Separating Grading and Feedback in UX Design Studios

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Feedback and assessment are core features of modern educational experiences. Despite having different aims, they are often conflated and can even conflict in cases where grades inhibit the goals of feedback. In this 'teachable moment' paper we describe strategies employed in a series of UX design courses to separate grading and feedback, attempting to give learners more agency and develop skills for reflective practice. We describe how these strategies intersect with broader pedagogical aims relating to critique and reflection as central to educating thoughtful UX designers.

CCS Concepts: • **Human-centered computing → Human computer interaction (HCI)**; • **Applied computing → Education**; • **Social and professional topics → Computing education**.

Additional Key Words and Phrases: feedback, assessment, design pedagogy, HCI education

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1 INTRODUCTION

Assessment and feedback are central tasks in most instructional settings, and the reception of feedback by students is generally regarded as an essential part of the learning process [18, 22]. Despite the centrality and importance of feedback, there is increasing evidence that traditional feedback practices are not effective [6, 37]. Among several known challenges to implementing effective feedback is the entanglement of feedback with assessment (i.e., grading), which has become so strong in many instances that they are effectively conjoined [37]. This integration is routine and often assumed uncritically, and it can lead to several problems for the student experience. While both assessment and feedback have important functions, they are distinct, and their conflation can obscure the important role that each has for the teacher and student. In this 'teachable moment' paper, we describe some known problems with assessment and feedback, the value of disentangling them, and several strategies we have taken to improve the feedback process across a series of UX design courses at a large research university.

2 ASSESSMENT AND FEEDBACK

Assessment and feedback have important yet separate functions. Winstone and Boud [37] have elaborated on this distinction in detail, noting that assessment tends to serve a certification function, whereas feedback serves to influence students' future work and learning strategies. As a result, grades should be more summative and evaluative (i.e., backward-looking, focusing on achievement in relation to standards), and feedback should be more formative (i.e., forward-looking, focusing on growth and future achievement). Not only are these often conflated, but they can become conflicting, in that assessment can *inhibit* the goals of feedback [37]. The formative and summative functions of assessment and feedback are not new topics and have been discussed widely for many decades (e.g., [3, 16, 27, 30]).

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However, despite their separation in theory, they are often conflated conceptually, functionally, and temporally in practice.

There are several known problems with traditional modes of feedback implementation, which can be exacerbated when grades and feedback and too closely intertwined. For instance, students regularly report a lack of satisfaction with feedback [24], students are often most interested in the grade and disregard feedback [11], grading can indicate to the student that the 'work is over' [17], and grades can obscure the formative purposes of feedback [37]. Furthermore, instructors can inadvertently enhance the inhibiting effect of grades on feedback by focusing their feedback on justifying the grade rather than providing useful formative information [37]. In design education, critique is the primary mode of feedback, taking on multiple levels of formality, types and numbers of participants, and formative or summative focus—with assessment frequently backgrounded in relation to feedback [25]. Critique events that share a focus on feedback are broad and diverse, including, for instance: informal conversations between a design team and instructor; group interactions as students share and get feedback on in progress work; asynchronous conversations on messaging platforms or directly on in-progress documents; and formal milestone reviews where work is shared and feedback is given. In all of these events, the provision of feedback is central—separate from, but occasionally linked to assessment. Critique is frequently described in the studio education literature as a key activity for students and instructors to engage in conversations about design that contribute both to students' reflective awareness of their development of design ability, and as a key mechanism for socialization into studio culture [12, 28]. Thus, while critique can function as a mode of assessment (cf., the "design jury"; [1]), in our desire to focus further attention on feedback, we use the multiple forms that critique can take as a starting point with which to consider supporting student attainment of design competence.

Beyond the issue of separating assessment and feedback, there are several important dimensions of feedback that characterize recent scholarship on learner-centered, sustainable feedback practices. Traditional views often treat feedback as a one-way transmission of information—i.e., information is transmitted from the teacher to the student. However, to promote more proactive engagement, feedback should be viewed as bilateral and multilateral, where students seek to inform their own judgements through information from various others in a pluralistic sense [5, 13, 23]. The traditional one-way implementation can lead students to become dependent on the instructor for their learning, resulting in limited agency and opportunities to develop self-regulative habits [5, 21, 36], and even lead to active harm through demeaning assessment practices (e.g., the design jury as a "firing squad"; [1, 10]). Shifting away from the view of feedback as unilateral information transmission to one that is more multi-directional can empower students to learn proactively rather than reactively [20].

To make feedback processes sustainable and self-regulative, feedback should be conceptualized and implemented with several characteristics in mind—e.g., as continual rather than episodic; dialogical and multi-directional rather than unidirectional; active rather than passive; and related to the overall competence and growth trajectory of the individual rather than limited to the immediate class assignment being evaluated [2, 5, 6, 21, 31]. Building upon prior literature on critique that has represented feedback in many different configurations in design education (e.g., [4, 19, 38]), we can identify the ways in which pluralistic feedback practices might be used to recontextualize students' experiences of assessment while also providing new opportunities for learners to develop agency and regulatory capacity. Table 1 contrasts traditional views of feedback with learner-centered views along several dimensions that have been identified in extant literature.

Although the implementation of effective feedback practices is challenging, as there are often institutional norms that must be overcome beyond the immediate course being taught, there are several strategies that can lead to more learner-centered practices even within a single course or sequence of courses. In the following section, we describe

Table 1. Contrasting traditional and learner-centered views of feedback

Characteristic	Traditional View	Learner-Centered View
relation to assessment	with grades	separate from grades
communication mode	one-way transmission	dialogic cycle
timing	singular act	continual process
direction	teacher to student	teacher to student, student to student, student to self, student to teacher
student role	passive recipient	proactive seeker
scope	immediate class assignment	professional competence and growth trajectory

several aspects of our curricular approach to feedback and assessment across a series of UX design courses, with a particular focus on their separation of the two conceptually, functionally, and temporally.

3 EDUCATIONAL CONTEXT

Here we describe several aspects of the pedagogical approach we have taken in designing and implementing a comprehensive, studio-based program in UX Design at the undergraduate and masters levels, with a particular focus on issues related to grading and feedback. Our program is built on an integrated studio structure [14], where students are continuously engaged in project-based learning experiences with multiple types of design competence addressed through a spiral pedagogical structure [15, 35]. Our undergraduate program includes a five–semester studio sequence, while our graduate program has a three–semester studio sequence. Through these program experiences, students build professional competence in a range of component skills, alongside extensive engagement in critique, reflection, mentoring, and just-in-time learning. In addition, program experiences are vertically integrated, allowing students later in the program to play an active role in critique participation, mentorship, and provision of feedback for students earlier in the program.

Importance of Reflection. Reflection is one of the central pillars of our pedagogy. We promote reflection not as a singular act, but as an attitude and way of being, essential to the practice and identity of design [29]. Students engage in multiple forms of reflection throughout each course and over the sequence of courses, including weekly written reflections in a shared Slack workspace, reflections in written documentation of their design work, and reflections as part of class discussions and critique sessions. The ultimate goal is for reflection to become a continual, habitual practice through which students can better understand themselves, their role and identity as designers, their level of professional competence, and opportunities for future growth. We build upon previous scholarship that addresses the role of reflection in students' development of their design identity [14], including how reflection practices can contribute to the building of trust among students within and across cohorts [15]. We also model these reflective activities ourselves as instructors, socializing these behaviors and seeking to lessen the power distance between instructor and student (see other strategies we have used to promote more equitable and inclusive studio learning practices in [13]).

Holistic, Tailored, and Dialogically-Oriented Feedback. We provide feedback to students in a range of forms, spanning levels of formality (from an informal desk critique to a more formal final presentation), modalities (discussion, Slack critique, written documentation comments), and combinations of participants (instructor interacting with one or more students, student to student). Across these modes, we seek to provide feedback that is rubric-free. We provide students with feedback from a range of topics and perspectives, including technical writing, teamwork, professional communication, visual communication, design process(es), design philosophy, documentation and presentation methods,

and rationale for design outcomes. Furthermore, feedback across these topics is not given with the same distribution or emphasis. Rather, we approach each feedback opportunity holistically and in relation to the student or team's current ability and trajectory, using a coach- or mentor-like relationship (cf., design coaching; [8, 34]) with students providing feedback on areas that are most pertinent to the intersection of the assignment, student or team, and course context. This diversity of feedback types is known in the design critique literature (e.g., [9, 33]), but has not been specifically addressed in relation to program-level competence attainment or in relation to explicit instructional strategies.

Decoupling Grading and Feedback. Since the formation of our program, we have sought to encourage students' development of competence and self-regulatory ability, with a focus on students' ability to engage meaningfully and reflexively with feedback to continue their development of design expertise. We have used multiple instructional strategies to support this goal, including prioritizing multiple forms of formative feedback, engaging students in productive failure to focus on their opportunities for growth, and providing feedback on documentation without attaching grades (or making the grade easily removable as a Post-It note). Through these experiences, we have found that even with these goals of separating assessment and feedback, students still connect the two both proximally and temporally. In 2021, we implemented a new instructional strategy to create further separation, providing feedback on final project documentation shortly after the conclusion of the project, and only providing a grade on the assignment a week or more after the feedback was provided. Our goal was to aid students in prioritizing feedback over assessment outcomes, provide more support for students to share their feedback, and for students to view the provision of feedback and their engagement with this feedback as a critical part of their development as a designer.

4 ENGENDERING THE CONDITIONS FOR EFFECTIVE FEEDBACK

While we engage in several interrelated strategies to make the student experience more learner-centered, we especially focus on the environment in which learning is happening and the conditions under which effective feedback can take place. We are aware that our vision of effective feedback requires a mindset shift for most students. Students enter our program after many years of formal education elsewhere, and they have typically internalized traditional views of feedback and assessment—often to the extent that it seems strange to question them. As a result, we must encourage students to surface those deeply ingrained views so they can be questioned and reflected on. This process often takes many weeks or months, and tends to continue throughout the student journey through the program. To do this effectively, however, we believe that the *experience* of giving and receiving feedback must be carefully attended to, and certain environmental conditions must be in place for students to engage authentically.

Near the beginning of their first UX studio course, we have an open conversation with the class about what feedback and assessment mean to them based on their prior experiences. We articulate some of the problems noted above about the conflation of assessment and feedback, and ask students to reflect on these ideas. We also outline our view of feedback that is more learner-centered, providing a few high-level points from the literature to establish credibility. At this stage, students may be skeptical, and likely have not engaged critically with their unconscious views of what effective pedagogy looks like. We revisit this conversation at multiple points throughout the first studio course and the overall studio sequence. This revisiting strategy aligns with our spiraling approach to the curriculum mentioned above, in which topics and skills are revisited many times at increasing levels of depth and complexity over time, allowing students to engage in ways that match their competence and growing design identity. As students progress through the curriculum, they gradually develop skills and habits of reflection and critique, and are able to have a deeper appreciation of the roles that feedback and grading can and should have for them.

The degree to which students can shift their attitudes and practices towards feedback and assessment does not simply rely on providing accurate information to them—e.g., convincing them that our approach has been studied and is valid. We attempt to transcend the cognitivist notions of feedback that students typically have adopted (i.e., that feedback is only about providing information on what was done well or poorly and what to change in the future [7]) by embracing sociocultural and affective perspectives on feedback as well (i.e., that feedback requires trust, care, and a sense of safety [39]). Without the necessary sociocultural and affective conditions in place, students may participate in the feedback process superficially, but not with the depth and authenticity that is required. In developing our curriculum, we have deliberately prioritized the experiential aspects of the studio over the traditional focus on content and learning outcomes [15]. One way we have done this at the program level is by intentionally framing and socializing the curriculum as a *learning experience*, rather than as merely a sequence of courses. We do this in various ways—through both peer and faculty mentoring; vertical integration of students at multiple levels in the same studio experience; project shepherding, portfolio reviews, and other activities focused on professional practices; and involving students in co-design workshops to provide feedback on and redesign aspects of the curriculum. We have preliminary validation that these experiential goals are being achieved at the program-level (see [15]).

Taking this experience-first approach allows us to focus initially on the conditions necessary for feedback to operate effectively, and subsequently on the logistics of feedback delivery. We attempt to build trust with the students by modeling the authenticity needed for effective feedback, providing the right sociocultural and affective conditions, and demonstrating our competence as mentors, coaches, and educators. Without the right conditions in place, whether we provide grades along with or separate from feedback is unlikely to make a substantial difference.

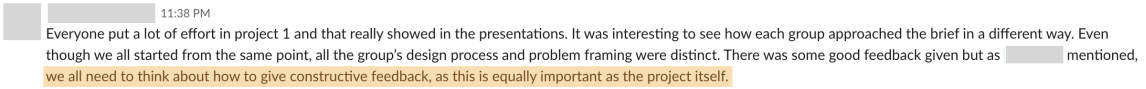
5 ONGOING DATA COLLECTION

Our approach to pedagogical innovation includes treating our program as a "living laboratory", following the spirit of Dewey's laboratory school that integrated theory and practice in a pragmatist orientation [32]. In doing so, we collect data from all classes across the program under a university-approved research protocol. As described above, we have conceptually and functionally decoupled grading and feedback from the start of the program—gradually enculturating students to the habits of critique and multi-lateral feedback—and we have over five years of data accumulated under this approach. More recently—starting at the beginning of this current school year—we decided to decouple the feedback from grades temporally as well, providing grades at least a full week after feedback had been provided on a project. We have done this fully in one course thus far—our introductory UX design studio for graduate students. We are currently in the process of implementing this separation strategy across four sections of our introductory UX design studio for undergraduate students.

While we are still collecting data to evaluate this strategy, we share preliminary data from the recently completed course in which we tried this strategy for the first time. This introductory graduate course involved 21 students (1 PhD, 2 MFA, and 18 MS). Throughout the course, students completed 4 group projects. Students are graded on each of these projects, and the strategy to separate grades and feedback was employed for each one throughout the course. There was at least one class critique session per project (2 for the fourth project), in which teams received feedback on their work from the instructor and their peers. During each project cycle, multiple class periods involved dedicated work time where teams would receive informal critique from the instructor (following the traditional notion of a 'desk critique' in studio pedagogy). These critique sessions offered several opportunities for students to engage in both structured and unstructured reflection as a result of giving and receiving feedback. Students also wrote weekly reflections throughout the semester on their experiences from the previous week. These were done in a Slack channel that all students were

participants in, and students were able to see, react to, and comment on the reflections of their peers. While we do have video recordings of the critique sessions, the data source we are using for this paper is from the weekly reflections. Below we provide a few examples of student reflections at different points in the course, offering a preliminary glimpse into the impact of this strategy. It is worth noting that there are no prompts for the reflections—students are simply asked to reflect on their course experience.

As the course progressed, students gradually became accustomed to seeking and receiving feedback from the instructor and especially from each other. Initially, students were open to the idea of giving and receiving feedback, but recognized they did not know how to do it well. Figure 1 shows a reflection from a student after the first class critique session, relatively early in the semester, in which the student is building on another student's comment about the importance of learning how to give constructive feedback. After seeing critique modeled by the instructor during the session, students recognized that their ability to give critical yet constructive feedback may have been lacking.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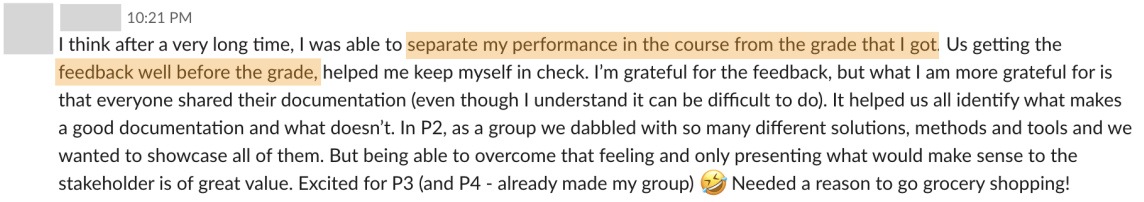
Everyone put a lot of effort in project 1 and that really showed in the presentations. It was interesting to see how each group approached the brief in a different way. Even though we all started from the same point, all the group's design process and problem framing were distinct. There was some good feedback given but as mentioned, we all need to think about how to give constructive feedback, as this is equally important as the project itself.

Fig. 1. A student reflecting after the first class critique session, building on another student's comment about the importance of learning how to give constructive feedback.

Figure 2 shows a student's reflection around the midpoint of the course, in which the student describes finally being able to separate their learning from their grade. The student also describes the effect of sharing the instructor's feedback on their project documentation with others in the class. This is a habit we have encouraged since the inception of the program with decent uptake, although it has been most prominent in this student's class. This effect is possibly due to the fact that no grades had been released when the feedback was given, and students may have felt more comfortable sharing their work knowing that nobody had received a grade. However, further investigation is needed to determine if this is true or not.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I think after a very long time, I was able to separate my performance in the course from the grade that I got. Us getting the feedback well before the grade, helped me keep myself in check. I'm grateful for the feedback, but what I am more grateful for is that everyone shared their documentation (even though I understand it can be difficult to do). It helped us all identify what makes a good documentation and what doesn't. In P2, as a group we dabbled with so many different solutions, methods and tools and we wanted to showcase all of them. But being able to overcome that feeling and only presenting what would make sense to the stakeholder is of great value. Excited for P3 (and P4 - already made my group) 🤣 Needed a reason to go grocery shopping!

Fig. 2. A student reflection describing the resulting effect of separating feedback and grading.

As students progressed further in the course, they developed better feedback skills and began to seek out feedback rather than wait for it to be provided—i.e., they developed self-regulative skills that are essential for active engagement with feedback. Figure 3 shows a reflection from a student closer to the end of the course, where the student describes finally recognizing the power of feedback—particularly as a proactive process—but also reflects on the need to seek feedback even earlier as a course-correcting mechanism.

Figure 4 shows a final reflection from a student at the end of the course, in which the student recognizes and appreciates the prioritization of feedback—both through numerous critique events and in summative feedback on

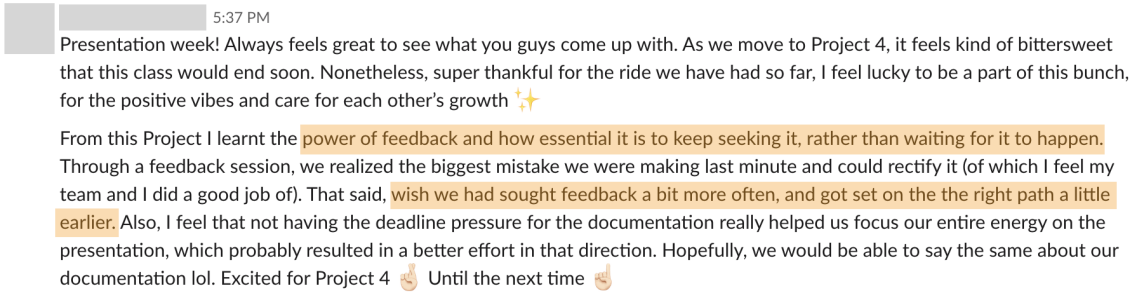

Fig. 3. A student reflecting later in the course about the power of feedback and the shift to a proactive mentality.

documentation of multiple projects throughout the semester—over grades as a deliberate instructional strategy. The student integrates several important characteristics of the learning experience, including the separation of grades and feedback, the importance of learning from failure, the value of reflection, and the multi-directional nature of feedback.

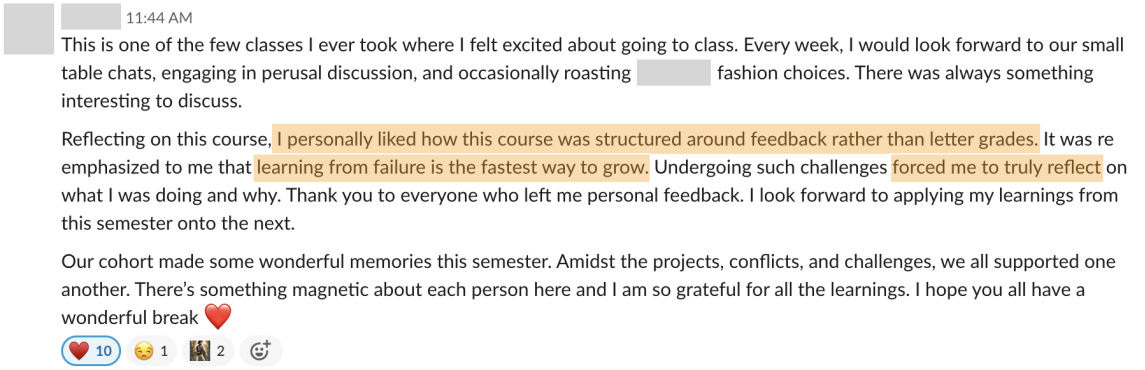

Fig. 4. A final reflection from a student at the end of the course, articulating the value of emphasizing feedback over grades throughout the class experience.

6 SUMMARY AND FUTURE WORK

In this 'teachable moment' paper, we have described opportunities to further decouple assessment and feedback, contributing to a growing interest in describing pedagogical content knowledge for HCI education [26]. Building on our program and course-level experiences, we have identified the need for instructional strategies that support students' development of design expertise.

In reflecting on our experiences in separating assessment and feedback, there are several points worth noting that might support educators in implementing future equitable and constructive pedagogical practices.

First, decoupling processes often run counter to the structures of modern higher learning institutions and learning management systems (LMS). For instance, in the LMS that our institution uses, it is impossible to release feedback to students without also providing a grade; because of this limitation, we assigned all students a 'zero' until their actual grade was given at least one week later. The prioritization of assessment over feedback is a common model that students

enter higher education with, and must be systematically addressed and shifted over time, with both course management and feedback strategies playing an important role.

Second, the decoupling of assessment and feedback—while important for the development of design expertise—could have broader impacts on students' recognition of their progress, since it can occasionally lack the same type of signalling of normal academic progress that is currently socialized through grades. This implies the need for additional forms of social support and structure, particularly for students that are already vulnerable or disempowered (e.g., minority and first-generation students).

Third, our decoupling experiment indicates a space to better integrate primary pedagogical structures, feedback, and the everyday social practices and norms of the design studio. For instance, in our studio environment, we have connected project-based learning as an instructional approach, leveraged in a learning environment that is constructivist in orientation, using decoupling of assessment and feedback as a way to encourage the development of self-regulation. Further work could investigate how decoupling might function in other course contexts or with different norms that might impact students' pedagogical experiences.

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