LEVERAGING VIRTUAL EXCHANGE FOR GLOBAL LEARNING IN THE CLASSROOM: TESOL CANDIDATES' PERSPECTIVES

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This paper explores TESOL teacher candidates' perspectives on leveraging virtual exchange for global learning in the classroom and identifies the support teachers may need when implementing virtual exchange lessons; TESOL teacher candidates collaborated with their global partners in planning lessons and chronicling field notes on student engagement. The study, which uses the candidates' reflective journals, candidates' focus group discussions, and the instructor/researcher's observation notes to collect data, shows that virtual exchange can be leveraged as an authentic context to expand TESOL teacher candidates' collaborative repertoire and intercultural competency. Practices and challenges in integrating virtual exchange into globalized classrooms are explored and discussed.

Keywords: intercultural competency, multilingual awareness, TESOL education, virtual exchange

Today's youth need to develop a broad range of global skills that enable them to navigate cultural differences more positively and to become active global citizens, and it is thus vital that teachers are equipped with the disposition, knowledge, and skills to instill a globally oriented mindset in their students through the use of appropriate digital technology and pedagogical innovation. This paper presents a pilot study in which virtual exchange was used as an authentic context to expand TESOL candidates' teaching and communicative and collaborative repertoire. Through harnessing the power of technology to support learning, virtual exchange allows geographically separated people to interact and communicate and makes it possible for classroom teachers to connect and collaborate across geographic and cultural borders. Over the past decades, educators around the world have sought to tap into the pedagogical potential of virtual exchange by combining it with innovative pedagogy to transform classrooms into dynamic places to teach and learn. Despite attracting overall positive feedback, however, virtual exchange has not been made into a staple of educational practices in P–12 schools. Consequently, few studies exist to explore the experiences of incorporating virtual exchange into P–12 learning settings where schools are responding to the demand to move education into the 21st century. This study includes three case studies of TESOL candidates' incorporating virtual exchange in the school standards-based curriculum and examines TESOL candidates' perspectives and attitudes on the perceived benefits (such as intercultural competency, multilingual awareness, and authentic learning) and the challenges of integrating virtual exchange in the classroom on the individual, the socio-institutional, and the interactional levels.

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Literature Review: Benefits and Challenges of Virtual Exchange

In light of the gap in our knowledge of TESOL teachers' experience in using virtual exchange to support standards-aligned learning, it is instructive to investigate virtual exchange's perceived benefits and challenges for ESL teaching and learning in the existing literature.

Intercultural Competence

As reported in the number of publications describing virtual exchange projects in diverse school settings, virtual exchange provides opportunities for participants to partake in intercultural dialogue across geographic distance. As shown in O'Dowd (2003), Patterson et al. (2012), and Evaluate Group (2019), most virtual exchange programs have a strong intercultural component, with participants engaging in tasks designed to sensitize them to cultural differences. Research on projects focusing on intercultural learning is generally based on sociocultural frameworks, highlighting concepts such as "critical cultural awareness," "intersubjectivity," and "cross-cultural capability" (O'Dowd, 2003, p. 120) to examine the role and development of cross-cultural competence (Patterson et al., 2012). Research also has found that in addition to building strong rapport among participants, virtual exchange allows for negotiation of meaning and form, which in turn may foster the development of linguistic competence as well (Fredriksson, 2013).

Multilingual Awareness

According to the Evaluate Group (2019), the use of a second language to communicate in virtual exchanges promotes linguistic awareness in response to various communication demands in different global contexts. Virtual exchange participants frequently report gains in communicative competence in their second language as they acquire experience in interacting and communicating with native language speakers and in understanding how different cultures relate to each other (O'Dowd, 2018; Soomro et al., 2015). Language and communicative skills are fundamental to global and intercultural learning, and virtual exchange provides participants an enriched learning opportunity to practice ways in which languages are expressed meaningfully in cross-cultural contexts.

Authentic Learning

In addition to helping increase and sustain motivation in second language learning, virtual exchange programs offer various beneficial opportunities to push for more authentic and learner-centered instruction. In order to maximize interaction, many virtual exchange programs require learner autonomy to promote effective learning in multimodality and multiliteracy. Maina et al. (2017) show how virtual exchange can be incorporated into flipped classrooms and report that virtual exchange promotes peer-to-peer collaborative inquiry, which simulates the autonomous learning required in the global era.

Implementation Challenges

As Lamy and Goodfellow (2010) point out, successes and challenges in integrating virtual exchange in the classroom can be attributed to a wide range of factors. For this study, I adapted the framework developed by O'Dowd and Ritter (2006) based on their review of the virtual exchange literature, focusing only on the levels that can contribute to the successes and challenges in virtual exchange: individual, socio-institutional, and interactional.

Individual. The individual level includes teacher candidates' intercultural communicative competence—their knowledge, their motivations, and their expectations; also included on this level are teachers' knowledge and perceptions of cultural and linguistic diversity. Several studies reveal that teachers' beliefs and disposition about language and diversity may affect learning expectations and opportunities for translating conceptual multicultural education into instructional possibilities and tapping into classroom diversity as learning resources (Gay & Kirkland, 2003; Vázquez-Montilla et al., 2014).

Unfortunately, however, as Vázquez-Montilla et al. (2014) report, teacher education often has few high-quality opportunities for guided practice in developing cultural critical consciousness and self-reflection. This can be corrected by instructors in teacher education programs incorporating virtual exchange and other accessible and practical approaches to help preservice teachers develop globally minded knowledge, skills, and cultural critical consciousness. If these approaches to global competency development are cultivated and modeled across the teacher education curriculum, they will set a foundation and support teacher candidates to leverage cross-cultural differences to build global competence across the student body. Several studies have similarly suggested that teachers who have had exposure to diverse cultures through intense social interactions and exchanges have an increased chance of developing positive beliefs and attitudes toward diversity and embracing diversity in the teaching and learning of the 21st century (McGarr & McDonagh, 2019; Polly et al., 2010).

Socio-institutional. On a socio-institutional level, the tasks, the matching of learners, the group dynamics, and even a teacher-to-teacher relationship may determine the outcome of virtual exchange interactions. This result may also include the virtual exchange environment mediated by technologies and their design; the general organization of the lessons, including lesson objectives or goals; and school calendars, teacher hours, language policies, and recognition of student participation in virtual exchange activities. As O'Dowd and Ritter (2006) indicate, participating teachers' limited access to digital technologies for teaching and learning could contribute some challenges connected to the implementation of virtual exchange in the classrooms.

Interactional. On an interactional level, in their study on virtual exchange programs O'Dowd and Ritter (2006) identify cultural differences in communication styles and behaviors, such as varied responses to cross-cultural communication. Perhaps the greatest challenge on an interactional level, though, is getting participating teachers and students to go beyond a superficial language-learning exchange so that they can create deeper, more meaningful interactions with their global partners. This is often the case with virtual exchange in language classes, as language pedagogy usually still primarily focuses on the mechanics of language skills and often misses opportunities for fostering the rich, interactive, and sustained intercultural learning afforded by virtual exchange. As Ware and Kramsch (2005) state, a deeper appreciation of language and cultural connection is no doubt one of the most important skills teachers will need to use in meeting future challenges. Virtual exchange provides a practical and accessible way in which this new level of understanding of the relationship between language and culture can be fostered.

In summary, these three analytic levels provide a useful lens through which to examine TESOL candidates' attitudes and perspectives on the benefits and challenges of virtual exchange for language teaching and learning. It is important not to consider each level in isolation; rather, they form a combination of interconnected factors that leads to successes in the dynamics of virtual exchange.

Research Question

The aim of this study was to examine TESOL candidates' perspectives and attitudes on perceived benefits (such as intercultural competency, multilingual awareness, and authentic learning) and the challenges of integrating virtual exchange in the classroom on the individual, the socio-institutional, and the interactional levels.

Methodology

This pilot study was conducted in the fall of 2019 and the spring of 2020 with two cohorts of TESOL candidates as part of their coursework toward their TESOL certification. Candidates were primarily full-time NYC elementary general education teachers, who were pursuing a teaching certificate in TESOL to better serve an increasingly culturally and linguistically diverse student population at their schools. The

purpose of assigning this project was to foster candidates' intercultural competency and build their knowledge and skills to prepare them for pursuing their own action research in their professional career.

For this course, Empatico was used as a tool to operationalize teacher intercultural competency development. Empatico is a nonprofit, all-inclusive educational platform that allows teachers to connect their classroom with other classrooms around the world through live video and to support virtual exchange experiences. Once connected with a global partner, participating teachers could start to plan lessons together by coordinating times to collaborate.

In this study, TESOL teacher candidates were encouraged to work in groups of two to three people, so that while one can facilitate the virtual exchange interaction, the others will observe and take field notes on the exchange. Only groups who were able to complete at least two virtual exchange sessions were selected for this study. The study included three case studies of TESOL candidates' incorporating virtual exchange in the school curriculum (see Table 1).

Table 1

Participant Information

	U.S. Teachers	Global Teachers	Number of Virtual Exchange Activities
Case Study 1 (Fall 2019)	• 2 U.S. teachers and 19 students • Fourth grade	• 1 Puerto Rican teacher and 34 students (18 females, 16 males) • Fourth grade	Two
Case Study 2 (Fall 2019)	• 2 U.S. teachers and 20 students • First and third grades	• 1 Columbian teacher and 29 students (16 boys and 13 girls) • Third grade	Two
Case Study 3 (Spring 2020)	• 3 U.S. teachers and 15 students • Second grade	• 1 Polish teacher and 22 students (12 females and 10 males) • Second grade	Three

Data Collection

The primary source of data was the candidates' midsemester and end of semester reflective journals about their experience of incorporating virtual exchange in their classroom. The second source of data was the semi-structured focus group discussions with teacher candidates conducted at the end of each semester; the focus group discussions took approximately one hour each, and were recorded in Zoom with live transcription enabled. These two sources covered factors that may affect the outcomes of virtual exchange, such as the linguistic distance between the two languages and students' level of proficiency in the native language and their knowledge of the second language. A third source of data consisted of the instructor/researcher's observations of the candidates' classrooms when virtual exchanges were implemented. One observation session was conducted for each case study group and detailed field notes were taken.

Data Analysis

For this pilot study, I conducted a qualitative content analysis, which is generally defined as a replicable technique for systemically compressing many words of text into fewer content categories based on

explicit rules of coding (Weber, 1990). Candidates' reflective journals, candidates' focus group discussions, and my observation notes were used to understand teacher candidates' perceptions of their experience implementing virtual exchange in their classroom. Themes established through literature review, such as intercultural competence, multilingual awareness, and authentic learning, were used to guide a recursive analysis; emergent themes were organized into categories and subcategories through another recursive process to get a broader sense of the data. The process of exploring and probing themes continued until saturation was reached. At this point, the consolidated themes were then further differentiated by analysis of the three levels of virtual exchange: the individual, the socio-institutional, and the interactional.

Findings

Intercultural Competence

As discussed in the Literature Review section, multiple studies suggest that active engagement and meaning making may have a positive impact on intercultural competence (O'Dowd, 2003; Patterson et al., 2012). On the individual level, all participating teacher candidates reported that they were inspired by seeing their students take part in the virtual exchange and enjoyed having the opportunity to interact with peers from another country. Realizing that their students could benefit from being paired with peers eventually moved participating teacher candidates to overcome their initial hesitations. As Ms. Hendrickson reported:

> I initially had my reservations on this method, as I was thinking, a person may not be motivated to learn through a virtual exchange classroom, but on the other hand, a significant number of students were able to learn the words through this virtual classroom session.

Data reveal that after a few initial meetings with their global partners, teacher candidates were able to overcome their fear of crossing cultural and linguistic boundaries and started to warm up to the idea of intercultural communication through virtual exchange. The data indicate that active production and negotiation of meaning in and around virtual exchange has important learning implications for both participating students and teacher candidates; the findings also illustrate that teachers can be unique mediators of cultural and linguistic diversity by incorporating elements of intercultural learning in their everyday lessons and expanding their teaching repertoire to better support their students' global education.

On the socio-institutional level, making and maintaining connection with students and teachers in different parts of the world can pose a tremendous challenge on multiple levels, given all of the complications with scheduling, age cohorts, alignment with curricula, and sometimes with access to and comfort with technology as well. As Ms. Perez reported, it took the TESOL candidates several attempts to find a virtual partner, given the time constraints and connecting to a classroom that aligned with what they were looking for (age, grade, language). In fact, many candidates were excluded from being part of this pilot study because they could find only a U.S. partner to collaborate with through virtual exchange. As intercultural competency calls for the ability to develop the targeted knowledge, skills, and attitude that lead to effective and appropriate intercultural interactions, virtual exchange provides opportunities for participating teachers to acquire the knowledge and develop the interpersonal skills needed to work well together.

On the interactional level, the nature of virtual exchange seems to compel teacher candidates to make a pedagogical shift from teacher-centered to student-centered. Online interaction promotes a role of facilitating, juxtaposing, interpreting, and reflecting on intercultural experiences for the teacher candidates. For example, as Ms. Benal expressed,

When ELLs are communicating with their peers and teachers, the communication provides not only input but also output. It means that ELLs are not only awarded the opportunity to use correct grammar and syntax when expressing in L2, but they also need to understand the message conveyed to them through the interaction.

Virtual exchange challenges TESOL teacher candidates to pay more attention to students' understandings to see if meaning had been confirmed, questioned, or contradicted through close observation and provides opportunities for interpretive and meaning-making practices that foster deep cultural learning, as discussed in O'Dowd's study (2003).

In addition, different kinds of tasks may promote different kinds of interaction in different contexts and affect candidates' experience with virtual exchange. Generally speaking, open-ended questions, when used to their full value, often elicit more reflective responses and promote deeper conversation (Inoue & Buczynski, 2011; Yee, 2002). However, due to the student age in Ms. Perez's first-grade and Ms. Bernal's third-grade classes, the open-ended questions they had brainstormed prior to the class did not sustain students' interests after a certain point, especially when the conversation was repeatedly interrupted by the instability of the internet connection. In contrast, in Ms. Hendrickson and Ms. Montoya's as well as in Ms. Sipes, Ms. Li, and Ms. Gokyuz's more language-focused lesson, the conversations were structured around key vocabulary words and theme-based topics followed by hands-on activities, which seemed to have contributed to more constructive conversations.

Data highlight both the challenges and great potential of virtual exchange for building TESOL candidates' intercultural learning and pedagogical repertoire. While the comparison of content-focused instruction versus language-focused instruction is inconclusive due to the intersection of multifaceted factors and the scope of this study, it is clear that tradeoffs were found between different focuses in instruction during a virtual exchange. It can be inferred that depending on the purposes of the lesson, a further study with the impact of different planning foci can be effectively used to lessen the complexity and heighten the effectiveness of virtual exchange.

Multilingual Awareness

Virtual exchange can bring relevance and purpose to language learning. It provides teachers opportunities to engage diverse learners in negotiating differences through cross-cultural conversations, while allowing them to practice their language skills in communicating and learning to respond appropriately in a variety of cultures. That being said, this study leaves open the question of how teacher candidates' practice of virtual exchange translates to more multilingual awareness for English language learners.

Data reveal that while their global counterparts in Puerto Rico and Colombia, for example, were motivated and eager to practice their emerging language skills and express themselves in their L2 (English), the U.S. participants, including both the teacher candidates and their students, showed little interest in learning Spanish from their global partners.

This lack of interest in learning a second or foreign languages can be attributed to the individual as well as on the socio-institutional level. As the Evaluate Group (2019) reported, virtual exchange programs can work to enforce monolingual ideology as participants tend to use a foreign language common to all of them—which mostly is English, a "lingua franca"—rather than making an effort to learn and communicate with native speakers in their native languages.

A lack of evidence in multilingual awareness on the part of the teacher candidates can also be determined on the interactional level. For example, teacher candidates' choice of the task and lesson design may determine the lesson focus and influence students' attitudes and perceptions about foreign languages. Ms. Montoya and Ms. Hendrickson's use of a post-quiz on the target vocabulary words in English as an assessment tool to measure the success of the virtual exchange illustrates how teachers can

be caught in the grip of the monolingual mindset, as a standards-based quiz may not be an apt tool to gauge the dynamics and quality of student interaction:

> [My global partner and I] found significant effect from the exchange on learning the new words on their second language: 87% learned and remember the words, 13% show no motivation and/or shyness and only learned 1–2 words out of the 5. Overall, I found support to my hypothesis that [a] virtual exchange classroom would significantly improve second language acquisition.

The dominant influence of English in diverse school settings may discourage teacher candidates from consciously utilizing the linguistic diversity existing in their classrooms as a valuable learning resource. Enhancing teachers' awareness of their students' multilingual skills as well as providing them with useful tools and resources to support them in building their multilingual competence is highly relevant to teachers who are working in culturally and linguistically diverse environments (Cummins, 2005).

Authentic Learning

Virtual exchange can provide both students and teachers opportunities to enjoy productive, and sometimes quite long-term, online connections with each other across national borders, especially for teachers and students who could not afford to travel past the border of their own community and see the world for themselves. Virtual exchange gives teachers and students opportunities to connect with real audiences and problems through virtual visits, field trips, and exchanges. During Ms. Perez and Ms. Bernal's virtual exchange lesson, students drove the inquiry, asking such real-world questions as "What is your favorite neighborhood restaurant?," "Do you know about your neighbors?," "What sports [do] you play after school?," and "Are there children similar to your age in your community?" This virtual exchange in the classroom inspired and empowered these students to make a clear connection between learning in the classroom and learning in real life.

On the individual level, through implementing virtual exchange teacher candidates were able to apply their global skills to a real-world context. Real-life challenges often drive people to keep going even in the face of setbacks, to take up opportunities, and to show commitment to what they want to achieve, as is evidenced in Ms. Perez's reflection:

> This tool has shown that you can easily increase language learners' motivation. ELLs had opportunities to interact with peers outside the classroom on a global scale to develop a flow with an exchange of words based on interests . . . Mrs. Calderón and I will continue to participate in virtual video exchange to help increase fluency among her students. My ELL students can benefit with increased listening and verbal skills.

On the social-institutional level, the global connection between Ms. Hendrickson and Ms. Montoya's fourth-grade class with students in Puerto Rico made both groups want to learn more about each other:

> Their excitement was shown to increase when they were introduced to students through the virtual exchange. The room was filled with excitement when they were first introduced and students couldn't wait to introduce themselves through the webcam. This excitement around the social interaction only increased as they formed their groups and couldn't wait to show off their representation of the vocabulary word.

Without their realizing, both teacher candidates and their students were able to engage in intercultural learning and have taken such opportunities where people from disparate cultures can come to understand each other. Tomorrow's teachers must have access to tools and platforms that provide opportunities for authentic engagement and student-led dialogue.

On the interactional level, data show that the majority of participating teachers believed that virtual exchange expands opportunities for authentic and autonomous learning. Ms. Sipes, Ms. Li, and Ms. Gokyuz cautiously concluded from their case study that

> Virtual exchange can improve second language acquisition via a sociolinguistics standpoint. From the objective of the lesson, students were able to name things they shopped for and discussed the differences between what students bought from New York versus what students bought from Poland.

Such reports reveal that teacher candidates were developing more confidence in virtual exchange and its potential in promoting authentic learning. While the development of authentic learning is acknowledged as a prominent educational goal for the classroom of the future, authentic learning was not common in the language-learning classrooms on the P–12 levels. One of the reasons for this discrepancy is the lack of teacher education stressing the real-world applications of class learning as valid educational concerns (Egel, 2009).

Discussion

The findings of this study demonstrate in what ways teacher candidates' perspectives on virtual exchange's perceived values and potential may affect their method of implementing virtual exchanges and their desire to incorporate the skills and knowledge gained from their experiences into their future classroom practices. Hence, these results help to identify the support needed to incorporate virtual exchange in teacher education.

By creating global connection in the classroom, virtual exchange concretizes intercultural learning for teacher candidates and their students. The experiential learning aspect of virtual exchange allows teacher candidates to see the benefits of virtual exchange in promoting intercultural competency, multilingual awareness, and authentic learning and enlarges the possibilities for student learning through meaningful peer interaction. My findings suggest that significant international experience can lead to prospective teachers' being more comfortable and skilled at crossing cultures and in shaping pedagogy, curriculum, and classroom interaction in ways that build on their vision of global learning and interaction.

Findings also reveal, however, that interacting with people from a different culture online can entail an affective challenge for participants. Anxiety about foreign languages and contexts may be exacerbated and heightened by critical barriers due to time differences, institutional constraints (such as coordinating across different school calendars), and technological requirements. When the burden of organizing virtual exchanges is left to individual teachers, many candidates reported that it has been difficult for them to make space for virtual exchange in the school curriculum.

My findings show that teacher candidates were able to leverage virtual exchange to integrate language and culture learning. Virtual exchange can offer an ideal combination of practicing communication skills and building intercultural competence, and provides teacher candidates an opportunity to develop language awareness as it requires them to communicate across a variety of cultures.

On the other hand, virtual exchange may also reinforce the dominant role of English as a common means of communication in virtual exchange interaction. This may prevent teachers from embracing virtual exchange as a language-learning tool as they may not see the value of exposing their students to non-standard Englishes in keeping with a monolingual ideology (Verzella, 2018). This impression is supported by the candidates' seeming lack of interest in learning multilingual practices from their global partners. Candidates' culturally encapsulated existence may have contributed to their adhering to the national or institutional English-only ideology, without questioning the role of English as a lingua franca.

Virtual exchange helped candidates achieve a new level of understanding of the real-world relevance of their language teaching, by either pushing students into the real world or bringing the real world into

the classroom. By helping increase and perhaps sustain L2 learners' motivation, virtual exchange programs offer various opportunities for teachers to push for more authentic and learner-centered learning.

Despite appreciating the authentic experiences of intercultural communications provided by virtual exchange, candidates also reported that they viewed virtual exchange as add-on or extracurricular activities rather than as an integral part of the school curriculum. For many of today's schools, "real-world learning" has often only been seen as something for advanced learners in higher education or as something historically accessible only to the most privileged students. This has caused many students, and especially multilingual learners, to be increasingly less prepared for the real world—a situation often created by the all-too-frequent lack of intercultural and multilingual awareness on the part of teachers or school administrators. As a result, in the traditional classroom multilingual language learners often take only a passive role in their learning. This study suggests that teachers' presenting core content with real-world connection via virtual exchange can lead to engaged learners who will be interacting with their learning at a deeper level.

Conclusion

Virtual exchange can be a rich experience that allows teachers to collaborate cross-culturally and can enhance intercultural competence development in teacher education. By providing practical space for teachers to apply what they have learned and reflect upon their practices, teacher educators can help candidates build their professional knowledge and embrace virtual exchange for both challenges and opportunities to improve student engagement and support active learning.

Continuing to expand educators' knowledge base in incorporating virtual exchange into TESOL education is important in identifying common strategies to support TESOL candidates' practice of virtual exchange in classrooms. As a pilot effort in this direction, this study allows us to suggest avenues for future research to explore difficulties regarding the mediating role of technology, cultural factors, and curricular integration.

An important issue in implementing virtual exchange programs concerns what barriers teachers might encounter in setting up online intercultural exchanges. Complications related to differing school calendars and curricula can discourage teachers from getting involved in virtual exchange in any educational endeavor. Providing support and adequate training to educators (including both faculty members and teacher candidates) on topics such as navigating technology issues, engaging learners in synchronous exchange, and managing conflicts arising between participants may lead to more successful virtual exchange experiences.

One rich area for future research is language tensions and the dominant role of English as a common means of communication in virtual exchange interaction, and how this is or could be recreated to foster teacher candidates' multilingual awareness and take it to deeper levels. As U.S. schools become more culturally and linguistically diverse, it is imperative that we question the concept of standard English itself as legitimized in the school curriculum, even if the language of instruction is English.

Another interesting field of further research concerns the ways virtual exchange can be organically integrated into a wide range of school topics and become an integral component of the global education experience at schools. To leverage virtual exchange's formative role in integrating content and language learning and achieve a greater integration in the school curriculum, it is vital to prioritize intercultural sharing and learning in virtual exchanges, even when topics are not explicitly culturally focused (e.g., math and STEM topics).

Finally, we need comparative as well as collaborative work to be carried out to more deeply understand the impact of integrating virtual exchange for global learning in teacher education beyond the individual studies and outside of educator and student beliefs. Though this need has been recognized in existing literature, more tools and resources need to be identified for accomplishing this. Being able to understand the impact of online intercultural exchange qualitatively as well quantitatively will ultimately

contribute to improving our knowledge in leveraging networking technologies and platforms to build intercultural competencies and 21st-century skills for teacher candidates and ultimately for all students.

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