“Engineering” Connections in Today’s Classrooms

Your Facilitators:
Dr. Frances Tuer, DeGroote School of Business
Dr. Carlos Filipe, Faculty of Engineering
Agenda

• Why connections matter
• Connecting in large classes versus small classes
• Forging connections between diverse individuals
• Avoiding the curse of “social loafing” through self-managed teams
Why Connections Matter: Selected Research

• Emotional engagement and student achievement and learning (Sayagadevan & Jeyaraj, 2012)

• Erosion model and social influence (Feeley & Barnett, 1997)

• Effect of single faculty-student connection (Kommaritu, 2010)

• Disconnection in large classes (O’Brien, 2002)

• Student perceptions of instructor and course evaluation (e.g. Ambady & Rosenthal, 1993; Clayson & Sheffet, 2006)
Faculty-Student Connection

Why they do connect with you

• Need for achievement/specific goals
• Need for affiliation
• Need for sponsorship
• Availability
• Interactional justice and likeability

Why they don’t connect with you

• Substitute goods/services
• Surface-level diversity, including gender bias
• Perceptions of competence
• Perceptions of warmth
• Time management
• Social anxiety
• How you dress
Social Cognition: Perceptions of Others

• Are influenced by:

1. The perceiver
2. The target
3. The situation

Perception → Attitude → Behaviour
What Way(s) of Connecting Have You Tried?

Category A: Works like a charm, every time you use it/them? AKA “student whisperer”

Category B: Used to work, but does not work so well anymore? AKA “my powers are fading”

Category C: Didn’t work the first time, so you never tried it again? AKA the “crash and burn”
Connection and Class Size

Small Classes
• Visible – no hiding
• Can use mechanisms such as:
  • Class discussion
  • Experiential learning
  • Eye contact
  • Movement around classroom

Large classes (> 100), Mega classes (>300)
• Just one face in the crowd
• SET goes down as class size increases
• Have to rely on mechanisms such as:
  • Useful content
  • Interesting delivery
  AKA “sizzle and the steak”
Today’s Multimedia Teaching versus “Chalk and Talk”

- Multimedia means using both:
  - Auditory channel
  - Visual channel

- Desirable difficulty

- Presentation graphics and students’ classroom experience (Apperson, Laws, & Scepansky, 2006)
Connection and Demographic Differences

• Gender differences (e.g. Burns-Glover & Veith, 1995; Sprague & Missoni, 2005)

• Generational Values

• Cultural Values
Generational Values

<table>
<thead>
<tr>
<th>Generation</th>
<th>Percentage of Workforce</th>
<th>Assets in the Workplace</th>
<th>Leadership Style Preferences</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Traditionalists</strong>&lt;br&gt;Born 1922–1945</td>
<td>8%</td>
<td>Hard working, stable, loyal, thorough, detail-oriented, focused, emotional maturity</td>
<td>Fair, consistent, clear, direct, respectful</td>
</tr>
<tr>
<td><strong>Baby Boomers</strong>&lt;br&gt;Born 1946–1964</td>
<td>44%</td>
<td>Team perspective, dedicated, experienced, knowledgeable, service-oriented</td>
<td>Treat as equals, warm and caring, mission-defined, democratic approach</td>
</tr>
<tr>
<td><strong>Generation X</strong>&lt;br&gt;Born 1965–1980</td>
<td>34%</td>
<td>Independent, adaptable, creative, techno-literate, willing to challenge the status quo</td>
<td>Direct, competent, genuine, informal, flexible, results-oriented, supportive of learning opportunities</td>
</tr>
<tr>
<td><strong>Millennials</strong>&lt;br&gt;Born 1981–2000</td>
<td>14% increasing rapidly</td>
<td>Optimistic, able to multitask, tenacious, technologically savvy, driven to learn and grow, team-oriented, socially responsible</td>
<td>Motivational, collaborative, positive, educational, organized, achievement-oriented, able to coach</td>
</tr>
</tbody>
</table>
Generation Z Are Here!

- Generation Z (iGeneration) Born 1993 and after
- “digital natives” with “lawnmower parents”
- “New Realists”
- Want to be both “managed and mentored” (Randstad/Ipsos-Reid, 2014)
- Different values than Generation Y (Millenials)
7 Personality Traits That Define Gen Z

1. Pragmatic: 60% say they want a long career with one company.
2. Competitive: Almost 1/2 consider themselves very competitive.
3. Connected: 78% prefer face-to-face communication with work and bosses.
4. Socially Responsible: 93% say that a company’s impact on society affects their decision to work there.
5. Customizers: No limit of ideas, but 1/2 would rather get a job than create one.
6. Plugged In: 44% check in on social media at least hourly.
7. Self Reliant: Even though 77% say personal relationships with co-workers are important, many prefer to learn at their own pace.

Developmental Influences:
- Great Recession
- Climate Change
- LGBT Rights
- Mass Shootings
- Declining Middle Class
- First Black President
- Global Terrorism

Download the report at i4cp.com
<table>
<thead>
<tr>
<th>Generation Z ranking</th>
<th>End Values</th>
<th>Generation Y Ranking (Millennials)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Health</td>
<td>3</td>
</tr>
<tr>
<td>2</td>
<td>Family security</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>Freedom</td>
<td>6</td>
</tr>
<tr>
<td>4</td>
<td>A comfortable life</td>
<td>1</td>
</tr>
<tr>
<td>5</td>
<td>Self-respect</td>
<td>8</td>
</tr>
<tr>
<td>6</td>
<td>True friendship</td>
<td>4</td>
</tr>
<tr>
<td>7</td>
<td>A sense of accomplishment</td>
<td>7</td>
</tr>
<tr>
<td>8</td>
<td>An exciting life</td>
<td>10</td>
</tr>
<tr>
<td>9</td>
<td>Equality</td>
<td>15</td>
</tr>
<tr>
<td>10</td>
<td>Wisdom</td>
<td>5</td>
</tr>
<tr>
<td>11</td>
<td>Mature love</td>
<td>9</td>
</tr>
<tr>
<td>12</td>
<td>Pleasure</td>
<td>12</td>
</tr>
<tr>
<td>13</td>
<td>Inner Harmony</td>
<td>16</td>
</tr>
<tr>
<td>14</td>
<td>A world at peace</td>
<td>11</td>
</tr>
<tr>
<td>15</td>
<td>Social recognition</td>
<td>14</td>
</tr>
<tr>
<td>16</td>
<td>National security</td>
<td>18</td>
</tr>
<tr>
<td>17</td>
<td>A world of beauty</td>
<td>17</td>
</tr>
<tr>
<td>18</td>
<td>Salvation</td>
<td>13</td>
</tr>
<tr>
<td>Generation Z Ranking</td>
<td>Instrumental Values</td>
<td>Generation Y (Millennial) Ranking</td>
</tr>
<tr>
<td>----------------------</td>
<td>--------------------------</td>
<td>----------------------------------</td>
</tr>
<tr>
<td>1</td>
<td>Honesty</td>
<td>3</td>
</tr>
<tr>
<td>2</td>
<td>Ambition</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>Loyalty</td>
<td>9</td>
</tr>
<tr>
<td>4</td>
<td>Responsibility</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>Courage</td>
<td>12</td>
</tr>
<tr>
<td>6</td>
<td>Independence</td>
<td>5</td>
</tr>
<tr>
<td>7</td>
<td>Self-control</td>
<td>8</td>
</tr>
<tr>
<td>8</td>
<td>Intellectualism</td>
<td>11</td>
</tr>
<tr>
<td>9</td>
<td>Logic</td>
<td>13</td>
</tr>
<tr>
<td>10</td>
<td>Ability to love</td>
<td>2</td>
</tr>
<tr>
<td>11</td>
<td>Capability</td>
<td>6</td>
</tr>
<tr>
<td>12</td>
<td>Broad mindedness</td>
<td>10</td>
</tr>
<tr>
<td>13</td>
<td>Forgiveness</td>
<td>17</td>
</tr>
<tr>
<td>14</td>
<td>Helpfulness</td>
<td>14</td>
</tr>
<tr>
<td>15</td>
<td>Politeness</td>
<td>15</td>
</tr>
<tr>
<td>16</td>
<td>Imagination</td>
<td>18</td>
</tr>
<tr>
<td>17</td>
<td>Cleanliness</td>
<td>7</td>
</tr>
<tr>
<td>18</td>
<td>Obedience</td>
<td>16</td>
</tr>
</tbody>
</table>
What Have You Noticed in Terms of How Students Have Changed Over Time?

• In-class behaviour?

• Out-of-class behaviour?

• Attitudes?

• Goals and values?
Connecting Across the Generation Gap

- Co-opt technology and social media
- Put “mystery shoppers” in your class
- Update your examples
- Review your jokes
- Consider blended learning
- YouTube is your friend
- Shorten up response time to queries
Cross-Cultural Connection Challenges

• Culture: shared values and beliefs → attitudes → behaviour
• Misunderstandings, conflict, disengagement, often don’t get second chance
• Hofstede model of cultural values
  • Based on studies of IBM
  • 5 dimensions
    • Power distance
    • Uncertainty Avoidance
    • Individualism versus collectivism
    • Masculinity versus femininity
    • Long-term versus short-term orientation
Connecting Across the Cultural Divide

• Language issues
• Cultural differences

• What have you run into?
• What have you tried that works?
Summary

• “We’re not in Kansas anymore, Toto” (Wizard of Oz, 1939)

• Ignore student changes at your peril

• Increase your job satisfaction and outcomes by finding a middle ground