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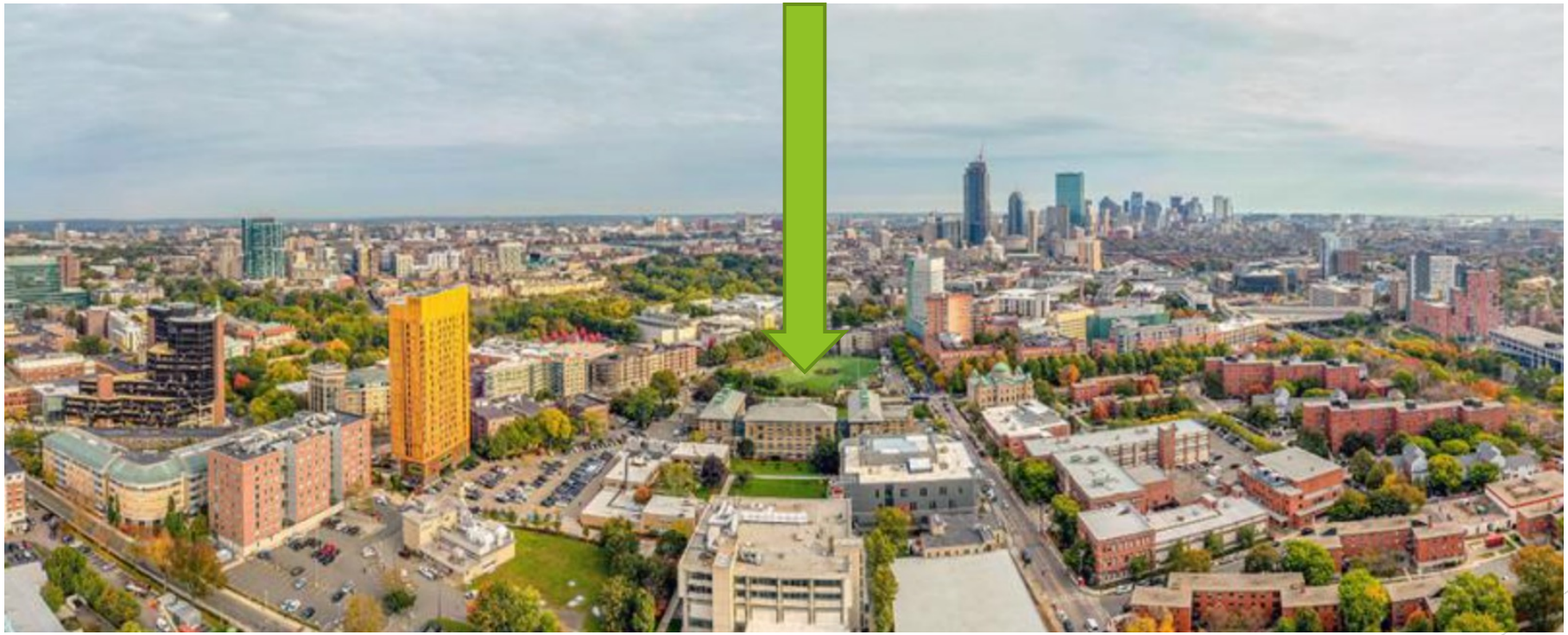
## Digital Self-Identity Part B:
## Five Additional Skills Needed for 2025 and Beyond

Professor of Management, Operations, and Project Management

# Wentworth Institute of Technology
# Boston, MA
# School of Management

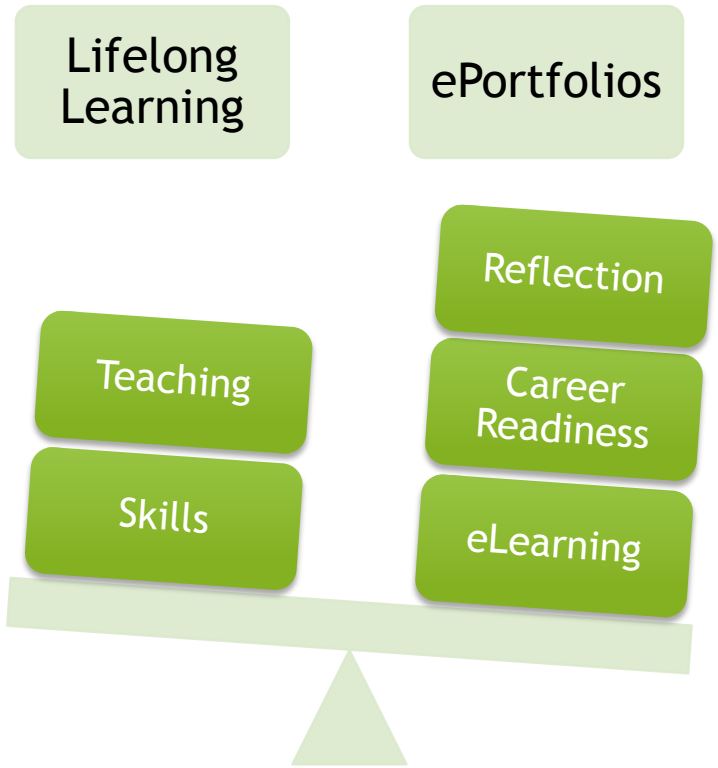


# What This Presentation Is About

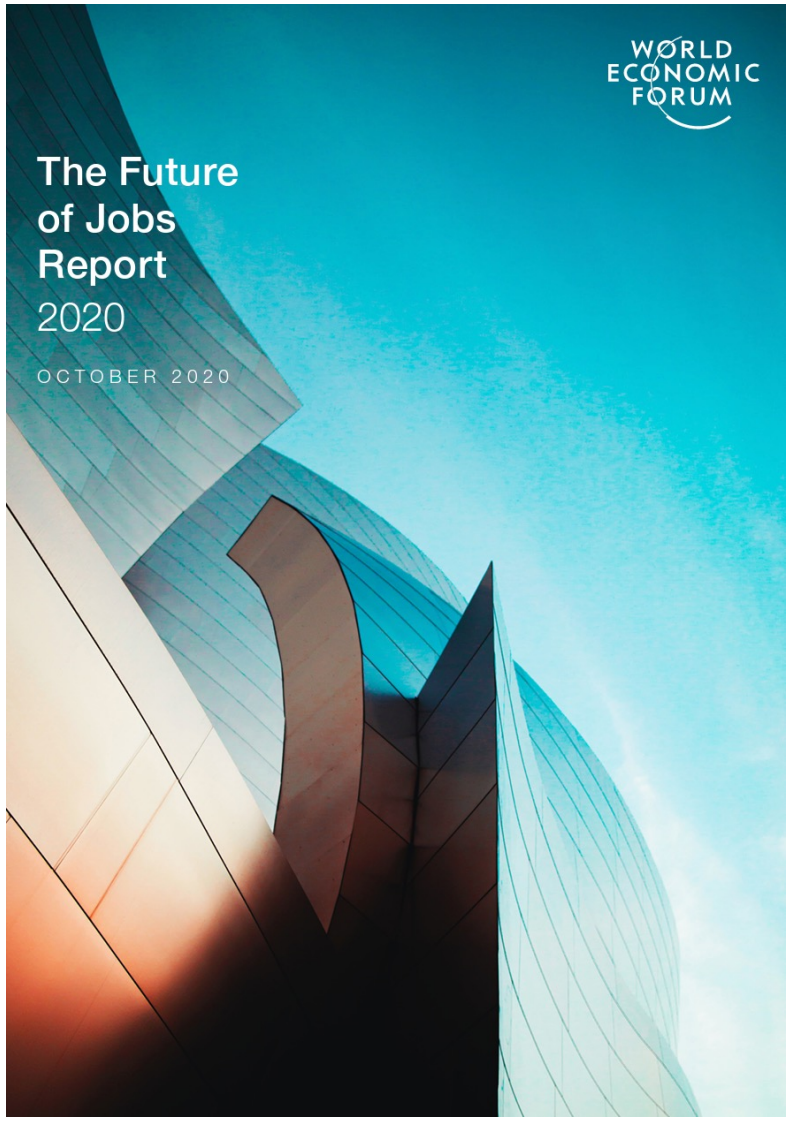
- Assessment of Student Work
- Lifelong Learning
- Career Readiness
- ePortfolios
- Top Skills Needed for 2025 and Beyond (World Economic Forum)
- Connected Research
- Curriculum Review
- Outcome: A Short Review of Student ePortfolios
- Needed Improvements for our Program

# Business Management Student ePortfolios (Current Requirements)

- Research
- Writing
- Group Dynamics
- Leadership
- Professional Development
- Communication



# World Economic Forum




# Skills Description

| Skill | World Economic Forum Definition |
|---|---|
| 1. Analytical thinking and innovation | • analyzing information and and using logic to address work-related issues and problems<br>• creating and alternative thinking to develop new ideas for answers to work-related problems |
| 2. Active learning and learning strategies | • understanding and using new information for both current and future problem-solving and decision-making<br>• selecting and using training/instructional methods and procedures appropriate for the situation when learning or teaching new things |
| 3. Complex problem-solving | • identifying complex-problems and reviewing related information to develop and evaluate options and implement solutions |
| 4. Critical thinking and analysis | • using logic and reason to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems<br>• monitoring/assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action |
| 5. Creativity, originality, and initiative | • willing to take on responsibilities and challenges |
| 6. Leadership and social influence | • willing to lead, take charge and offer opinions and direction |
| 7. Technology use, monitoring and control | • determining tools and equipment needed<br>• controlling operations of equipment or systems<br>• watching gauges, dials, or other indicators to make sure a machine is working properly<br>• analyzing needs and product requirements to create a design |
| 8. Technology design and programming | • writing computer programmes for various purposes<br>• generating or adapting equipment and technology to serve user needs |
| 9. Resilience, stress tolerance, and flexibility | • being open to change<br>• maintain composure, keeping emotions in check, controlling ager and avoiding aggressive behavior, even under difficult situations<br>• accepting criticism and dealing calmly and effectively with high stress situations |
| 10. Reasoning, problem-solving and ideation | • influencing the application and manipulation of information in problem-solving<br>• influencing the solution of problems involving mathematical relationships |

Table 1: The Top 10 Skills Needed for 2025 and Beyond (The Future of Jobs Report 2020)

# Skills and Categories (Whiting Research)

| Skill Area | Problem Solving | Self Management | Working with People | Technology use and Development |
|---|---|---|---|---|
| 1. *Analytical thinking and innovation* | X | | | |
| 2. *Active learning and learning strategies* | | X | | |
| 3. *Complex problem-solving* | X | | | |
| 4. *Critical thinking and analysis* | X | | | |
| 5. *Creativity, originality, and initiative* | X | | | |
| 6. *Leadership and social influence* | | | X | |
| 7. *Technology use, monitoring and control* | | | | X |
| 8. *Technology design and programming* | | | | X |
| 9. *Resilience, stress tolerance, and flexibility* | | X | | |
| 10. *Reasoning, problem-solving and ideation* | X | | | |

Table 2: Top Ten Skill Categories and Areas (Whiting, 2020)

*See Stevens Previous Published Article: https://aaeebl.org/wp-content/uploads/2021/12/AEPR_Volume-5_Issue-1_Winter_2021.pdf

# Five Additional Skills

| Skill | World Economic Forum Definition |
|---|---|
| 11. Emotional intelligence (EI) | • Being sensitive to others' needs and feelings and being understanding and helpful<br>• Being pleasant with others on the job and displaying a good natured, cooperative attitude<br>• Preferring to work with others rather than alone, and being personally connected with others on the job |
| 12. Persuasion and negotiation | • Bringing others together and trying to reconcile differences<br>• Persuading others to change their minds or behavior |
| 13. Systems analysis and evaluation | • Considering costs and benefits<br>• Determining how a system should work<br>• Identifying measures or indicators of system performance |
| 14. Troubleshooting and user experience | • Determining causes of operating errors and deciding what to do about them |
| 15. Service Orientation | • Looking for ways to help people |

# Short Review of Literature

| Author | Color |
|---|---|
| Herpertz | |
| Iliescu et al | |
| Artinger, Vulkan, & Shem-Tov, | |
| Sakamoto | |
| Zohar | |
| Arnold & Wade | |
| Gillott, Joyce-Gibbons, & Hidson | |
| Zarestky et al | |
| Popli & Rizvi | |
| Botelho | |


Figure 1: Definition Comparison to the 2020 World Economic Forums' Skills 11-15

# Connection to Whiting

| Whiting's Categories | Problem Solving | Self-Management | Working with People | Technology Use and Development |
|---|---|---|---|---|
| **Literature Review Associated Definitions** | **Arguing Reasoning Problem Solving Conflict Resolution** | **Expressing & Regulating Emotion Visual Appearance Self-Reflection Metacognition** | **Leadership Trust Building Active Listening Understanding Human Behavior Communication Mentoring Social Awareness** | **Process Thinking** |
| Emotional intelligence | X | X | X | |
| Persuasion and negotiation | X | X | X | |
| Systems analysis and evaluation | X | | | X |
| Troubleshooting and user experience | X | | | X |
| Service Orientation | X | X | X | |

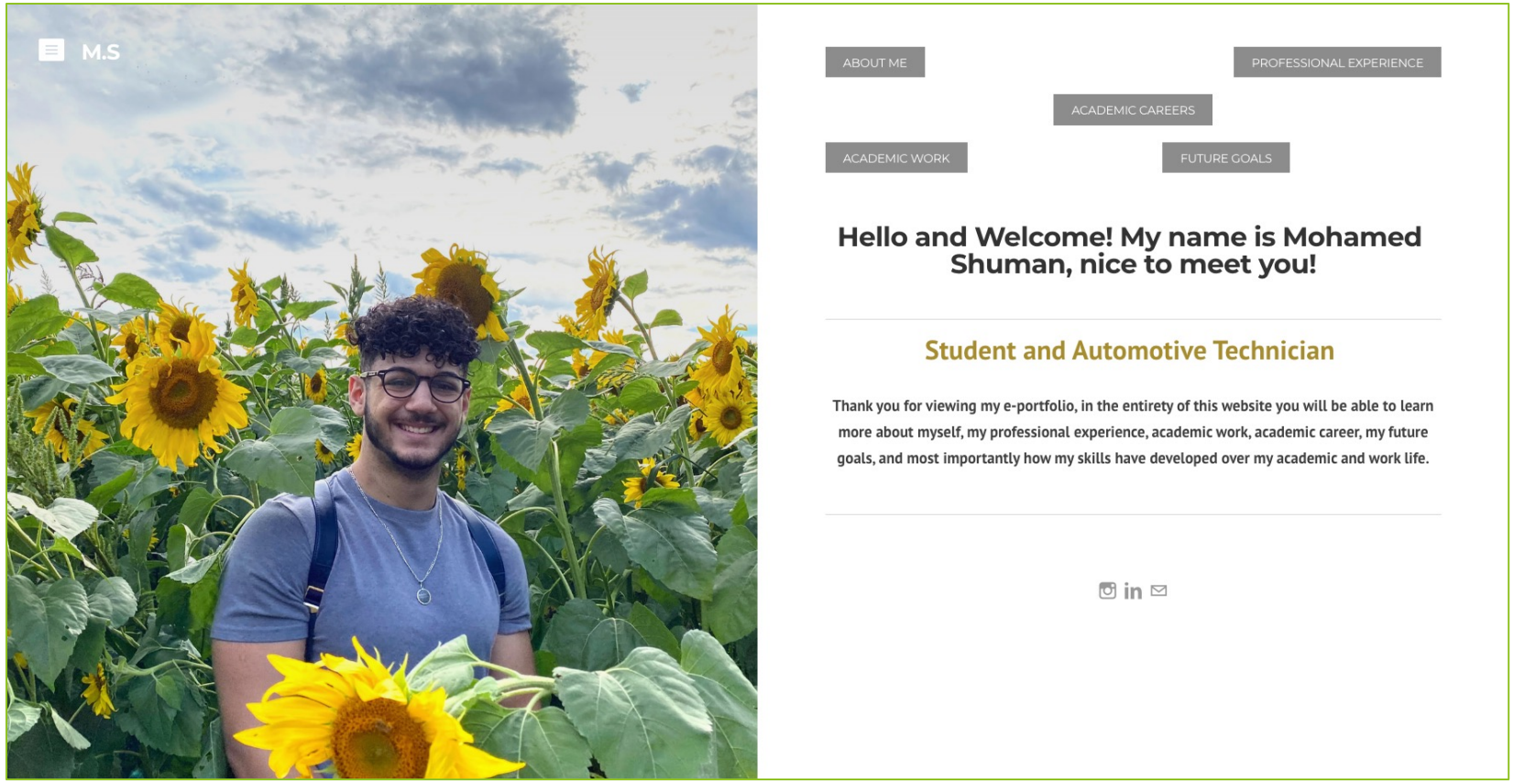
Researched Areas Can Fall in Multiple Categories

Interconnected

# Student 1


KENTO SCHAAF'S ELECTRONIC PORTFOLIO
Welcome!
About Me
Education
Artifacts
Leadership
Co-Op
Future Endeavors
Contact
Kento Schaaf
Welcome to my Electronic Portfolio!

# Student 2


M.S
ABOUT ME
PROFESSIONAL EXPERIENCE
ACADEMIC CAREERS
ACADEMIC WORK
FUTURE GOALS
Hello and Welcome! My name is Mohamed Shuman, nice to meet you!
Student and Automotive Technician
Thank you for viewing my e-portfolio, in the entirety of this website you will be able to learn more about myself, my professional experience, academic work, academic career, my future goals, and most importantly how my skills have developed over my academic and work life.

# Student 3

## Electronic Portfolio

Welcome to my Electronic Portfolio! On this website you will find various portfolios from my work/projects at Wentworth Institute of Technology of Technology, photos which I've taken around the world, and various recipes!

Please click the tabs above to get started!

# Student 4


YIANNI PAPADOPOULOS
HOME
PROFESSIONAL EXPERIENCE
COMMUNITY INVOLVEMENT
ACADEMIC PROJECTS
HOBBIES & PASSIONS
CONTACT
Welcome to my E-Portfolio!
For the last four years I have attended Wentworth Institute of Technology pursuing a degree in Business Management with a concentration in Entrepreneurship. This e-portfolio showcases my professional experiences, community involvement, samples of academic work, along with a sneak peek in my hobbies & passions
YIANNI PAPADOPOULOS
B.S Business Management

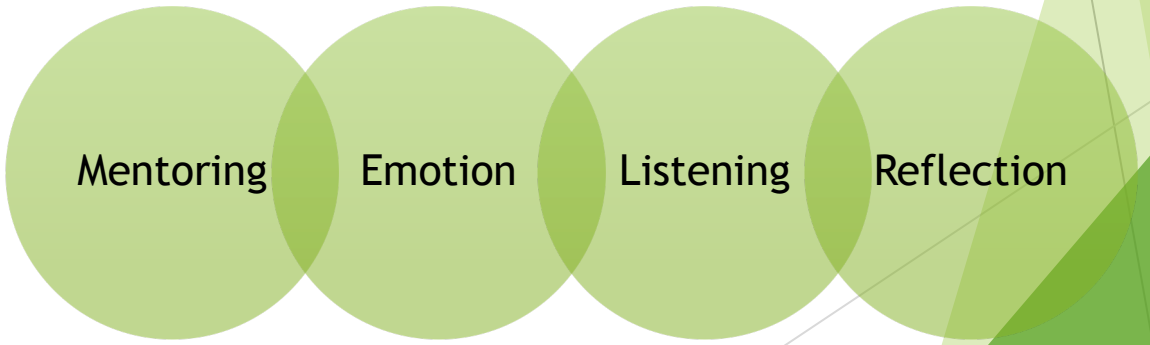
# Detecting Five Additional Skills Within Student ePortfolios

| Skill Area | Problem Solving | Self-Management | Working with People | Technology Use and Development |
|---|---|---|---|---|
| Emotional intelligence | ✓ RAMP Program Coordinator | ✓ RAMP Mentor Program | ✓ Spending time with friends playing golf<br>✓ MIDAS Mentor Program<br>✓ Co-Op | |
| Persuasion and negotiation | ✓ Ethics Artificial Intelligence Research Argumentative Paper | ✓ RAMP Mentor Program | ✓ MIDAS Mentor Program | |
| Systems analysis and evaluation | ✓ Inventory Specialist | | | ✓ Technology Acquisition Project<br>✓ Co-Op |
| Troubleshooting and user experience | ✓ Technology Acquisition Project<br>✓ Lean Six Sigma Project<br>✓ RAMP Project Coordinator | | | ✓ Co-Op |
| Service Orientation | ✓ MIDAS Mentor Program | ✓ Commuter Assistant | ✓ Operations Management Case Study Group Work<br>✓ RAMP Mentor Program<br>✓ Co-Op | |

Table 3: 2022 Business Management ePortfolio Review- Kento

# A Few Direct Examples

- Mentoring: Kento served as a RAMP mentor providing feedback on the organization's food insecurity program.
  - Included an analysis of new delivery sites.
  - This display of digital identity fits the skill area of problem solving/working with people.
- Expressing and Regulating Emotion/Arguing: Evan provided evidence of working in his family restaurant in the customer service area.
  - Solve problems, negotiate customer complaints and more.
  - Remain professional under stressful circumstances.
  - This display of digital identity fits the skill area of problem solving, self-management, and working with people.
- Active Listening: Yianni indicated in his ePortfolio that he works as a Product Zone Apple Specialist.
  - Listen to the explanation of the problem from the customer, troubleshoot and then evaluate the customer experience.
  - Displays process thinking, which falls under technology use and development as well.
- Self-Reflection: All four students reflected on every aspect of their ePortfolios. This indicates a certain level of metacognition.

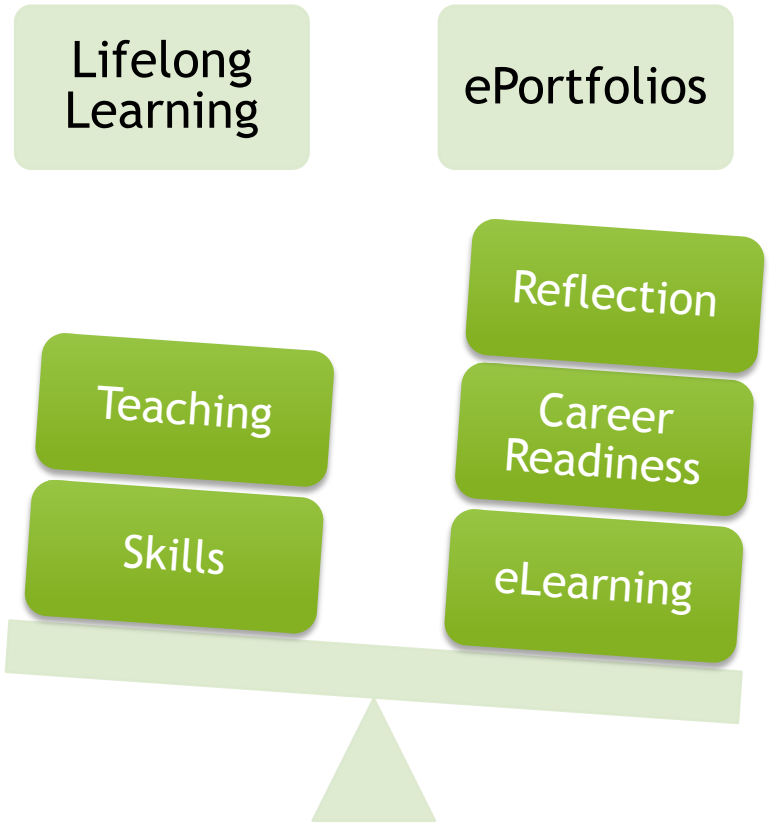


# Outcomes

- Reviewer's Perspective
  - World Economic Forum's definitions need to be expanded
  - Additional research to further expand definitions and ideas
  - Top 15 World Economic skills can be detected in the student's ePortfolios
    - This paper focused on 11-15
  - Keep our curriculum the same
  - Add focus on technology use and development

- Reviewer's Perspective
  - Remaining five skills needed are more advanced and interconnected
  - Remaining five skills connect to the top ten.
  - A certain level of metacognition can be detected via student reflection
  - A rubric or KPI measurement (Likert) would be a great next step

# Outcome= Questions (Circle Back)




- How are we doing from the World Economic Forum's perspective?
  - Larger Picture?
- Do we teach to the top 15?
  - Teach to the test so to speak?
- Do we continue our path to see if we can assess/detect the top 15?
  - Develop KPIs?
  - Rubrics (Likert)?
  - If we can detect does that mean an employer can?
    - Outside reviewers?

# What's Next- Beyond The Questions

- Review our curriculum to brainstorm additional learning skill opportunities:
  - Systems analysis and evaluation
  - Troubleshooting and user experience
    - New projects
    - Group activities
    - Technological design and programming
    - Certificates and licenses
- Look at behaviorist, cognitivist, or constructivist learning opportunities
- Review the outcome questions to keep moving forward- New Ideas

# Q & A

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