

Education Research on Un-grading: The implications of removing grades on student and instructor experiences

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Abstract

This research study focused on grading methods, more specifically Un-grading which can be implemented in a variety of ways. Students and instructors from three different courses utilizing this method were interviewed and the results of the benefits and drawbacks are highlighted in this paper. This study offers suggestions for improving the current 0-100 grading scale utilized in most education communities and elements of traditional grading that could be applied to Un-grading. The results of this study suggest Un-grading has a variety of benefits over traditional grading scales but has improvements to be implemented to increase the effectiveness.

Acknowledgements

This study wouldn't have been possible without the involvement of the three professors that implemented un-grading. This includes both their desire to move education forward and willingness to participate in an interview with me discussing their methods and ideas on this new form of grading. The same can be said about the students who participated in the interviews and gave their opinions on the implementation of their professor's method. Finally, I'd like to thank my advisor Ben Pollard, not only for his assistance in designing the research study with me but his belief in improving the field of education for all.

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Introduction

Is the grading method used in traditional education the most beneficial way to grant students feedback and garner learning? Grades are a heavy focus in United States education levels K-12, as well as Undergraduate and post graduate studies. The 0-100 scale allows educators to give feedback to students in how well they are completing their assignments, sometimes by following the premade rubrics and goals. This can include homework, participation, quizzes/tests, and projects. Numerical grades show students how well they are doing in the course and provide feedback to take into account when reviewing the returned material.

In addition to acting as a feedback mechanism for students, traditional grading is also relied on for ranking and summative assessment. This system allows easy categorization of large bodies of students for administrators. Ranking students with grades can also have negative implications and act as barriers to education and opportunity. This is especially reflected in standardized testing including the PSAT, SAT, and ACT where students are required to sit silently for multiple hours and complete these multiple choice/written response question. These exams can also be the deciding factor acceptance to a college or university meaning students that are better performers on tests have an advantage. A high GPA is also pivotal to enter post-secondary education at a college or university.

Although the grading system of 0-100 has benefits, there are also inherent issues with this system including: added stress to students, impact on motivation to learn, lowered collaboration inside and outside the classroom, Effect on amount learned and the retention of the material, and Fairness and Equity amongst students.

Another method that is utilized in the education community is Un-grading, which focuses on students receiving qualitative feedback on their work and avoids depending on numerical

grades. The common structure of Un-grading focuses on student reflection, teacher feedback, student set learning goals, and check-ins with students. There is generally a final grade awarded to students as most schools require a final letter grade at the end of the course. This grade is determined by check-ins with students on their progress toward their self-made learning goals, which can be unique amongst students. Another approach is giving all students an A at the beginning of the course and focus strictly on learning and allows students to explore areas they find interesting more in depth. If students assign themselves a final grade it is subject to change by the professor based on completion of the students learning goals. This study was motivated by the lack of current research on this grading method.

In this work, we qualitatively research courses using Un-grading through student and professor interviews to analyze the effectiveness of this method. We aimed to analyze the benefits of Un-grading over that of the traditional 0-100 scale. We also explored the benefits of traditional grading in the hopes it would give feedback on how to improve Un-grading. Our research questions align with the issues stated above including:

1. What is the emotional impact on students when utilizing Un-grading compared to traditional grading?
2. How does Un-grading affect student motivation?
3. What are students' perceived fairness when using Un-grading compared to traditional grading both within their course and compared to other courses?

The body of the paper will focus on these three sections, overviewing the benefits of Un-grading in these areas as well as improvements to be made in each of those areas by comparing it to the traditional 0-100 scale.

Background

Physics Education Research (PER) has grown as a field over the last century and provides both suggestions and analysis of pedagogy (the art of teaching). Otero and Meltzer provided overview of this growth in their article from 2015 (1). Qualitative education research didn't begin until 1903, partially sparked by the fact 61% of students who took the Physics GRE failed. In 1914 the focus shifted to lab work and more hands-on learning; this included the implementation of project-based learning. Moving onto 1923, it was noticed that High School Physics curriculums had very little in common with university Physics. This era, until 1947, sparked education research with the creation of the American Association of Physics Teachers (AAPT). The next era of research occurred during the cold war from 1948-1966. The Cold war ended up sparking an increase of government funding for STEM education after the Sputnik rocket launch. This also pulled physics research away from theoretical and moved toward practical studies. The modern era was then introduced in 1967 including Physics Education Research (PER) research being done and papers were beginning to be published. This era also shifted the research from mostly the high school level to research in universities as well.

Although PER has become much more common in the last century, the research on Ungrading specifically in higher-ed STEM classrooms is few and far between meaning this study is treading new ground. However, the years of qualitative research have led to many methods being implemented that assist in this study, which were pulled from Otero and Harlow's 2009 paper on qualitative research (2). The method of qualitative research reaches far past that of PER into all areas of education and applications in many other research topics. Quantitative research leaves contextual gaps in research that can be filled in with Qualitative research. Inductive analysis is a common method used in Education Research, where the researcher aims to derive concepts, trends, and themes through the collection interview quotes or other means of obtaining feedback. Utilizing this form of analysis requires preparation for the researcher where they must lay out what they are trying to learn from their study before it begins. The researcher must also prepare for any problems they may run into because qualitative research

studies are less structured than their quantitative counterpart. Since inductive analysis includes the thoughts and opinions of research participants the researcher must realize their own preconceptions on the topic which includes writing out specific research questions and analyzing your preconceived opinion on each question.

The three professors who implemented this method received funding from Morgan Teaching and Learning to create a Faculty Learning Community (FLC) starting in August of 2021. To receive this funding the professors interested in exploring Un-grading wrote proposals that were accepted and in turn funded. The first term of the academic year these professors began to implement their own version of Un-grading and plan to continue altering their approach as they receive feedback.

Methodology

This research began with outreach to faculty implementing Un-grading in their classrooms. A survey was constructed for the professors to send to their students asking for feedback on their professors grading method. The questions on the survey hit each of the six research questions as well as offered students twenty USD to participate on an hour-long interview discussing their ideas and opinions. The interviews were conducted either over zoom or in person within the WPI Physics Building (Olin Hall). Audio was recorded during every interview for further analysis. A research protocol was written for the study identifying the interview as semi structured and hit all six research questions including sub-questions to each section. The interviews were the main focus of this study. The semi structured method meant interviewees and the interviewer are welcome to deviate from the main questions and structure of the interview. This is done in a desire to record all thoughts and opinions of the interviewees and helps avoid funneling interviewees into answering a question a specific way. There were seven sections in this interview listed below:

1. General ideas and course implementation of Un-grading
2. Perceived fairness of Un-grading and traditional grading
3. Motivation in the course
4. Collaboration in the course
5. Emotional impact
6. Wrap up
7. Ending

Sections 1-5 were the bulk of the interview and where most data were retrieved from.

To analyze the data the software Otter.ai and NVivo were utilized to transcribe the interviews and code the interviews respectively. Every interview was transcribed with Otter.ai and then manually reviewed to correct for any errors in the auto transcription, and to do an initial pass at beginning to understand and analyze the transcripts. After this, NVivo was utilized

to code the data which included pulling quotes from every interview and dividing them into sections relevant to research questions. This type of coding is called *a priori* coding where the researcher has pre-determined sections before going through every interview. The sections were based on the research questions and split into two categories: benefits of Un-grading and improvements to be made. The improvements for Un-grading were mostly pulled from the benefits interviewees saw to traditional grading. After collecting emergent themes these were further analyzed to pull relevant quotes to highlight what the study found.

Chapter 4: Results and Discussion

The initial analysis of the coding was based around the number of respondents (instructors and students) to each of the research questions. This allowed important themes to emerge and shifted the focus of the study accordingly. The following graphs show the results. Two main areas were studied, areas where traditional grading ideas could improve Un-grading and the current benefits of Un-grading.

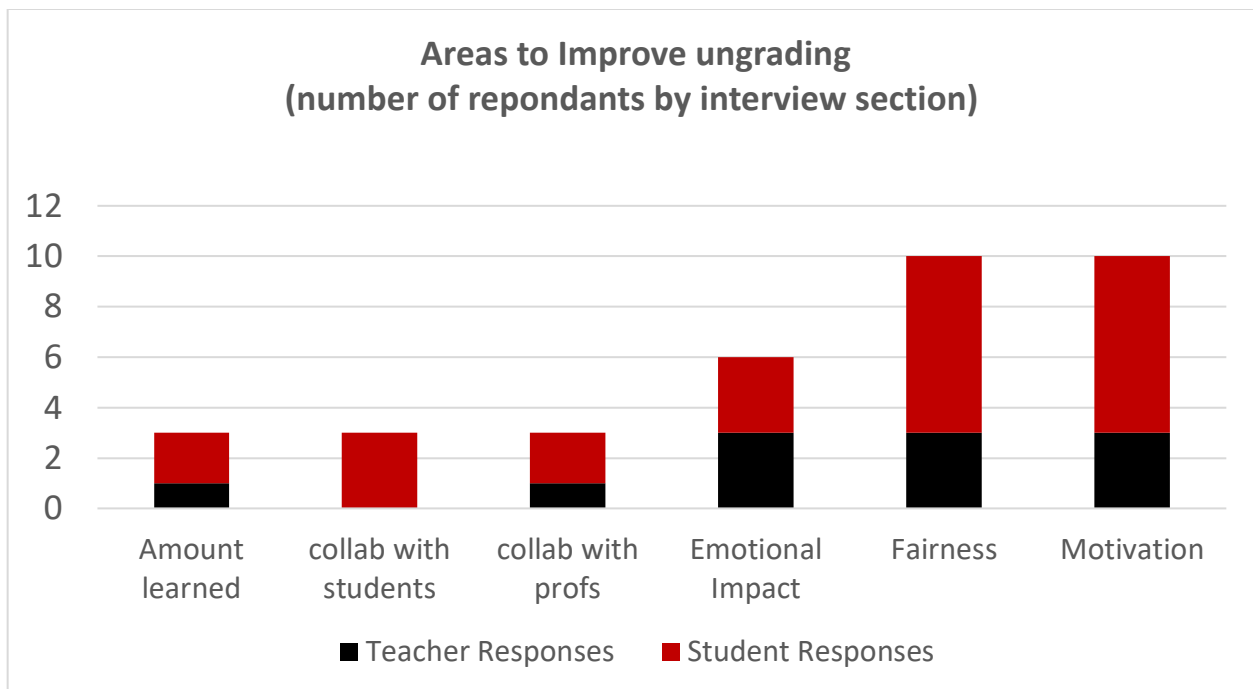


Figure 1: Number of interviewees who spoke about each topic in the context of areas to improve Un-grading

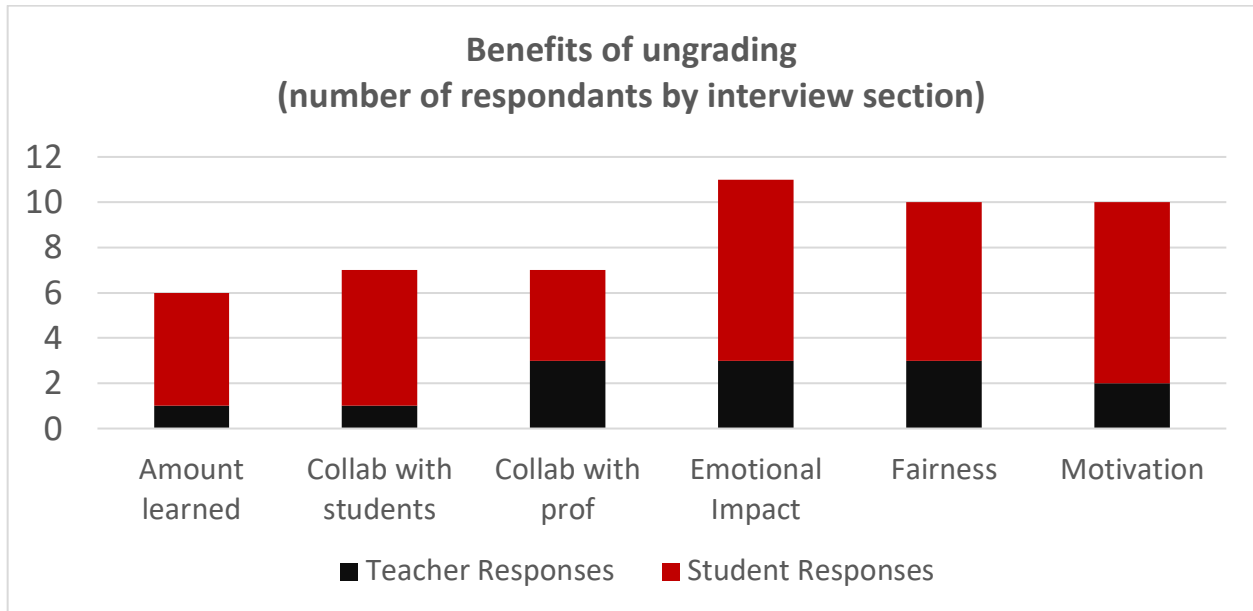


Figure 2: Number of interviewees who spoke about each topic in the context of benefits of Un-grading

The most relevant research questions covered were Emotional Impact, Fairness, and Motivation. These will be the three main areas Discussed in this paper. Motivation, in this research, was defined as the desire students felt to learn and reach or go above and beyond their stated learning goals. This can include students doing extra work/assignments they didn't think they'd desire to complete and going out of their way to learn more about the topics they found interesting to them. Fairness had two areas that need to be defined. First, there was the fairness amongst the students in the course. This was defined as the opinion of the students on how fair it was for students to grade themselves and if they had inherent advantages over each other. Second, there was fairness between an Un-graded course and a course utilizing the 0-100 grading scale. This was defined as the opinion of students and professors on student choice in which method they would be graded with and how it compared to other course sections traditionally graded. Finally, Emotional Impact of Un-grading was analyzed. This was defined as the stress level the students felt from Un-graded courses compared to traditionally graded courses. It also included the student comfort level in each of these types of courses.

4.1 Motivation, Benefits of the Un-grading method

Both students and professors were asked about the benefits they saw to motivation of the students in the course. There were multiple emergent themes that more than one respondent replied to. These emergent themes were: Intrinsic interest in the class topic, Personalized goals, and Less grade stress and focus on learning. Across the board, students and teachers saw a boost in intrinsic interest in areas of the class that resonated with them.

All three of these Un-graded courses allowed for a lot of student interaction with the subject material in terms of how and even what they would learn from the class. One student reflected, “And I found myself like interested in learning about it. Since it's something that I'm not being graded on”. This displayed how the student found the material more inherently interesting due to the lack of constant numerical feedback. A similar sentiment was displayed by another student, “If we go over something in class, and I'm like, oh, that's actually really cool. I'd like to learn more about this. I have the room to do that”. This point also reflected the feeling of freedom in where they could focus their interests in the course. That said, there was still a curriculum followed to guarantee students get what they need from the course if it was a prerequisite for future work as well as allow them to explore areas of interest.

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Another emergent theme was the ability for students to personalize goals in the classroom. An important aspect of Un-grading is student set learning goals which help determine the grade received at the end of the course. Students reflected that setting their own course goals was both new to them and motivating, allowing them to personalize their experience in the course. A student stated,

“I think that's really good for students, because it like, keeps you self-motivated. Because you're working for your goals that are specific to you, instead of like everyone trying to get a better grade than other people.”

Displaying appreciation that there wasn't a huge feeling of competition between students which many reflected occurs in their grading courses.

Finally, students and professors noticed less academic stress in the class due to the lack of constant numerical grade feedback. Students had more room to focus on learning and less on the semantics of grades. This lower stress level motivated students to achieve their pre-determined learning goals. The emotional impact (stress) will be explored later in this paper. One student reflected, "Like I'm getting my homework done like days in advance, because it's not something that I'm like, worried about." Expressing that they even finished homework for their Un-graded course ahead of time. Another student said,

"For the un-graded course, I noticed myself going a little more above and beyond and doing a little bit more, just because it's not like it's not like I get three points each time I do something, it's just, I create a good product, a good end product, and that is what I'm sort of judged on."

Displaying the fact students even went above and beyond what was initially expected from them. Finally students expressed a lowered stress level which motivated them to put more effort into the course, finally another student reflected, "So, knowing that I don't have that stress over that grade, it really motivates me more to actually learn the material," Aligning with the previous quote from a different student.

4.2 Motivation, areas of improvement for Un-grading method

Although interviewees displayed their perceived benefits of the Un-grading method, they also had opinions on improvements to be made, especially pulling from more traditional grading methods. Emergent themes included: difficulty staying on track, students focusing more on their graded courses, and inability to know exactly how well they were performing. Some students found themselves having a lack of motivation as they couldn't clearly see what progress they were making on the course. Participants reflected the necessity of check-ins with the professor and a set of "soft-deadlines" to help students keep themselves on track. One student said,

"Like, if you're in a normal grading system, you could have like a 16, you're like, Okay, well, I really need to pick it up, like I need to pass and do well in this class, or is in this class, like, you kind of know how you're doing, you know, if you get the material or not, but you also know that you're going to be giving yourself a grade it's not graded,"

reflecting how a grade can motivate them to perform better in the classroom. Other students also reflected this making it an important emerging theme from this section, a student said, "Yeah, I think a benefit would be we know exactly what we're supposed to be doing and don't have to figure anything out," expressing their concern that they couldn't tell what progress they were making in the course. Two other students also reflected this point,

"So, for me, it's like comforting to know that somewhere on a scale of zero to 100, I am exactly at this point. So, I know where I have to do better,"

and,

"It's sort of harder. I think it's sort of harder to tell if you like, achieved an objective if you're not receiving, like a letter or a number."

Interviewees were used to a more traditional grading method that specifically guides them through the course, this new method left some students alienated.

There was also the issue of students prioritizing their classes that have consistent graded feedback, leading students to focus less on their Un-graded course and left them with the feeling of falling behind. One student said, "Just because I feel myself not really learning as much necessarily, I feel myself like not wanting to, since it's like it feels like a break from being graded," showing they wanted to do more in the course, but their other classes took priority. Another student reflected, "Like, I feel like I need to work on those classes, like a lot harder than I need to work on this one. Since I know, I'll be evaluating myself at the end anyways," showing they thought the self-evaluation at the end of the course allowed them to take the course less seriously. A student also reflected, "Yeah, no, that definitely happens. Um, um, I do prioritize my classes with grading because they feel more urgent, and they are more stressful," citing the stress grades bring motivate them to finish their work on time.

This sentiment was also reflected by professors, who displayed concern that many students said they wanted to achieve more from the class but prioritized other classes.

"When I tell students that there aren't deadlines for my class, and they can do the work whenever it's really hard to I think the students find it hard to prioritize the work of my class, because they've got other deadlines in other classes."

4.3 Fairness, benefits of the Un-grading method

Students and professors had a lot to say on the topic of fairness. This included both the fairness amongst students in an Un-graded course and between an Un-graded course and a traditionally graded one. This section focuses on the benefits Un-grading has in terms of these areas of fairness. The main emergent themes were: Students felt they entered the course at the same level as others, Learning was more diverse, and students cared more about the material.

An emergent theme both students and professors expressed was the feeling all students entered at the same level. One student said, "It's a lot easier to like, talk to people, especially knowing that like, it feels like people are all on the same level as me, you know", showing how they felt more comfortable collaborating in the class because they felt like no students had an inherent advantage. This meant students could come into the course with different levels of experience with the materials but didn't feel like they were falling behind compared to their peers. One student responded, "I think everyone ones, everyone's coming in into different place, and everyone's coming out in a different place", which aligns with equity in the course, meaning resources are allocated accordingly to students who require assistance. A student also reflected, "I'd lean more towards the like, there is something more inherently fair about meeting students where they are, as opposed to just making them like, grind out work", which focused on the idea that many courses students go through are a chore and they generally forget material after the class has concluded.

Another emergent theme was the idea that grades were more fairly assigned because not every student had to meet the same objectives in the course. One professor stated, "But I think one of the real advantages of this on un-grading approach I'm doing is that everyone can write their own goals, because I think it's important for learning and for equity, that not everyone has to learn the same thing in my class", displaying the importance they felt of students setting their own goals and learning outcomes. Two students reflected the importance of grade distribution,

“So, she's like, Okay, this isn't my strength. So I'm gonna let you guys do whatever you need to do. And just explain it to me, and I will like, figure it out on my own,”

and,

“For example, in my [Un-graded¹] class, um, if I, if I was given a grade, right now, I might, you know, get an A and my partner might get a B, because purely based on the amount of work and the quality. Some of my partner has done a lot of technical electronic skills that have been really essential to our project. And I've done just a lot more like basic project management. So, it's, it's a lot more accurate.”

These students expressed that different group members had different areas to contribute to and Un-grading takes these different skills into account.

Finally, there were multiple interviewee responses to the theme of diversity of learning in the course. Similar to a topic covered in motivation was the ability for students to learn in diverse ways. One student said, “there's people who have learning, you know, they learn differently. They. So, I feel like the traditional learning system does not take those differences into account,” displaying that being traditionally graded does not suit every student at a university. Another student reported, “But I feel like within the class itself, it is fair, because it's everyone learning like, at their own pace, what they want to do, and the teachers very accommodating with, like, everyone and helpful,” not only showing that how students learn matters but also at which pace they are learning. Another student spoke on inclusivity, “I feel like it's more inclusive, in the sense that it allows you to find out which way you learn best,” which also reflected the idea that students has room to explore how they learn best.

¹ The student referred to the class by the name of a specific department, which is omitted to preserve anonymity.

4.4 Fairness, areas of improvement for the Un-grading method

Although interviewees highlighted benefits to fairness amongst students in the course, there were also some inherent issues that were touched upon. These emergent themes included: The ability of the choice of Un-grading or traditional grading, It's difficult for students to see their achievements, The course may not prepare students for future courses in the sequence.

Both students and professors relayed there should be a choice for students on how they are graded, Un-graded or traditionally. This included students in the Un-grading course being able to have the choice between the two methods and more broadly, the ability to choose in every course the student takes. One student said, "So, I think if you can choose the professor, then it's fair. But if you can't choose the professor and one professor doing traditional grading the other professors doing un-grading them? That's not super fair," displaying the fact that it may be unfair that one course section follows traditional grading when another does not. Professors also often discussed the adjustment period for student to get used to this new method,

"You can't just like, throw them into the deep end of the pool, like swim. Tell me what grade you think. But yeah, if you give them like, give the students enough that they can, like kind of pace themselves and reassure themselves and see where they stand implicitly,"

pointing out that some students may be very uncomfortable coming into the class and need reassurance. One professor stated, "So, there's a lot of like, you know, just reminders and kind of like we're all in this together. And here's what we're working towards.", highlighting that professors have to assist students acclimate to this unfamiliar territory to teach an effective course.

A major theme covered mostly by professors was the issue that an Un-graded course may not properly prepare students for future courses reliant on that background. Although WPI

does not require prerequisites for any course offered at the university there is still the concern that students will not reach all the necessary objectives and may fall behind in future studies.

One professor stated,

“The place where the unfairness gets that, I think, like, I haven't had to worry about because of the courses that I've done this in, but I could imagine what have some colleagues worrying about is the interface point to the expected knowledge in the next class in the sequence.”

Describing their uncertainty on how well a student will be prepared for the next course in the sequence. Not only did they say it was unfair to students but also colleagues. The same professor stated, “But if the next class in the sequence is expecting them to like, have all of this broad base of knowledge, it's not really fair to my colleagues”, expressing concern on their colleague's opinion on how their course is graded.

4.5 Emotional Impact, benefits of the Un-grading method

Interviewees expressed many opinions on the emotional impact Un-grading has on students. The interview questions focused on the stress levels of the students in the course compared to their traditionally graded courses and their comfort level in the courses. The emergent topics covered included: self-evaluation lowers stress and, ownership and pride of learning.

Interviewees noticed overall less stress with the method of Un-grading compared to traditional grading. This had multiple impacts on students including increased desire to learn the material, less worry and nit-picking for small errors with work, realization that their emotional health has an important effect on learning. One student noted, "I feel relaxed going to that class because I know either I'll have a check in or I'll be doing like a self-help self-evaluation where I'm talking to people about how I feel in the class and comparing whatever it's I think that's been nice", students had a positive experience when it came to stress levels. This student stated how they focused on where they are in the class and where they need to be which was unique to every student. Another student reflected, "Yeah, I think the un-grading definitely helps lower the stress because I don't have to worry constantly about my grade, I just have to worry about or not even worry, I just have to work towards my goals", stating that not worrying about the specific aspects of grading motivated and pushed them to achieve goals set for themselves. Some students even came to the realization of the importance of their emotional health, one student said, "And it's, I feel like, I feel like beyond this course, I'm gonna, like it's really made me I think start realizing that like, yeah, my emotional well-being like, is more important," displaying how school and grades can effect all areas of your life.

The other main emergent topic was student ownership and pride in their learning. Both students and professors reported that the Un-grading method allowed them to take ownership

of their work and the pride that comes from that, this quote was also utilized in a previous section to show how stress levels were reduced:

“Yeah, I think the un-grading definitely helps lower the stress because I don't have to worry constantly about my grade, I just have to worry about or not even worry, I just have to work towards my goals.”

This student reflected their lower stressed level helped them take ownership of their education.

One professor commented on the idea that students find more purposeful work when not constantly worrying about a grade stating,

“That's a good question. I think that I think overall, the un-grading is a positive and it lessens anxiety, and it helps people find also find purposeful work, because I hope what we're hearing and the activities that I've I'm talking about, like I really want them to feel a sense of ownership and pride and the choice that you're talking about.”

This professor also stated that Un-grading has allowed their students to take pride in their learning because they have a choice in what to learn and where they apply the most effort in the course.

4.6 Emotional Impact, areas of improvement for the Un-grading method

Although there were benefits to Emotional Health of students, Un-grading is new to many and some students experienced stress while getting used to this new method of evaluation. Some of the topics included in the areas Un-grading can improve included: adjustment from previous education, and not knowing exactly how you are doing in the course can add stress.

Multiple students reflected that Un-grading was a new idea to them and were stressed when the first found out the professor's method of grading. This idea was echoed by professors who understood that students have been conditioned to the 0-100 scale of grading and an adjustment can be difficult to navigate. One student stated, "Honestly, it's my first time actually working with an un-grading graded course. Which is very, very interesting. When I read the syllabus, I was actually more stressed," displaying how changes to something you've done for a long time can be a challenge. One professor echoed this sentiment saying,

"But like, a surprising thing, to me that has been a theme across all of them is, the beginning of the term is always about establishing trust that I'm not going to pull the rug out from under them,"

displaying how students need support through this new experience.

Another common theme had been the issue that students don't know exactly how they are performing in the class, covered in the motivation results section. This theme was also addressed in this section by multiple students. Students were used to gauging their progress through a specific grade, when this more qualitative approach was introduced, students lost that concrete structure and motivation, one student stated, "I think the benefit is just being able to look at a number and know exactly where you are. Um, which, I guess maybe that's just

been the way that it's been my entire life. So for me, it's like comforting to know that somewhere on a scale of zero to 100," displaying the importance of checkpoints in the class. Even students who didn't struggle to keep up in the course reflected the importance of having at least some structure. A professor also reflected that academic stress can oftentimes push students to complete their assignments and stated, "And sometimes it does worry me like, how do you keep that, you know, that ideal level of concern, you need just enough anxiety to like, focus your attention, but not too much anxiety? So you shut a student down?" reflecting a concern that students may lose investment in the course without enough and the right type of feedback.

Chapter 5: Conclusions and Future Work

It was apparent through interviewee responses that Emotional Impact, Fairness, and Motivation were the most relevant research questions in terms of number of respondents to these questions. Each section was analyzed in terms of Benefits of Un-grading and Improvements to be made to Un-grading. The results of the study display that Un-grading may be an effective alternative or supplement to the traditional grading method of 0-100-point evaluation. This research displays the possibility for differentiated grading methods in all of education. Students reflected that they were significantly less stressed in their Un-graded course which led to increased motivation to complete work. This said, it was also reflected that students needed time to adjust to the new grading method and were often stressed when first learning about this new experience. Motivation was another major emergent theme; students relayed the intrinsic motivation that creating their own goals gave them. Students often found themselves going above and beyond their set goals and ventured into learning more about topics they found the most interesting in the course. The most emergent improvement to be made through the interviews was the necessity for checkpoints for students to keep themselves on track. Students reflected they lost motivation when there were not at least “soft deadlines” in place. Professors also reflected this sentiment and expressed it by relaying their knowledge that students likely haven’t gone through a course like this before. Finally, both students and professors reflected the aspect of fairness and equity that Un-grading introduces. The sentiment was that every student starts at a different place in the course and ends in a different place. Students appreciated being able to learn at a pace that worked for them and didn’t see Un-grading as something students took advantage of or that peers had an advantage over other classmates. One improvement professors expressed should be made is the choice for students to choose which method they are graded with. This was not limited to students in the courses that were Un-graded in this study but for all course’s students complete at their university.

The data collected in this study is a starting point for further research into Un-grading. Overall, the consensus was that Un-grading has many benefits and is a viable way to assess students in the classroom. This research studied twelve total participants, nine of which were students and three were professors. Future work should further analyze courses utilizing Un-grading through conducting further interviews at both WPI and universities around the world. Methods of grading have been analyzed since the inception of Physics Education Research (PER), Un-grading has only been studied by a handful of researchers and provides an opportunity to delve into a unique grading method.

Chapter 6:Citations

- [1] Meltzer, D. E., & Otero, V. K. (1970, January 1). *A brief history of physics education in the United States*. American Association of Physics Teachers. Retrieved April 27, 2022, from <https://aapt.scitation.org/doi/10.1119/1.4902397>
- [2] Otero, Valerie, and Danielle Harlow. "Getting Started in Qualitative Physics Education Research." Getting Started in PER. 1 ed. Vol. 2. 2009. 10 June 2009. 27 Apr. 2022 <<https://www.compadre.org/Repository/document/ServeFile.cfm?ID=9122&DocID=1218>>.

Appendix

Below is the interview protocol followed for both student and professor interviews.

The effectiveness of Un-Grading Interview

Interview Protocol

Benjamin Petkie, Benjamin Pollard

Intro

1. The purpose of this interview is to gather feedback on your instructor's implementation of "un-grading". I want to emphasize that we're looking at commonalities among students, and this is NOT an assessment of your particular skills or abilities. This won't affect your grade and isn't required for any class.
2. I need you to sign a consent form in order to participate in the research study. I'm required to use this form because the research I do involves human subjects, so I'm held to the same ethical standards as people who are testing new drugs on human subjects. But don't worry, this is just an interview, no drugs are involved! By signing this form, you acknowledge that you're participating of your own free will, you can leave at any time, the data I collect from today's interview will be anonymized, and the only people who will see the non-anonymized data are approved researchers using it for research purposes. Please read over the form and, if you consent to participate, sign it. You will get paid \$20 for your time for this interview, even if you leave early.
3. Thanks. Here's a blank copy, just for your reference so you can look back on what you signed. My supervisor's contact information is there as well.

<turn on audio recorder>

4. As a WPI student, you are used to the percent scale being graded from 0-100%, un-grading implements other methods of evaluation. Un-grading can be implemented in a

variety of ways and we are studying how it compares to the current grading scale. We are looking to understand your opinion on this grading method compared to classes that use a more traditional method. This research will be a starting point for further research into grading practices and ways the education community can improve grading that has been in place since the inception of education.

5. Your professors will not be given any identifying information about you or any other student who I interview. Overall themes from these interviews will be shared with professors using un-grading at WPI, and perhaps more broadly. All of that information will be anonymized. We will not share anything about these interviews with your professors until after final grades have been submitted.

6. This interview has 6 parts, beginning with your general thoughts and opinions on the grading scale being utilized. Topics covered will include your perceived fairness of the grading method, the effect on collaboration in the class, effect on learning, and the emotional impact on students. These questions are very open, and any information will be helpful.

Part 1 – General ideas

7. In your own words, how would you describe the grading method being used in <class> and how your instructor is implementing it?
 - a. Do you see any immediate benefits/drawbacks from this method?
 - b. Do you have any classes that you believe effectively used this method of grading in your previous college experience?

8. How would you describe the traditional grading scale (percent scale) used in most of your classes?
 - a. Are there any immediate benefits you see to this method?
 - b. Are there any immediate drawbacks?

9. What is your understanding of the concept of “un-grading”?
 - a. Do you see any immediate benefits from this method of grading?
 - b. Are there any immediate drawbacks?

Thanks for those general ideas. Now I'd like to talk about some specific aspects of the grading in this course. The first one is fairness.

Part 3 – Perceived fairness of your professors use of the new grading scale

10. In your own words, what is your opinion on the fairness of the grading in <class>?
11. In your own words, what is your opinion on the fairness of a traditional grading scale?
12. Are there issues of fairness when different courses use different grading methods?

Part 4 – Motivation and learning in class with the new grading system

13. How does the grading method affect the amount you're learning in this course?
14. How does the grading method affect your motivation to learn in this course?
 - a. If you feel like your motivation was positively/negatively affected, why?
 - b. Are there any barriers you're facing in translating your motivation to learn into actual effort/action?

Part 5 - Collaboration in the class

15. How does the grading affect your collaboration with other students?
 - a. Did it affect the level of collaboration?
 - b. Did it affect the type of collaboration?
16. How did this grading scale affect your communication with your instructor?
 - a. Did it affect the level of communication?
 - b. Did it affect the type of communication?

Part 6 – Emotional Impact

17. Compared to the 10-point grading scale, how did your instructor's grading method affect your mental/emotional health?
 - a. How comfortable are you with the grading method your instructor utilized?
 - b. Do you think your stress levels were lower or higher due to the new grading system?

Part 7– Wrap up

18. And those are all the questions that I have. Thank you for your time! Is there anything else you'd like to add that you did not have the chance to express earlier?

19. Do you have any questions for me?

Part 8 – Ending

Thank you for your time during this interview. If you have any further questions, feel free to contact me at brpetkie@wpi.edu and if you think your classmates would be interested in being involved in this study please refer them to the same email.