

SELL IT: DESIGN PROJECT ASSESSMENT BY THE PUBLIC

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ABSTRACT

This investigation contributes to design assessment practice by examining how public assessment can enhance project-based learning.

Project-based learning is designed to provide students with an opportunity to engage in authentic problem finding and solving. Students often become very involved with the specifics of their project without always noticing what they are learning. As such, it becomes essential to engage them in reflection during the process and at the completion of the project. A constellation of formative and summative assessment activities that include self, group, and instructor, can aid the learner in this contemplation.

We propose that public assessment in the form of a student-run sale can provide distinctive feedback to students. Our experience with student-run retail sales over multiple years has led us to identify some unique characteristics of this type of public assessment. These include a positive effect on student motivation, independent validation in a face-to-face setting, and providing direct consumer feedback to students. In this paper we discuss assessment practice as it relates to the sale and review student reflections on the experience to determine its usefulness.

Keywords: Project-based learning, public assessment, face-to-face selling.

1 INTRODUCTION

Over the last several years, we have assigned a project-based design problem for second a year student that pursues a number of learning goals. One of these goals is to give our students a hands-on production experience as they make multiples of their own design. Working in teams, students design and make a small-run production (15 in number) of a particular product, such as a lamp or stool. As they work, students employ production processes and make tools and fixtures in order to have a number of sellable artefacts as the final deliverable.



Figure 1. Students' work in the production phase of the project

Working concurrently, students also plan, organize, market and execute a sale of their end products to the public. The students invest their own money in the materials for the development and production

of the product and therefore are entitled to keep the proceeds of the sale. All teams are required to be present at the sale and each product is sold for the same price, which is set by the professor (usually around 50 USD). Over the years, students have selected venues such as cafes, galleries, civic buildings, campus locations, and public markets. The success of the sales event fluctuates depending on a myriad of factors, including: venue location, scheduling (date, time, duration), quality of the end products, marketing effort of the students, and the weather.

2 SALE AS ASSESSMENT

Over the course of the project, both formative and summative assessments give the students and professor a chance to evaluate learning progress. Assessments include informal and formal team critique, peer feedback, informal public comments, face-to-face buyer to seller feedback, sales outcomes and written team/self-evaluations.

As an assessment practice, the sale serves to provide students feedback on several different levels operating simultaneously. It is a summative event at the close of the project. It provides students with independent feedback from disinterested individuals who have unique and varied points of view. It gives students an opportunity to hear from non-authoritative consumers who ask questions and make comments absent any instructive impulse. It also provides the students with the uniquely validating experience of being paid directly for a product of their own design labour. Our intention is that these channels of qualitative feedback will be integrated by thoughtful students to form for themselves a clear evaluation of their learning progress.

In the next sections, we will evaluate those assessments methods we think are unique to the implementation of this project, discuss the goals of the sale, and compare the sale as a form of assessment to other forms of public assessment, such as student exhibitions.

3 GOALS OF THE SALE

The goals of the sale are rooted in the sense that students respond positively to what they perceive as a “real” reason to work at mastering material. While perhaps learning for learning sake is the ideal, we reasoned that having a visceral and compelling purpose to motivate learning in action could increase student engagement, provide independent feedback and validation, and be a meaningful celebration of achievement.

3.1 Motivation

Research shows that people enjoy activities that present a moderate level of challenge, and tasks that demand greater cognitive complexity result in higher student involvement [1]. Our aim in designing this project is to generate intrinsic motivation in students through providing the right level of challenge. This is accomplished by fostering meaningful goals, allowing uncertainty about success, and providing clear feedback concerning progress [2]. Through this project, it becomes clear to students that they must master certain skills and processes in order to make a product of sufficient quality as to be presentable in a retail setting.

This task-mastery orientation is associated with higher cognitive engagement [3] and increased mental effort [4]. Students are intrinsically motivated to produce quality design work and create excellent artefacts not only because of an impending grade, but also because in order to perform well at the sale event their work must be convincing to a discerning buying audience. We regularly hear students discussing in team interchanges their desire to iterate further in order to get the best product they can for the sale. We have found shifting the “final presentation” (final assessment event), from a classroom/professor centric experience to a public/consumer centric experience has increased the perceived importance, utility, and value of the project to students [5]. This in turn has increased student (and professor) engagement, which is connected to improved learning outcomes. Evaluating the project as a whole, one student wrote, “I don’t think I have worked harder on any other school project before...it was very difficult and time consuming, but well worth the effort.” Another wrote, “The fact that we had to put on a show and sell them also made me really care a lot about the quality of my work. It really felt like I was designing in the ‘real world.’”

We have also seen evidence the sale may act as an extrinsic motivator. Over the course of any assigned project, interest sometimes lags and students lose focus. This behaviour is inevitable to some degree and may be attributed to personality or other factors. However, for some students on this

project, the prospect of a public sale has pushed them to keep working hard despite the impulse to slack off.

3.2 Reality: independent validation

As students begin the design work for what will eventually become their product, they need to think of the needs, behaviours and values of the end user. One effect of the sale has been to solidify the concept of the end user in students' minds. Students move beyond this sometimes-abstract concept to thinking about real people (known and unknown) who may be interested in buying what they are producing. At the sale event, the end user becomes present as a customer who embodies the validation or rejection of their design work.

The reality of how a product performs in the marketplace, even a small marketplace, can be very exciting or very disappointing. One student wrote, "It was rewarding to have...the public see our work and evaluate it (by buying it). It also got me to think about how people would receive design so that I thought about what they would want and what kind of designs would succeed."

We regularly have some teams whose products sell quickly, some even taking orders after they sell out, while other teams' products sell slowly if at all. This can be a harsh form of feedback with attendant gravitas. Whichever way the product performs, the voice of the customer speaks loudly as an independent source of assessment.

3.3 Celebration

There is no doubt the sale is partly a celebration. There is food and music, friends, and in some cases family in attendance. The atmosphere is usually festal and intense. As a culminating event, students have a good deal of time, effort, and emotion invested in the outcome of the sale. Their relief at finishing the project mixed with anxiety about how their products will fare, produces an environment similar to a typical exhibit opening night party. In this case, the celebration can be either heightened or dampened by sales performance.



Figure 2. Students receive feedback from the public at the sale

4 ASSESSING THE ASSESSMENT

4.1 Exhibit or Sale

Of course it's not uncommon for design students to exhibit their work. Many participate in informal project displays, end of year exhibitions and certainly, senior shows. Our sales share much in common with these summative assessment events, but a sale differs from an exhibit in some important ways.

The sale is different discursive space than an exhibit. Products are perceived and discussed in a setting where the designer is also a seller and the viewer is also a customer. The intent of the design work is reduced to a product meant for sale, and the public responds in consumer mode with concrete observations and practical concerns. In an interview, one student reflected on the difference in this way: "I felt that [at an exhibition] people would view our work more in like, an art context, where they might say critical things, but not to us, they would quietly say that to the person they came with...but because [at the sale] people were spending money they were like, looking at our products in a

commercial sense, I feel that every other person would offer an idea or suggestion as they were looking at it.” It is these very “ideas or suggestions” brought out by the sale environment we want our students to include in their own reflections on the project.

4.2 Direct Feedback

Before our most recent sale (Fall 2016), we asked students to answer a questionnaire evaluating the design and production quality of their product, in this case a stool. We then gave the same questionnaire to the students after the sale. We compared these two written self-assessments to determine what effect the sale had on the students’ views of their own outcomes. We also asked students to report informal customer conversations from the sale. Essentially, we were looking for the nuances of the sale as an evaluative tool.

4.2.1 Self-Assessment Reliability

For some students, their pre-sale evaluation was essentially confirmed. They considered the strengths and weaknesses of their stool and found that the people at the sale shared their opinion. One student wrote in the pre-sale questionnaire how satisfied they were with the form of their stool frame. “The overall form (bends and their placement) is the best aspect of our design.” In the after-sale questionnaire the same student reports a conversation with a customer who said “I love the curves in your stool, everyone else’s is too...sharp and ...(linear)”. Another student wrote pre-sale, “I also really like our wood. It adds a warm contrast to the cold steel.” After the sale she writes one customer was “impressed with the chamfer on the wood” and another commented on the “good finish of the wood.” This independent validation speaks to one aspect of the principle of assessment reliability. When a member of the public reflects back to the student an assessment similar to her own, our intent is that this will bolster the student’s confidence in her own self-assessment skills.

4.2.2 New Insights

Other students heard feedback from the public that differed from their self-assessment. There were comments directed at human factor issues that surprised students. One customer said, “Maybe [I] would like a taller stool”, and “It cuts into the back of my thigh.” Another student reported “multiple people who bought our stool noticed the smell (due to the plastic resin) once they brought it home.” Other students found that in the marketplace, perception is reality: “the seating- though the weave was strong, was perceived as untrustworthy” (student emphasis). The same student wrote concerning the height: “the height- we needed to seek more user testing. It should have been shorter” Predictably there were contradictory comments. As one student records, “the bottom [of the seat] had bubbles- some thought it was weird, some thought it was cool.” They also heard unexpected positive comments. One student wrote after the sale that she realized “how lightweight and mobile [her stool] was. The top wasn’t heavy [and] it had a lip your hand could hold if you needed to move it around.”

4.2.3 Reinforced Feedback

In some cases, we found students’ post-sale questionnaire reflected comments made by customers who gave feedback quite similar to previous professor feedback. It was interesting to read and hear from students how they had learned some new idea about their artefact from customer comments – whether they were favourable or unfavourable. We had to smile as we realized the points were exactly the same points the faculty had previously discussed with the students. One team had neglected a basic aspect of their design despite repeated professor prompts. But after the sale one team member wrote, “I would probably improve the feet. It was hard to find something that wouldn’t subtract from the design while still being practical enough to prevent scratching the floors.” Clearly the situation, the setting, the particular person, or all factors were in alignment for that student to internalize that feedback from the public rather than the professor.



Figure 3. Customers purchasing student work

5 CONCLUSION

Based on our analysis of student and customer comments, and according to our own observations over the years, we recognize that these sales have accomplished at least two assessment objectives: They have been both reliably motivating and awareness broadening experiences.

In written comments evaluating the project as a whole, almost all students report being motivated to do well because of the public nature of the sale.

We recognize the types of feedback students receive at the sale are heavily influenced by the criteria of the marketplace. The types of concerns prospective customers express in a retail setting may have little overlap with typical design discussions in the studio. Because the assessment experience at the sale is somewhat unusual, we argue it provides a supplementary point of view not often heard in the course of a student's education.

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