

Mastery-Based Grading Through the Lens of Ignatian Pedagogy

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1 What is Mastery-Based Grading?

Our goal as educators is simple. But often simple to state goals are the hardest to accomplish. We want our students to learn. It is what pushed us into the careers that we are in and it is what drives us to pursue self-improvement every semester.

Often I find in my classroom that something gets in the way of true teaching, and that is evaluation. How do we know when our students have truly learned something? What does that look like? In this article I will speak from the perspective of teaching in a mathematics course. Traditional evaluation involves exams, quizzes, homework, and in general percentages. Each problem is assigned a point value and students receive points for correctly answered questions. But what does a 83% mean? How much did my students really learn? Does this mean that a student understands 83% of the concepts on the exam? Does it mean they are 83% likely to correctly answer a calculus problem? And does a student with an 83% deserve a better grade than a student with an 82% on that exam?

It is questions like these that made me seek a better way to evaluate student learning. Mastery-based grading, or sometimes Standards-based grading, is a system that only awards a student when they have fully mastered a concept. Students are allowed multiple opportunities to give evidence of their mastery of core concepts throughout the semester and as long as the concepts are eventually mastered. They receive no credit for topics that are not eventually mastered. Typically there are standards presented for students to master and they are graded based on how many of the standards the students are able to master by the end of the semester. The key component of the methodology is to encourage learning from their mistakes, growth, and rewarding students for their knowledge base at the end of the semester.

I chose to implement a mastery-based grading system in MATH 225 – Foundations of Mathematics course during the Spring 2020 semester. My goal was to utilize this course structure and the principals of Ignatian pedagogy to develop a course framework that would have students naturally engage in discernment and solidarity and kinship on their journey through the course.

2 How does Mastery-Based Grading relate to Ignatian Pedagogy?

The five primary Ignatian values are **reflection, discernment, solidarity and kinship, service rooted in justice and love, and cura personalis**. When I first came across the notion of Mastery-Based grading it struck me as being deeply connected to the Ignatian values of discernment and solidarity and kinship. Essentially the practices that make Mastery-Based Grading effective for education, already tap into these Ignatian values and this seems like an opportunity to help develop discernment and solidarity and kinship in our students both with and without addressing them directly. If we can help our students *live* these Ignatian values in our classroom, this can help them experience them more readily outside of it.

2.1 Discernment

“Discernment invites us to be open to God’s spirit as we consider our feelings and rational thought in order to make decisions and take action that will contribute good to our lives and the world around us” [Xavier.edu/mission-identity].

There is an opportunity to promote discernment in a Mastery-Based classroom by having students spend time reevaluating their own learning to see where they were lacking mastery. One of the benefits of Mastery-Based grading is that students can always receive perfect grades if they are willing to learn from their mistakes and reengage with the material that they initially did not fully grasp. This process involves students having a stronger understanding of what it is they *know*. This encourages students to not be satisfied with what they currently know and always be striving for knowing more. And this starts with self-evaluation from the students, which is at the heart of discernment. By giving the students numerous opportunities to demonstrate mastery of a given topic and providing no penalty for mistakes made along the journey to mastery, the process encourages and rewards students for engaging in thoughtful and meaningful discernment. The goal is to show them that discernment truly provides an opportunity for them to grow and learn, leading to a greater understanding of the Ignatian value.

2.2 Solidarity and Kinship

“Solidarity and kinship invites us to walk alongside and learn from our companions, both local and afar, as we journey through life” [Xavier.edu/mission-identity].

Mastery-Based classrooms are designed to present students with a deeper understanding of their own strengths and limitations. Equipped with this deeper self-understanding it seemed opportune to give the students opportunities to bring their understanding and lack of understanding to their peers. When designing the course I had the students work in groups as a form of reflection over which standards they were able to achieve and which ones they weren’t. They were encouraged to help those who haven’t mastered standards they fully grasped. One way of encouraging this was to reward students for teaching each other. One way to achieve mastery of a standard was to help teach other students various topics. The goal of adding this feedback process to the course was to help students engage with solidarity and kinship by giving tangible rewards (in this case grades) for learning from and teaching our companions.

3 Course Design

3.1 The standards structure.

The course was designed with 19 standards, which the students set out to master. Their grade was computed as a percentage of these 19 standards that they completed. An opportunity to master each standard would be offered at least 3 times for each standard in what I called reviews. Students are allowed to attempt any standards that are offered that they have not yet mastered each opportunity. In addition to the written opportunities, students are able to schedule a “discussion review” which allows them to complete two standards by talking me through standards they have not yet mastered. Finally there is opportunity to demonstrate mastery in non-conventional ways. For instance, students that are found helping other students in class with a difficult topic that they themselves have not yet mastered can receive mastery. After every attempt students receive either an M for mastery, a J for journey person, or an A for apprentice, which indicates how they did. An M means that a student has complete this standard and doesn’t need to show any additional proficiency. A J means that the student is showing great progress but has not demonstrated mastery yet. An A means that the student has work to do on the journey to mastery. Any grade other than an M will not give any credit, and in order to achieve an M you must have a clear and well communicated understanding of the nuances of the topic. The students fill out a chart throughout the semester to track their progress in each of the standards. Below is an example of what the charts that are presented in each syllabus might look like throughout the semester, keeping in mind that a student who achieves an M doesn’t need to demonstrate future work on the standard:

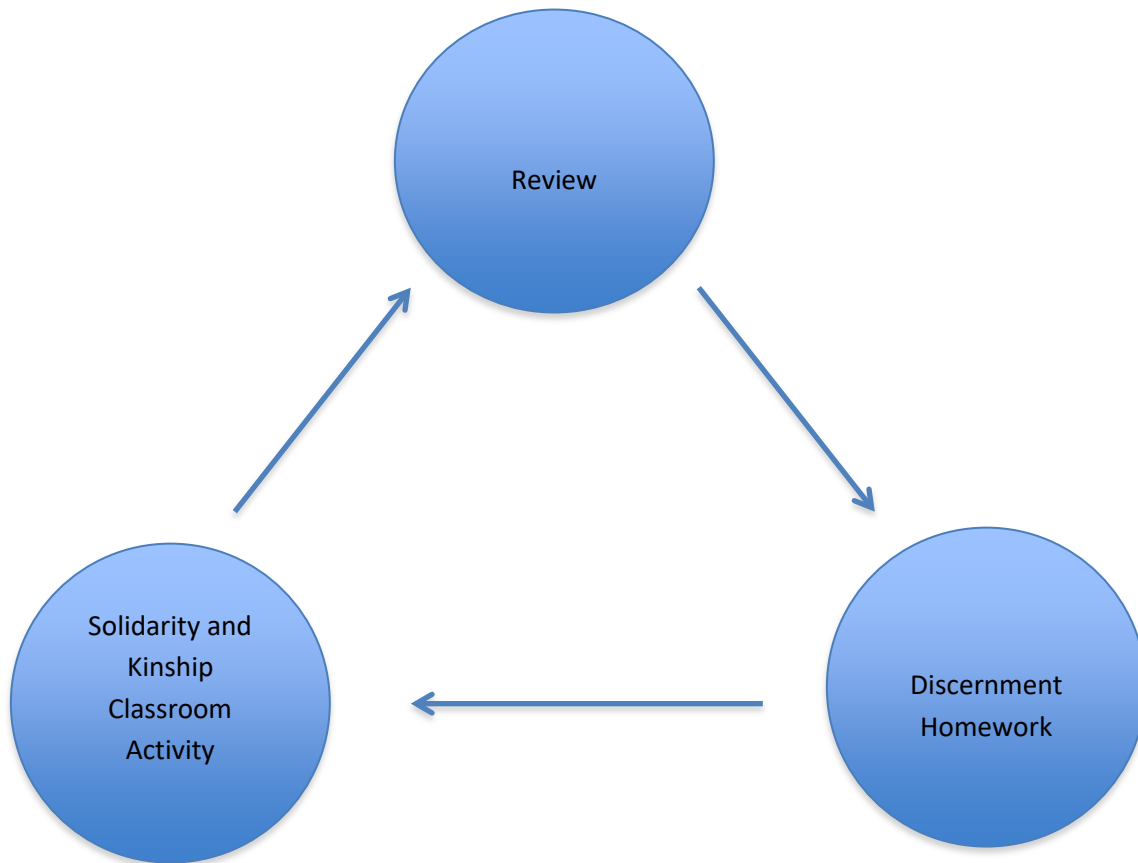
Standard	1	2	3	4	5	6	7	8	9
Review 1	M	J	M	A	J	J	-	-	A
Review 2	-	M	-	J	J	M	A	A	M
Review 3	-	-	-	J	M	-	J	M	-

The goal of the standards structure is to help students take deep ownership over their understanding of the material. A student that engages deeply with the material and the process and truly learns something will receive the same results as a student who found the concept easy to grasp the first time.

3.1 The feedback loop.

In section 2 we discussed how Mastery-Based Grading intrinsically promotes Ignatian Values, but I wanted to have a more deliberate implementation of Ignatian pedagogy in this course as well. This is in the feedback loop that was built around the Reviews in the course. After taking the review, the students were broken into groups where I paired students with a variety of success in each standard. For instance if Review 1 covered standards 1-6, I would make sure a student with an M on standard 1 was in each group, but also that a student with an A on standard 1 was also in that group. This was not always possible, but as the semester went on we had enough variety in grades that this was easily doable. The students were asked to engage in the act of discernment as homework. They wrote a reflection on which standards they found difficult and which they thought they were strong in. On this reflection homework they also wanted to outline one standard, which they felt they could help a student master, and one standard they wanted someone else to help them with. The goal was to create an open, accepting environment in which the students were prepared to both learn from their peers and to teach their peers. This process was called the Ignatian Feedback Loop in our class. The students would arrive in class, get with their groups, and then help each other master various skills so that on the next review they would have a strong chance of mastery. If a student did a particularly good job of teaching and supporting their fellow student(s) then it was possible that I would award mastery during these feedback days.

Students were asked during exit interviews to evaluate how the different Ignatian values helped their understanding of the material and how the feedback loop in general helped or hindered their conceptual understanding. Below is a diagram that I think helps understand how this feedback loop is designed to involve students in Discernment and Solidarity and Kinship:



4 Student feedback.

At the conclusion of the semester I conducted oral exit interviews with each student via ZOOM. During the interviews, the students were asked 3 questions regarding this project and I will provide some select comments made by the students, a brief summary of their overall response, and my primary take-aways from their responses. I intentionally designed the questions to address the process both in reference to the Ignatian Values and without.

4.1 How did the standards method help or hinder your understanding of the material?

- “The standards were honestly the best thing I have seen at Xavier this semester.”
- “I really liked the standards approach, it gave me opportunities to learn from what I missed.”
- “I loved the standards. I think I always felt like I could get my grade back on track... I didn’t, but that’s more on me.”
- “At first it really scared me. After the first standard I only had like 1 out of 7 or something like that, but like you said in the beginning you eventually get them in the end.”

Generally speaking the students really seemed to enjoy the standards based model of grading. They seemed to feel as if it allowed them to learn from their mistakes and they were not being punished for learning. They also seemed to like how it instilled in them a sense of control over their final grade. The forgiving nature seemed to be particularly appreciated during the remote learning format of the class.

My overall take away is that the Mastery-Based component of this project was very successful. The students felt empowered, took pride in their learning, and really had a deep understanding of what they knew and what they didn't know by the end of the semester. A longevity study would be the only way to understand if they truly learned more from this process than had I done a traditional grading model, but from the initial feedback and the quality of the work presented I believe the students had a better grasp of the course material than in previous semesters.

4.2 How did the group work after standards help or hinder your understanding of the material?

- “The feedback loop was helpful, it helps to see that other students are stuck too.”
- “I liked talking to the other students. I thought I knew things but talking to them made me realize that I didn't know them as well.”
- “I thought teaching others things really helped.”

In general, the students seemed to gain from teaching each other. Most students found it beneficial to see that other students were in similar positions as them. Also they seemed to learn a lot from playing the role as teacher

Overall I think the feedback loop helped students engage with each other instead of just the material. Very often in mathematics it can feel like an isolated experience so I believe this helped the students discuss and communicate mathematics in a way that deepened their understanding. I also believe it helped make students feel more open to communicate openly throughout the semester about what they don't understand, making student engagement very strong throughout the later parts of the semester.

4.2 How did this course impact your feelings towards the Ignatian values of discernment and solidarity and kinship?

- “I think the reflections we had to write helped me be successful. It was nice to see exactly where I was not understanding things.”
- “I felt a responsibility to help others in class, which I realized really helped me. I think I might try and do that in other classes too.”
- “Maybe discernment. I think that one was the one that I had to think about the most, because I was always thinking about how to fix my reviews. One thing that was nice is since I could always get full points for a standard it really forced me to keep thinking about them until I got them.”

The students in general didn't seem to have as deep a connection to the Ignatian values as I would have hoped. I think something very subtle happened in this course, in that the students were engaging with discernment and solidarity and kinship without realizing that they were. Because the course and activities were designed to have these values as the underlying structure a lot of students seemed to really appreciate it without having a name for it. I was surprised how many students gave answers like “I really liked helping other students, it gave me a sense of pride and joy” while still saying, “I don't really think I engaged with kinship”.

Overall my one take away from this is that it would be beneficial to have more activities that take them through the two Ignatian values prior to the first review. Possibly we could have a writing exercise or simply discuss the values for a day leading up to this. I think this might help tie the course to the larger Ignatian values of the university.

5 Conclusions

I wanted to briefly discuss my overall conclusions from this project. I think that Mastery-Based Grading is a beautiful pedagogical tool that though developed separately from the Ignatian values inherently is guided by them. I believe that it encourages students instead of punishes them. It supports the journey of the learning process, rewarding errors, collaboration, and perseverance. It highlights the need to engage in discernment in our everyday life and provides a training ground for practicing this Ignatian value. And in general I believe the method provided a very different outlook from the students. They were excited to share ideas and excited to come to class each day. And when all is said done, cultivating passion, thoughtfulness, and kindness is exactly what the Ignatian pedagogical values are designed to do.