REFLECTIVE WRITING & SELF-ASSESSMENT IN AN UNDERGRADUATE MEDICAL EDUCATION ANATOMY COURSE

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MENTOR: Bruce Campbell MD
BACKGROUND

- Character development depends on **critical reflection** of strengths and weaknesses in the areas of professionalism and emotional intelligence.

- Reflective writing allows students to **analyze and judge** what will or has happened.

- Medical students need to **evaluate themselves** clearly to care for themselves & patients.

- **Hypothesis**: Medical students that use reflective writing and self assessment will show development in areas related to professional identity formation (team-work, well-being and emotional intelligence) which may reduce issues related to depression, anxiety, and stress.
METHODS:

EXPERIMENTAL DESIGN

Week 1: REFLECTIVE WRITING

Week 2-3: REFLECTION FEEDBACK

Week 3-4: SELF-ASSESSMENT & SMART GOALS

Week 5: SELF-ASSESSMENT FEEDBACK

End of course

- Student perception & preference Survey
- Data coding & statistical analysis
- Exam performance compared to MKE peers

M1 students MCW-CW 2018-19
METHODS:

OUTCOMES/AIMS

- Impact of reflective writing & self-assessment on:
  - Achievement of course objectives
  - Learner development in emotional intelligence, teamwork and well-being
- Student feedback on best practices for reflective writing & self-assessment in future applications
One reflective response per prompt

- 4 assignments throughout semester (1 per block)
- Example prompts:
  - What do you hope to learn about yourself and your teammates?
  - How will you be challenged in this process?
  - How is this going to make you a better practitioner?
- Instructor feedback
- Qualitative analysis of reflections
  (themes = teamwork, emotional intelligence, well-being)
- Survey
RESULTS: EMOTIONAL INTELLIGENCE

<table>
<thead>
<tr>
<th>Block</th>
<th>Code Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Adjusting to school</td>
</tr>
<tr>
<td></td>
<td>Empathy toward cadaver</td>
</tr>
<tr>
<td>2</td>
<td>Building confidence</td>
</tr>
<tr>
<td></td>
<td>Learning from mistakes</td>
</tr>
<tr>
<td>3</td>
<td>Preferred role on a team</td>
</tr>
<tr>
<td></td>
<td>Goal of self discipline</td>
</tr>
<tr>
<td>4</td>
<td>Working through perfectionism</td>
</tr>
<tr>
<td></td>
<td>Gratitude for “first patient”</td>
</tr>
</tbody>
</table>

Emotional Intelligence Code Frequency

- Social Skills
- Empathy
- Motivation
- Self Regulation
- Self Awareness
RESULTS: TEAMWORK

Block 1
Hope to learn to “work together”
Skeptical of teamwork

Block 2
Teammate strengths/weaknesses
Team bonding

Block 3
Functioning as a team
Balancing strengths/weaknesses

Block 4
Importance of trust on a team!
RESULTS: WELL-BEING

Block 1: Dealing with death
- Acquiring new skills

Block 2: Support system vs. study time
- Self-care goals

Block 3: Limited time with loved ones
- Dealing with personal loss

Block 4: Ideal work environment

Well-Being Code Frequency

- Spiritual
- Career
- Intellectual
- Social
- Community
- Financial
- Physical
RESULTS:

EXAM PERFORMANCE

Lecture Exams:

Lab Exams:

* = statistically significant (p < 0.05)
RESULTS:

REFLECTIVE WRITING SURVEY

Do you consider self-reflection to be a new skill when you started CHA?

Would you recommend continuing reflective writing assignments in CHA?

15/21 learners in cohort completed these questions on the survey = 71%
Self Assessments asked learners to:

- Complete a brief emotional intelligence inventory
  - Influence of reflective writing on: self-awareness, self-regulation, motivation, empathy, and social-skill
  - Scale 1-7, 1 = extremely negative; 7 = extremely positive

- List up to 3 specific personal growth fronts
  - Example: My growth fronts are team-work, self-care and wellness

- Develop one SMART goal
  - Based on reflective/self assessment process
  - SMART goals are:
    Specific, Measurable, Achievable, Relevant and Timely
RESULTS:

EMOTIONAL INTELLIGENCE INVENTORY

Student Self-Assessments

- Self awareness
- Self Regulation
- Motivation
- Empathy
- Social Skill

Assessment Score vs. Assessment Assignment
RESULTS:

SPECIFIC PERSONAL GROWTH FRONTS

self-care

wellness

time-management

motivation

patience

anxiety

engagement

emotional-awareness

organization

self-awareness

conflict management

leadership

knowledge acquisition

work

self-assessment

empathy

communication

self-control

social-skills

professional identity

engage

self-compassion

self-awareness

feedback

critical-thinking

satisfaction

self-regulation

focus

grade

adaptability

adaptability

efficiency

satisfaction

work-life balance

teamwork

confidences
RESULTS:

SELF-ASSESSMENT SURVEY

Prior exposure to emotional intelligence

Continued application of the self-assessment process outside of CHA?

15/21 learners in cohort completed these questions on the survey = 71%
What was your biggest takeaway from the reflective writing assignments in CHA?

- My biggest take away was learning how to take reflections and turn them into **SMART goals** as a way to improve on what I reflected on.

- I’m consistently **adapting and changing** as medical school progresses.

- I **never have been a fan of reflective writing** and don’t think it is a benefit to me personally.

- That sometimes it’s **helpful to step back** and actually look back on how far I’ve come.
CONCLUSIONS

- M1 year = transition to medical school environment
- Greatest improvement in areas of self-awareness and teamwork skills
- Major challenges:
  - Time for loved ones
  - Physical & social wellbeing
  - Personal identity formation
- Each learner needed something different – individualized feedback is key for this type of assignment
MY ENTREPRENEURIAL MINDSET

Curiosity

**Pre-Study:**
- Is reflective/self-assessment practice a valuable addition to a first year medical school anatomy course?

**Post Study:**
- Improved feedback to show development in team-building skills, emotional intelligence, and well-being
- Does reflective practice reduce levels of depression, anxiety or stress?
- Integration of reflection/self-assessment longitudinally?

Connections

**Pre-Study:**
- Olin College of Engineering, Kolb’s Learning Cycle & first cohort of MCW-CW learners

**Post-Study:**
- Connect to other course instructors, course directors or campus deans

Creating Value

- Assist in medical student professional identity formation
- Educator/Learner trust enhanced through repeated feedback process