Update on MQP and IQP Outcomes Assessment

March 6, 2023

Undergraduate Outcomes Assessment Committee (UOAC)
Andrea Arnold (MA)
Chrys Demetry (Morgan Teaching and Learning Center) – ex officio
Soroush Farzin (CEAE)
Yashvi Gosalia (CHE '24)
Adrienne Hall-Phillips – CAP Appointee
Melissa Leahy (IR) – ex officio
Kate McIntyre (HUA)
Doug Petkie (PH) – Chair
Kent Rissmiller (Global School) – Provost’s Appointee
UOAC's Role and Responsibilities

As a permanent subcommittee of CAP (Committee on Academic Policy), UOAC is charged with:

a. "proposing policy with regard to WPI’s undergraduate learning outcomes

b. identifying and facilitating procedures for assessing those outcomes

c. coordinating outcomes assessment activities on campus

d. communicating assessment results

e. formulating academic policy recommendations based on its assessment activities"

"The Committee is not responsible for the assessment of departmental majors or programs, but for the identification and assessment of learning outcomes that arise from the undergraduate curriculum broadly defined, including assessment of the first year program." (Faculty Handbook)
Three Main Takeaways

1. We have undergraduate learning outcomes, MQP learning outcomes, and IQP learning outcomes.
2. Data from Student Reports on IQP and MQP Learning and Advising are now accessible.
3. Advisor Reports on IQP and MQP Learning are being redeployed on eProjects, and we have a collective responsibility to complete them all are important for our institution-level and program-level outcomes assessment processes
WPI's Undergraduate Learning Outcomes

Graduates of WPI will:

1. have a **base of knowledge** in mathematics, science, and humanistic studies
2. have mastered **fundamental concepts and methods** in their principal areas of study
3. understand and employ current **technological tools**
4. be effective in oral, written and visual **communication**
5. function effectively both **individually and on teams**
6. be able to **identify, analyze, and solve problems creatively** through sustained critical investigation
7. be able to make **connections between disciplines and to integrate information** from multiple sources
8. demonstrate **global and intercultural competency** by developing the capacity to identify, explain, and critically analyze the forces (such as cultural, historical, political, economic) that shape the self and others as they engage with local and global communities
9. be aware of personal, societal, and professional **ethical standards**
10. have the skills, diligence, and commitment to excellence needed to engage in **lifelong learning**
# Intentional Design for Learning

## Degree Requirements and Other Learning Experiences

<table>
<thead>
<tr>
<th>Learning Outcomes</th>
<th>MQP</th>
<th>IQP</th>
<th>HUA</th>
<th>Courses</th>
<th>Extracurricular</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base in MA, SCI, HU</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>Concepts and methods in major</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Understand and employ technological tools</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Communication</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
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<tr>
<td>Individual and team functioning</td>
<td>X</td>
<td>X</td>
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<td></td>
<td></td>
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<tr>
<td>Identify, analyze, and solve problems creatively</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Connections between disciplines and integrating information</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
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<tr>
<td>Global and intercultural competency</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Ethical standards</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lifelong learning</td>
<td>X</td>
<td></td>
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</tr>
</tbody>
</table>

MQP: Master's Qualification Project  
IQP: Independent Qualification Project  
HUA: Humanistic and Arts Courses  
Courses: Other Courses  
Extracurricular: Extracurricular Activities

- **Learning Outcomes**
  - Base in MA, SCI, HU
  - Concepts and methods in major
  - Understand and employ technological tools
  - Communication
  - Individual and team functioning
  - Identify, analyze, and solve problems creatively
  - Connections between disciplines and integrating information
  - Global and intercultural competency
  - Ethical standards
  - Lifelong learning

- **Degree Requirements**
  - MQP: Master's Qualification Project
  - IQP: Independent Qualification Project
  - HUA: Humanistic and Arts Courses
  - Courses: Other Courses
  - Extracurricular: Extracurricular Activities
Assessment of Learning in IQPs and MQPs: Triangulating Data Sources

Student Reports on IQP and MQP Learning and Advising

Advisors

Student Reports on IQP and MQP Learning

Advisor Reports on IQP and MQP Learning

Project Advisors

Professional Peers

Summer IQP and MQP Reviews
Student Reports on IQP and MQP Learning and Advising

- Two sets of questions: 1) progress on LOs (experience); 2) advisor behaviors

- Uses
  - By project advisors for self-improvement, P&T evidence
  - For program review, institutional learning across programs, key data source in Undergraduate Outcomes Assessment Plan

- Integrated into project submission/CDR process

- High completion rate

- Two places to access data – access rules approved by faculty
  - eProjects Evaluations - "My IQP/MQP Surveys" includes comments – seen only by you
  - Tableau – more historical data than eProjects, but no comments
Where to Find Student Report Data on eProjects.wpi.edu
### My MQP Evaluations

7 MQP Post Project Evaluations were found for projects that you advised.

### Questions and Scores

| Q1 | Applying Fundamental and disciplinary concepts and methods specific to my major. | 4.7 |
| Q2 | Demonstrating skill and knowledge of current technological tools and techniques relevant to my major. | 4.7 |
| Q3 | Developing skill in written communication. | 4.1 |
| Q4 | Developing skill in oral expression and public speaking. | 3.9 |
| Q5 | Developing skill in visual communication (i.e., use of images and graphics to convey information, data, and ideas). | 4.3 |
| Q6 | Identifying, analyzing, and solving problems creatively through sustained critical investigation. | 4.4 |
| Q7 | Finding, critically evaluating, and integrating information and ideas from multiple sources. | 4.7 |
| Q8 | Understanding and applying ethical standards in my field (for example, human and animal rights in research, respect for intellectual property, social and environmental responsibility, honest reporting of data, sensitivity to conflict of interest). | 3.8 |
| Q9 | Taking responsibility for my own learning and project direction. | 4.9 |
| Q10 | My progress in working with others as a member of a team (leave blank if not applicable). | 4.5 |
### MQP Experience

<table>
<thead>
<tr>
<th>Department</th>
<th>n</th>
<th>Q1</th>
<th>Q2</th>
<th>Q3</th>
<th>Q4</th>
<th>Q5</th>
<th>Q6</th>
<th>Q7</th>
<th>Q8</th>
<th>Q9</th>
<th>Q10</th>
<th>Q11</th>
<th>Q12</th>
<th>Q13</th>
<th>Q14</th>
<th>Q15</th>
<th>Q16</th>
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<tbody>
<tr>
<td>ME</td>
<td>258</td>
<td>4.61</td>
<td>4.6</td>
<td>4.46</td>
<td>4.2</td>
<td>4.41</td>
<td>4.68</td>
<td>4.57</td>
<td>4</td>
<td>4.78</td>
<td>4.68</td>
<td>4.4</td>
<td>4.08</td>
<td>4.17</td>
<td>4.53</td>
<td>4.67</td>
<td>4.51</td>
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<tr>
<td>CS</td>
<td>186</td>
<td>4.65</td>
<td>4.66</td>
<td>4.3</td>
<td>3.67</td>
<td>4.15</td>
<td>4.45</td>
<td>4.41</td>
<td>3.51</td>
<td>4.71</td>
<td>4.54</td>
<td>4.34</td>
<td>3.85</td>
<td>3.85</td>
<td>4.39</td>
<td>4.66</td>
<td>4.43</td>
</tr>
</tbody>
</table>

### Student Evaluations of Their MQP Advisors

<table>
<thead>
<tr>
<th>Department</th>
<th>n</th>
<th>AQ1</th>
<th>AQ2</th>
<th>AQ3</th>
<th>AQ4</th>
<th>AQ5</th>
<th>AQ6</th>
<th>AQ7</th>
<th>AQ8</th>
<th>AQ9</th>
<th>AQ10</th>
<th>AQ11</th>
<th>AQ12</th>
</tr>
</thead>
<tbody>
<tr>
<td>WPI Average</td>
<td>1230</td>
<td>4.58</td>
<td>4.71</td>
<td>4.48</td>
<td>4.49</td>
<td>4.27</td>
<td>4.4</td>
<td>4.56</td>
<td>4.21</td>
<td>4.21</td>
<td>4.33</td>
<td>4.26</td>
<td>4.46</td>
</tr>
<tr>
<td>ME</td>
<td>258</td>
<td>4.47</td>
<td>4.62</td>
<td>4.3</td>
<td>4.33</td>
<td>3.98</td>
<td>4.23</td>
<td>4.46</td>
<td>4.1</td>
<td>4.02</td>
<td>4.17</td>
<td>4.13</td>
<td>4.25</td>
</tr>
</tbody>
</table>
Advisor IQP Report

Please type in the name or username of the advisor you'd like to see an evaluation report for.

Search for other advisor's student report on IQP Learning and Advising
Search for other advisor's student report on MQP Learning and Advising
Department comparison of student report on IQP Learning and Advising
Department comparison of student report on MQP Learning and Advising
Academic year comparison of student report on IQP Learning and Advising
Academic year comparison of student report on MQP Learning and Advising

Search Advisors

Deme
jdemetry
Chrys Demetry (cdemetry)
Michael Demetriou (mdemtri)
**Additional Student Report Data on Tableau**
(link will also be distributed by email)

<table>
<thead>
<tr>
<th>Title</th>
<th>MOP Experience Evaluations</th>
<th>MOP Advisor Evaluations</th>
<th>IOP Experience Evaluations</th>
<th>IOP Advisor Evaluations</th>
<th>MOP Experience Evaluations - Prior to Fall 2019</th>
<th>IOP Experience Evaluations - Prior to Fall 2019</th>
<th>IOP Advisor Evaluations - Prior to Fall 2019</th>
</tr>
</thead>
</table>

**Student Reported IQP & MQP Evaluations**

Prepared by the Office of Strategic Initiatives & University Analytics
### Student Reported IQP Advisor Evaluations

In the following table, 1 = Very poor, 3 = Average, and 5 = Excellent

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>The advisor’s personal interest in helping students learn</td>
<td>4.38</td>
<td>5,185</td>
<td>0.95</td>
</tr>
<tr>
<td>The advisor’s treatment and respect for students</td>
<td>4.30</td>
<td>5,186</td>
<td>1.09</td>
</tr>
<tr>
<td>The advisor’s helpfulness in fostering good professional habits</td>
<td>4.20</td>
<td>5,177</td>
<td>1.07</td>
</tr>
<tr>
<td>The advisor’s encouragement of creativity in meeting project goals and needs</td>
<td>4.22</td>
<td>5,171</td>
<td>1.02</td>
</tr>
<tr>
<td>The advisor’s facilitation of team functioning (if applicable)</td>
<td>4.03</td>
<td>4,706</td>
<td>1.15</td>
</tr>
<tr>
<td>The advisor’s ability to challenge me in a constructive manner</td>
<td>4.05</td>
<td>5,171</td>
<td>1.14</td>
</tr>
<tr>
<td>The advisor’s creation of an atmosphere of trust</td>
<td>4.13</td>
<td>5,168</td>
<td>1.19</td>
</tr>
<tr>
<td>The advisor’s articulation of expectations and grading criteria</td>
<td>3.81</td>
<td>5,164</td>
<td>1.24</td>
</tr>
<tr>
<td>The advisor’s feedback on my work</td>
<td>4.04</td>
<td>5,173</td>
<td>1.13</td>
</tr>
<tr>
<td>The advisor’s timeliness in responding to my work</td>
<td>4.20</td>
<td>5,168</td>
<td>1.08</td>
</tr>
<tr>
<td>Overall, I rate the advisor’s effectiveness as</td>
<td>4.11</td>
<td>5,173</td>
<td>1.10</td>
</tr>
</tbody>
</table>
Advisor Reports on IQP and MQP Learning

• Your assessment of level of achievement on each IQP/MQP LO, for each student on team
• Used by degree programs and UOAC for outcomes assessment
• Integrated into project approval/CDR process

Right now can only be completed during approval/CDR workflow. Return/reminder mechanism under development.

• In a co-advised project, only one advisor will be prompted to complete the survey—whichever approves and grades the project
Advisor Report Interface on eProjects

Project Submission Workflow

To move this submission to a different step in the process, select an action below.

Optionally leave a note or comment (visible to project students, advisors, and registrar staff).

☐ Do not notify
Prevents sending emails to project members and advisors regarding this transition. This option is only visible to administrators.

Send from Archived to Library (Admin)

Please fill out your Advisor Report on MQP Learning.

For complete information on the submission process, see the IQP/MQP Submission Documentation or The Hub. If you have questions during the process, please contact its@wpi.edu.
Advisor Report on MQP Learning

By providing your assessment of student achievement of MQP learning outcomes, you are contributing to our collective responsibility to continuously assess and improve student learning in this important degree requirement. The data will be used to focus improvement efforts in areas of need identified by faculty members who advise MQPs. These data will not be used to evaluate MQP advising or rank MQP advisors. We realize that there are many factors in addition to advising that contribute to learning outcomes, and even an outstanding student may not be exceptional in all of the learning outcomes.

A note on confidentiality: While advisors are encouraged to discuss achievement of learning outcomes with students as part of the feedback and grading process, these Advisor Report data will not be shared with your project students. The Dean of Undergraduate Studies will report data only in summary form at the institute and program levels. Department and program heads will be told which of their faculty members completed Advisor Reports, but they will not be given learning outcomes data at the advisor level.

GID

If you encounter any problems with your survey, please include the number below with your support ticket.

25248
Information relevant to all students on the project:

Will the project report be presented to an external organization?
- Yes
- No

Was this project co- advised by another WPI faculty member?
- Yes
- No

Did the students meet with an external organization during the project?
- Yes
- No

Was financial support provided by an external organization?
- Yes
- No
Student names will be listed.
Three Main Takeaways

1. We have undergraduate learning outcomes, MQP learning outcomes, and IQP learning outcomes.
2. Data from Student Reports on IQP and MQP Learning and Advising are now accessible.
3. Advisor Reports on IQP and MQP Learning are being redeployed on eProjects, and we have a collective responsibility to complete them.

All are important for our institution-level and program-level outcomes assessment processes.

THANK YOU to staff contributors:
- Robert DelVecchio, Ermal Toto, and the rest of the eProjects development team in IT
- Dan Richards and Monelle Verdolino – IR Office

What are your questions?