Integration of 21st Century Skills in Curriculum

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Abstract: *21st century skills in the curriculum helps to prepare students for their future careers. In present time collaboration, creativity, uniqueness determines the success of any school. It is important to allow students to use the power of technology to support necessary skills and learn in unique ways (Alismail and McGuire, 2015) (1). By allowing critical thinking to understand the content, students can prepare for valuable outcomes. Education needs to make a paradigm shift in order to ensure the students succeed as the innovators of the future, it needs flexibility, resourcefulness. This article explores 21st century skills and describe how different methods allow students to enhance these skills. It also highlights how teachers can link students' current knowledge with their life experiences that motivate, as well as allow them to create and collaborate with the latest technologies. The article also discusses the benefits of integrating multimedia in the classroom. It concludes that 21ˢᵗ century skills give students the opportunity to enhance academic and social skills as they make enquiry, communicate and share information, organize their ideas, and express opinions while preparing a project or conducting research through online experience.*

Key Words: *21st century skills, Curriculum, Innovative Methods of instruction, Technology.*

1. INTRODUCTION:

Over the past decades, education has been based on teaching students the 3 R's which are reading, writing and arithmetic and subjects related with social studies and language (Alismail and McGuire, 2015) (1). In traditional approach, a teacher taught the content by lecture method which made students less interesting. This is a teacher-centered approach it focuses on rote learning, requiring students to memorize information in order to expand their knowledge. After the completion of the course, teacher assess student knowledge to identify students' learning outcome. Nowadays, curriculum developers give importance to the educational goals, contents, teaching methods and assessment procedure to prepare students for their future careers. In present days educators tried to connect the 3 R's to 3 H's. A good curriculum helps to provide students proper academic knowledge and skills needed in the future.

This paper will raise several questions about a good curriculum, such as 1) what are the 21st century needs, 2) how can a good curriculum enable students to satisfy 21st century needs, and 3) how can curriculum and instruction be designed to meet these expectations.

2. 21st Century Skills :

21st Century Skills includes 3R's (core academic content mastery) and 4C's (critical thinking, communication, collaboration, and creativity). It helps student in mastering the multi-dimensional abilities that are required in the 21st century.

These skills can help students succeed in their future careers by supporting 21st century learning systems to improve outcomes. By integrating cognitive learning and skills into curriculum, students can obtain deeper understanding of the subject and try to solve complex problems in the real world (Alismail and McGuire, 2015) (1).

In teaching learning process students should engage with the real world experiences which they will encounter in their life to construct their cognitive knowledge and skills, which helps to connect 3 R's to 3 H's. Without connecting the knowledge of read, write and arithmetic to head, hand and heart the entire knowledge will be incomplete.

3. Curriculum in the 21st Century :

Today, curriculum and educational decisions should be reviewed and redesigned to integrate future skills explicitly. Ackerman and Perkins, 1989 (2) claimed that thinking skills should be taught as a 'meta curriculum' intertwined with traditional core subjects.

Ellis, 2004 (3) stated, the knowledge centered curriculum is an academic curriculum where students are expected to acquire knowledge of their world as a foundation for adult life.

'Multiliteracy' can enable students to make informed decisions that prepare them to face challenges in the global community and give them the opportunity to be successful in the workplace (Wiggins & McTighe, 2005) (4). Providing students with proper knowledge and skills for facing them in real world successfully.

Herrington and Kervin, 2007 (5) argued, thinking curriculum is one that provides a deep understanding of the subject and the ability to apply that understanding to the complex, real-world problems that the student will face as an adult.

Preparing curriculum to be connected with the real world can support student participation, their motivation and understanding for the academic subjects, as well as preparing them for adult life (Lombardi, 2007) (6).

In this way, students will be prepared with the necessary knowledge and life skills that will help them be successful in their future careers (Lombardi, 2007) (6). According to Paige, 2009 (7) adopting a 21st century curriculum should blend knowledge, thinking, innovation skills, Technology, and real life experience in the context of core academic subjects.

Students should develop 21st century skills such as critical thinking, problem solving, collaboration and creativity by engaging in the learning environment effectively.

Therefore, curriculum in the 21st century should focus on the construction of knowledge and encourage students to produce the information that has value or meaning to them in order to develop new skills (Alismail and McGuire, 2015) (1).

Students need 21st century skills to improve their cognitive knowledge, attitude, skills that prepares them to be successful in their future careers.

Curriculum developers should designed the curriculum in a way that allows students to master in core knowledge, attitude and skills such as civic, financial, environmental, health, social and global awareness. The curriculum should be relevant to the real world, reflecting the knowledge and skills that students will need for success in their future life and to compete successfully in the global economy.

4. Instruction procedure in the 21st Century :

Teachers should apply different innovative strategies and methods for teaching 21st century skills. There are many strategies that enhance knowledge and skills to promote them in future skills. One such approach is problem solving method. In this method, students can solve different issues that are related to the real world.

Knowlton, 2003 (8) mentioned that using problem solving in teaching students can promote critical thinking skills that help them overcome challenges they may face in the real world. This approach helps students to achieve 21st century skills. When teachers applied this strategy, they help students to build capacities like critical thinking, communication and cooperation, as well as social interaction.

In Problem solving approach, students' participation increases in class activities and enhance critical thinking skills (Joyce et al., 2009) (9). Trilling and Fadel, 2009 (10) defined critical thinking as the ability to analyze, interpret, summarize, synthesize and evaluate information. These processes can give students the opportunity to be successful in their life. There is a significant correlation between problem-based learning activities and the critical thinking skills that students will need in the 21st century (Drew, 2013) (11). Problem solving approach allows students to investigate problems, provide explanations, generate ideas, analyze data, and make judgments in order to find the appropriate solution. Critical thinking requires a set of higher mental processes that augment students' capacities in problem solving (Alismail and McGuire, 2015) (1).

Another strategy that enhances 21st century skills is cooperative learning. This strategy divides students into different groups with diverse abilities and interests, and has a powerful effect on learning that gives distinctive results. The group's work is more creative because of the deep thought and integration of students' strengths and talents in order to achieve a product. The diversity of students' skills and abilities can encourage creative work where 'every person brings something to the table' (Knowlton, 2003) (8). Trilling and Fadel, 2009 (10) emphasized that working students in different groups can enhance many aspects such as mutual respect between team members, estimating teamwork required to complete the joint action, and efforts toward compromises needed to achieve a common goal. Collaborative learning has a positive impact on student abilities such as increasing their motivation and performance as well as

developing social interaction. Cooperative learning is an effective strategy to increase student motivation and change it from the external to the internal (Joyce et al., 2009) (9).

Today, teachers should give students the opportunities to engage in various activities that promote cooperative learning such as seminars, projects, research based learning. In these activities, students work together in order to complete the activities and increase their participation, achievement, and motivation to learn. Consequently, collaborative learning allows students to contribute different degrees of prior knowledge, abilities, and aptitudes. Students are also motivated to learn more, as well as learn quicker in a stress free environment and with a greater degree of achievement.

Additionally, linking knowledge with the real world is an important component in the 21st century teaching model. This achieves the goal of authentic learning. In this approach, teachers make the classroom more interesting by increasing student participation in class activities and applying the knowledge in real time. Using real world contexts allows students to research information from several resources that are outside the school walls such as interviewing experts and specialists to obtain information in a particular field. This approach allows students to obtain new knowledge and skills instead of listening to lessons and memorizing information in order to prepare for tests.

Students engage in the learning environment effectively when linking content with real experiences and promotes future skills such as critical thinking, problem solving, and collaborative learning (Herrington & Kervin, 2007) (5). Students contribute in the construction of their own knowledge and produce the information that has value or meaning to them in order to achieve collaborative work in its truest sense. When students have the opportunity to see the connection between what they are learning and issues of real life, they can understand the topic more easier. In this way, students will be prepared with the necessary information and life skills that will help them in their future life. Curriculum developers should find useful and effective instruction process that can support 21st century curriculum and as well as instill necessary skills among students that help them to face challenges successfully. Teachers should integrate multimedia tools in teaching learning process to achieve 21st century skills.

Jacobsen, 2001 (12) argued that many technological tools can support different skills such as problem solving, critical thinking, collaborative learning. For example Wikipedia, Google site, Youtube, Blog, etc., support these skills and bring creativity in the students. Technological tools offer students to working in groups, which may increase student motivation and develop critical thinking and minimize the learning anxiety. He also said that using technological tools in teaching gives students the opportunity to engage in the real world, helping them increase their understanding and develop creativity and innovation skills. There are many options available in the virtual world from which educators can choose in order to achieve real meaning, enabling students to see the real world through their online experience. Video game, role-play in online simulated learning environments, videos on YouTube can be effective means to show different subjects and issues realistically.

This approach can help teachers enhance current lessons and facilitate discussion about the topics presented by using technological tools, making abstract or conceptual content more understandable (Mueller, 2006) (13). Multimedia tools promote deeper understanding. Use of multimedia tools in class activities have higher level thinking skills than in comparison with traditional teaching methods (Kanuka et al., 2007) (14). The power of technology tools helps in team effort and can evaluate their peers' work by using technology. By using technology, students can provide meaningful feedback for their peers to improve their work. This strategy helps students to develop critical thinking skills, communication, collaboration and creativity also.

Robin, 2008 (15) argued that educators should use multimedia tools to support students' learning by encouraging them to organize and express their ideas and knowledge in a personal and meaningful way.

Drew (2013) (11) said, students need to be prepared as skilled and strategic readers, writers, and communicators in online environments. Teachers should create a teaching-learning environment where students can connect themselves with reality.

Integrating these tools in education gives students the opportunity to enhance academic and social skills as they communicate and share information, organize their ideas, and express opinions while preparing a project or conducting research through online experience (Alismail and McGuire, 2015) (1). 21st century skills promote students to work together to prepare their projects, assignments or any other work and help them to develop communication skills.

Technology is a powerful tool, which allows students to access information and knowledge by themselves. Teachers should give students the opportunity to research and obtain information in order to develop different skills (Alismail and McGuire, 2015) (1). Technology also helps students for self learning by getting information from different internet sources. The Internet allows students to expand their knowledge of issues and understand social values in multiple topics such as global warming, famine, poverty, health issues, global population explosion and other environmental and social issues. This would allow them to be informed about and able to address the global issues

suffered by society. Technology provides students more practice in reading and writing, as well as online literacy in order to meet their future needs (Alismail and McGuire, 2015) (1).

Multimedia tools is one of the best way to increase student performance, it helps to motivate students to learn by critical thinking, collaboration, problem solving, and it increases creativity in students and it promotes cognitive processes and helps to construct knowledge in students.

5. Teachers require a variety of 21st century skill sets for teaching learning process :

Teachers use 21st century skills to create a conducive learning environment that facilitates the development of their students. These skills can be developed through proper practice and training.

1. Critical thinking skills
With strong critical thinking skills, teachers are able to consider the best interests of their students while also working within the institution's goals and standards.
2. Communication skills
Teachers should ideally be good at physical, verbal and written communication. Strong verbal communication means that teachers make their lesson materials and expectations clear while presenting concepts in a way that students can understand.
3. Creative thinking skills
Teachers might learn to incorporate performances (like singing, drawing or fine arts) into their classroom to stimulate learning. Teachers also may use media like films, videos, music and the Internet to illustrate ideas and concepts in detail.
4. Collaborative skills
Teachers may use brainstorming activities in the classroom by the help of collaborative skills. It helps to develop unconventional and innovative ideas. Collaboration also helps to develop creative content for inspiration and share appropriate takeaways within the students.

21st century instructors give students the opportunity to expand their knowledge, experience, and skills by building ways to understand the real world (Alismail and McGuire, 2015) (1).

6. CONCLUSION :

Curriculum developers should emphasize that education should focus on both core academic subject mastery and 21st century skills development. These will help students for their future life and global career competition. There are various strategies by which to achieve 21st century skills, problem solving, critical thinking, collaborative learning, integration environment, and digital tools in teaching (Tyack, 1974) (16). Wiggins and McTighe, 2005 (4) stated that by combining core academic content and necessary future skills, students can have a bright future. 21st century curriculum and instruction provides innovative learning approaches for achieving success for students. 21st century curriculum and instruction in schools should prepare students to deal with the complex challenges of this age (Rotherham & Willingham, 2009) (17). Trilling and Fadel, 2009 (10) emphasized future skills for the 21st century are necessary in order to prepare active citizens who are able to face the challenges of a global society, innovative, can solve complex problems and use the power of technology for a better world. Teacher should use innovative techniques and instruction on students' for developing cognitive knowledge, social capacities, critical thinking and creativity. In addition, Teacher education curriculum should prepare teachers who can competent for the 21st century skills and can integrate multimedia tools in their teaching learning process. Curriculum developers have an important responsibility for developing 21st century curriculum and selection of innovative instruction method as well as assessment procedure to prepare students for their future with proper cognitive knowledge, attitude and skills.

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