Assessment *in* Practice

Ethical Reasoning:
Assessing a Critical Thinking Skill

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James Madison University (JMU) identified ethical reasoning (ER) as a teachable critical thinking skill, defined it, implemented a comprehensive university program, and assessed—showing substantial student learning improvement. Improvement is demonstrated by comparing performance assessments to baseline ER data collected prior to any learning intervention. This *Assessment in Practice* article contrasts JMU before and after the ER project, highlighting conditions and strategies contributing to success. Although this article features ER, the strategies shared here can apply to learning improvement initiatives of any scale.

JMU's ethical reasoning story begins in 2012. ER was, like many other laudable, yet ill-defined and contested constructs, widely endorsed despite a fuzzy understanding and minimal agreement about what it was. Some might suggest ER is making the "right" decision; others may say it is a strict adherence to moral codes; and still others may contend it is a vacuous concept. Absent a commonly shared definition, no systematic approach for teaching ER is possible. Further, we had no evidence for students' ER proficiency.

Five years later, the ethical reasoning landscape has changed dramatically. During orientation, all incoming students wrestle with a complicated hypothetical, yet realistic, scenario. Currently, they must decide where to dispense vaccines when the need for vaccines far exceeds the supply. No matter where students choose to send the vaccines, many people will die. To aid the decision process they use eight key ethical questions (8KQ; The Madison Collaborative, N.D.):

1. **Fairness** - How can I/we act equitably and balance legitimate interests?
2. **Outcomes** - What achieves the best short- and long-term outcomes for all others and me?
3. **Responsibilities** - What duties and/or obligations apply?
4. **Character** - What action best reflects who I am/we are and the person I/group we want to become?

5. **Liberty** - How does respect for freedom, personal autonomy, or consent apply?
6. **Empathy** - What would I/we do if I/we cared deeply about those involved?
7. **Authority** - What do legitimate authorities (e.g. experts, law, my religion/god) expect of me?
8. **Rights** - What rights (e.g. innate, legal, social) apply?

In small teams, students analyze the scenario asking the 8 key questions, and then weigh and balance considerations raised to make a decision. In addition to ethical reasoning being the first university project, other educational opportunities related to ER are available to students in their residence halls, student affairs programs, general education classes, and majors.

JMU dedicated significant time, thought, and resources to create its unique ethical reasoning program led by the critical assessment question: Is JMU's Eight Key Question (8KQ) ethical reasoning program effective?

Results indicate that the typical JMU student in 2017 is better at ethical reasoning using the 8KQ approach than the typical 2013 student. 2013 is the year before ER programming launched and baseline data collected then is used for learning improvement comparison. The difference between these cohorts is a large gain (on average, scores were about one full standard deviation unit higher, a Cohen's d of 1.02.). And, we tested subgroups who received longer, more focused, instruction where the difference in learning improvement is dramatically higher (Cohen's d > 2; Smith, 2017). In essence, JMU students are better ethical reasoners as a result of its programming, a conclusion backed by sound evidence.

JMU's initiative follows the general outline of the Simple Model for learning improvement (Fulcher et al 2014, 2017). Evidenced learning improvement is exceedingly rare in higher education in part because academe has not spent enough time identifying the conditions and processes leading to success. We have outlined a few elements that we believe are salient and that would likely generalize to other projects.

ALLOCATING THE APPROPRIATE TIME FOR PLANNING

Before launching into programming, JMU's administration set aside two years for planning. The president and vice presidents appointed faculty and staff to a cross-campus committee. The committee was tasked to operationally define ethical reasoning, select or develop assessment instruments, gather baseline data, and begin developing curriculum and pedagogy. In our opinion this was the right amount of time for a project intended to affect all 20,000+ students.

ACTIONS CONSISTENT WITH SCOPE

For the initiative to reach the entire university, ethical reasoning had to be introduced and reinforced in the curriculum and co-curriculum, touching the vast majority of students. Strategic programming involved areas such as orientation, judicial affairs, leadership, and residence life in addition to academic courses. The assessment design is also consistent with this scope. All students are required

to participate in assessment testing through Assessment Days at JMU. Of the 4000+ freshman, several hundred are randomly sampled to take ER testing. We consider their performance scores representative of the student body.

THE RIGHT PEOPLE AROUND THE TABLE

Table 1 presents the cross-campus committee who participated in the planning of this project.

Role	Project-specific	Comments
Project champion	Ethical reasoning champions	One champion was a philosophy professor and ethics expert; the other, was a JMU staff member and doctoral student concerned about students' ethical decision making.
Project manager	Knowledge of JMU personnel and assessment culture	An associate vice provost with a history of steering complex programs led the project. Because the project spanned the academic and student affairs divisions, someone needed to effectively bridge traditional divides.
Assessment professional	Experience with content development	Planning for assessment guided the process from the beginning. JMU's administration endorsed a "backwards design" approach beginning by articulating what students should know, think or do regarding ethical reasoning – as expressed through assessment instruments – and then building an action plan to get students there. An assessment professional was critical to the project design.
Other stakeholders	Various	We included faculty, staff, students, and administrators from across the university representing each college, JMU libraries, and several units within student affairs. Among this group was the head of the Faculty Senate and the president of the Student Government Association. This group identified difficulties among their respective groups and provided strategies to address them.
Senior leadership	Project support from the outset	The Provost and Vice President of Student Affairs reviewed the plan and gave advice about who should be involved from their respective divisions. The Vice President of Finance and Administration dedicated a budget to support three full-time positions to run the ER initiative: a chair, associate chair, and an administrative assistant, plus assessment support and funds for faculty and staff development.

Table 1. The Committee: Key Actors in Planning the Ethical Reasoning Initiative

ARTICULATING AND ASSESSING WHAT STUDENTS SHOULD KNOW, THINK, OR DO- AT THE OUTSET

JMU operationalized ethical reasoning skills early on, envisioning reflective questioning as the critical thinking heart of the ER process. Students are to ask eight questions (i.e., fairness, outcomes, responsibilities, etc.) when facing a tough ethical situation. Guiding questions such as, "...when you read or hear students' ER process, what characteristics distinguish outstanding ethical reasoners from the excellent, good, developing, and beginning?" provided direction. Eventually a

draft of the ER rubric was generated, undergoing several revisions and a rigorous validation process by faculty, staff, and graduate students before it was finalized. [JMU's Ethical Reasoning Rubric]

This rubric articulated what ethical reasoning looks like at varying stages (i.e., beginning, advanced, etc.), providing guidance for instrument development and articulation of student learning outcomes (SLOs). We drafted a rough set of SLOs, developed instrumentation, returned to the SLOs, and then went back to the instrument for further revisions, all with the rubric in mind (Sanchez et al, 2017). Figure 1 provides details about this backward design process (Wiggins & McTighe, 2005).

How will students be changed?	We asked ourselves, "Given the 8KQ, what would an outstanding ethical reasoner look like?"
How will we know students have changed?	We determined performance assessment, such as an essay, would provide an authentic indicator. The criteria for outstanding ethical reasoning became the elements of the scoring rubric.
In order to be successful on the assessment, what will students need to know, think, or do?	This conversation, guided by the newly-developed rubric, led to the development of the student learning outcomes, intentionally scaffolded to provide formative feedback on student development.
To meet the student learning outcomes, what educational curriculum must the students experience?	Campus-wide curriculum and co-curriculum in Orientation, residence halls, and the classroom.
What improvements to the curriculum and assessments could be made if students fall short of the outcomes?	By following a simple model for learning improvement: assess, intervene, re-assess, we are able to determine gains in student learning outcomes, as well as opportunities for improvement.

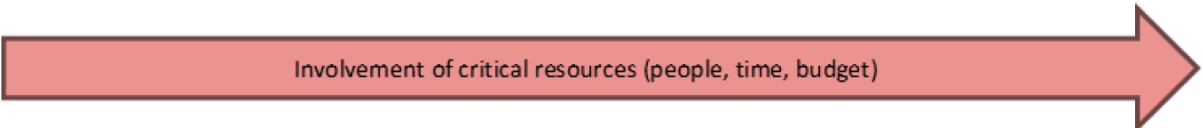Involvement of critical resources (people, time, budget)

Figure 1. Critical Components of JMU's Ethical Reasoning Initiative: The Backward Design Process

The data collection design, in addition to the instruments, was finalized before JMU made substantive changes in curriculum and pedagogy. The advantage is that assessment methodology was kept consistent as interventions were piloted and adopted. We have a representative sample of students taking ethical reasoning assessments before the program began, and at every stage thereafter. This makes it possible to accurately tell the learning story: what JMU changed in its curriculum and pedagogy and how those changes affected student learning.

PARLAYING A LEARNING INITIATIVE INTO SCHOLARSHIP

In recent decades, a growing number of academics have advocated for the scholarship of teaching and learning. Faculty, administrators, and staff can take

their research skills and focus them internally on what works and what doesn't regarding student learning.

We took this approach at JMU. Faculty from various disciplines, graduate and undergraduate students have conducted studies investigating the efficacy of a variety of ethical reasoning interventions. For example, we examined how students' ER knowledge and skills were affected by: exercises in orientation, an 8-week long module in a communications course (Ames et al, 2016), and a variety of courses where faculty received specific development in ER pedagogy (Smith, 2017).

CONCLUSION

We contend that higher education achieves its core mission by teaching students the knowledge, skills, and dispositions they will need to lead productive and meaningful lives. JMU, recognizing ethical reasoning's vital importance and undeterred by its complexity, brought together administrative support, thoughtful planning, strategic implementation, and effective learning assessment designing a comprehensive university ethical reasoning project. We briefly present our experience to aid similar bold efforts at other institutions.

For the initiative to reach the entire university, ethical reasoning had to be introduced and reinforced in the curriculum and co-curriculum, touching the vast majority of students. Strategic programming involved areas such as orientation, judicial affairs, leadership, and residence life in addition to academic courses. The assessment design is also consistent with this scope.

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- The National Institute for Learning Outcomes Assessment (NILOA) was established in December 2008, and is co-located at the University of Illinois and Indiana University.
- The NILOA website contains free assessment resources and can be found at http://www.learningoutcomesassessment.org.
- The NILOA research team has scanned institutional websites, surveyed chief academic officers, and commissioned a series of occasional papers.

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