as follows:

Table 1 Advantages of mobile learning

Advantages	Researchers
Support personalized learning • Choose the topic according to the learners' own needs • Choose place and time by oneself • Manage the learning process by oneself	Gluchmanova (2015); Klimova (2020); Chachil et al. (2015); Lai et al. (2022); Horbatiuk (2019)
Develop autonomy and confidence	Klimova (2020); Sanda & Klimova (2021); Horbatiuk (2019)
Improve student's cognitive capacity	Klimova (2020); Horbatiuk (2019)

Advantages	Researchers
Develop communicative, intercultural, informational, cognitive and social competencies	Horbatiuk (2019); Lai et al. (2022)
Create new social ties • Share their experiences and understanding • Collaborate with other learners or native speakers	Sanda & Klimova (2021); Lai et al. (2022)
Contribute motivation to study	Klimova (2020)
Help Low-achieving learners to reach their study goals	Klimova (2020)
Reduce the anxiety	Sanda & Klimova (2021)
Introduce the innovative forms of foreign language teaching	Horbatiuk (2019)
Allow giving personal feedback	Oh & Song (2021)

In our opinion, to develop any application, developers should find a way to take learners to the deepest level, e.g., explanation and types of skill training activities. By implementing this, the learning content will be recorded in the long-term retention, in other words, emotion-involved processing. At this stage of learning, the learners should have good attitudes towards learning and acknowledge its value. This influences motivation as well as encourages engagement regardless of any arising obstacles. A higher stage is semantic processing. In this process, learners memorize meaning, in which the required time is shorter than the emotion-involved processing. A stage with the shortest memorizing time is perceptual processing, whereas the learning outcome is just to get an overview of the

studied content and the relationship among subjects without any detailed study. Nevertheless, at any stage, instructors or application developers can induce positive emotion, such as, creating good learning environment, giving tutorials, and adjusting features to be more engaging.

2.2 Examples of Language learning applications

Babble, Busuu, Duolingo, and Rosetta Stone are four popular language learning applications available on platform authorized stores, both App Store and Play Store, and accessible from a mobile phone. They provide both vocabulary and the basic grammar lessons of both the French language and German language. Duolingo and Rosetta Stone are free of charge whereas Babble are Busuu are accessible with a payment. All four applications received high ratings from both iOS and Android users. The researchers studied the structures of the four applications, particularly features, content, and exercise and used the gained data to construct a questionnaire which survey opinions of French language and German language learners.

2.2.1 Duolingo

Duolingo was officially launched in 2012 and was downloaded by more than 10 million people in the first year (Sanda & Klimova 2021: 1849). As of 2021, Duolingo was available in 38 languages. Each language was divided into several topics where different languages had a different number of topics. It takes 15 minutes to finish a lesson. Users can use this application free of charge. In each language, users can develop four skills

including listening, speaking, reading, and writing. Grammar and vocabulary will also be learnt via a number of exercises. Content is divided according to topics in daily communication. Learners need to pass from low levels to high levels. To skip a lesson, the learners must show the medals earned by completing the previous lesson. Apart from presenting vocabulary and grammar, the application also adopted a voice recognition technology which learners can use to practice speaking and reading sentences. Learning outcomes are statistically performed to compete with other learners. The application notification feature will notify users when it comes to the study time each day as set before the lessons start.

2.2.2 Babbel

The application was developed in 2007. As of 2021, the application offers 14 languages, 60,000 lessons, in which each lesson takes 10-15 minutes. There are listening, speaking, reading, and writing exercises. Similarly to Duolingo, voice recognition technology is also available. Moreover, the application offers paid options (1 month, 3 months, 6 months, and 12 months) of revising vocabulary that learners have missed in the exercises.

2.2.3 Busuu

Busuu was launched in 2008, offering 13 languages. The teaching content is divided into four levels, i.e., basic, elementary, intermediate, and upper intermediate. Each level has different total number of lessons. At the beginner level, learners spend 2-5 minutes per lesson while at higher levels the learners spend up

to 15 minutes per lesson. The concept of lesson design and the use of technology are not that different from that of Duolingo and Babbel. Once learners have sufficient knowledge and skills to communicate with an instructor, Busuu offers a paid option where the learners can make an appointment and attend a 45-minute one-on-one class with an instructor. Another option is to have a learning buddy. For a fee, the learners can choose to pay monthly, annually, and every two years.

2.2.4 Rosetta Stone

This application is based on the very successful CD-ROM format of foreign language learning materials in the 1990s. As of 2021, Rosetta Stone offers 25 languages, in which each lesson takes less than 15 minutes. Learners will enhance four skills, i.e., reading and writing skills via many kinds of exercises and listening and speaking skills via a voice recognition technology the same as the other applications. It is worth mentioning that the learning process in this application is a one-way learning same as self-learning from a CD-ROM as there are no additional options at all.

After studying the characteristics of currently popular language learning applications available on App Store and Play Store, the researchers found that most applications use English as a medium for communicating with users. Although the types of activities offered to learners are diverse, the exercises remain a set of repetitive activities that apply to all subjects. Therefore, learners may become bored after studying for a while. Most

acceptable applications teach many languages. Another point worth highlighting is that, in each language learning application the content/strategies of describing the content and format of the exercises are in the same direction. Therefore, it can be assumed that the application developers may have modeled the presentation first and later applied the grammar content and sentences in each language to create the application.

3. Methodology

3.1 Instrument and participants

This study was conducted using quantitative approach. Data was collected during mid-2021. The questionnaire contains questions regarding of behavior and attitude toward the use of digital media in learning foreign language in order to gain the direction of application structure formulation and the trend of foreign language self-learning via application in Thai learners. To obtain the broadest scope of information, the researchers collected quantitative data by distributing the questionnaire to learners across the country by using simple random sampling method.

The first part of the questionnaire contains four sections: 1. Behavior and attitude toward the foreign language learning via application (2 questions), 2. Devices and Internet access (3 questions), 3. Factor affecting the choice of application (5 questions) and 4. Learning and teaching media (1 question). The second one focuses on the application's features (15 questions) and academic content (3 questions). Validity test was conducted

by three reviewers, comprising two test-creation experts and one technology expert. The result of validity is 0.97. Reliability test result is 0.81 using Cronbachs α formulation.

Population of this study are French language and German language Thai learners, both at secondary level and tertiary level in Thailand. The survey revealed that a large distance between the number of learners of each language. In 2020, the number of French learners nationwide presented by Centre régional d'Asie-Pacifique (CREFAP) was 26,746 persons in secondary level and 4,432 persons in tertiary level. For German learners, according to Thailändisches Deutschlehrer Verein (TDLV), there were 3,583 persons in secondary level and 475 persons in tertiary level in 2020. The researchers selected the sample group using simple randomisation. Conforming to Taro Yamane's formula (95% confidence level), the sample group for French learners should be 400 people for each level. There are fewer German language learners, so a sample size is smaller, that is 360 people from secondary level and 230 people from tertiary level.

3.2 Data analysis

Since most of the answers are multiple choices and the number of participants who study French and German are not equal, it is optimal that the result be reported in percentages. This will make the analysis easier and will allow the researchers to better understand the situation.

4. Results

4.1 Behavior and Attitude Toward The Use of Digital Media in Learning Foreign Language

This topic comprises four sub-questions in order to understand behavior and attitudes toward foreign language learning via application.

4.1.1 Attitude towards Foreign Language Learning via Application

68.25% of all student groups have experience of learning a foreign language via applications, including Duolingo, Rosetta Stone, and Babbel. The samples suggested that 20 min – 30 min was an appropriate time they could concentrate. More than half of the learners in all groups agreed that the time used in each lesson should be 5 min – 10 min. When being asked, "To what extent do you think you could improve yourself by learning via applications?", 60% of all students thought they could improve their knowledge at a moderate level, and 27.75%, excluding the German-study tertiary group, said they could improve at a high level. Only 1.25% of the sample said the application could barely elevate their knowledge The result suggested that the learners had positive attitude and would like to study via application by themselves. Therefore, developing a high-quality application that could motivate learners is crucially important and urgent. However, the structure of the application should be organized as a short session as learners have limitations in concentrating on the subject they are learning.

4.1.2 Devices and Internet Access

Of all kinds of internet-accessible devices, which are mobile phones, tablets, desktop PC, and notebooks, 98.25% of the respondents possess mobile phones. The least used devices are desktop PC, with 20% of secondary learners and 14.50% of tertiary learners. A higher portion of tertiary learners than secondary learners possess both tablets and notebooks. To illustrate, in the French-study group, 41% of secondary learners as opposed to 66% of tertiary learners possess tablets. Similarly, in the German-study group, 49% of secondary learners as opposed to 77% of tertiary learners possess tablets. As for notebooks, 43% in each language group of secondary learners, as opposed to 60% (French study) and 72% (German study) of tertiary learners, have a notebook. Considering internet access, the study found merely a slight difference. 97.50% of the respondents have internet access at home while 77% and 89.50% of secondary and tertiary learners have internet access outside the home. The answers from the sample group suggested that, in building an application, the developer should focus on smartphone application as almost 100% of learners had smartphone. Even though 20% of the learners did not have access to internet outside their homes, WIFI hotspot outside homes is not as difficult to access as it used to be. They may use WIFI in Café to learn. Hence, internet access should not be a concern.

4.1.3 Factors affecting the choice of applications

Important factors affecting the learners in choosing language-learning applications are similar overall. Factors which more than half of the respondents agreed on include the clear explanation (83.75%), the completeness of the basic content (62.25%), pictures (59.50%), exercises (56.25%), and user reviews (50%). The least important factors are recommendations from friends, teachers and application rating. Factors regarding content and explanation are also examined. 80.25% of the learners said they would choose self-learning if an application had complete content, a clear explanation, and a remarkable presentation. 16.50% of the learners were reluctant to use them.

However, the learners' confidence explicitly dropped in cases where the application had a fee. That is, only 37.75% of all groups had insisted on using the application. Approximately 50% of every group were reluctant to use the application. It can be implied that, besides the clarity and remarkability of the content, there are other factors influencing learners' decisions in choosing an application. 80% of every sample group suggested that the subscription fee they were willing to pay was 1,000 THB annually. Therefore, in producing an application, developers should pay more attention to the integrity of the basic content, clear explanation, exercises, and illustrations. In the future, related people and/or interested parties may conduct an in-depth study to obtain more insight for the benefit of further application quality improvement.

4.1.4 Learning and Teaching Tools

Materials that foreign language learners regularly use may affect their behavior of self-learning via application. According to the survey, the following media, i.e., Power Point, websites, note taking, and applications, had the usage frequency above 3.50/5 in every sample group. The scale ranges from 1 – 5, where 1 = Never, 2 = Rarely, 3 = Sometimes, 4 = Often, and 5 = Always. The most used media is note taking (4.33) which reveals that the learners pay attention to and are familiar with the study from descriptive explanations such as summary of the content they have learned. Although applications are the least popular (3.52), an in-depth study might be valuable to the development of applications in the future. Other media being mentioned are Google, YouTube, podcasts, social media (ex. Facebook, Twitter, Instagram), TV series, and movies. It is speculated that these media have animations and sound effects or are platforms where learners can find more information or can communicate with others and receive new information. Therefore, these factors should be appraised when developing an application.

4.2 Factors that could enhance the learners' motivation of foreign language self-learning via application

In this study, the researchers aim at exploring ways to develop features and content in order to encourage learners to have motivation toward self learning via application.

4.2.1 Features

The sample groups' opinions toward the three factors

affecting learners' motivation point in the same direction. That is, 1) have either actual picture (51.50%) or cartoon picture (47.50%), 2) use true tone colors (93.25%), 3) The sound should contain, in some parts, the song without lyrics (41.25%) or the song with lyrics (24.75%).

There are some other factors that almost all respondents think the applications should have. These include sound in the learning language, subtitles when speaking the learning language, explanation of grammar in Thai in every lesson, French – Thai and German – Thai translation, discussion and opinion exchange among users, and function to remember the lessons that are being studied for convenient use in the future. Two factors that scored more than 80% but less than 90% are short sound, e.g., when choosing a wrong answer and when choosing any options, and notification that urges users to enter the application. Last, competition among learners scored less than 50% (46%-48%) in every group. Options may be created so that learners can choose whether to compete with others so that learning will be more challenging and fun for those who like competition.

4.2.2 Content and exercise

69.50% of all sample groups agreed that content should be arranged by proficiency level rather than content theme. The samples of both French and German languages put focus on the following three subjects the most (4.50/5 or more). There are vocabulary, conversation, and pronunciation respectively. The least important subject is Grammar (4.25/5). Besides, the sample

groups also showed interest in culture. When asked about word types, the sample gave relatively equal attention to each type of word with a mean between 4.00-4.20/5. Only verbs had a mean above 4.50/5 among tertiary learners of both French and German. Adverbs had the lowest mean of about 4/5.

Moreover, in both French and German sample groups, the expectation toward self-learning exercise via application is quite similar. The means in descending order are as follows: 1) arrange words to make complete sentences (77.25%), 2) Read aloud (76.75%), 3) Pairing (75.50%), 4) True or False (74.50%), 5) Fill in a conversation (74.25%), 6) Listen and write along (73.25%), 7) Complete sentences with no answer choice (67%), 8) Read and translate (66.75%), 9) Arrange the letters into words (62%), 10) Fill in letters to complete a word (54.25%), 11) Summarization (47%), and 12) Choose words to complete sentences (45%). The results suggest that activities that the learners in both languages dislike the most are word creation and summarization. There is one obvious difference, i.e., the French learners do not prefer the choose-words-to-complete-sentences activity, but the German learners enjoy it a lot.

5. Discussion and Conclusion

The results reveal that almost every learner have a personal mobile device with internet access both at home and outside. The result also shows that the learners have positive attitude toward self-learning using a mobile device outside the classroom and believe that learning with self-regulation could

enhance their skills. The researchers strongly believe that having application developers who share the same native language as application users would highly be beneficial to the users, particularly those at beginner level. Both developers and learners may have cognitive processes which go in the same direction and may encounter the same kinds of problems in learning any foreign language. Hence, it can be assumed that the developers should have an explanation strategy that makes it easier for learners to understand and be able to provide clear examples. Besides, explanation in native language is particularly helpful for beginner learners who want to accumulate basic knowledge in order to continue learning more complex content (Harun et al. 2014; Rouzbahani & Alipour 2019; Vo 2019; Zhao & Macaro 2016). A factor that all application developers should scrutinize is the application fee that users have to pay. The result points out that even the application features could meet users' needs, such as a complete content, interesting features, great useability, having a fee significantly makes users reluctant in choosing the application.

The researchers think that, in enhancing the quality of applications, developers should intensify two factors in parallel, i.e., features and content. To demonstrate, features on applications should be up-to-date and easy to use. The application should have a notification feature which reminds users to come back to class after not using the application for some time. Competition and point collection feature are also interesting options that could make learning become more

challenging. Table 2 shows main characteristics which should be included in any foreign language learning application for Thai learners. The below table is the product of synthesizing data gained from the questionnaire and is fulfil the second objective of the study, i.e., to propose ways to develop French language and German language learning application for Thai learners.

Table 2 Guidelines for developing language learning applications for Thai learners

	Elements	Description
Features	Image	• Either real or cartoon color image which is modern • Meaningful image, not just an image for decoration
	Voice & Sound	• Some sounds to avoid boredom • Short sound effects when doing exercise right / wrong • A voice record of native speakers reading sample sentences
	Forum	• To exchange opinions and knowledge among learners • To enhance communication skills and, most importantly, metacognitive competences as learners have to synthesis the learned content and exchange with others
	Feedback	• Provide feedback after learners have completed exercises, e.g., cheer up comments, error analysis, and identification of aspects that should be improved

Content	Lessons	• Have diversity, e.g., grammar, vocabulary, conversation, and culture • Split into short chapters so that each content is not too complicated
	Content Arrangement	• Arrange content based on learners' language competency • The duration for one lesson should be between 5-10 minutes
	Exercises	• Have Thai translation for all foreign language sentences • Have many kinds of exercises • Arrange activities based on the complexity of cognitive competences so that learners can acknowledge their own progress
	Explanation	• Short, concise, easy to understand, suitable for learning in informal setting • Have sample sentences and context to support any explanation so that learners can fully understand

In our point of view, enhancing the above elements in language learning applications should be able to increase learning motivation. Instructors may utilize applications as a teaching tool to help learners who would like to enhance certain skills or gain more knowledge. It could be used in a classroom while an instructor facilitates the class or be used a self-learning tool outside of the classroom. For the latter case, the learners may keep a journal about their experiences, progress, and problems they encountered so that the instructor can recognize and give feedback. For possible future research, investigating the use of gamification for learning language applications seems interesting

and should be further studied and developed to make foreign language learning more enjoyable and engaging.

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