Academic STUDIO
Applying design thinking in High Education

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Exhibit 1: Students require 16 skills for the 21st century

21st-Century Skills

Foundational Literacies: How students apply core skills to everyday tasks
1. Literacy
2. Numeracy
3. Scientific literacy
4. ICT literacy
5. Financial literacy
6. Cultural and civic literacy

Competencies: How students approach complex challenges
7. Critical thinking/problem-solving
8. Creativity
9. Communication
10. Collaboration

Character Qualities: How students approach their changing environment
11. Curiosity
12. Initiative
13. Persistence/grit
14. Adaptability
15. Leadership
16. Social and cultural awareness

Top 10 skills in 2020
1. Complex Problem Solving
2. Critical Thinking
3. Creativity
4. People Management
5. Coordinating with Others
6. Emotional Intelligence
7. Judgment and Decision Making
8. Service Orientation
9. Negotiation
10. Cognitive Flexibility

Source: Future of Jobs Report, World Economic Forum

LT stands for information and communications technology.
Exhibit 3: A variety of general and targeted learning strategies foster social and emotional skills

**Social and cultural awareness**
- Foster greater respect and tolerance for others
- Encourage empathy
- Foster cultural self-awareness

**Critical thinking/problem-solving**
- Give constructive feedback

**Competencies**

**Creativity**
- Offer opportunities to build and innovate
- Provide autonomy to make choices

**Communication**
- Create a language-rich environment

**Leadership**
- Foster the ability to negotiate
- Encourage empathy

**Adaptability**
- Foster the ability to process emotions
- Practise both flexibility and structure

**Collaboration**
- Foster greater respect and tolerance for others
- Provide opportunity for group work

**Persistence/grit**
- Build in opportunities to learn from failure

**Character qualities**

**How to teach all skills**
- Encourage play-based learning
- Break down learning into smaller, coordinated pieces
- Create a safe environment for learning
- Develop a growth mindset
- Foster nurturing relationships
- Allow time to focus
- Foster reflective reasoning and analysis
- Offer appropriate praise
- Guide a child’s discovery of topics
- Help children take advantage of their personality and strengths
- Provide appropriate challenges
- Offer engaged caregiving
- Provide clear learning objectives targeting explicit skills
- Use a hands-on approach

**Curiosity**
- Encourage questions/guessing
- Provide autonomy to make choices
- Instil sufficient knowledge to ask questions and innovate
- Evoke contradiction

**Initiative**
- Provide long-term, engaging projects
- Build confidence in the ability to succeed
- Provide autonomy to make choices
The STUDIO:
Gathering
Observing
Searching
Working
Creating
Prototyping
Brainstorming
Experimenting
Trying new
Mixing
Mingling
Planning
Executing
STUDIO:

Presenting
Critical thinking
Reflection
Review by peers
Concept Skills
STUDIO:

Creative leadership
Spatial Coherence
Future trends forecast
Need hunting and finding
Social Empathy
Emotional sensitivity
Ethical stability
Sustainable awareness
Self Ego Management
Team Flow
Design Thinking
SKILLS IN DESIGN THINKING PROCESS

1. COMPLEX PROBLEM SOLVING
2. CRITICAL THINKING
3. CREATIVITY
4. PEOPLE MANAGEMENT
5. COORDINATING WITH OTHERS
6. EMOTIONAL INTELLIGENCE
7. JUDGMENT AND DECISION MAKING
8. SERVICE ORIENTATION
9. NEGOTIATION
10. COGNITIVE FLEXIBILITY

- NEED FINDING
- QUESTIONING THE NOW
- IDEATION
- TEAMWORK
- STAKEHOLDERS AND TEAM
- EMPATHY TO THE USER
- CONCEPT GENERATION AND GATES
- ECO-SYSTEM DESIGN
- APPLICATION PROCESS
- VALIDATION AND PIVOT