

# Learning to Fail: Experiencing Public Failure Online Through Crowdfunding

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## ABSTRACT

Online crowdfunding platforms like Kickstarter are gaining attention among novice creatives as an effective platform for funding their ventures and engaging in creative work with others. However, a focus on financial success of crowdfunding has obscured the fact that over 58% of crowdfunding projects fail to achieve their funding goals. This population of failed creatives however, gives us an audience to study public creative failure in an online environment. We draw inspiration from work in organizational behavior on failure, and work in Human Computer Interaction (HCI) on online behavior, to study online public failure. Using a mixed-methods approach with data scraped from Kickstarter and interview data with failed crowdfunding project creators, we answer the following question: What do project creators on crowdfunding platforms learn and change through the process of failing? We find that creators who relaunch their projects succeed 43% of the time, and that most individuals find failure to be a positive experience. We conclude the paper with a series of design implications for future creative platforms where public failure is part of the creative process.

## Author Keywords

Crowdsourcing; Crowdfunding; Feedback, Failure;

## ACM Classification Keywords

H.5.m. Information Interfaces and Presentation (e.g. HCI): Miscellaneous

## General Terms

Human Factors; Design; Measurement.

## INTRODUCTION

Creative work, and the associated design process is often characterized by a process of learning through iterative failure. Successful creatives fail repeatedly and consistently, before an eventually succeeding. Moving creative work online, presents challenges however, as many individuals are reluctant to post negative progress online. As Human Computer

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Figure 1. The homepage of Kickstarter.com: a crowdfunding platform for creative projects.

Interaction (HCI) researchers, we wish to understand public online failure so we can design online platforms where public failure is used as a stepping stone to eventual public success.

We study public online failure within the context of Kickstarter, a crowdfunding platform for creative projects. The popular press heralds crowdfunding as a way for people, typically with limited access to capital, to raise money for ventures, and for a crowd, a distributed network of individuals, to support them [24, 28, 1]. Crowdfunding has rapidly risen in popularity, with Kickstarter, the largest of the creative crowdfunding platforms, raising over \$400 million since 2008 [5], and the entire crowdfunding industry raising over \$2 billion in 2011 alone [2].

While much of the focus on online crowdfunding platforms has been on their financial success, many have ignored the fact that roughly 58% of crowdfunding projects on Kickstarter fail to reach their funding goal [5]. The preponderance of failed projects on Kickstarter, however gives us a unique opportunity to observe the reactions to public failure and engage with a large population of failed creatives. While others have discussed the failure of project creators to deliver goods and the determinants of failed projects, no discussion has occurred around the topic of the experience of failing within crowdfunding [21]. This paper seeks to use crowdfunding as a means to understand the experience of online creative failure by answering the following broad question:

*What do project creators on crowdfunding platforms learn and change through the process of failing?*

Because little is known about this phenomenon, we take an exploratory approach to the research. Through 11 interviews with crowdfunding project creators who have failed, as well as a dataset of roughly 16,000 projects hosted on Kickstarter.com. We present a mixed methods investigation of how crowdfunding project creators react to and learn from failed experiences and present a series of design implications for future online platforms that promote iterative failure and the design process.

This work is motivated by literature from organizational behavior, entrepreneurship, previous HCI research on crowdfunding and other HCI research on online behavior. Research from organizational behavior and entrepreneurship tells us that people who fail are more likely to succeed. Previous literature HCI research on crowdfunding tells us that crowd-funders, successful or not learn a lot about social media marketing, communication design and creative work in general. Theoretical work in HCI, however, indicates that posting negative updates online is uncomfortable for users and they're unlikely to do so. We posit that designing platforms which encourage iterative failure then would be positive for users, but that these platforms need to be designed appropriately with an understanding of the process of publicly failing online. To do so we need to understand what the experience of failing is so we can design for it. This paper addresses this need. The contributions of this paper therefore, are threefold: a discussion of the experience of failing publicly online, a quantitative explanation of failure on Kickstarter, and a series of design implications for future support tools.

## RELATED LITERATURE

We draw on theory from the fields of organizational behavior, entrepreneurship studies and HCI to explain the role of motivation, success and failure in online creative work. To discuss these themes, this section is structured as follows: First we discuss research from organizational behavior and entrepreneurship on the positive effects of failure. We continue with a discussion of current research on crowdfunding, highlighting recent HCI work on the tasks involved in running crowdfunding campaigns. Finally we conclude with a discussion of current HCI research on social network usage patterns as it pertains to crowdfunding work

### Motivation, Success and Failure

Research from organizational behavior focuses on the individual and group reactions to failure. Organizational behavior scholars explain the idea of the duality between the public and private self and how the two selves affect notions of failure. Brown and Gallagher described the reconciliation between these two selves [9], and they find that individuals are less inclined to fail publicly. Those who do experience public failure, however, exhibited a more egalitarian view towards self and others. Amy Edmonson expands on these themes by describing a theory of psychological safety, wherein individuals on teams are self motivated to not take risks as to not endanger the progress of the entire team [14]. The concept of psychological safety has implications for crowdfunding platforms, where platform designers are encouraging users to engage in risky behaviors, without fully explaining the social

implications of failed actions.

In addition to beliefs on the causes of team failure, organizational behaviorists have also developed theories of the cause of individual failure. Wood and Bandura have popularized the theory that beliefs about self-efficacy can act as a motivator for success and failure [27]. Their model of self-efficacy posits that there are four intrinsic factors that feed into specific behavioral patterns endemic to either success or failure. These factors are: 1) prior experience, 2) behavior models, 3) persuasion from others and 4) assessment of physical/emotional state. The combination of these four factors feed into either a high or a low efficacy state, which lead to high percentages of success or failure [27].

Perhaps most closely related to the topic at hand is research on reactions to failure within entrepreneurial ventures, as the work associated with online crowdfunding is similar to that of establishing and running a small entrepreneurial venture [19]. Cope et al. describes the learning experience of failed entrepreneurial ventures, discovering that failed entrepreneurs are often better prepared to proceed forward with new ventures [11]. Furthermore, Cannon and Edmondson describe specific methods for how ventures can learn from entrepreneurial failure, as a means of education for employees [10]. They subsequently describe a series of designed learning activities and guidelines for proceeding with the reframing or halting of new ventures. Additionally, Singh et al. proposed a framework for understanding the coping mechanisms for failure in new entrepreneurial ventures [25]. Using a qualitative approach they uncover that entrepreneurial failure leads to economic and social learning experiences, which are motivated by the endemic cause of failure. Projecting these insights to an online environment, an ideal platform for launching new creative ventures would pay strong attention to the self-efficacy beliefs of its members, as well as encouragement for failed creatives to re-factor and relaunch. As such, crowdfunding platforms should support their members in these ways.

### Crowdfunding

Crowdfunding platforms support the request for financial resources in exchange for a reward offered by a requester [20, 26]. These platforms enable a group of individual backers to contribute micro-contributions to support the development one new venture. Crowdfunding represents a new path for entrepreneurs to realize new ventures by leveraging a crowd of supporters. A high-exposure example of a crowdfunding campaign is that of the Pebble smartwatch team, a group of five individuals who raised just over \$10 million to fund the development and manufacturing of a smartwatch by soliciting contributions from just under 69,000 individuals [4, 6].

Unlike entrepreneurial and creative ventures, the notion of a failed or successful project is well defined on crowdfunding platforms. The project creator is asked to set a fundraising goal and a duration for each project, both of which are fixed. On Kickstarter, the most popular of the crowdfunding platforms, and the focus of this study, a project is deemed "successful" if it achieves financial pledges equal to or beyond that of its fundraising goal. If the project does not achieve

the goal then the project is permanently labeled on the website as a “failure” and the pledged funds are returned to the backers. Others have named this the “all-or-nothing” model [19]. For example, if a project has a goal of \$4000 and raises \$3999 in pledges, it would be a “failed” project. These failed projects remain on the Kickstarter website and are not removed. Though this is the manner in which Kickstarter operates, other crowdfunding platforms do not necessarily use the “all-or-nothing” model. For the scope of this paper however, we are only considering data from Kickstarter, as it is currently the most popular crowdfunding website.

Previous HCI research on crowdfunding centers on understanding the actions and the needs of the population of crowdfunders. Greenberg et al. positioned crowdfunding as a new form of complex-crowdwork, where the crowdfunding platform brokered the exchange of several kinds of resources [17]. Muller et al. described the experience of crowdfunding within enterprise settings, finding that crowdfunding success is tied closely to the marketing efforts of individuals [23]. Hui et al. described the work involved in the planning, running and execution of a crowdfunding campaign and found that project creators learned a variety of skills, from business planning to social media marketing [19]. Gerber et al. described the motivators and deterrents to participation in online crowdfunding, discovering that monetary reward was not the only motivating factor for participants, while deterrents are largely focused around avoiding impending failure [16].

From other academic perspectives, crowdfunding is a new and largely unexplored domain. Much of the research that has been completed to date comes from literature in economics and marketing. This literature is mostly outside the scope of this paper and is concerned with the locality of contributions and the potential financial impact of the crowdfunding market [7, 20]. However, Mollick et al. has described quantitatively the motivators of success and failure in online crowdfunding, using a regression analysis on a dataset scraped from Kickstarter.com [21]. His results indicate that perceived project quality and the size of the creator’s personal social network correlate most strongly with success on Kickstarter. Mollick also discusses the failure of successfully funded projects to deliver product on time, revealing that over 75% of projects miss deadlines at some stage of the project.

From a HCI perspective, crowdfunding is a unique kind of online community for several reasons. First, crowdfunding represents an online community where failure and success is broadcast to a personal social network. As such, unlike other online communities such as Facebook, the growth and decline of a user’s social capital is potentially tied to their record of public success online [15]. Furthermore, as social media marketing is a large part of the work involved in running a crowdfunding campaign [19, 21], running a campaign encourages individuals to post status updates on their project and to ask their friends and family for money. In previous studies of question asking and answering on Facebook, Morris et al, found that 4% of individuals reported using facebook to ask for favors [22]. Kickstarter, however encourages individuals to disclose information and rely on consistently ask-

ing friends and family for money to ensure success. A novice crowdfunding project creator who has never engaged in previous creative ventures and who isn’t comfortable with the iterative failure process of the design process [13], might feel uncomfortable with broadcasting failures, small or large to their social networks, as it would go against their established self-image [29]. Designing crowdfunding and other creative platforms where we encourage both social media marketing and iterative failure thus is a balancing act between several factors: managing self-efficacy, managing a projected image, and maintaining a crowd of supporters.

## METHODS

### Study Design

Others have studied the phenomenon of crowdfunding from the perspective of financial disruption and online communities, however we believe this is the first scholarly pursuit to study the experience of failing within online crowdfunding. We have investigated this phenomenon from a quantitative as well as a qualitative perspective. The quantitative approach uses data scraped from Kickstarter.com to provide descriptive statistics of the community of failed crowdfunders. The qualitative approach uses interview data to build a model of learning from failure as well as the motivations and deterrents to relaunching crowdfunding projects [12].

We seek to answer the following research questions about failed crowdfunding projects:

*RQ1: What happens to failed projects and their creators?*

As researchers and designers of online platforms, it is important to understand user decay and the actions of users who have failed. We wish to know why people leave platforms after they failed, and where do they turn to as alternatives?

*RQ2: What do creators of failed projects learn and change?*

Failure is not always a bad experience, as literature from organizational behavior suggests that failed creatives are more prepared to try again. As such, we wish to identify the skills and behaviors learned by failed creatives so that designs could be implemented which highlight the skills they have learned to encourage relaunch.

*RQ3: What are motivators or deterrents to relaunching failed projects?*

In an online environment the actions of crowdfunders are broadcast to their social network, as social media marketing is crucial in running a crowdfunding campaign. If we want to design tools which help people to relaunch, we need to understand what factors make relaunching appealing and unappealing to users.

We use quantitative data to address RQ1 and RQ2, and we use qualitative data to address RQ1, RQ2, and RQ3.

### Quantitative Data

We use a scraped dataset of project pages from Kickstarter.com provided by the owners of TheKickbackMachine.com, a site that captures projects as they are launched on Kickstarter.com and shows statistics on projects [3]. There

Attribute	Description	Type
goal	Goal in dollars of the project	Integer
perRaised	Percentage of goal raised	Double
category	Project category	String
rewardCount	Number of rewards available	Integer
duration	Length of project in Days	Double
hasVideo	Video present	Boolean
fbConnected	Connected to Facebook	Boolean
fbFriends	Number of Facebook friends	Integer
twFollowers	Number of Twitter followers	Integer
success	Outcome variable	Boolean

Table 1. Scraped Project Attributes

are no inherent biases in this dataset, since it captures all crowdfunding projects as they were launched; none were excluded. The dataset provides information on over 16,000 project pages on Kickstarter.com. The Kickback Machine is a public website, but the data we used is not publicly available. We received the data through a partnership with the owner of The Kickback Machine.

We used data on all projects that were originally scheduled to finish between: 6/18/2012 and 11/9/2012. In contrast to other quantitative analyses of data from Kickstarter.com, this dataset is a complete sample of all projects that were launched during this period. Locating failed and canceled projects on Kickstarter via traditional web search methods is impossible, as Kickstarter puts a *noindex* tag on the pages of failed projects so they do not appear in web search results. Other approaches include traversing the network graph of projects and supporters, but this approach results in collecting 94% of the projects on Kickstarter and misses failed projects with 0 backers or 0 comments [21]; our approach captures every project. Since this work is focused specifically on describing the experience of failed projects, we have opted to use a complete sample of all projects on Kickstarter as this would be best used to describe the experience of failure.

The structure of crowdfunding pages includes a video (optional), a goal, a project description, reward structure, and links to social media platforms (Figure 1). From each project page, The Kickback Machine collected a variety of attributes, which can be seen in Table 1.

Data processing to identify relaunched projects occurred in several stages. A visual representation of the processing pipeline can be seen in Figure 2. To identify relaunched projects, the original dataset from The Kickback Machine needed to be appropriately cleaned and processed for further analysis. Descriptive statistics were then calculated on the cleaned dataset. A summary of these statistics can be seen in Table 2.

The original dataset was reduced down to those entries for creators who had launched more than one project. This resulted in 1230 entries in either pairs or triads of projects, each pair or triad created by one user. Using manual inspection, each dyad (or triad) of projects was compared to determine if one project was a relaunched version of the previous project. We defined a relaunched project as one which was either iden-

Variable	med	mean	min	max	$\sigma^2$
Goal	5000	20212.9	1	15000000	147792.5
Raised	1185	8452.3	0	3986929	66023.9
% Raised	28.3	111.5	0	240716	2166.4
# Rewards	8	9.1	1	94	5.5
Duration	30	32.0	1	60	10.6

Table 2. Descriptive Statistics on Kickback Machine Data

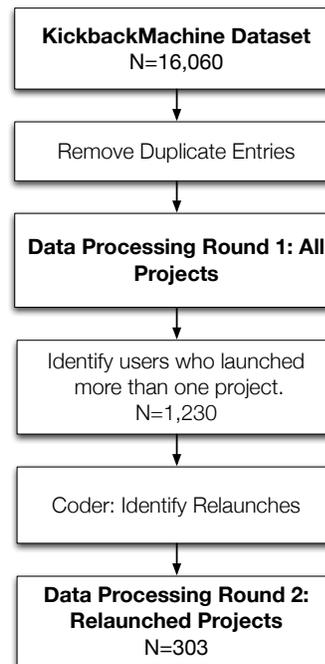


Figure 2. Data Processing Pipeline.

tical or an altered version of the original project concept. Subsets of previous projects were considered relaunches as well. We agreed on 303 projects as relaunches. For the relaunched project pairs a variety of attributes were calculated. The summary of these attributes can be seen in Table 3 for all the calculated attributes.

Values for change were calculated by subtracting the original project value from the relaunched project value, associated percentage change values were calculated as well. For example, a project which originally launched with 4 reward levels, and relaunched with 2 reward levels, would be calculated to have a  $-2$  for the Change in Number of Rewards attribute. Descriptive statistics on the relaunched projects can be seen in Table 4 for continuous variables, and Table 5 for Boolean variables.

Quantitative data was collected in a Google Fusion Table for initial filtering. A .csv file was output for further data processing. Scripts for cleaning and processing the data were written in Python. Statistical analyses and data visualizations were run in R.

## Interview Methods and Participants

Attribute	Description	Type
$\Delta$ Raised	Change in amount raised between original and relaunch	Double
$\Delta\%$ Raised	Change in amount raised as a percentage of the amount raised in the first attempt	Double
$\Delta$ Goal	Change in the goal size	String
$\Delta\%$ Goal	Change in the goal as a percentage of the original goal size	Integer
$\Delta$ Time	Change in length in days	Double
$\Delta$ Num. Rewards	Change in number of rewards	Integer
$\Delta$ FB Friends	Change in number of Facebook friends between launch and relaunch	Integer
Time to relaunch	Time elapsed between the launch of the first project and the launch of the second attempt	Integer
$\Delta$ Video	If a change in the video was present between the launch and the relaunch	Boolean
$\Delta$ Goal Structure	If a change in the number of goals was present	Boolean
$\Delta$ Category	If categories were changed	Boolean
$\Delta$ Time	If a change in the length of the campaign was present.	Boolean

Table 3. Calculated Attributes for relaunched Projects

	Percent	Count <i>n</i> = 303
Changed Video	59.15	181
Changed Goal Structure	70.26	215
Changed Category	4.90	15
Changed Time	64.05	196

Table 5. Descriptive Statistics for Boolean Variables of relaunched Projects

To develop a theory of motivations and deterrents to relaunch failed crowdfunding projects, we adopted a grounded theory approach [12]. We interviewed 11 participants (2 women) over an eleven-month period. All participants ran failed projects, 7 participants have relaunched their original projects.

Creators launched projects from the categories of Comics, Design, Fashion, Film & Video, Food, Games, Music, Publishing, and Technology. We selected participants from Kickstarter since our quantitative dataset is from this platform. Participants were recruited through random sampling and through snowball sampling, which allowed us to identify a wide range of individuals in the crowdfunding community. Participants were not compensated for their participation.

We followed a grounded theory approach and performed user interviews, as is common practice in qualitative HCI research [8]. The study began with open data collection. Since very little has been written about crowdfunding, let alone crowdfunding failure, we did not want to approach the interviews with set hypotheses, so as to allow themes to emerge over time.

Data was collected using semi-structured interviews. All participants were briefed on a commitment to anonymity in data collection. Our semi-structured interview protocol was varied between the different categories of respondents. For all respondents we began by asking a series of questions about their crowdfunding project, its status and their experience running said project. Relaunched participants were then asked to describe their motivations for relaunching and to describe alterations they might have made to their project. Failed participants were asked to describe the reasons why

their project might have failed, while canceled participants were asked why they canceled their projects. The third phase of the interview was focused on future actions. All participants were asked to describe their future plans with respect to their project and crowdfunding in general. The goal of this last phase was to understand their ongoing relationship with crowdfunding.

Interviews lasted approximately 20 minutes and were all conducted via Skype or phone due to the geographically distributed nature of the participants. The interviews were recorded and subsequently transcribed.

We used selective coding analysis on the transcripts to understand the reactions to failure in online crowdfunding, facilitated by the coding package, HyperResearch. We began the selective coding process by tagging instances where participants mentioned a motivation or a deterrent. Initial coding began after the collection of four interviews. Themes that emerged in the early interviews informed iterations of questions for later interviews. The emergent themes and the evidence that supports these themes are described in the Qualitative Results section.

## RESULTS

We take a two-part approach to discussing the results of our analyses. We first discuss quantitative answers to research questions 1 and 2, and then follow up by discussing qualitative answers to research questions 1, 2 and 3.

### Quantitative Results

#### *RQ1: What happens to failed projects?*

We find that 57.48% of projects in our dataset are unsuccessful (compared to 58% for all projects on Kickstarter), very few of these unsuccessful projects continue on Kickstarter either by relaunching as the same or refactoring and relaunching. By searching through a corpus of 16,060 projects (9,233 unsuccessful), we only located 303 projects which relaunched, meaning 1.8% of all projects in our dataset were relaunched, and 3.38% of all failed projects in our dataset eventually relaunched. A summary of this can be seen in Table 6 and Figure 3.

Despite the low percentage of relaunched projects, we do find that 43% of relaunched projects are eventually successful.

Variable	med	mean	min	max	$\sigma^2$
Goal	2999.5	10347.84	10.0	250000	2642.39
Amount Raised	805.5	3482.0	0.0	103200	9917.71
Percent Raised	43.17	141.80	0.0	10000	661.18
Reward Count	8	8.89	1	29	5.03
Duration	30.0	30.31	5.0	60.0	13.1
Change in Raised	79.0	1383.0	-23960	101500	8204.49
Percent change in raised	23.55	-109.2	-8104.0	inf	789.95
Change Goal	-3900.0	-32270	-4800000	80000	280846
Percent Change in Goal	-150.0	-845.4	-66570	81.01	4978.92
Change in Time	0.0	-2.0	-40.04	30.04	13.49
Change in Number of Rewards	0	-0.2	-9	13	3.02
Change in FB Friends	0	17.81	-15	568	<i>NA</i>
Time to relaunch	32	37.0	19	139	27.24

Table 4. Descriptive Statistics for Continuous Variables of relaunched Projects

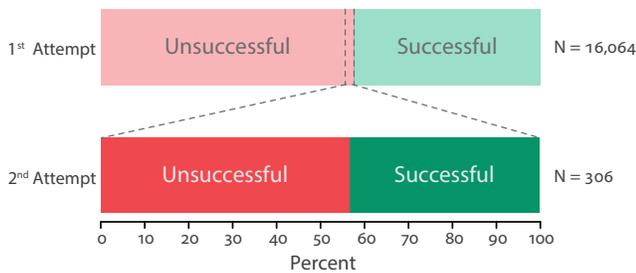


Figure 3. Subset of original projects which relaunch

While it may appear that this is no better than the 42% success rate of Kickstarter projects in general, it is interesting to see that these relaunched projects, which were at one point unsuccessful, were able to re-factor, relaunch and turn an unsuccessful venture into a successful one. It appears that the creators of unsuccessful projects that do end up relaunching learn from the mistakes of their original projects and re-factor appropriately to become successful.

*Q2: What do relaunching project creators learn and change?*

We find that relaunched projects change several aspects of the content of their project, although no single group of changes can guarantee success [18, 21]. Overall, we find that 59% of relaunched projects change the video, a task that some project creators have claimed is the most difficult task in preparation of the project content [16]. However we find little correlation between changing the video and resulting success in crowdfunding ( $r = -0.04$ ,  $n = 306$ ,  $p = 0.533$ ). We also find that 70% of relaunched projects change the reward structure of their project, with the average project reducing the number of rewards by 0.2 ( $\sigma = 3.0$ ). This indicates a simplification of the project content to create a more focused project.

We also find that very few projects change the category of their project: 4.9%. This is to be expected as the category of project has little bearing as to a project’s success, rather it is mostly correlated to the marketing efforts of the creators and the value proposition or pitch presented in the project content [21, 19, 18]. We do find, however, that project creators reduce

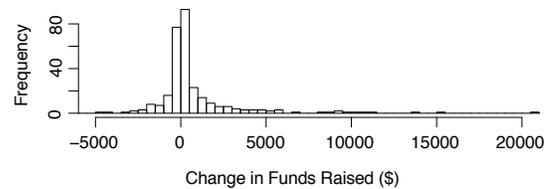


Figure 4. Change in Funds Raised: difference between first attempt and second attempt

the time that projects run (64% of projects), with the average project running for roughly 2 days shorter. Again we see this as a mechanism for reducing the complexity of projects, and focusing the pitch.

We find that the the average goal size for a relaunched project decreases by \$32268.02 ( $t = -1.9051$ ,  $p = 0.05769$ ). The average, however, doesn’t tell a true story, since it is heavily weighted by projects with large goal changes. However we find that the average change in goal size by percentage is a -850% change. Very few projects increase their goal size.

We do find however that a relaunched project raises \$1,383 more than its original counterpart . ( $t = -2.2196$ ,  $p = 0.02697$ ). A graphical representation of the distribution of the changes in funds raised can be seen in Figure 4.

We find that the average time to relaunch (difference between first and second launch date) was 37 days. Since the average campaign runs for approximately 30 days, we can conclude that the average project takes about a week to regroup, and relaunch.

Marketing, and engaging with social networks can have a profound effect on the success of a crowdfunding project [21]. We find that project creators on average add 17.8 friends on Facebook between the first and second launching. This shows an effort to build an audience in the days between relaunch, or that these individuals have learned the importance of engaging with a social network in order to be successful with crowdfunding.

	Succeeded	Canceled	Failed	Total	Percent Successful
1 <sup>st</sup> Attempt	6798	1175	8058	16064	42.32
2 <sup>nd</sup> Attempt	132	29	145	306	43.14

**Table 6. First and Second Attempts at Crowdfunding**

We are not convinced quantitatively that there is a standard set of changes that a project creator can do to guarantee success in a relaunch. Others have investigated the determinants of success and failure, and no such standard set of project elements guarantee project success [18, 21, 23]. Every failed project has its own shortcomings, and a checklist of things to change isn't what project creators need, rather they need incentive to re-factor and relaunch. Furthermore, much of the work involved in crowdfunding, and leading to crowdfunding success is social media marketing work, and is not captured in our dataset.

### Qualitative Results

#### *Q1: What happens to failed projects?*

Although we focused on relaunches in the previous sections, we find that many times after projects fail they continue on outside of the Kickstarter community. One participant described a potential move to another crowdfunding platform, IndieGoGo. One of the participants we interviewed received an offer of seed money to begin manufacturing a product directly after his project failed (P3). This creator claimed that he had heard of others who had received offers directly after their campaign had ended, but we could not locate any such individuals in our interviews. However, other individuals just end up abandoning the project idea all together, as was the case with three of our participants - (P1, P2, P5).

#### *Q2: What do relaunching projects learn and change?*

Much of what our respondents reported learning reflected the skills necessary to run an effective crowdfunding campaign, communication design and marketing [19]. One creator described what he learned about social media marketing:

You can't just expect someone to find your game and then do your marketing for you that's just not how it works. Yeah sure you can catch a rocket every once in a while, go viral. But you can't count on that. - (P9)

Another project creator described learning about how to communicate the ideas in his project beyond his personal social circle to a mass audience:

Uh, I learned that you really need to have a product that isn't just appealing to friends and family who like you and want to support you. You've got to have something that's going to have mass appeal to do really well. - (P11)

#### *Q3: What are the motivators and detractors to relaunching?*

*Detractors:* Several of the participants indicated that running a crowdfunding campaign involves the use of social capital. The running of a campaign involves asking friends for money, and the social consequence of this kind of interaction may detract people from running campaigns more than once. One participant stated:

I really don't know if I would turn to crowdsourcing for funding again. Just because I also feel like you can only ask people for so much and it is a great tool, but I mean, if you were getting all your projects funded by crowdfunding, it just seems, I can't really say it's good or bad or the other. To me, just personally, it seems kind of weird. (P7)

Another participant described her personal feelings about asking her social network for funds:

Oh my god, I lost confidence in myself and I really, some of my friends I was really disappointed. It became too personal for me, on a personal note. - (P8)

Other individuals indicated that they felt that crowdfunding was a waste of their time and money. Running a campaign can involve hundreds of hours, as well as hundreds of dollars in outlays without a guarantee of financial reward. One individual described her wasted time and effort:

I wanted to do it, and I still think it's a really good idea, and I still think it could work out somehow, but when it was obviously not going to get funded, and so you're kind of like, oh, I did spend a lot of time on that when I could have been working for real money, so I probably would not do this again. (P6)

*Motivators:* Most individuals however described crowdfunding as a positive experience in some regard, whether they indicated to us that they would be willing to run another campaign or not. In line with what the entrepreneurship literature says about failed ventures [11], project creators indicated to us they felt more experienced and better prepared to crowdfund again:

I've got also more experience and I think I'll do better with it. (P11)

Additionally, running a first campaign on Kickstarter allowed individuals to connect with an audience of potential supporters faster than just posting on social media. These supporters often gave feedback on projects and encouraged individuals to re-factor and relaunch. As Kickstarter allows individuals to bulk email supporters of projects, participants used this feature to advertise a relaunch or a new project launch with ease. Kickstarter makes it simple in this case to relaunch a project with a small tweak like a decrease in the goal size. One participant described his experience with easy re-factoring and relaunching:

...don't be afraid, if you already have run a campaign and it failed, don't be afraid to do it again. It isn't very much work compared to how much work you spent setting it up the first time right, cause you already know what you're gonna do, you already have the materials

you put together, and the stuff you wrote about it and all of that - (P4)

The same individual went on to describe how the first round of backers assisted him with relaunching, giving suggestions for improvement, as well as motivation to relaunch:

I also, when I, you know, made some tweaks and things about the, the rewards, part of that was in response to feedback I had from, from people interested in the campaign the first time. So I listened to that feedback, I thought about what might be reasonable to change or tweak, and I tweaked those things. - (P4)

In fact, several participants described to us the experience of getting feedback on a first campaign and using that feedback to inform design changes on a second campaign.

Participants described using the time between projects to create interest within their community, using that time to improve their marketing efforts:

I wanted to have enough time... I wanted to have enough time for where people knew something had actually changed... I mean, by going dark for two weeks, people literally wrote me like "Hey are you guys still around, what happened ... what's going on dahdahdah." and it gave me an opportunity to be like hey we're just taking a break right we got our butts kicked on Kickstarter, and we'll be back eventually, well we'll be back in two weeks. - (P10)

In all, individuals largely described the experience of failing online to be positive. While the fear of failure can cause individuals to protect themselves from potential risk [14], individuals used failed experiences to move forward, whether it was with a new iteration of a project, a move to a different funding source or to move on to another project. One stated:

I don't want to be cheesy but it made me stronger. It made me stronger in that I found different ways to connect with my audience, I found different ways to, dare I say manipulate the audience, to get the response that I needed... So, hopefully people are learning. People that fail learn and reevaluate, I know I did. So for me, failure is net positive. - (P10)

## DISCUSSION

As we have shown above, failure is a large part of the experience of online crowdfunding, but relaunching is not a very common experience. Relunched projects represent just under 2% of projects on Kickstarter. We do find, however, that individuals who do relaunch are more prepared to do the type of creative and entrepreneurial work that crowdfunding requires. This is very much in line with studies from organizational behavior and entrepreneurship studies, which claim that individuals who fail are more prepared for future success [11]. This claim is further backed by the finding that 43% of relunched projects on Kickstarter eventually succeed.

Project creators learn quite a lot through the process of failing. Individuals reported learning about the importance of

marketing and communication in building a successful campaign. Creators refactored their project by asking their social connections for feedback, and by looking at other, successful, crowdfunding campaigns. In addition, project creators used the period between failure and relaunch to refactor some of the project materials, with most projects reducing the goal size and the number of rewards. In turn, most relunched projects raised more funds than their failed counterparts.

While most respondents claimed that failure on Kickstarter was a net positive experience, there remained several factors which prevented users from relaunching. Some respondents reported that they had lost social capital by contacting their friends repeatedly during the first campaign, which supports HCI theories of social media identity management [29]. While other crowdfunders reported a lowering of their self esteem brought on by failure, similar to the concept of psychological safety. [14]

## Design Implications

Designing an online system where failure is broadcast to a public crowd can prove to be a difficult task. Even though individuals who fail in public are more prepared for eventual success, there are social consequences for failing in an online environment. Designing environments for failure can then be difficult and must be done carefully. Building on the findings above, we give some suggestions for the design of platforms which encourage learning through the experience of failure.

One major area of improvement for crowdfunding websites is social support. In line with ideas of psychological safety [14], social support for failed creatives can lessen the impact on a creator's self esteem and self-efficacy beliefs, which can in turn affect their ability to succeed [27]. Enabling avenues for social support between creators then should be a priority for creative platforms where iterative failure is an accepted and understandable part of the creative process. On crowdfunding platforms, each crowdfunding project is a micro-community for the exchange of ideas and feedback [18, 19], however, there exists no meta-community for project creators to share tips and solicit feedback on existing projects. External micro-communities for social support exist, but these are not readily available to a novice joining the crowdfunding community. The existence of such a meta-platform would assist creatives of varying levels of expertise in learning from the failings of others and giving support to others in the community as well.

In addition to support from peers, platforms should provide support and encouragement to individuals throughout the process of success and failure. Since the self-efficacy beliefs of individuals can lead to greater rates of success [27], platforms for creative work should monitor the self-efficacy beliefs of creatives throughout the process of running a project. Doing so, and maintaining high self-efficacy, should create greater rates of success for project creators.

Building on the theme of learning from others, Kickstarter and other crowdfunding platforms should not hide failed projects. Several of our respondents reported looking at other crowdfunding projects to understand what makes for a successful project. However, looking at failed projects to deter-

mine what makes an unsuccessful project is just as important. Kickstarter purposefully hides these pages by adding a *noindex* tag to the HTML so they are not indexed by search engines. Third-party sites like The Kickback Machine have sprung up to fill this need [3], but many individuals are unaware of such tools. Kickstarter, and other creative platforms, could use failed projects to educate others on common pitfalls that failed projects fall into, but currently do not support this. An online creative platform which encourages failing as part of the design process, should allow individuals to view and search through previous failed attempts, so that new members to the community may learn through the experiences of others.

Crowdfunding platforms should highlight the successes of projects that have refactored and relaunched, by showing users how to properly relaunch. A search for material relating to “How to Relaunch” proved unsuccessful. Kickstarter does provide a “school” for new project creators, but does not provide resources to those who have failed. Educating users to the pros and cons of relaunching could prove beneficial to Kickstarter as well, as more successful projects would lead to greater profits.

Crowdfunders learn skills through failure. Showing these crowdfunders their progress could be used to motivate them to try again. In other research, crowdfunders reported learning many skills related to running a crowdfunding campaign. These skills included: communication design and social media marketing [19]. When a project fails and doesn’t relaunch, these learned skills could potentially go to waste. Creative platforms which encourage relaunch from failure, should highlight the positive aspects of failing, such as the skills learned and the experience gained. Even if the failed creatives don’t realize that they are more prepared to succeed, encouragement from platform end could get them to realize this, try again, and eventually succeed.

In all, we do not suggest the design of interactions which encourage people to always fail, rather we are encouraging platforms to help individuals learn from their own personal failings and the failings of others. In doing so, we hope to improve the eventual output and quality of material on crowdfunding platforms and online platforms for creative work in general.

### **Limitations**

There are several limitations to the study we have presented here. First we do not have quantitative data on what happens to projects outside of the area of Kickstarter. This includes projects which may have shifted from one crowdfunding platform to another platform, and engagement on social media platforms like Twitter. So, for example, if a project moves to RocketHub or another crowdfunding platform, we have not captured that data quantitatively. Some of this data, however, has been captured in the qualitative data.

In addition, we do not have data on relaunches which may have occurred outside of our dataset. For example, we may have failed projects in our dataset which have relaunched since we collected our data. A full sample of all projects

launched on Kickstarter would alleviate this, but we do not have access to such a dataset. However, we feel that since our dataset comprises a complete sample of roughly 16,000 projects from Kickstarter that we have a representative sample.

### **Future Work**

In the future we would like to expand on the quantitative analyses presented in this paper. Using the same quantitative techniques as presented above on data from other crowdfunding platforms, such as IndieGoGo, and RocketHub would allow us to discuss crowdfunding more generally and discuss differences in experiences with each platform. We are currently working to acquire datasets from these platforms.

We realize that individuals who have run more than one campaign may not have failed the first time, but that these users might have learned entrepreneurial and creative skills each time they ran a campaign. Running similar type analyses on individuals who have launched more than one campaign, and have not failed, could provide further insights into how project creators learn through the crowdfunding process. We intend to work on this analysis in the near future.

In addition, we recognize that social media marketing plays a large role in the success of, and the the work involved with running a crowdfunding campaign [21, 19]. We would like to extend the analyses presented in this paper to include quantitative measures on social media engagement, as well as social media marketing efforts. With such metrics, we could make more concrete statements about what relaunching project creators change, and what they have learned through the crowdfunding process. We are currently working on acquiring quantifiable measures for these metrics as well.

### **CONCLUSION**

We presented a mixed-methods study of failure and relaunch of crowdfunding projects on Kickstarter.com. Through a series of 11 interviews and a dataset of over 16,000 projects we discussed the reactions to and consequences of failure in online crowdfunding. Major findings include that relaunched projects succeed 43% of the time and that individuals find failing on Kickstarter to be a largely positive experience.

We examined Kickstarter as a proxy for other platforms where individuals undertake, risky, creative work online, so we could draw implications for the design of online platforms for creative work. Broadly speaking, we recommend that creative platforms highlight the positive aspects of public failure (gained experience, an avenue to gather feedback, and new social network connections), while downplaying the negative aspects of public failure (decreases in social capital, and self-efficacy). We do not encourage designs that help people to always fail, rather we are encouraging platforms to help individuals learn from failure, so that these individuals can move forward and eventually succeed.

### **ACKNOWLEDGMENTS**

Acknowledgments go here, but they have been removed for anonymity.

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