



# Between Vision and Revision: English Language Teachers Accentuating Their Voices about 21st Century Skills

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**Abstract:** Globalization and technological innovation have increased demands on the education system to prepare students for success in an increasingly complex world. This exploratory sequential mixed-methods study created spaces for English language teachers to accentuate their voices with regard to “21st century skills” as recently introduced in the United Arab Emirates educational reform. In addition, it mirrored the encountered challenges while incorporating these skills into current instructional practices within the context of the United Arab Emirates. The study’s findings revealed that most English language teachers possess an adequate awareness of 21st century skills and incorporate them into their teaching practices. In addition, qualitative and quantitative data indicated that teachers recognize the importance of practicing 21st century skills to stimulate students’ engagement and improve their academic achievement. However, the mixed-methods results revealed that teachers encounter challenges while integrating 21st century skills into daily teaching: lack of necessary knowledge on how to teach specific 21st century skills, lack of time, lack of teacher collegiality, lack of robust professional development workshops, and increased paper accountability. Moreover, external challenges such as school environment, poor parental support, and difficulties in responding effectively to rapid change appeared to hamper the implementation of 21st century skills. Finally, the study suggested implications for curriculum design, pedagogy, and policymaking. For example, the curriculum should be built around learning by design to fuse 21st century skills into its contents; the pedagogy should incorporate multiliteracies and multimodalities for language learners; and policymakers should ensure direct instruction of the 21st century skills.

**Keywords:** 21st Century Skills, 21st Century Learning, English Language Teachers, Challenges, United Arab Emirates

## Introduction

In today’s world, globalization and the proliferation of technological innovation are transforming teaching and learning environments. Economic growth and education seem inextricably connected as modern societies strive for global competitiveness (Rappleye and Komatsu 2021). Thus, the United Arab Emirates (UAE) firmly tied its economic development plans to the education system (UAE Vision 2021, n.d.) by placing greater emphasis on improving education standards in schools across the UAE. Hence, to attain higher international recognition and keep pace with the rapidly changing world, the government’s aim was for schools to equip students with the necessary knowledge and skills they need for success in the 21st century (Saavedra and Opfer 2012). These skills have several terms used to describe them. These are commonly referred to as “21st century skills” or survival skills (Wagner 2008; Kennedy and Sundberg 2020).

Levy and Murnane (2005) highlighted that employers demand fewer people with basic skills and more people with complex thinking and communication skills. Based on several hundred interviews with teachers, business executives, and educational leaders, Wagner (2008) indicated that 21st century skills are the core skills that are essential for life in the 21st century, and educational leaders have a vital role to play in preparing young learners for success in a rapidly changing global society. Additionally, a national opinion survey showed that multiple stakeholders, including adults, teachers, and business executives, believe that problem-solving, creativity, analytical thinking, communication and collaboration skills, ethical action, and accountability are necessary to succeed beyond school (Sacconaghi 2006). These results align with recent socioeconomic research findings, which clearly showed the importance of 21st century skills for students' future access to the global market and the world's economic competitiveness (Sacconaghi 2006; Oakley 2019).

Educational reforms set successful and ambitious goals for student learning. In order to prepare students for modern world competitiveness, educational reforms around the globe call for 21st century skills (Haug and Mork 2021; Kennedy and Sundberg 2020). A key element in such skills and competencies is the learners' ability to engage in higher-order thinking, high-level reasoning, creative thinking, and critical thinking and construct deep knowledge and transfer that knowledge to solve problems (National Research Council 2012; Nir et al. 2016; OECD 2018). Several scholars contended that learning could be deepened by purposeful hands-on activities where students learn to observe and actively construct knowledge by being exposed to real experiences (Montessori 1912; Bruner 1977; Dewey 1997). Today, the UAE education system is shifting toward incorporating 21st century skills, innovation, critical thinking, and logical reasoning in its educational reforms, aiming to develop an innovative education system that stimulates the growth of a competitive knowledge economy (Hamad et al. 2022; Farah and Ridge 2009). There has also been a shift from rote learning and memorization to a skill-based education that prepares students to thrive in the 21st century (Farah and Ridge 2009).

However, achieving these educational goals is influenced by several factors. First, the changes in classroom practices demanded by such reform visions heavily rely on teachers (Fullan and Miles 1992; Spillane 1999) as they are at the forefront of educational changes. Several scholars stressed that changes of this magnitude would require deeper learning on the part of teachers who will only be able to achieve it with support and guidance (Borko 2004; Darling-Hammond and Oakes 2019; Granger et al. 2019; Fullan 2007). As Granger et al. (2019) described, for many teachers, such educational reforms mean substantial efforts to rethink traditional teaching strategies, and this requires a deep craft knowledge and a set of instructional practices and skills that they commonly do not possess. For instance, recent research indicated that teachers encounter challenges while implementing Science, Technology, Engineering, and Mathematics (STEM) education into their teaching, which is an interdisciplinary teaching approach essential to developing students' 21st century skills (Hamad et al. 2022; Bybee 2010). Moreover, inadequate preparation, lack of collaboration, and vast curriculum content appeared

to have the highest impact (Hamad et al. 2022). This was in line with Capps, Crawford, and Conostas's (2012) findings in which several challenges, such as lack of time due to high-stakes testing and lack of necessary content knowledge, hindered teachers' successful implementation of inquiry-based instruction. To bridge the gap between the 21st century reform visions and the everyday challenges of the classroom, we believe it is essential to accentuate teachers' voices. Therefore, we explored English language teachers' perceptions of 21st century skills incorporation into their teaching practices.

## Theorizing on 21st Century Skills and Learning

One of the most intriguing areas in this study is theorizing for 21st century skills and learning, how we legitimize learning or learning some skills with the progress in communication, mass media, and computer science. With the advancement of new technologies, multiliteracies, and multimodalities, a new definition is needed. For example, Lyotard (1984, 18) indicated that knowledge is not a set of denotative statements; instead, it is pragmatic enactment of what we know:

But what is meant by the term knowledge is not only a set of denotative statements, far from it. It also includes notions of “know-how,” “knowing how to live,” and “how to listen” [savoir-faire, Savoir Vivre, savoir-ecouter], etc. Knowledge, then, is a question of competence that goes beyond the simple determination and application of the criterion of truth, extending to the determination and application of criteria of efficiency (technical qualification), justice and happiness (ethical wisdom), the beauty of a sound or color (auditory and visual sensibility).

Lyotard's (1984) vision is similar to other research in its pragmatic view and looking at education and learning in the 21st century as preparing students for successful living in the 21st century workplace and society. This notion challenges all educators with the idea that contemporary education is unable to do so, as it is designed to replicate an industrial age model, essentially “rear-focused, rather than future-focused” (Benade 2015). In this regard, some scholars (Alam 2022; Benade 2015; Care 2018; Kincheloe 2011) indicated that 21st century learning emphasizes developing knowledge, skills, dispositions, attributes, and competencies in students that will equip them to anticipate future challenges.

## 21st Century Skills Definition and Nature

Commonly used terms in the field of education are “21st century skills,” “21st century learning,” and “college and career readiness.” The 21st century skills have three widely accepted definitions (National Research Council 2012; Battelle for Kids, n.d.; Kennedy and Sundberg 2020). These definitions differ from one another mainly in the way they are organized into domains and categories. A key element in all these definitions is the learners' ability to construct deep knowledge and apply it creatively in new contexts. Hence, the first

competency domain is the cognitive domain that includes higher-order thinking, critical thinking, creative thinking, and problem-solving. The second competency domain is the intrapersonal domain that focuses on intellectual openness, flexibility and adaptation, self-regulation, and the ability to regulate one's behavior and emotions. The interpersonal domain, the third competency domain, consists of teamwork and collaboration, social and intercultural skills, leadership, and accountability (National Research Council 2012; Kennedy and Sundberg 2020). Another distinguishing element in all definitions of 21st century skills is the need to develop technological literacy and information and communication technology (ICT) (Nir et al. 2016). Many researchers asserted that integrating technology into students' learning plays a crucial role in developing the skills they need as it creates spaces for sharing ideas, communication, collaboration, and innovation (Prensky 2001; Rivero 2006; Wagner 2008; Trilling and Fadel 2009; Ananiadou and Claro 2009; Chu et al. 2017). As Wagner (2008) stated, student collaboration and open communication during student-centered classroom activities create a passion for continuous learning, leading to innovation.

## Teachers and 21st Century Skills

A crucial component of any educational change is teachers, who are also primary stakeholders (Tabari 2014; Fullan 2007; Senge 2000). Teachers' values and openness to change can phenomenally impact the implementation and effectiveness of instructional practices and reform movements (Tabari 2014; Barni, Danioni, and Benevene 2019). Moreover, values can support teachers' well-being and their sense of self-efficacy.

The concept of teachers' self-efficacy derives from Bandura's social-cognitive theory of behavioral change (Martelli, Stimmler, and Roberts 2012). It refers to a teacher's belief in their ability to successfully perform tasks and challenges pertaining to their professional role. Today, many teachers worldwide recognize the importance of preparing students to be college-ready and good citizens for the future. Similarly, many educational leaders are united around the idea that students need 21st century skills that are effective in today's revolutionary world (Merriman and Nicoletti 2007; Rotherham and Willingham 2009). However, to be able to effectively incorporate 21st century skills such as critical thinking and problem-solving in teaching practices, teachers are required to have a high sense of self-efficacy, sufficient knowledge of specific instructional strategies, and openness to shift to a skill-based education (Leu 2005; Fullan 2007; Farah and Ridge 2009; Barni, Danioni, and Benevene 2019). Considerable research has shown a connection between teachers' level of self-efficacy and student achievement (Ross, Hogaboam-Gray, and Hannay 2001; Watson 2006; Klassen et al. 2009; Barni, Danioni, and Benevene 2019). For instance, teachers with high levels of self-efficacy experience higher levels of job satisfaction and are more likely to try innovative ideas, particularly strategies and teaching approaches that are difficult to implement. As Vygotsky (1978) explained, when new knowledge is beyond students' existing frameworks of understanding, they cannot independently navigate and make sense of it. Therefore, teachers are essential in determining students' readiness to examine and make

sense of new knowledge at this stage. This can be evident by guiding classroom communication, engaging students in higher-order thinking, and eliciting their thoughts through critical questioning and reasoning. Thus, teachers' self-efficacy is an effective indicator of student achievement as it plays a vital role in influencing academic outcomes, such as students' achievement and motivation (Barni, Danioni, and Benevene 2019).

## **School Curriculum Modernization and Reform in the UAE**

In a rapidly globalizing context, the government of the UAE has recognized the importance of bringing education to the forefront of development plans. These sustainable development plans entail a number of strategic goals such as reforming the education sector and raising student attainment by fostering an environment conducive to educational excellence, promoting equal educational opportunities, and strengthening students' sense of citizenship and belonging (Emirates Center for Strategic Studies and Research [ECSSR] 2021). Moreover, the government's aim was for schools to graduate students who are equally proficient in English and Arabic, knowledgeable, innovative, committed to their heritage, and college-ready. Modernizing and reforming the curriculum in order to attain higher international recognition have become one of the prominent strategic plans of the UAE government (Tabari 2014). Policymakers and curriculum specialists were pressurized and at the forefront of a huge revamp of study programs and curricula. They looked to the West for solutions (Phillips and Ochs 2003) and "borrowed" practices that were originally developed in and for the West. However, it is important to note that these were often adopted without considering the cultural context in which they would be applied (Tabari 2014).

A number of educational reforms were initiated in the UAE in line with the country's vision to keep pace with the rapid global and technological changes. For example, Dubai launched Madares Al Ghad (Schools of Tomorrow) in collaboration with the Ministry of Education, and forty-four schools across the Emirates were targeted for training, professional development, curriculum revamping, and overview of the goals and reforms in place (Farah and Ridge 2009; Kannan 2008). Moreover, the primary goal for this initiative was a paradigm shift from rote learning and memorization to student-centered education by employing a new curriculum that places greater emphasis on 21st century critical skills and adopts strong academic methods that develop students with advanced academic standards.

## **Resistance to Change and Challenges to Overcome**

Any educational change can be conceptualized as a learning experience for multiple stakeholders, including students, teachers, administrators, and parents (Fullan 2007). Yet, several decades after its development, turning 21st century skills from vision to action is still considered a challenging educational reform due to several resistive pressures.

For instance, Trilling and Fadel (2009) highlighted the complexity of standards-based assessments that primarily provide empirical evidence for judging students' performance on specific skills, such as reading and mathematics, rather than promoting 21st century skills. More

importantly, several researchers stressed that teachers tend to model the pedagogical approach reflected on standardized tests (Gerver and Robinson 2010; Griffin, Care, and McGaw 2011; Tye 1985). When such assessments are composed of multiple-choice questions, teachers seem to rely heavily on multiple-choice worksheets in their classroom activities and, in turn, give relatively little attention to complex thinking and problem-solving, which may lead to lower levels of cognitive skills, student engagement, persistence in learning, metacognition, and self-regulation. Another critical challenge is the preferences of some parents for their children to succeed on similar tests and exams they took at school and are reluctant to see their schools implementing changes that may jeopardize their children's success (Trilling and Fadel 2009). The instructional and teaching time diverted to standards-based assessment preparation activities is another challenge that teachers confront (Hamad et al. 2022; Griffin, Care, and McGaw 2011). Such preparations are time-consuming and aim to help students do well on the test, reducing the expectation that students should apply knowledge and acquire skills and capabilities demanded by today's world. Another complex challenge is the teacher content knowledge and expertise to adopt 21st century skills teaching and learning methods (Harits, Sujadi, and Slamet 2019; Hamad et al. 2022; Capps, Crawford, and Conostas 2012). Research has shown that schoolteachers with low content knowledge may struggle to support students during their work and engage them effectively in class (Haug and Mork 2021; Morrison 2013). Furthermore, this challenge triggers teachers' enthusiasm and motivation to incorporate 21st century skills in their teaching practices and may change their beliefs and practices.

## Research Design

The focus of this study was to accentuate educators' voices by exploring English language teachers' perceptions of 21st century skills incorporation into their teaching practices in UAE schools. The study applied an exploratory sequential mixed-methods design with two phases in its framework (Creswell and Clark 2018; Teddlie and Tashakkori 2009). The first phase involved collecting qualitative data using semi-structured interviews. Then, it was subsequently followed by the second phase, which quantitatively tested the initial qualitative findings using a developed survey to explore teachers' perceptions across a larger sample (see Appendix). Three key research questions guided this study:

1. How do English language teachers view the incorporation of 21st century skills into their teaching practices?
2. What do English language teachers report on incorporating 21st century skills into their teaching practices?
3. Are there any variations between English language teachers' perceptions and self-reports on 21st century skills incorporation into their teaching practices?

## Data Collection Tools

To answer the first research question, semi-structured interviews were conducted to explore the participants' understanding and readiness to incorporate 21st century skills into their teaching practices ( $N = 6$ ). The interview protocol contained five main questions from which sub-questions were derived. To establish the content validity of the interview protocol, a panel of professors teaching in the College of Education at the United Arab Emirates University revised the content of the interview questions.

Regarding the second research question, the researcher developed an online survey based on a literature review of relevant studies and the initial qualitative findings from the first qualitative phase. Upon approval of the consent to participate in this study, the survey began with six items that gathered demographic information (gender, age, teaching grade level, educational qualification, years of experience, and school type). This was followed by the survey's twenty statements, where participants were requested to offer feedback on teacher understanding and awareness of 21st century skills (A1, A2, A3, A4, A5), teacher practice of 21st century skills (P1, P2, P3, P4, P5), the extent to which implemented curriculum supports 21st century learning (C1, C2, C3, C4, C5), and a list of challenges and external factors that could facilitate or hamper the incorporation of 21st century skills into everyday teaching practices (I1, I2, I3, I4, I5). All questions were measured using a 5-point Likert scale to assess responses: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, and 5 = strongly agree. The survey was validated by a panel of professors from the Research and Development Department at United Arab Emirates University. To ensure internal consistency, Cronbach  $\alpha$  was used to establish reliability, resulting in a value of 0.74.

After collecting a range of data using the two instruments—semi-structured interviews and a self-developed survey—the researchers combined and compared teachers' inputs from the qualitative findings with statistical results. To answer the third research question, similarities and variations between both outcomes were interpreted and discussed in the final discussion.

## Sample and Population

English language teachers from public and private schools with K–12 in the UAE served as the population for this study. In particular, six English language teachers (three from public and three from private schools) were conveniently sampled (based on their specialized knowledge/experience in the field and availability to participate in this study) and interviewed to obtain their in-depth insight. In addition, the online survey was shared with 100 randomly selected male and female English language teachers from all grade levels.

## Data Analysis

For the qualitative phase, the researcher audio-recorded, transcribed, and reviewed information gleaned from the interviews. Next, codes were created to connect and categorize the data. Finally, after several rounds of revision, the researcher thematically analyzed the gathered data.

For the quantitative phase, an electronic survey was created using Microsoft Forms. Upon receiving all approvals, the survey was sent to the teachers. Four weeks after its administration, collected data was entered into the analysis software SPSS for investigation and output of results. Descriptive data analysis (mean, standard deviation) was used to investigate teachers' perceptions. In addition, an inferential statistical test (paired sample t-test) was run to compare the survey items.

## Results

The first research question of this study pertained to English language teachers' views on incorporating 21st century skills into their teaching practices in UAE schools. Semi-structured interviews were conducted to explore the participants' input into their understanding and readiness to integrate 21st century skills into their teaching processes. Most interviewees (five out of six) indicated an adequate awareness of 21st century skills and competencies students need to succeed in the 21st century. Many teachers asserted that critical thinking, problem-solving, technological literacy, and communication skills are essential to promote students' curiosity in learning and enhance their academic achievement. Further discussions on the topic revealed that incorporating 21st century skills is integral to the implemented curricula in UAE public and private schools. All teachers emphasized that 21st century skills are embedded in the English curricula they use to teach from. Some teachers (three out of six) viewed the English language textbook as a valuable source of knowledge. It offers innovative, student-centered instructional methods and assessment strategies that invite students to reflect on their learning, expand their imagination, reason, and think critically. Comments from the interviewees included:

21st century skills are embedded in my daily teaching practices.

If my students can think it, they can dream and build it. These competencies create a different kind of learner.

I think 21st century skills like communication and critical thinking deepen students' learning and enhance their employability prospects in the future.

While teachers showed positive attitudes toward incorporating 21st century skills into their daily teaching practices, they also addressed their opinions on the challenges that hinder the incorporation process. For instance, most teachers accentuated the lack of necessary knowledge as an obstacle, primarily referring to 21st century skills such as critical thinking and problem-solving. However, further discussions revealed that some teachers still need to learn how specific strategies should be used to teach certain 21st century skills like critical thinking and problem-solving during their teaching practices.

Another critical challenge hindering the process, according to all interviewees, was the need for more time due to the increased workload. Several teachers contended that they are burdened with their current load, teaching duties, standardized test preparation, and collecting evidence for teaching and learning.



The last challenge that was considered crucial by four out of six interviewees was the need for continuous professional development workshops to guide meaningful and effective incorporation of 21st century skills. Even though several interviewees stated that they attended some of the training workshops conducted by the senior leadership teams at their schools, the overwhelming feeling of the teachers was that professional development sessions need to consider what teachers already know about and how they learn. Teachers also highlighted that such training should allocate adequate time and offer hands-on training on adopting best practices and avoiding pitfalls. Some of the comments addressing these challenges included:

I am not able to teach critical thinking to my students. I do not know how specific strategies should be used for teaching innovation in my class.

My students are amazingly creative, but I feel like there is no time for imagination because there is less play. We are missing out on that.

We need real professional development programs that offer guidance on effectively incorporating such skills and competencies into our daily teaching.

We need robust training sessions where we share experiences on how to help our students construct and apply knowledge through discovery and exploration.

Regarding the second research question, a self-reporting survey with four main categories, including English language teachers' awareness, English language teachers' practice, the implemented curriculum, and challenges in incorporating 21st century skills, was distributed among English language teachers ( $N = 100$ ) teaching different grade levels (K–12) in UAE schools. The self-reporting survey assessed teachers' input using a 5-point Likert scale that ranged from 1 (strongly disagree) to 5 (strongly agree).

The descriptive statistics of survey categories related to the second research question indicated that the mean values ranged from 3.27 to 4.35. These results signified that most participants had a "high" perception regarding the importance of 21st century skills and competencies and the incorporation of these skills in everyday teaching. The results in Table 1/Figure 1 showed that English language teachers' input into "the practice of 21st century skills" had the highest mean score ( $M = 4.35$ ), which indicates that teachers have a high agreement upon incorporating 21st century skills into their teaching practices. Another highly ranked category was "English language teachers' awareness of 21st century skills and competencies," with the second highest mean score ( $M = 3.74$ ), indicating that teachers adequately understand these skills and competencies. This was followed by "the challenges faced by teachers while incorporating 21st century skills into their teaching practices" ( $M = 3.40$ ), reflecting that teachers expressed their input according to their teaching experience, the grade level they teach, and the school where they work. "The implemented English curriculum" category had the lowest mean score ( $M = 3.27$ ) compared to the other categories. To some extent, teachers expressed neutral views toward the implemented curricula in UAE schools (Table 1 and Figure 1).

Table 1: English Language Teachers’ Self-Report on 21st Century Skills Incorporation

Survey Categories	Mean	Std. Deviation
English language teachers’ practice	4.35	0.49
English language teachers’ awareness	3.74	0.44
Challenges in incorporating 21st century skills	3.40	0.63
The implemented English curriculum	3.27	0.67

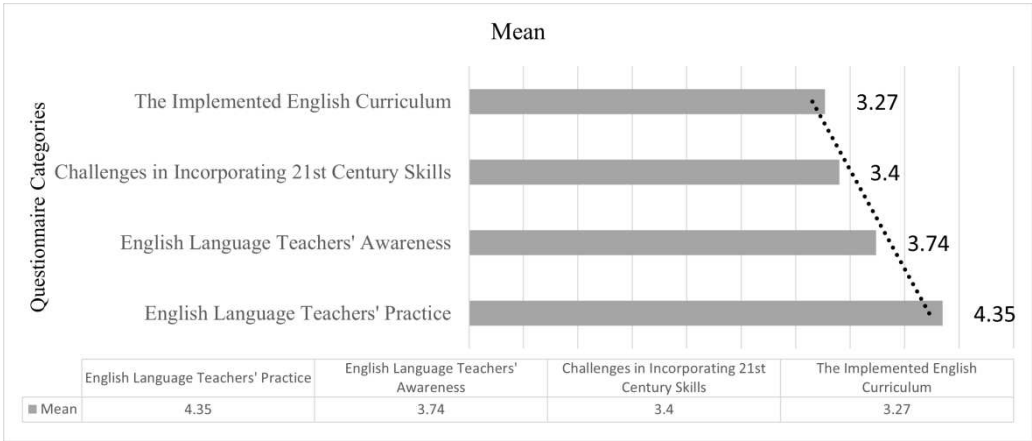


Figure 1: English Language Teachers’ Self-Report on 21st Century Skills Incorporation

The survey item gaining the highest level of agreement (with 4 = agree and 5 = strongly agree) was “I think that 21st century skills promote students’ creativity and innovation,” where 68 percent of teachers “strongly agreed” and 26 percent “agreed.” This was followed by “I think that teachers need more workshops on 21st century skills,” where 42 percent of teachers “strongly agreed” and 34 percent “agreed.” Another highly ranked item was “I think that teaching 21st century skills needs efforts from all teachers.” This item generated 31 percent and, most importantly, 56 percent responses as “strongly agree” and “agree,” respectively. The last item, which was “I think that the English curriculum should be designed to incorporate 21st century skills,” generated 37 and 55 percent responses as “strongly agree” and “agree,” respectively (Table 2).

Table 2: Frequency Percent of Survey Items with the Highest Level of Agreement

Survey Item		1	2	3	4	5
I think that 21st century skills promote students’ creativity and innovation.	N	0	0	6	26	68
	%	0	0	6.0	26.0	68.0
I think that teachers need more workshops on 21st century skills.	N	2	7	15	34	42
	%	2.0	7.0	15.0	34.0	42.0
I think that teaching 21st century skills needs effort from all teachers.	N	1	4	8	56	31
	%	1.0	4.0	8.0	56.0	31.0
I think that the English curriculum should be designed to incorporate 21st century skills.	N	0	0	8	55	37
	%	0	0	8.0	55.0	37.0

Note: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree.

For more elaboration on English language teachers' self-report on incorporating 21st century skills into their teaching practices, Table 3 displays the items in the first category of the survey, which is English language teachers' awareness of 21st century skills, based on the participants' responses. Most teachers agreed with their need to receive more workshops to guide meaningful and effective incorporation of 21st century skills, with the highest mean score ( $M = 4.07$ ). Another highly ranked item was "Some teachers are aware of 21st century skills," which had the second highest mean score ( $M = 4.04$ ), stressing that not all teachers are aware of or know about 21st century skills. The third highest ranked item followed this, "Teachers need support and guidance to teach 21st century skills," which scored  $M = 3.92$ , accentuating teachers' voice about the importance of receiving regular guidance to teach 21st century skills effectively. Finally, "All English teachers are aware of 21st century skills" had a score of  $M = 3.41$ , reflecting that teachers' responses were based on their teaching expertise and the extent to which they incorporate 21st century skills and competencies into their weekly lesson planning at the schools where they work. The last item in this category was "Teachers have little knowledge about how to teach 21st century skills," with a mean score of  $M = 3.27$ . It is essential to highlight that 38 percent of teachers agreed with this particular item.

Table 3: English Language Teachers' Awareness of 21st Century Skills

<i>Category 1: English Language Teachers' Awareness</i>	<i>Mean</i>	<i>Std. Deviation</i>
A1: All English teachers are aware of 21st century skills.	3.41	1.06
A2: Some teachers are aware of 21st century skills.	4.04	0.76
A3: Teachers need more workshops on 21st century skills.	4.07	1.01
A4: Teachers have little knowledge about how to teach them.	3.27	0.99
A5: Teachers need support and guidance to teach 21st century skills.	3.92	0.86

As demonstrated in Table 4, the findings indicated that most participants emphasized how important it is for teachers to practice 21st century skills to promote students' creativity and innovation, with the highest mean score of  $M = 4.62$ . The second highest ranked item, "I think practicing 21st century skills will promote students' engagement," scored  $M = 4.48$  and spotlighted the teachers' high agreement on the phenomenal influence of 21st century skills on students' class engagement. The third highest ranked item followed this, "I think every teacher should practice 21st century skills in his/her class," which scored  $M = 4.46$  and reflected teachers' positive responses about incorporating and practicing 21st century skills during the teaching process. Next, "Practicing 21st century skills improves students' performance and academic achievement" scored  $M = 4.24$ , showing that 57 percent of teachers agreed with the strong impact of practicing these skills on learners' academic outcomes. The last item in this category was "I think 21st century skills should be central to the curriculum," with a mean score of  $M = 3.97$ . Again, this indicates teachers' high agreement upon practicing and incorporating 21st century skills into their teaching practices.

Table 4: English Language Teachers' Practice of 21st Century Skills

<i>Category 2: English Language Teachers' Practice</i>	<i>Mean</i>	<i>Std. Deviation</i>
P1: Every teacher should practice 21st century skills in his/her class.	4.46	0.62
P2: Practicing 21st century skills will promote students' engagement.	4.48	0.67
P3: Practicing 21st century skills promotes students' creativity and innovation.	4.62	0.59
P4: 21st century skills should be central to the curriculum.	3.97	0.88
P5: Practicing 21st century skills improves students' performance and academic achievement.	4.24	0.68

The results in Table 5 demonstrated several important teacher insights about how the implemented curriculum supports 21st century learning. The first highly ranked item in this category was “I believe that the English curriculum should be designed to incorporate 21st century skills,” which scored  $M = 4.29$ . Most importantly, this item confirmed that no participants had opposing views toward integrating 21st century skills in any English curriculum they may have to teach or plan in any educational setting. The second highest ranked item, “I believe that the English curriculum offers little help in teaching 21st century skills,” scored  $M = 3.10$ , indicating an existing gap between what teachers expect to find in a 21st century skills-aligned English curriculum and the actual implemented English curriculum. It is also important to highlight that some teachers' responses were neutral. This can be associated with several factors, such as the school type, the implemented curriculum, and the teachers' expertise in the field. Finally, the two items (C2 and C4) that surprisingly scored the same mean ( $M = 3.03$ ) showed that teachers' responses fluctuated between “neutral” and “disagree.” Similarly, teachers' responses to C3, “I believe that the English curriculum does not challenge the students on creativity and innovation,” signified that 42 percent of teachers disagree. This indicates some teachers' general agreement upon teaching an English curriculum aligned with 21st century skills that challenge students' creativity and innovation in the class. Therefore, the last item in this category scored  $M = 2.92$ .

Table 5: The Implemented English Curriculum

<i>Category 3: The Implemented English Curriculum</i> <i>I believe the English curriculum...</i>	<i>Mean</i>	<i>Std. Deviation</i>
C1: should be designed to incorporate 21st century skills.	4.29	0.60
C2: does not contain learning strategies that provoke 21st century skills.	3.03	0.96
C3: does not challenge the students' creativity and innovation.	2.92	1.07
C4: emphasizes rote memorization and not 21st century skills.	3.03	1.00
C5: offers little help in teaching 21st century skills.	3.10	0.88

The results extrapolated from participants' responses, as displayed in Table 6, shed light on the challenges of implementing 21st century skills in teaching and learning. This category's first highly ranked item was “I think that teaching 21st century skills needs efforts from all teachers.” This item scored the highest level of agreement (with 4 = agree and 5 = strongly agree), where 56 percent of teachers agreed, and 31 percent strongly agreed with the importance of teacher collaboration in incorporating 21st century skills effectively.

Moreover, the mean of this item was  $M = 4.12$ . The second highest ranked item, which was “Factors such as school environment, poor parental support, difficulties to adapt to the change effectively make it difficult to implement 21st century skills in schools,” scored  $M = 3.75$ , indicating that factors like overall school culture, poor parental support, and resistance to change can hamper the effective implementation of 21st century skills in teaching and learning. The third highest ranked item followed this, “I think schools do not have enough resources that facilitate the incorporation of 21st century skills,” which scored  $M = 3.27$  and reflected teachers’ different views on their school learning resources that facilitate the effective incorporation of 21st century skills in teaching. This differentiation in teachers’ responses can be attributed to several factors, such as the school type, whether public or private, and the school budget management. Finally, “I think that teachers do not have enough time to teach 21st century skills,” which scored  $M = 3.06$ , highlighted that 35 percent of teachers expressed their agreement and considered lack of time due to high-stakes testing a barrier that hinders the successful implementation of 21st century skills during teaching. The last item in this category was “I think that students are not well-prepared to learn 21st century skills,” with a mean score of  $M = 2.82$ . It is essential to highlight that 41 percent of teachers disagreed with the idea of students not being well-prepared to learn 21st century skills, indicating high teacher expectations of students.

Table 6: Challenges of Implementing 21st Century Skills

<i>Category 4: The Challenges of 21st century Skills Implementation</i> <i>I think that...</i>	<i>Mean</i>	<i>Std. Deviation</i>
I1: teachers do not have enough time to teach 21st century skills.	3.06	0.96
I2: students are not well-prepared to learn 21st century skills.	2.82	1.04
I3: teaching 21st century skills needs efforts from all teachers.	4.12	0.79
I4: schools do not have enough resources to teach 21st century skills.	3.27	1.03
I5: factors such as school environment, poor parental support, and difficulties in adapting to the change effectively make it challenging to implement 21st century skills in schools.	3.75	0.94

Moreover, paired sample  $t$ -test was performed to synthesize quantitative data and look for statistically significant differences between the four survey categories. Examining the means, Table 7 shows that there was a significant difference between English language teachers’ awareness of 21st century skills ( $M = 3.74$ ;  $SD = 0.44$ ) and their practice of 21st century skills ( $M = 4.35$ ;  $SD = 0.49$ ) ( $t = -9.964$ ,  $df = 0.99$ ,  $p \leq 0.05$ ). This was followed by another significant difference between English language teachers’ awareness of 21st century skills and the implemented English curriculum ( $M = 3.27$ ;  $SD = 0.67$ ) ( $t = 7.044$ ,  $df = 0.99$ ,  $p \leq 0.05$ ). Another significant difference was found between English language teachers’ awareness of 21st century skills and the challenges of implementing these skills in teaching and learning ( $M = 3.40$ ;  $SD = 0.63$ ) ( $t = 5.090$ ,  $df = 0.99$ ,  $p \leq 0.05$ ). The results also showed that there were significant differences between the practice of 21st century skills ( $M = 4.35$ ;  $SD = 0.49$ ) and the implemented English curriculum ( $M = 3.27$ ;  $SD = 0.67$ ) ( $t = 13.938$ ,  $df = 0.99$ ,  $p$

$\leq 0.05$ ). Additionally, significant differences were found between the practice of 21st century skills and the challenges of implementing 21st century skills during teaching ( $M = 3.40$ ;  $SD = 0.63$ ) ( $t = 11.034$ ,  $df = 0.99$ ,  $p \leq 0.05$ ). There was no significant difference between the implemented English curriculum ( $M = 3.27$ ;  $SD = 0.67$ ) and the challenges of implementing 21st century skills during teaching ( $M = 3.40$ ;  $SD = 0.63$ ) ( $t = -1.887$ ,  $df = 0.99$ ,  $p \geq 0.05$ ).

Table 7: *t*-Test Analysis Examining Significant Differences among the Four Categories

<i>Scale Comparison</i>	<i>T</i>	<i>df</i>	<i>Sig. (2-tailed)</i>
Pair 1 Awareness–Practice	–9.964	99	0.000
Pair 2 Awareness–Curriculum	7.044	99	0.000
Pair 3 Awareness–Challenges	5.090	99	0.000
Pair 4 Practice–Curriculum	13.938	99	0.000
Pair 5 Practice–Challenges	11.034	99	0.000
Pair 6 Curriculum–Challenges	–1.887	99	0.062

Discussion

The main focus of this study was to explore English language teachers’ perceptions of 21st century skills incorporation into their teaching practices in UAE schools. This study employed an exploratory sequential mixed-methods design in which qualitative and quantitative results were extrapolated from the participants’ responses. The instruments used in this study were semi-structured interviews and an online survey. This section outlines the major findings of the current study.

First, the first qualitative phase results showed that most teachers have an adequate awareness of 21st century skills and competencies students need to succeed in the 21st century. Moreover, many teachers contended that critical thinking, problem-solving, technological literacy, and communication skills are essential to promote students’ curiosity in learning and enhance their academic achievement. Furthermore, teachers agreed with the importance of improving educational standards by incorporating 21st century skills in their teaching practices. These results advocate those of Merriman and Nicoletti (2007), who explained that many teachers worldwide recognize the importance of preparing students to be college-ready and good citizens for the future. Similarly, these findings align with those of Rotherham and Willingham (2009). They revealed that many educational leaders and teachers are united around the idea that students need 21st century skills that are effective in today’s revolutionary world. Secondly, teachers’ insights indicated that practicing 21st century skills in the classroom facilitates the process of learning, as it creates spaces for students to develop their ideas and reflect on their learning. These results have been confirmed by Montessori (1912); Bruner (1977); Dewey (1997); and Wagner (2008), who explained that learning could be deepened by purposeful hands-on activities where students learn to observe and actively construct knowledge by being exposed to real experiences. Thirdly, further discussions on the topic shed light on incorporating 21st century skills, which is considered an integral part of the implemented English curricula in UAE public and

private schools. Teachers asserted that the implemented English curricula in UAE schools contain instructional activities that promote 21st century skills and stimulate students' communication and critical thinking. Moreover, teachers contended that students could imagine, question, reason, and think critically. These findings align with Ridge, Kippels, and Farah's (2017) study that showcased UAE schools' curriculum development. In this context, heavy emphasis was placed on developing 21st century skills such as critical thinking and problem-solving rather than rote memorization. However, while teachers showed positive attitudes toward incorporating 21st century skills into their daily teaching practices, they also addressed their opinions on the challenges that usually hamper the incorporation process. For instance, the lack of necessary knowledge on how to employ specific strategies to teach certain 21st century skills like critical thinking and problem-solving was accentuated by several teachers. This key result elaborates Granger et al.'s (2019) findings, who emphasized that for many teachers, educational reforms mean substantial efforts to rethink current traditional teaching strategies and require a deep craft knowledge and a set of instructional practices and skills that they commonly do not possess. Another important challenge was the lack of time due to the preparations for standardized tests that discouraged exploration and creativity. This resonates with the findings of Tye (1985); Suárez-Orozco (2007); Wagner (2008); Gerver and Robinson (2010); and Griffin, Care, and McGaw (2011), who stressed that teachers tend to model the pedagogical approach reflected in standardized tests. Such pedagogical approaches heavily rely on multiple-choice questions and, in turn, give relatively little attention to complex thinking and problem-solving, which may lead to lower levels of cognitive skills, student engagement, persistence in learning, metacognition, and self-regulation. Moreover, one of the reasons mentioned by teachers as possible causes of these difficulties was the time they devote to the increasing workloads. In this context, Fullan (2007) brings teachers' voices back by explaining the increased paper accountability demands and the negative influence these can have on the quality of teaching and teachers' overall well-being. Similarly, Abbott-Chapman, Hughes, and Williamson (2001) and Hargreaves (1994) argued that the complexity of organizational tasks and work intensification for teachers could have several negative impacts, such as job conflict, low levels of organizational identification, stress, and, in some school contexts, high teacher turnover. The last challenge considered crucial by the interviewed teachers was the lack of continuous professional development workshops to guide meaningful and effective incorporation of 21st century skills. The overwhelming feeling of the teachers was that professional development sessions do not consider what teachers already know about and how they learn. Educational research on professional development policy and practice considered this challenge a serious unsolved problem (Borko 2004) since professional development training continues to be superficial and inadequate. Moreover, most teachers highlighted that such training should allocate adequate time and offer hands-on training on how to adopt best practices and avoid pitfalls. In this context, several researchers indicated that teachers worldwide need more robust and succinct professional development workshops (Leu 2005; Trilling and Fadel 2009;

Rotherham and Willingham 2009; Groff and Mouza 2008; Ertmer et al. 1999), arguing that such training should enlighten teachers on how to construct and apply knowledge through discovery, exploration, and project-based methods.

Furthermore, the major findings from the second quantitative phase revealed that English language teachers' views on practicing 21st century skills had the highest mean score. This explains that teachers showed a high agreement upon practicing 21st century skills and the considerable influence these skills might have on students' academic performance. Hence, a large population of teachers, 68 percent, confirmed that practicing 21st century skills increases students' engagement and promotes their creativity and innovation skills, improving their performance and academic achievement. This finding is in line with that of Montessori (1912); Vygotsky (1978); and Leu (2005), who asserted that new paradigms of teaching and learning based on constructivist principles include active learning, problem-solving, and learner-centered approaches that help deepen learners' understanding of the knowledge base, enable them to synthesize information and strengthen their analytical skills and creativity. Also, Pink (2006) explained that analysis and synthesis are the two most fundamental ways of interpreting data. Furthermore, Trilling and Fadel (2009) indicated that "visceral" (hands-on) activities provide ways to make thinking visible and deep. In light of this view, a rich literature on emotional intelligence studies clearly shows the advantages of being internally motivated to learn. Hence, Trilling and Fadel (2009) indicated that when students emotionally connect to what is being learned, learning can be sustained, understanding can become more profound, and learning can be retained longer. Hence, studying lessons with well-designed, project-based learning geared to students' interests can contribute to active engagement, deeper understanding, and a desire to achieve more. A major finding from the online survey emphasized that 57 percent of teachers expressed their agreement that some English language teachers possess an adequate awareness of what 21st century skills are. Moreover, the findings also revealed that teachers need more support and instructional guidance on effectively incorporating 21st century skills in their teaching practices. This result is relevant to research on professional development and teacher learning that sheds light on the importance of robust and succinct training workshops that offer hands-on training on how to adopt best practices and avoid pitfalls (Leu 2005; Trilling and Fadel 2009; Rotherham and Willingham 2009; Groff and Mouza 2008; Ertmer et al. 1999). Another critical result extrapolated from the online survey indicated that a significant percentage of teachers, 87 percent, strongly agreed that teaching 21st century skills needs efforts from all teachers. Research on teacher collegiality and collaboration has consistently underlined the contribution of such strong collegial relationships to teacher professionalism (Futernick 2007; Hausman and Goldring 2001), school quality, organizational effectiveness (Barth 2006; DuFour 2004), and student behavior, attitude, and achievement (Goddard, Goddard, and Tschannen-Moran 2007; Chance and Segura 2009; Garmston and Wellman 2003). It is suggested that teacher interaction and collegiality can modify instruction as teachers become more open to new ideas, teaching methods, and resources (Martin 2008). It



is also found that teacher collaboration creates a sense of belonging and high levels of organizational identification among teachers and reduces emotional stress and burnout (Shah 2012; Abdallah 2009; Vandenberghe and Huberman 1999). Finally, critical challenges such as the overall school environment, poor parental support, and difficulties in adapting to change are perceived as threats or barriers to implementing 21st century skills in the classroom. Trilling and Fadel (2009) highlighted that the preference of some parents to have their children learn in the same ways they did is a robust resistive pressure that makes incorporating 21st century skills into everyday teaching practices challenging.

The mixed-methods question was answered by integrating qualitative and quantitative data results, and several consistencies in different points and one significant variation were interpreted. According to the integrative data analysis, the first consistency between qualitative and quantitative data results is that English language teachers' responses during the interviews were in harmony with the responses of the larger population in the online survey. Furthermore, all participants were united around the idea that practicing 21st century skills is essential to keeping pace with the rapidly changing world. It was also asserted that students' learning could be deepened through meaningful real experiences, exploration, and creativity, where they observe, analyze, synthesize, and reason critically to solve problems. Hence, qualitative and quantitative data findings emphasized the considerable role of 21st century skills incorporation in teaching and learning in ameliorating students' academic performance. The second consistency between qualitative and quantitative data findings concerns the instructional guidance and support teachers need to teach and incorporate 21st century skills in their everyday teaching practices. Moreover, qualitative data from the interviews showed that all interviewees possess an adequate awareness of 21st century skills; however, some expressed their concerns about implementing specific skills like critical thinking and problem-solving. All teachers insisted on the need for more support and robust training workshops, including specific lesson plans that deal with the high cognitive demands and potential classroom management problems that might be posed due to acquiring constructivist methods of teaching and learning. This finding aligns with the quantitative data extrapolated from the teachers' responses in the online survey, as 76 percent of teachers stressed the need for more support and guidance on how to employ teaching strategies to incorporate 21st century skills in their everyday teaching practices effectively. The last consistency between qualitative and quantitative data findings is related to the implemented English curriculum and its incorporation of 21st century skills. Responses from both the interviews and the online survey were consistent, as teachers confirmed that 21st century skills are embedded in the UAE's common core standards of the education system. Moreover, teachers strongly agreed that these skills are integrated with the English curriculum content, and textbooks create spaces for students to think critically, imagine, reason, and analyze. The consensus among teachers was that recent educational initiatives in the UAE have pointed out the urgent need to incorporate 21st century skills into curriculum content and shift education from rote memorization toward a skills-based system that prepares students to thrive in the 21st century.

Despite the overall consistencies between qualitative and quantitative findings, a variation between both results was apparent in one aspect of this study. While most interviewees accentuated the need for more necessary knowledge as a primary challenge, essentially referring to specific 21st century skills such as critical thinking and problem-solving, the actual survey results did not support the same challenge. Instead, according to the survey, 87 percent of teachers accentuated the essential need for collaboration to teach 21st century skills. Moreover, the primary challenge for the larger population of English language teachers was their interaction and cooperation to modify classroom practice, make learning more meaningful, and eventually improve student attitude, behavior, and achievement. This significant variation is considered an important challenge on the road to 21st century skills incorporation in everyday teaching practices. By overcoming this challenge, teachers respond much more effectively to rapid change and cope better with the new demands of globalization and the digital age.

## **Implications of the Study**

This study has some implications for curriculum, pedagogy, and policymaking. For example, the curriculum should be built around learning by design to fuse 21st century skills into its contents; the curriculum should be based on competencies and outcomes that are quintessential skills for the future. The pedagogy should incorporate multiliteracies and multimodalities for language learners; these skills should be based on communication skills and innovation. Furthermore, policymakers should ensure the direct instruction of the 21st century skills.

## **Conclusion**

It was essential to conduct this mixed-methods study that aimed at accentuating English language teachers' voices by exploring their perceptions on incorporating 21st century skills into teaching and learning as presented in recent educational reforms in the UAE. The reviewed literature highlighted several perspectives on the nature of 21st century skills and shed light on the resistance that accompanies any change in the education arena. However, this research uncovered critical challenges that hamper the implementation of 21st century skills in teaching and learning. Therefore, we recommend that the senior leadership team, middle leadership, and teachers collectively establish a conducive environment for students learning through consistent communication, teamwork, and meaningful collaboration.

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## Informed Consent

The authors have obtained informed consent from all participants.

## Conflict of Interest

The authors declare that there is no conflict of interest.

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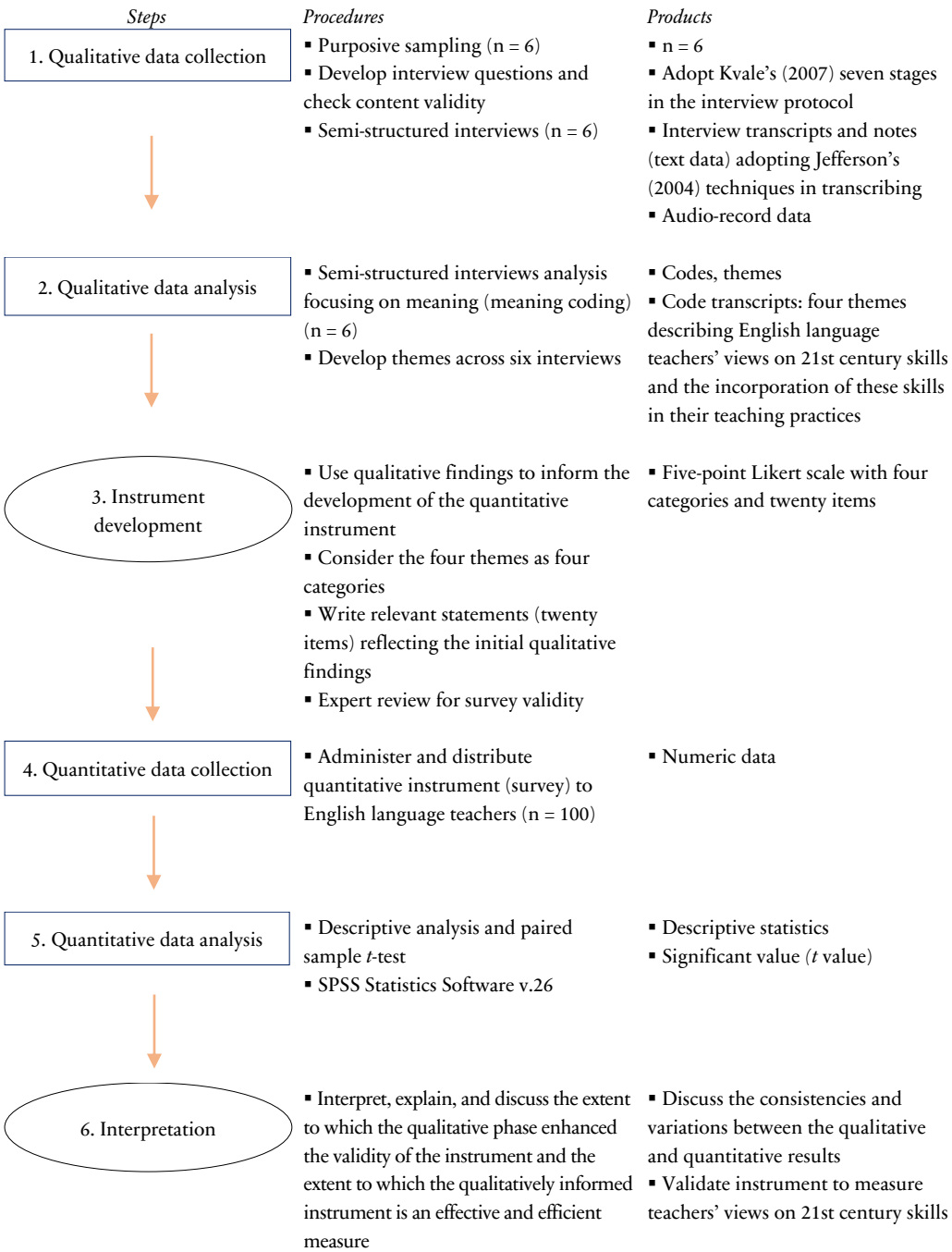
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Appendix



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