Towards a Model of Teaching 21st-Century Skills in EAP Classes

Zahra Ali Al Lawati

Department of English for Humanities, CPS, Sultan Qaboos University, Muscat, Sultanate of Oman

Mohammad Athar Khan

Department of English for Humanities, CPS, Sultan Qaboos University, Muscat, Sultanate of Oman

Abstract—Technological and globalisation advancements have made teaching 21st-century skills a part of any curriculum. However, EAP classrooms provide a perfect platform for teaching 21st-century skills. This article first outlines the importance of teaching these skills and briefly reviews how the literature defines these skills. It also looks at various frameworks of 21st-century skills, provides a brief rationale and outlines the challenges of teaching these skills. The latter part of the article shows how EAP classes are the perfect platform for teaching 21st-century skills. Finally, the piece ends with a working model for teaching 21st-century skills in an EAP context.

Index Terms—21st-century skills, 21st-century skills frameworks, EAP context

I. INTRODUCTION

Technology, as we know, has brought an immense change in people's lives in the 21st century and has changed how we live and work. Society should produce life-long learners with specific competencies, skills, and experience to deal with complex problems. Some such skills are skills to search for new knowledge, use of technology, information management, teamwork, collaborative work, effective communication, etc. As Griffin et al. (2012, p. 1) say, "…a growing awareness that many countries are moving from an industrial-based to the information-based economy and that education systems must respond to this change". In other words, there must be a shift in pedagogy too. We cannot continue to teach and assess the way we did at the start of the 20th century, where students learn individually and are then evaluated separately because the workforce produced through this approach does not succeed in work when employed (Duerden et al., 2014; Soule & Warrick, 2015). Our educational system should be re-defined in terms of the needs of the 21st century.

This article discusses definitions, different frameworks, and the teaching of 21st-century skills. This is followed by teaching these skills in an EAP context and ends with a practical-working model of teaching 21st-century skills to EAP teachers. The suggested model, it is hoped, will help raise awareness of EAP instructors to develop their learners as 21st-century citizens.

II. DEFINING 21ST-CENTURY SKILLS

With the ever-increasing use of technology, our society has become loaded with information and knowledge. Levy and Mundane (2004) believe that most rule-based-recurring tasks can be performed through technology. However, studies that involve identifying and solving problems require understanding and interpreting multifaceted issues, which the human element can solely address. This human ability is crucial in the present-day knowledge society and requires 21st-century skills. According to Anderson (2008), knowledge society needs various sub-skills such as 'finding, organising, and retrieving information ', information management, 'knowledge construction', 'adaptability' ', teamwork', and 'critical thinking. Law et al. (2008) consider these skills life-long learning competencies. In short, 21st-century skills combine the knowledge, skills, and characteristics a learner possesses to survive in present-day society. Casner-Lotto and Barrington (2006) state that as 21st-century skills focus on the application level, they can be defined as those skills that enhance basic rudimentary knowledge (acquired at schools in science, mathematics, geography, English, etc.) to succeed in the workplace. Success is now defined as communicating, working in teams, adapting and innovating, sharing information, using the information, and making collective decisions. In short, in the 21st-century job market, what matters is not just academic knowledge, but one must possess skills vital to success. Moore et al. (2015, p. 1) say, "Crucial skills for education and success in the workplace are self-regulation, agency/motivation, persistence/diligence, and executive functioning". Wagner (2008), on the other hand, identified several essential skills and termed them survival skills, which include 'critical thinking, 'problem-solving', 'collaboration, curiosity and imagination, 'adaptability & agility', 'initiative & entrepreneurialism' and 'effective written and oral communication', etc.

Griffin et al. (2012) classified the 21st-century skills in four major areas: ways of thinking such as creativity, problem-solving, critical thinking, decision making and learning to learn; ways of working, for example, teamwork,

communication and collaboration tools for working, i.e., ICT literacy, information literacy, and ways of living, which includes social responsibility including cultural awareness and competence. NEA (2002) worked on about 18 different skills (for example, information literacy, technology literacy, media literacy, leadership, creativity, critical thinking, productivity, social skills, collaboration, communication, and flexibility) and finally identified the four most vital 21st-century skills known as the four Cs namely critical thinking, communication, collaboration, and creativity.

III. THE 21ST-CENTURY SKILLS FRAMEWORKS

The literature review reveals a dearth in identifying a core set of 21st-century skills. However, researchers and organisations have provided a list of skills under the overarching term 21st-century skills. This section minimises the lack of clarity by providing a concrete definition of 21st-century skills by looking at different models or frameworks and the skills covered under each model. Researchers have identified various skills that are considered 21st-century skills. The American Management Association (2010) recognised problem-solving, critical thinking, communication, collaboration, and creativity (innovation) as essential skills. Boyles (2012) has listed the following skills required for the 21st century: innovation and creativity, analytical and problem-solving, communication and collaboration skills, critical thinking, self-direction, flexibility, and adaptability. However, Businessschooledge.com (2013) provides a broader category of skills: productivity (time management, meeting management, leadership, systems, personal productivity), creativity (imagination, inventiveness, problem-solving, brainstorming, making connections), and communication (written, social networking, oral, sales), planning (strategic, project, financial, risk, logistics). Holtzman and Kraft (2011) identified skills such as speaking/oral communication, ethical understanding, interpersonal skills, adapting to change/being flexible, and time management. Schuele and Madison (2010) also mention a similar set of skills: critical thinking, problem-solving, innovation, cultural competency, communication, and teamwork. Similarly, different organisations have suggested diverse frameworks for 21st-century skills. For example, Lemke et al. (2003) show that En Gauge promotes 21st-century skills in teachers, students, and administrators. It focuses primarily on contextual skills and knowledge. It includes four primary categories: Effective Communication (teaming, collaboration, Interpersonal Skills, etc.), High Productivity (prioritising, planning, managing, etc.). Digital-age literacy (scientific, economic, and technological literacies, visual and information literacies, and multicultural literacy) and Inventive Thinking (adaptability, managing complexity, creativity, risk-taking, higher-order thinking, etc.). Binkley et al. (2012) show that Assessment and Teaching of 21st-century skills (ATCS) stress classroom assessments and provide operational definitions of 21st-century skills to develop assessment tasks. Partnerships for 21st-century skills (2008, 2009) primarily implement 21st-century skills in education and offer framework definitions. This framework emphasises that students should learn apart from learning academic content. Thus, it encourages critical thinking and problem-solving, creativity and innovation, collaboration, information and media literacy, and life skills (people skills, leadership skills, personal responsibility, etc.). The assessment must measure all these skills integrated with core subjects by combining classroom assessment with standardised testing. The Organisation for Economic Cooperation and Development (2016) proposes three different categories of competencies: "acting autonomously (act within the big picture, defend and assert rights, interests, limits, and needs), using tools interactively (use knowledge, technology, and information interactively, use language, symbols and texts interactively) and interacting in heterogeneous groups (co-operate, work in teams, manage and resolve conflicts)".

IV. TEACHING 21ST-CENTURY SKILLS

The world is undergoing speedy social, economic, and technological changes. The education system thus must prepare students for these challenges when they enter the real world. Once students leave the four walls of the classroom, they will need the knowledge (that they have gained) but also tools to use and apply that knowledge to succeed. As discussed above, these skills are 21st-century skills, also known as non-academic, non-cognitive, soft, generic, or transversal. In this context, Voogt and Pelgrum (2005) argue that curricula need to be changed to facilitate ways that help learners acquire 21st-century skills. Furthermore, Voogt (2008) suggests the need to adopt a pedagogical approach that provides various learning activities, lets students learn at a pace suitable to their abilities, encourages collaborative work, focuses on problem-solving, etc. In other words, we should revisit our curricula and teaching practices.

The teaching of 21st-century skills is a challenge because of many reasons. The first one is finding a suitable model for its integration into curricula. Should it be taught as a specific subject across subjects or introduced as extracurricular activities? The other challenge is definitional, i.e., the lack of a well-defined set of these skills in the current literature. Teaching these skills also has an operational challenge, i.e., the lack of a measurement system, and finally, the systemic challenge, i.e., the mismatch between 21st-century skills and the examination system.

V. EAP CLASSES AT SULTAN QABOOS UNIVERSITY

At Sultan Qaboos University (SQU), the Centre for Preparatory Studies (CPS) serves the English language needs of the University students through two major English Language programmes, namely, the Foundation Programme English Language (FPEL) and the Credit English Language Programme (CELP). Most university students go through the FPEL

before entering the CELP. The CELP courses are EAP courses usually offered during the first two semesters of students' college studies. They provide additional support in English language skills for the students to pursue their studies in one of the university colleges: the College of Arts and Social Sciences, College of Education, College of Medicine, College of Engineering, College of Science, College of Agriculture and Marine Sciences, College of Economics and Political Sciences and College of Law). Teaching, learning and assessment in CELP's EAP courses emanate from the learning objectives (Los) of the course, i.e. LOs guide the materials being used in the classroom, and assessment evaluates the extent to which learners have achieved these LOs. Assessment procedures involve a combination of formative and summative assessments. Each EAP course is conducted over a semester of 16 weeks. Teachers use various methodological approaches such as lectures, discussions, and collaborative learning that lead to independent learning.

The purpose of CELP, as stated in the CELP (2020, p. 6) curriculum, is, "Students must develop independent critical thinking skills and competence in the English language necessary for attaining success in their college studies and future undertakings. As English is emphasised in research, data analysis, debates, discussions, etc., practice in these areas is provided by the CELP". Thus, the focus of these EAP courses is on thinking and problem-solving skills delivered through skill-based and task-based approaches. The overview in the CELP curriculum document (2020, p 6) states, "students develop independent critical thinking skills and competence in the English language necessary for attaining success in their college studies and future undertakings". Therefore, the CELP programme objectives revolve around "Logical and critical thinking skills".

The EAP courses are offered through Credit English Language Programme (CELP) under two different departments: the Department of Humanities, which offers 16 Courses and the Department of Sciences, which oofers11 Courses. The CELP curriculum document provides course descriptions, objectives, learning objectives, suggested topics, activities, and assessment details. The content analysis of the CELP curriculum document shows that EAP courses focus on the following aspects or terms related to 21st-Century skills: Critical Thinking Skills, Problem Solving, Communication, Collaboration and Innovation. The integration of EAP courses with college courses is stated in the rationale of the CELP courses in the following words: " It considers the real world in which we live, initiates the students by making learning relevant to their lives, makes sense of vast amounts of information by making connections among disciplines, looks at the comprehensive curriculum by viewing content as a 'means' not an 'end', recognises reading, listening, speaking, writing and use of language as enabling skills within thinking/problem-solving processes" (CELP Curriculum Document, 2020, p. 7).

VI. EAP CLASSES AND 21ST-CENTURY SKILLS

As English is the world's lingua franca, it empowers the learners to real-world opportunities. Thus, teaching 21st-century skills in English language classes is of greater importance. Therefore, these skills (creativity and imagination, collaboration, leadership, critical thinking, digital literacies, etc.) must be integrated into regular English classes. Trilling and Fadel (2009) suggest 7Cs as 21st-century skills: creativity and innovation, critical thinking and problem-solving, teamwork and leadership, collaboration, cross-cultural understanding, communication and media literacy, computing and ICT literacy, and career and learning self-reliance. According to Kumaravadivelu (2001, 2006) and Brown (2007), the teaching focus is on eclecticism in ELT. In other words, language teaching and learning involve integrating digital literacy with project-based learning. Moreover, Corbett (2003) and Kohn (2013) focus on teaching intercultural communicative competence, i.e., while teaching both local and international English. This, in turn, produces learners who are influential language users of English as a lingua franca.

Students bring real-world issues into the classroom through technology, smartphones, and multimedia devices. They have encouraged teachers of English to use e-books, YouTube, etc., to prepare lessons and classroom activities. Thus, both teachers and students bring real life to the classroom. Integrating technology into a school helps learners from different parts of the world. Students may know more than their teachers about using technology. However, teachers still help students select, analyse and use the correct information to realise their learning objectives.

EAP teaching involves developing several learners' skills that help produce 21st-century citizens. As discussed here, EAP learners adopt nine roles corresponding to the nine most critical 21st-century skills.

A. Learners as Collaborators

The EAP learning environment provides an immense opportunity for learners to develop as collaborators. Most of the classroom activities involve working in pairs and teams. This requirement to work together helps learners develop understanding and cooperative skills apart from managing and resolving conflicts. Even individual work such as research helps students collaborate when they seek help understanding the concept or explore resources on the internet. The learners, when editing peer work, are again collaborating. These pairing and grouping activities are reliable and valuable. Additionally, mixed-ability groups allow learners with different learning styles and abilities to understand each other's needs and work together. They learn to adjust and listen to each other, preparing them for future collaborative activities.

B. Learners as Communicators

Learners in EAP classes are encouraged to communicate with their peers and teachers through speaking and writing activities. The speaking activities involve responding to the teacher's questions, adding to peers' responses, taking the initiative, and more extended interactions with peers and teachers. Moreover, classroom presentations and debates provide students with a platform to communicate for extended periods. Written communication involves language tasks, assignments, posters, projects, reports, etc. EAP Learners communicate and develop negotiation skills in both forms, i.e., speaking and writing.

C. Learners as Innovators

A plethora of EAP activities help learners innovate. The small-scale research activities in problem-based and project-based learning activities help them innovate. This innovation or creativity is reflected in how they identify problems, research, and propose solutions in Problem Based Learning and how they learn long-term project-based. Their reports and presentations based on these two types of learning provide them with opportunities to innovate.

D. Learners as Critical Thinkers

Every EAP curriculum directly or indirectly encourages learners to become critical thinkers. For example, tasks such as research reports, presentations, debates, etc., involve brainstorming, prioritising, planning, analysing, evaluating, and synthesising. Using these skills to complete the task helps learners become critical thinkers. For example, after students have read a text, teachers set essential thinking duties, such as relating the problem to their context, visualising an event in the past, etc., to ignite their thinking.

E. Learners as Leaders

Classroom group activities provide a platform for learners to take on the roles of leaders - as team presentations, conducting research, solving a task in a group, etc. Other activities that help teach leadership qualities in EAP classes are checking/editing peers' work, assisting peers in understanding the job, etc. Leadership roles in these activities help them in planning and risk-taking. Moreover, these activities also help them develop adaptability, flexibility, and time management, thereby developing self-directed learning abilities.

F. Learners as Problem Solvers

Many activities encourage EAP learners to adorn the role of a problem solver, individually or as a team, especially in those classes driven by problem-based learning philosophy. The learner identifies a problem, conceptualises it and works to provide suitable solutions. Most of these activities end in oral presentations or written reports. In either form, learners develop as problem solvers.

G. Learners as Autonomous Learners

In any EAP class, learners are provided with the opportunity to select their partners in role-plays or group activities. Additionally, they are free to choose topics for their research, projects, and presentations. Providing such autonomy to learners ensures maximum participation as they take responsibility for their learning.

H. Learners as Reflectors

Many EAP classes revolve around activities that require learners to produce journal writing and portfolios. The learners reflect on various aspects, such as their role as team leaders and team members, while participating in research activities, projects, presentations, debates, etc. Such reflective writing helps these learners identify their strengths and areas of concern and either polish them further or address them. As the reflective writing activities have no right or wrong answer, it helps the learners express themselves without inhibitions.

I. Learners as Digitally Literate Participants

Teachers and learners represent the natives of the digital world. The Covid 19 pandemic has further pushed us to be digitally literate. EAP classes have always used various online learning tools and platforms to deliver teaching and learning practices. Individual and group tasks are assigned on Moodle, Big Blue Button, etc. The learners use technology to work with each other by using Google meet, Google class, Microsoft teams, WhatsApp, YouTube, etc. The use of technology provides a higher degree of engagement and responsibility to both teachers and learners. For example, the learner's submission of an assignment on the plagiarism tool (e.g.Turnitin) helps learners own the responsibility for the originality of their work.

VII. Towards a Model of Teaching 21st-Century Skills in an EAP Context

The above discussion culminates in a suggested model of teaching these skills in the EAP teaching and learning context. This model has emanated from a literature review on teaching 21st-century skills, a review of various frameworks of 21st-century skills, and our experience of teaching these skills in EAP classes.
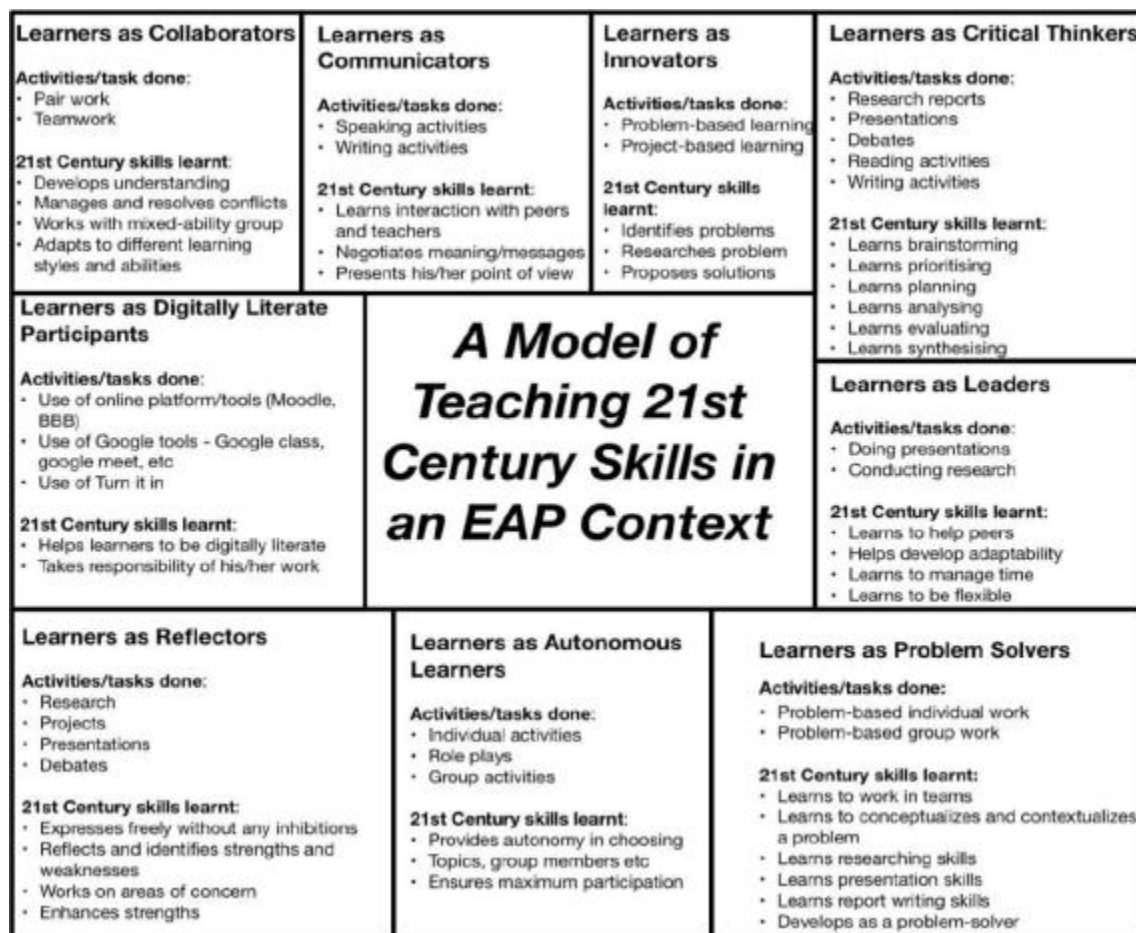
Figure 1. A Model of Teaching 21st-Century Skills in an EAP Context

The model shows that the nine most critical 21st-century skills are taught and practised in EAP classes, which are learners as collaborators, learners as communicators, learners as innovators, learners as critical thinkers, learners as leaders, learners as problem solvers, learners as autonomous learners, learners as reflectors and learners as digitally literate participants. Researchers (Boyles, 2012; Holtzman & Kraft, 2011; Madison, 2010) and organisations (Businessschooledge. com, 2013; American Management Association, 2010; En Gauge; Assessment and Teaching of 21st-Century Skills-ATCS; Partnership for 21st-century skills-P21; Organisation for Economic Cooperation and Development- OECD) consider all the categories discussed here as crucial 21st-century skills.

The model demonstrates how learners in an EAP class adopt nine roles corresponding to the nine primary 21st-century skills. Furthermore, each box in the model shows the activities or tasks that facilitate learning 36 sub-skills, which constitute 21st-century skills. Thus, EAP classes are the perfect places to equip learners with 21st-century skills.

VIII. CONCLUSION

Teaching 21st-century skills produce individuals who can face the challenges of the modern world. This paper has shown how different elements of 21st-century skills, as outlined in the literature, are effectively delivered in EAP classes. This further suggests a practical working model for teaching these skills in an EAP context.

REFERENCES

[1] American Management Association (AMA). (2010). *Executives say the 21st century requires more skilled workers.* Retrieved from http://www.p21.org/document/CriticalSkillsSurveyExecutiveSummary.pdf
[2] Anderson, R. (2008). Implications of the information and knowledge society for education. In J. Voogt & G. Knezek, (Eds.), *International handbook of information technology in primary and secondary education* (pp. 5–22). New York: Springer.
[3] Boyles, T. (2012). 21st Century Knowledge, Skills, and Abilities and Entrepreneurial Competencies: A Model for Undergraduate Entrepreneurship Education. *Journal of Entrepreneurship Education, 15*, 41
[4] Binkley M., Erstad O., Herman, J., Raizen S., Ripley, M., Miller-Ricci, M. & Rumble, M. (2012). Defining Twenty-First Century Skills. In: Griffin P., McGaw B., Care E. (Eds) *Assessment and Teaching of 21st-Century Skills*. Springer, Dordrecht. https://doi.org/10.1007/978-94-007-2324-5_2
[5] Brown, H. D. (2007). *Teaching by principles.* New York, NY: Pearson Longman.
[6] Casner-Lotto, J. & Barrington, L. (2006). Are they ready to work? *Employers Perspectives on the Basic Knowledge and Applied Skills of New entrants to the 21st-Century U.S.* Workforce. Washington, DC: Partnership for 21st-Century Skills.

[7]   Corbett, J. (2003). *An intercultural approach to English language teaching*. Bristol, United Kingdom: Multilingual Matters.

[8]   Duerden, M.D., Witt, P.A., Garst, B.A., Bialeschki, D., Schwarzlose, T. & Norton, K. (2014). The Impact of Camp Employment on the Workforce Development of Emerging Adults. *Journal of park and recreation administration, 32*.

[9]   Duerden, M. D., Witt, P., Garst, B., Bialeshcki, D., Schwarzlose, T. & Norton, K. (2014). The impact of camp employment on the workforce development of emerging adults. *Journal of Park and Recreation Administration, 32*(1).

[10]   Griffin, P., McGaw, B. & Care, E. (2012). The Changing Role of Education and Schools. In P. Griffin, B. McGaw & E. Care (Eds.), *Assessment and Teaching of 21st-Century Skills* (pp. 1–16). Dordrecht, Germany: Springer

[11]   Holtzman, D. M., & Kraft, E. M. (2011). Skills needed in the 21st-century workplace: A comparison of feedback from undergraduate business alumni and employers with a national study. *Business Education & Administration, 3*(1), 61–76.

[12]   Kohn, K. (2013, March 15). *Intercultural communicative competence: English as a lingua-franca perspective* [PowerPoint]. TESOL Arabia.

[13]   Kumaravadivelu, B. (2001). Towards post method pedagogy, *TESOL Quarterly, 35*, 537–560.

[14]   Kumaravadivelu, B. (2006). *Understanding language teaching: From method to Post practice*. New York, NY: Routledge

[15]   Law, N., Pelgrum, W.J. & Plomp, T. (2008). Pedagogy and ICT are used in schools around the world. Findings from the IEA SITES 2006 study. *CERC Studies in comparative education*. Hong Kong: Comparative Education Research Centre, The University of Hong Kong, and Dordrecht: Springer.

[16]   Lemke, Cheryl, Ed Coughlin, Vandana Thadani, and Crystal Martin. (2003) *En Gauge 21st-Century Skills: Literacy in the Digital Age*. Rep. Los Angeles, CA: Metri Group.

[17]   Levy, F. & Mundane, RJ (2004). *The new division of labour*. How computers change our work Princeton University Press and the Russell Sage Foundation.

[18]   Moore, K. A., Lippman, L. H. & Ryberg, R. (2015). Improving outcome measures other than achievement. *AERA Open, 1*(2), 1–25.

[19]   NEA (2012). *Preparing 21st-century students for a global society: An educator's guide to the "Four Cs"* National Education Association

[20]   OECD (2016). *Education at a Glance 2016: OECD Indicators*, OECD Publishing, Paris.

[21]   Partnership for 21st-Century Skills. (2008). *21st-Century skills, education & competitiveness: A resource and policy guide*. Tucson: Partnership   for   21st-Century   Skills.   Retrieved   from http://www.p21.org/documents/21st_century_skills_education_and_competitiveness_guide.pdf

[22]   Partnership   for   21st-Century   Skills.   (2009).   *P21   framework   definitions*.   Retrieved   from http://www.p21.org/storage/documents/P21_Framework_Definitions.pdf

[23]   Soule, H. & Warrick, T. (2015). Defining 21st-century readiness for all students: What we know and how to get there. *Psychology of Aesthetics, Creativity, and the Arts, 9*(2), 178–186.

[24]   Schuele, K. & Madison, R. (January 2010). Navigating the 21st-century job search. *Strategic Finance*. 49–53.

[25]   Trilling, B. & Fadel, C. (2009). *21st-Century Skills: Learning for life in our times*. San Francisco, CA: Jossey-Bass.

[26]   Voogt, J. & Pelgrum H. (2005). ICT and curriculum change. Human Technology; an *Interdisciplinary Journal on Humans in ICT Environments, 1*(2), 157–175.

[27]   Voogt, J. (2008). IT and curriculum processes: Dilemmas and challenges. In J. Voogt & G. Knezek (Eds.), *International handbook of information technology in primary and secondary education* (pp. 117–132). New York: Springer.

[28]   Wagner, T. (2008). *The Global Achievement Gap: Why even our best schools don't teach the new survival skills our children need - and what we can do about it.* New York: Basic Books.

Zahra Ali Al Lawati teaches at the Centre for Preparatory Studies, Sultan Qaboos University, Muscat, Sultanate of Oman. At present, she is the Deputy Director for Academic Programs. She received her MA in Language Studies with a focus on Language Testing from Lancaster University, UK, in 2002 and PhD in Applied Linguistics with a focus on Language Testing from Lancaster University, the UK, in 2014. Her research interests include language assessment, language education, critical thinking and 21st-Century skills.

Mohammad Athar Khan is the Head of the Sustainable Development Unit at the Centre for Preparatory Studies, Sultan Qaboos University, Muscat, Sultanate of Oman. He is a qualified Oman Academic Accreditation Authority and Quality Assurance External Reviewer. He has a B.Sc, MA (English), PGDTE, M.Phil (ELT) and PhD in Language Assessment. His research interests include language testing and assessment, learner strategies and 21st-Century skills, benchmarking and quality assurance.