THE NEED FOR 21ST LIFELONG LEARNING

CRITICAL THINKING

Critical thinking is the ability to think rationally and clearly about what to believe and will to do. A critical thinker can understand the logical connections between ideas and can identify, construct, and evaluate arguments, as well as solve problems systematically.[19] Being a critical thinker and problem solver is one of the most essential skills for learners to be successful 21st century learners. It allows for deeper and higher order thinking. It prepares them for a more complex global environment and strengthens their capacity to be independent lifelong learners. Moreover, employers often look for learners that can solve problems in innovative ways.

Key Components/Skills of Critical Thinking

The essential components or skills involving critical thinking are mentioned below[20]:

REASON EFFECTIVELY
To use inductive and deductive reasoning properly

USE SYSTEMS THINKING
To understand how parts interact with each other to make a whole and analyze parts of complex systems

MAKE JUDGMENTS AND DECISIONS
To evaluate and make arguments based on evidence, analyze different points of view, make connections between sources of information, draw conclusions, and reflect on experiences

SOLVE PROBLEMS
To apply skills to alternative problems, ask questions to clarify and create innovative solutions

Benefits of Critical Thinking

93% of respondents
According to a recent study, 93% of respondents believed that this critical thinking abilities are more important for the job candidates than their academic accomplishments.[21] while

80% of respondents
In a related study, 80% of respondents opined that teachers need to teach critical thinking to the students.[22]

Other benefits of critical thinking are mentioned below[23]:

Critical thinking promotes creativity

Critical thinking helps detecting inconsistencies and common mistakes in reasoning

Critical thinking helps to cope with the fast-changing working environment in the new knowledge economy

Critical thinking improves the ways we express ideas, and also enhances language and presentation skills

Critical thinking helps in self-reflection

COMMUNITY SKILLS

Community or volunteering skills are vital to assist and empower local people with a view to understanding how their knowledge and skills can be increased and shared for improving the wellbeing of others in the communities. People in the community do need care and support, and these skills equip an individual with the proficiencies to help the people in need.[34]

Components/Skills for Community Services

In order to be engaged in community services, the following skills are necessary[35]:

A KNACK FOR UNDERSTANDING PEOPLE | EXCELLENT CREATIVE, COMMUNICATION SKILLS | PROJECT MANAGEMENT | DATA ANALYSIS SKILLS | NEGOTIATION SKILLS | ORGANIZATIONAL SKILLS

Benefits of Community Mindedness

The benefits of being involved with community services or volunteering activities include[36]:

83%
GAINING WORK EXPERIENCE AND DEVELOPING SKILLS are important motivating factor for students engaging in volunteering.[37]

50% LESS
THOSE INVOLVED IN VOLUNTEERING ACTIVITIES regularly are 50% less likely to engage in destructive behavior or abuse cigarettes and alcohol, or to become pregnant.[39]

STUDENT VOLUNTEERING CAN DEVELOP STUDENTS' COMMUNITY AWARENESS AND HELP THEM INTEGRATE INTO LOCAL COMMUNITIES.
77% of student volunteers indicate that their understanding of other people had increased. Furthermore, volunteering provides a great social opportunity and connect with the community. research showed that 74% of students experienced a wider range of friendship through volunteering.[38]

51%
OF RECENT GRADUATES stated that volunteering helped them to secure employment.[37]

Volunteers also have a

27%
HIGHER LIKELIHOOD OF FINDING A JOB after being out of work than non-volunteers. Furthermore, volunteers with a high-school diploma have a 51 percent higher likelihood of finding employment.[40]

MORE THAN THREE QUARTERS (79%) of volunteers said that their volunteer activities helped them with their interpersonal skills, such as understanding people better, motivating others, and dealing with difficult situations.

JUST OVER TWO THIRDS (68%) of volunteers said they developed better communication skills. 63% of them reported increased knowledge about issues related to their volunteering.[41]

SOCIAL AND EMOTIONAL LEARNING

Social and emotional learning (SEL) is the process for assisting children and adults develop those skills that are indispensable to handle school and work, relationships, and also for their personal development. SEL, or emotional intelligence (EQ) skills are needed to build resiliency, reduce bullying and risk behaviors, and achieving the desired goals. In short, social-emotional skills are foundational to become successful in school, work, and life. It defines how we feel about ourselves, relationships, and the community at large.

Key Components/Skills of SEL

The core components or skills associated with SEL competency are mentioned below[3]:

SELF-AWARENESS
Recognizing strengths, needs, and values; identifying and recognizing emotions; accurate self-perception; self-efficacy

SOCIAL AWARENESS
Empathy; difference recognition; perspective taking; respect for others

SELF-MANAGEMENT
Self-motivation and discipline; impulse control and stress management; goal setting and organizational skills

RESPONSIBLE DECISION-MAKING
Problem identification and situation analysis; problem solving; personal, social, and ethical responsibility; evaluation and reflection

RELATIONSHIP SKILLS
Social engagement, and relationship building; communication, working cooperatively; negotiation, refusal, and conflict management; help seeking

Benefits of SEL

Promoting social and emotional competencies within students can encourage their academic engagement, work ethic, and overall success. Schools that implement programs that improve students' social and emotional competencies can positively affect a broad array of academic and behavioral outcomes.[4] Research indicates that well-planned and well-implemented SEL programming can positively affect a broad range of student social, health, behavioral, and academic outcomes. The review of more than 700 studies published through 2007, which included 207 studies of programs involving 288,000 students showed[5]:

11% increase
in standard tests and academic achievement

9% improvement
in school and classroom behavior (decrease in misbehavior/aggression)

10% decrease
in emotional distress, such as depression and anxiety

23% improvement
in social and emotional skills

9% improvement
in attitudes about self, others, and school

Kindergarten teachers assessed students' social and emotional abilities using a 9-item, 5-point scale. Researchers then examined these students 13 to 19 years later and found that for every 1-point increase in a child's social competence score in kindergarten, he or she was:

54% more likely to earn a HIGH SCHOOL DIPLOMA

2x as likely to attain a COLLEGE DEGREE IN EARLY ADULTHOOD

46% more likely to have a FULL-TIME JOB AT THE AGE OF 25

For every 1-point decrease in a child's social competence score in kindergarten, he or she had a:

67% HIGHER CHANCE OF HAVING BEEN ARRESTED by early adulthood

82% HIGHER RATE OF RECENT MARIJUANA USE

82% higher chance of being in or on a WAITING LIST FOR PUBLIC HOUSING

EQ

LIFELONG LEARNING

Lifelong learning is the voluntary, self-motivated, and ongoing pursuit of knowledge either for developing career skills or for personal enjoyment. The term recognizes that learning is not confined to only childhood or classroom, rather takes place in a range of situations and throughout the life.[1] At present, the lifelong learning skills are indispensable to achieve success in our lives.

Key Components/Skills of Lifelong Learning

As we learn more about education and the needs of our global society, we understand that skills related with following components are and will be the most vital foundational skills lifelong learners need to develop:

EQ
EMOTIONAL INTELLIGENCE

CRITICAL THINKING

CREATIVITY

TECHNOLOGY

COMMUNITY-MINDEDNESS

LITERACY

Benefits of Lifelong Learning

It not only increases social inclusion, personal development, and active citizenship, but also enhances self-sustainability, as well as employability and competitiveness.

At present, the lifelong learning skills are indispensable to achieve success in our lives. Particularly, these skills are vital for every student to become successful.

Employers are also looking for these skills in their potential employees before hiring them. In fact, these 21st century skills become more important due to global competition and increased access to technology, information and different digital tools.[2]

TECHNOLOGY IN EDUCATION

As we embrace the 21st century, effective and responsible technology skills are necessary for every learner, professional, leader, and citizen. Tablets are replacing our textbooks, Google is replacing dictionaries and encyclopedias, and YouTube is replacing manuals. Today information is easily obtainable through smartphone, tablet, or computer. Technology has only begun to transform our everyday lives.[9] Learners need to not only develop digital fluency but also how to recognize when information is needed and have the ability to locate, evaluate, and use effectively valid and reliable information – information literacy. They must also use technology and information effectively and responsibly.

Key Components/Skills of Educational Technology

The major components or skills of using technology in education are mentioned below[10]:

PROMOTING AND DEMONSTRATING the effective use of digital resources and tools

FACILITATING student experiences that advance learning, creativity and innovation in face-to-face and virtual environments

DESIGNING, DEVELOPING, AND EVALUATING digital-age, authentic learning experiences and assessment incorporating contemporary resources and tools

DEMONSTRATING fluency in technology and its use to apply this knowledge to new technologies and situations

USING TECHNOLOGY to collaborate with students, peers, parents, and community members

ACHIEVING AND UNDERSTANDING of the global and local societal issues and responsibilities in an evolving digital culture

Benefits of Technology in Education

The following study results reveal the true benefits of using technology in education:

STUDENTS WHO USED COMPUTER-BASED INSTRUCTION SCORED AT THE 64TH PERCENTILE ON TESTS OF ACHIEVEMENT compared to students in the controlled conditions without computers scored at the 50th percentile.[11]

3.2 POINTS
The consequence of employing wireless handheld technology by students on academic performance SHOWED THAT STUDENTS WITH WIRELESS HANDHELD DEVICES earned final grades that were an average of 3.2 points higher than those without devices.[12]

70% vs **30%**
A study on writing and essay found that students who used a computer rather than pencil and paper performed better. NEARLY 70 PERCENT OF THE STUDENTS who took the computer-based test performed "adequately" compared to only 30 percent with paper and pencil.[13]
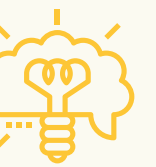
MORE THAN 70%
OF TEACHERS
In Maine, of the teachers surveyed reported that laptops helped them to more effectively meet curriculum goals and individualize their curriculum.

MORE THAN 75 PERCENT OF TEACHERS reported that laptops helped them meet state standards.

MORE THAN 80 PERCENT OF TEACHERS indicated increased student engagement, active learning,and assignment quality.[14]

IN A 2004 SURVEY OF SCHOOL LEADERS

74% say technology provides timely data for decision making;

71% say it improves administrators' productivity;

71% say it improves support staff efficiency;

61% say it increases teacher productivity.[15]

70% say it improves communications among parents, teachers and the community;

A study of Algebra I found that students who used a software tutor performed better than those who did not.

85% students performed better on average.

Students were also

69% more likely to pass traditional geometry and

71% more likely to pass traditional algebra ii.[16]

CREATIVITY/ INNOVATION

Creativity is the capability of producing original and unusual ideas, or to make something imaginative or new. Creativity is concerned with producing ideas that are unique and useful in order to solve problems and exploit opportunities.[24] However, innovation deals with bringing change into a relatively stable system. It is concerned with the work needed to make a creative idea viable.[25] In fact, there is no innovation without creativity. In the evolving global economy, creativity and innovation are the keys to success.

Key Components/Skills of Creativity/Innovation

According to creativity experts, four skills or competencies are essential for creativity/innovation[26]:

CAPTURING preserving novel ideas

CHALLENGING giving ourselves tough problems to solve

BROADENING enhancing creativity by learning interesting and new things

SURROUNDING associating with diverse ideas and people

Benefits of Creativity/Innovation

In the present context, companies that have excelled in an increasingly competitive business environment are those that are most creative and innovative. They always try to introduce new applications, products, or services in the market.[27] Hence, according to Boston Consulting Group, creativity and innovation are the number one strategic priorities for organizations around the world.[28] Some of the other key benefits of creativity and innovation in the businesses are[29]:

IMPROVED PRODUCTIVITY | INCREASED COMPETITIVENESS | REDUCED COSTS | IMPROVED BRAND RECOGNITION AND VALUE | INCREASED TURNOVER AND IMPROVED PROFITABILITY | NEW PARTNERSHIPS AND RELATIONSHIPS

Furthermore,

76% people in the U.S. believe that being creative is valuable to the society, while

85% of them consider creativity as the key to driving economic growth.

84% people in the U.S. also believe that creativity enables them to make a difference in their lives & the lives of others.[30]

Another study conducted by IBM revealed that about

60% of the CEOs consider creativity as the most important leadership quality.[31]

According to the Adobe's 2016 global study, global respondents believe being creative is valuable to

70% society
people who identify as creators report a household income that is 13 percent higher than non-creators. 85% of U.S. respondents say creativity makes them better leaders, parents and students.[32]

64% economy

In a survey by Robert Half,

35% of chief financial officers said the greatest roadblock to organizational breakthroughs is a lack of innovative ideas.[32]

LITERACY

Today, literacy is more than just reading and writing. It is also knowing how to learn and know and to effectively process information. Students should be able to understand concepts as tools, which can be used for solving real-world problems. They should also be able to identify new ways to see and know the world through these literacy skills. As science has become the primary tool acquire new knowledge, students should also be exposed to major scientific methodologies: qualitative and quantitative. Most consider literacy as the foundation of lifelong learning that can lead to success in life.

Essential Components of a Literacy Program

Effective literacy development includes six basic components[43]:

PHONEMIC AWARENESS | PHONICS | VOCABULARY | FLUENCY

COMPREHENSION | WRITING

However, in the 21st century, students need to know more and be able to do more than they did in the past. They should also acquire supplemental literacy skills: critical thinking, scientific reasoning, and multicultural awareness.[44]

Benefits of Literacy Skills

Literacy skills can be vital for students in the following ways:

Academic success:
Literacy skills can help a student gain academic success. The single most important factor in foreseeing later academic achievement is that children start school with a mastery of literacy concepts and math skills.

By the age of 2, children who are read to regularly display greater language comprehension, larger vocabularies, and higher cognitive skills than their peers.

50% more rare words
Children's books actually contain 50% more rare words than primetime television or even college students' conversations.

Improved literacy can reduce poverty and crime.
Conversely, 2 out of 3 of students who cannot read expertly by the end of 4th grade will end up in jail or on welfare. Furthermore, 70%+ of inmates in America are unable to read above a 4th grade level.

Social and civic job
Another study reveals that literacy skills not only enhance the likelihood of the academic and economic successes of an individual, but also awaken the social and civic sense of that person and encourage him/her to behave positively.

Corporate goals:
Enhanced literacy include reducing unemployment and unleashing the potential of individual employees, cementing stronger labor management relations, better team performance, and moving the entire company toward achieving the corporate goals.