

## **The standards of the International Society of Technology in the field of education as an introduction to formulating the future educational system in the Sultanate of Oman.**

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### **Abstract:**

The current study aims at understanding the standards set by the International Society for Technology in Education for teachers' and intends to explore the possibility of benefiting from those standards in the field of teaching in the Sultanate of Oman. The study has used the descriptive approach as well as documents analysis in data collection. The study results reveals that great attention given by the International Technological Society Standards in the teaching field by setting technological standards for teachers in many areas: technological process and concepts, planning for teaching, teaching methods and strategies, assessment, professional development and sustainable career development, and using technology ethically. The study also reveals the non- existence of specialized technological standards for teachers in the Sultanate of Oman and the low attention given to the teachers' technological competence by the school performance improvement system. The study recommends that the Ministry of Education in the Sultanate of Oman should put technological standards for teachers by making use of the standards set by the International Technological Society in the field of teaching.

### **Introduction:**

This era is witnessing great scientific and technological revolution, which has led to the exploration of information and knowledge different fields. The emergence of globalization has deep and wide range of reflections in the political, financial, social and cultural systems. Therefore, to face these challenges efficiently and effectively, there is a real need to prepare a generation of students who are equipped with the knowledge, skills and modern attributes which will enable them to adapt to the global society, and confront the challenges in the information technology and communication field.

International Society for Technology in Education in the US is one of the famous educational organizations that has given a great care in the effective use of the technology in the teaching. It also has put technological standards for school heads, teachers, trainers as well as students. It has given a focus on the standards for teaching, learning and the administration in the digital era. ( Grant& Basye , 2014)

It is worth mentioning that the International Society for Technology in Education is a non-profit organization working internationally to promote the use of technology in the different teaching and learning areas and trying to solve its problems, encourage the technological creation and innovation in the field of teaching and learning. (2019B, 5)

The society also provides room for constructive collaboration and the effective communication with all who are taking part in the teaching field or those who are interested in such an area at both national and international levels. This effort aims to promote life-long learning and sustainable development and establish use of technology in the teaching and learning fields to cope with the development, changes and challenges of this era. ( Poth, 2019, 124-125).

The International Society for Technology in Education has covered various areas in the teaching field. As for the school administration, it has two publications: the first was in 2002 and the second was in 2009, which sets of five standards for the school administrations. These standards are wise leadership, digital era learning culture, excellences in the career performing, the organized improvement and development and the digital citizenship. (International Society for Technology in Education, 2009, 1-2)

In the teachers' field, the society has five publications in 1993, 1997, 2000, 2008 and 2017. The latest publication includes seven standards. The first standard is the learning teacher who develops his practices by learning from and with the others whereas the second standard is related to the leading teacher who provides leadership opportunities for students and their success. The third standard focuses on the citizen teacher who inspires the students for positive cooperation and collaboration in the digital era. The cooperative teacher is the fourth standard, which focuses the cooperation with the colleagues and the students to improve the practices and solve problems. Standard five is about being a designing teacher who designs activities that are led by the learners. The facilitative teacher is the sixth standard, which gives the teacher the role of facilitating learning by using technology to support students' achievements. The seventh standard is the analytical teacher who uses the information and the data to direct and assist the learners in achieving their leaning goals and fulfil their miscellaneous needs. (International Society for Technology in Education, 2017, 4-5)

In the trainers' area, the International Society for Technology in Education has put six technological standards for schools. They are the wise leadership, career development and program evaluation, environmental digital learning era, teaching, learning and assessment, digital citizenship and professional development and informational content. (Ehsanipour& Zaccarelli, 2017, 12)

In relation to students, the International Society for Technology in Education has three publications in 1998, in 2007 and in 2016. The latest publication sets forth seven standards: the delegated learner, digital citizen, knowledge producer, innovative designer, computer thinker, innovative communicator and the universal learner.

)International Society for Technology in Education A,2016,4-5(

In the Sultanate of Oman, the Ministry of Education has set its standards for the teaching learning process through the the school performance improvement system in three different fields. The first field is the learning and this has three standards: students' acquisition of knowledge and new skills, the implementation of knowledge and the acquired skills by the student, and the third is related acquiring positive values. The second field is the teaching, which consists of five standards. These standards are the quality of teaching and learning in each school subject, fulfilling all students' special learning needs, effective assessment methods and its encouragement to the students' learning, staff self-assessment and the effectiveness of the senior teacher as a resident supervisor.

The third field is the school administration and this field includes eight standards. These are activating the school planning, organizing the administrative work, supervision and assessment of the learning and teaching processes, students' retention, strengthen the relationship with the parents and the local social institutions, self-improvement of school administration, developing organizational values and the effective utilization of the human resources at the school.

### **Research Statement:**

The Ministry of Education in the Sultanate of Oman has created standards for the teaching and learning through the system of school performance improvement in three different fields: learning, teaching and the school administration. An analysis of these standards shows that there are not any separate standards or indicators for the use of technology in the teaching field. Therefore, these standards are to be updated, with the inclusion of technology in the teaching-learning process, by making use of the standards proposed by the International Society for Technology in Education to cope with the current trends and development globally. Based on this, **I state the following research questions:**

1. What are the International Society for Technology in Education standards?
2. What are the efforts by the Sultanate of Oman in improving teaching quality standards?
3. What benefits the Sultanate of Oman derive from the standards set by International Society for Technology in Education?

### **Research Aims**

**The study aims at the following:**

1. Recognizing the standards of the International Society for Technology in Education.
2. Exploring the efforts by the Sultanate of Oman setting teaching quality standards.
3. Identifying beneficial areas from The International Society for Technology for the field of education in the Sultanate of Oman.

### **The Significance of the study:**

The importance of this study lies in the fact that it could help the school administration, teachers, students and trainers in understanding the standards of the International Society for Technology in Education and they can benefit from them in improving the learning process in Oman. In addition to that, the authorities in the Ministry of Education and the Directorate of the Education in the different governorate draw on these findings in improving the teaching quality standards in the Sultanate of Oman and initiate steps to incorporate the use of technology more widely teaching or even by building technological standards for the teaching system.

### **The Study Population:**

**The study population is as the following:**

#### **1. Topic Boundaries:**

It is limited to standards of The International Society for Technology in Education for the school heads, teachers, students and trainers. In addition to that, it is also limited to the Sultanate's efforts in improving the teaching quality standards.

#### **2. Place Boundaries:**

It is limited to The International Society for Technology in Education in United States of America and the Sultanate of Oman.

**3. Human Boundaries:**

In terms of human resource, it focuses on school administration, teachers, students and trainers.

**4. Time Boundaries:**

The study was conducted in the second semester of the scholastic year 2019-2020.

**Definitions:****1. The International Society for Technology in Education Standards**

They refer to the level of standards in the technological performance, which were established by the International Society for Technology in Education in the United States of America in the fields of school administrations, teachers, students, and trainers. These standards have focused on the teaching, learning and the digital era management including the changes and variations. (Ayad,2017,108 )

**2. The International Society for Technology in Education:**

The International Society for Technology in Education is considered as one of societies that provides excellent services in the teaching and technology fields in the United States of America. It was founded in 1979 in Washington and it has branches in Eugene in Oregon State and in Alexandria in Virginia State. It has more than 100 thousand members from the teaching staff, school administration, decision makers, journal specialists, librarians, and technology coordinators in more than 80 countries worldwide. The society aims to improve the teaching and learning process by efficient technology use. (International Society for Technology in Education, 2012, 2)

**Study Results:**

The results of the study reveals that:

- There is absence of any independent standard or indicator for the utilization of technology.
- In the teaching standard, which includes the teaching and learning quality in each teaching subject, there is just an indication referring to the use of technology as “using the learning resource center”.
- In the school administration standard that consists of the assessment and the supervision of the teaching and learning processes, there is a clear indication to the use of technology as “the utilization of the modern technology by the school administration”.

**Utilization of the standards of the International Society for Technology in Education in the teaching field in the Sultanate of Oman.**

- The Ministry of Education in the Sultanate of Oman has improved the quality standards in the learning and teaching process through the School Performance Improvement System by merging some of the standards of the society in the teaching field in a way that helps the development of these attributes set by the society for the education system in the Sultanate.
- The Specialized Training Centre at the Ministry level, the training centers at the Directorate General in the Governorates and the Professional Development Programs have considered The International Society for Technology standards in the Teaching field as a crucial training area for all participants in the teaching-learning process planning, implementation and evaluation.
- The attention that the teacher training programs have given to the standards of the International Society for Technology in Education in the various teaching-learning fields.

– The inclusion of the standards of the International Society for Technology in the job description and responsibilities and, performance evaluation forms. They are also included in the supervisory forms of the school administration, teachers and trainers.

## References:

### Arabic Sources:

1. Ministry of Education in the Sultanate of Oman (2009). Reference for the school performance improvement system. Muscat: Directorate General of the Human Resources.

### Foreign References:

1. Grant, P.; Basye, D.( 2014). Personalized Learning: A Guide For Engaging Student With Technology, Washington: International Society for Technology in Education.
2. International Society for Technology in Education.(2019B). Planning for ISTE19: School and district resource, Philadelphia.
3. Poth, R.(2019). Connecting Technology and Pedagogy, *Journal of Digital Learning in Teacher Education*, 35(3), 124-125.
4. International Society for Technology in Education (2009). ISTE Standards Administrators. Washington.
5. International Society for Technology in Education.(2017). ISTE Standards for Educators: A Guide for Teachers and Other Professionals, Washington.
6. Ehsanipour, T.; Zaccarelli, F.(2017). Exploring Coaching for Powerful Technology Use in Education, Stanford University: Center to Support Excellence in Teaching.
7. International Society for Technology in Education.(2016A). ISTE Standards For Students, Washington.
8. Peters, Laurence.(2009). *Global Education : Using Technology to Bring the World to Your Students*, Washington: International Society for Technology in Education.
9. Lerman, James ; Hicks, Ronique.(2010). *Retool Your School : The Educator's Essential Guide to Google's Free Power Apps*, Washington: International Society for Technology in Education.
10. O'Neal, Chris.(2012). *Data-Driven Decision Making : A Handbook for School Leaders*, Washington: International Society for Technology in Education.
11. International Society for Technology in Education.(2017). ISTE Standards for Educators: A Guide for Teachers and Other Professionals, Washington.
12. International Society for Technology in Education.( 2011A). ISTE Standards Coaches, Washington
13. International Society for Technology in Education.( 2019A). What Are ISTE Standards, Washington.
14. Morphew, V.N. .(2012). *Constructivist Approach to the NETS for Teachers*, Washington: International Society for Technology in Education.
15. Solar, Mauricio; Sabatin, Jorge ; Parada, Victor.(2013) Maturity Model for Assessing the Use of ICT in School Education, *Technology & Society*, 16 (1), 206–218.
16. Esplin, Nathan L. (2017). *Utah Elementary School Principals' Preparation as Technology Leaders*, Un published Doctoral Dissertation, Utah State University, USA.

17. Shyr, Wen-Jye.(2017). Developing the Principal Technology Leadership Competency Indicators for Technical High Schools in K-12 in Taiwan, *EURASIA Journal of Mathematics Science and Technology Education*, 13(6),2085-2093.
18. Strange, Melody.(2018). Exploring K-8 Teacher Educational Technology Use: An Instrument Development Study, Un Published Doctoral Dissertation, School of Education,Piedmont College , Gorgia– USA.
19. Oskay,Özge .(2017).An Investigation of Teachers' Self Efficacy Beliefs Concerning Educational Technology Standards and Technological Pedagogical Content Knowledge, *Journal of Mathematics Science and Technology Education*, 13(8),4739-4752..
20. Daigle, Angela M.(2017). The Impact of A Professional Development Initiative on Technology Integration Within Instruction, Un Published Doctoral Dissertation, The Graduate College , University of Nebraska – USA.
21. Twu, Ming-Lii. (2017). Examining the Influence of Educational Mobile Application Software on Students' Technology Literacy, Un Published Doctoral Dissertation , Faculty of The University of Houston-Clear Lake, USA.
22. Weinberg, Amie (2010). Elementary Students' Perceptions of Classroom Technology, Un Published Doctoral Dissertation , College of Education and Human Development, George Mason University, USA.
23. Friedman, A., Bolick, C., Berson, M., & Porfeli, E. (2009). National educational technology standards and technology beliefs and practices of social studies faculty: Results from a seven-year longitudinal study, *Contemporary Issues in Technology and Teacher Education*, 9(4), 476-487.
24. Sugar, W. ; Tryon,P. J. (2014). Development of a Virtual Technology Coach to Support Technology Integration for K-12 Educators, *TechTrends*, 58(3), 54-62.
25. 19- Conyac, B.(2016). The Role of the Technology Coach in Middle School English Language Arts Classrooms, un published Dessertation Doctoral, Education Faculty ,Lindenwood University-USA.
26. Zhong, L. ; Wang, S. (2016). The roles of instructional technologies in supporting K-12 CCSS transition. *International Journal of Technology in Teaching and Learning*, 12(2), 77-88.
27. International Society for Technology in Education.(2012). Chief Executive Officer: Position Profil, Alexandria, Virginia.
28. Ayad,Fuad.(2017). The Degree of Implementing ISTE Standards in Technical Education Colleges of Palestine, *The Turkish Online Journal of Educational Technology*, 16 (2), 107- 118.