

FINANCING PUBLIC EDUCATION VIA CROWDFUNDING:
K-12 TEACHERS AS SOCIAL ENTREPRENEURS

by

Brett Lee, M.Ed.

A dissertation submitted to the Graduate Council of
Texas State University in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy
with a Major in School Improvement
December 2018

Committee Members:

Stephen P. Gordon, Co-Chair

Larry R. Price, Co-Chair

Hilary Lustick

Shetay Ashford

COPYRIGHT

by

Brett Lee

2018

FAIR USE AND AUTHOR'S PERMISSION STATEMENT

Fair Use

This work is protected by the Copyright Laws of the United States (Public Law 94-553, section 107). Consistent with fair use as defined in the Copyright Laws, brief quotations from this material are allowed with proper acknowledgement. Use of this material for financial gain without the author's express written permission is not allowed.

Duplication Permission

As the copyright holder of this work I, Brett Lee, authorize duplication of this work, in whole or in part, for educational or scholarly purposes only.

DEDICATION

This dissertation is dedicated to emerging scholars
whose lives were cut short before they completed their academic dreams.

Draylen William Mason, East Austin College Prep, (2000 – 2018)

Wylmette Heather Gayle, Southwest Texas State University, (1976 – 1998)

In life, I was inspired by your intelligence and prodigious musical gifts.

A beacon of light: your lives were well lived.

I was inspired by your service to others
and your faith proclaimed in word and melody.

I am still inspired by your legacy.

This dissertation is dedicated to my ancestors.

To names on census records unearthed:
like great, great grandparents Fred and Hattie
born 1853 and 1866 respectively.

Both unable to read and write.

I write this because you could not.

I write this because you dreamed
of a day when your progeny could
be free.

ACKNOWLEDGEMENTS

The only way I can begin to acknowledge others is to start with the one who has led me and kept me through this process. There is a proverb that speaks volumes to my experience: A man's mind plans his course, but the LORD directs his steps.

לִב אָדָם יַחֲשֵׁב דְרָכָיו וַיְהוָה יְכִין צִעָדָיו: Thank you to Abba, the Parakletos, and Yeshua the anointed one. Your leadership, love, and ways that you speak have made me who I am today. Thank you to my parents, Robert M. Lee, Jr. and Catherine W. Lee, for speaking life over my educational path, even when I was sixteen and did not believe college was the way for me. Thank you, Mom and Dad, for reading and critiquing every APA formatted paper I wrote in the master's and doctoral program. As first-generation college students, you answered the call. Today, I stand upon your shoulders. I love you eternally!

To my committee, Dr. Shetay Ashford, Dr. Hilary Lustick, and chairs, Dr. Larry Price and Dr. Stephen Gordon, thank you for walking with me over the past two years. Your input and insight are evident in the presentation of this research. I appreciate everything you have done to promote this scholarly work and my progression in the academy. Thank you to the following Texas State faculty for your leadership while I worked as a research assistant: Dr. Miguel Guajardo, Dr. Michael O'Malley, Dr. Mary Jo Biggs, Dr. Shetay Ashford, and Dr. Matthew Eichler (posthum). Thank you to the current and former administrators who provided leadership and encouragement during my doctoral journey: Dr. Gloria Williams, Dr. David Williams, Dr. Samuel Garcia, Dr. Jocabed Marquez, Donald Tracy, Lee Vallery, and Mildred L. Reese.

TABLE OF CONTENTS

	Page
ACKNOWLEDGEMENTS	v
LIST OF FIGURES	x
ABSTRACT	xi
CHAPTER	
I. INTRODUCTION	1
Statement of the Problem	3
Purpose of the Study	6
Significance of the Study	7
Overview of Research Design	8
Potential Limitations of the Study	12
Definition of Terms	15
II. REVIEW OF LITERATURE	17
Crowdfunding	17
Crowdfunding in Education	19
Crowdfunding in K-12 Education	20
Related Theoretical Frameworks	25
Social Entrepreneurship	30
Inter-sectorality	31
Signaling Theory	32
Social Capital	33
Stakeholder Approach	34
The Agents of Crowdfunding	35
Donors	36
Civic Crowdfunders	36
Campaign Organizers	37
Donor Motivations	39
Metrics of Success	40
Social Media	41

Non-profit vs. For-profit	42
Signals of Quality	42
Offline Partnerships: Going Local	45
Marketing Experience	46
Concerns	47
Platform Selection.....	47
Privacy and Online Security	48
Following the Crowd: Privatized Supplies	50
Equitable Access	51
Feedback Mechanisms	53
Beyond Fundraising: Improving Teacher Agency and Offline Collaboration.....	53
Strengths	54
Sustainability.....	55
The Need for Future Research	56
Summary	57
III. DESIGN OF THE STUDY.....	59
Research Methods	60
Overview of Grounded Theory Methodology	61
Selection of Participating Schools	64
Qualitative Data Gathering	66
Interviews.....	66
Documents and Artifacts.....	68
Photographs.....	68
Data Analysis	70
Analysis of Interviews	70
Analysis of Documents and Artifacts	72
Analysis of Photographs	72
Triangulation of Data.....	74
Ethical Considerations	75
IV. RESEARCH FINDINGS.....	77
Motivations for Crowdfunding	79
Outdated Technology in the Classroom.....	79
New Books and Culturally Relevant Reading Materials	81
Budget Cuts.....	85
Inequity Within the School	87
Inequity Within the School District	90

Methods for Successful Crowdfunding	91
Taking the Plunge	91
Researching Past Projects	93
Researching Corporate Matching Opportunities	94
Researching Materials.....	98
Social Media: The Facebook Factor	99
Fall Proposal Writing: The Season for Giving	103
Crowdfunding on Personal Time: Working from Home	106
Supports for Teacher-led Crowdfunding	109
Teachers Teaching Teachers: Professional Development Workshops	109
Teachers Teaching Teachers: Informal Instruction	111
DonorsChoose: Technical Support	115
Barriers.....	117
Funders Keepers: A Tale of Two Policies	117
Additional District Requirements	120
Dollar Threshold	121
Outcomes	123
Reducing Planning and Preparation Time	123
On Campus Collaboration.....	125
Sharing	126
Partnership	127
Student Outcomes: Technology, Literacy, and Social-Emotional Learning	129
Summary	136
V. DISCUSSION	140
Interpretations	141
Budget Cuts.....	141
Social Justice.....	142
The Dollar Threshold.....	143
Social Media	144
Social Capital	145
Conclusions.....	147
The Emergent Theory	150
Grounded Theory Visual Model	150
Summary	154
Recommendations.....	154
Recommendations for Teachers.....	154
Recommendations for Campus Administrators	156

Recommendations for District Administrators	157
Recommendations for Future Research	160
Social and Emotional Learning.....	160
The Budget Band-Aid: PTA Revenues.....	161
Primary vs. Secondary School Crowdfunding.....	161
Donor Profiling	162
Social Entrepreneurship vs. Necessity Entrepreneurship	163
Recommendations on Emergent Theory.....	164
Concluding Thoughts.....	165
APPENDIX SECTION.....	167
REFERENCES	173

LIST OF FIGURES

Figure	Page
1.1 Crowdfunding Projects in Texas Schools	5
1.2 Texas Teachers Using DonorsChoose	6
2.1 Five-Year Budget Hole	23
2.2 Instructional Spending per Student, in 2016 Dollars	23
2.3 Conceptual Framework: Crowdfunding K-12	27
3.1 Genealogy of Grounded Theory: Major Milestones	62
3.2 Conceptual Map: Factors Influencing K-12 Teacher Crowdfunding	67
3.3 Conceptual Representation of Iterative Process of Qualitative Analysis With an Inductive Approach	75
4.1 Crowdfunded Reading Materials	84
4.2 Crowdfunded Snacks and Personal Hygiene Products	89
4.3 Screen Capture of Texas Match Offers.....	96
4.4 Ozobot on the Move.....	126
4.5 Crowdfunded Social Puppets	136
4.6 Crowdfunded Instructional Materials	139
5.1 Process Overview: Crowdfunding K-12	147
5.2 School Fundraising Vehicles	151
5.3 Theory of Crowdfunding K-12: Bus v. Plane	153

ABSTRACT

This study explored the practice of crowdfunding by certified teachers in public schools and the methods they employed to finance learning materials and resources on behalf of their respective classrooms and schools. While there are numerous studies pertaining to crowdfunding for-profit ventures, there is a lack of research on this method of crowdsourced, online fundraising in educational institutions. This study included the insights of 12 certified teachers and 4 principals. The four sites selected for the study consisted of campuses from a Texas school district that raised the most money over a ten year period on the website DonorsChoose.

Grounded theory methodology was utilized as a means of generating a theory from the data. Teacher and administrator interviews were the primary form of data utilized by the researcher to inductively develop conceptual categories and an integrated theory. The collection and analysis of data also included: proposal text, photographs, thank-you letters, and archived statistics. The findings indicate teachers utilized crowdfunding as an alternative to spending their own money for student supplies. Although teachers wrote crowdfunding proposals at home, participants explained that investing their “free time” yielded improvements in their teaching and their students' learning and self-efficacy. Across each site studied, teachers demonstrated a willingness to share information and resources with fellow teachers. The practice of crowdfunding led to the formation of informal learning communities and formal professional development. The teachers that authored the most crowdfunding proposals and raised the

most money were from Title I elementary schools. The teachers, many of whom work in dual language classrooms, identified equity as the primary goal of their online efforts.

CHAPTER I

INTRODUCTION

While broadcast journalist and popular media publications provide significant material on the topic of crowdfunding in public schools, this phenomenon is largely absent from academic literature. At the most fundamental level, crowdfunding involves a person that proposes a funding idea and a crowd of people who collectively provide monetary donations to support the proposal (Antonenko, Lee, & Kleinheksel, 2014). In 2014, \$529 million was collectively raised on the world's largest crowdfunding site Kickstarter.org (CNET, 2015). While artistic ventures and startups fueled the rise of crowdfunding giants Kickstarter and Indiegogo, today crowdfunding is increasingly utilized by teachers to secure classroom supplies and funding for campus-based projects (Fink, 2015). Websites such as SportsMatter, Piggybackr, GoFundMe, and DonorsChoose provide a platform for educators to solicit funds from patrons in close proximity to their school as well as from individuals in other states and nations. Moreover, school administrators and teachers seeking to maintain athletic programs utilize crowdfunding as an alternative to car washes, candy bar sales and clipping box tops (Chang, 2016; Paterson, 2016). Although there is minimal research demonstrating the effects of crowdfunding on classroom teaching and learning, a recent article suggests crowdfunding is a viable alternative for teachers as "schools tend to have close-knit groups of parents, families and students" (Curriculum Review, 2017, p. 4). As it relates to elementary education, the research of Reese and Miller (2017) indicates crowdfunding helps teachers bridge the gap between curriculum, instruction, and fiscal support, especially in financially distressed schools and districts. Correspondingly, the practice of

raising money by asking individuals and groups to support a crowdsourced project is a viable means of improving schools in the wake of reduced federal, state, and local support (Fink, 2016).

According to CNBC (2016), education is the largest growing category on GoFundMe; \$60 million was raised for education related projects in the twelve months spanning from September 2015 to September 2016. In the spring of 2016, GoFundMe rebranded its offerings to gain a greater share of the educational crowdfunding market (GoFundMe, 2016). To promote this new offering, GoFundMe will award 100 Google Chromebooks to 9 high need schools that organize the most successful crowdfunding campaign. Currently, one school from Texas is in the finals. Reagan High School is ranked number seven out of nine finalists (GoFundMe, 2017).

While crowdfunding is relatively new to elementary education, compared to the fields of science, business, and technology, this emerging field of research has the potential to help elementary science educators deliver curriculum and instruction aligned with the Next Generation Science Standards (Reese & Miller, 2017). Akin to the field of entrepreneurship, crowdfunding's success depends on the socio-cultural environment where society ultimately makes the decision on which projects should be funded; however, unlike entrepreneurship, crowdfunding creators describe their relationship with the public as supportive rather than competitive (Hui, Greenberg, & Gerber, 2014). Although crowdfunding grew out of the entrepreneurial domain, parallel frameworks from academic literature can be applied to articulate crowdfunding in K-12 educational contexts. In this study, the tenets of social entrepreneurship, social capital, inter-

sectorality, stakeholder theory, and signaling theory are presented as components of a larger conceptual framework.

Statement of the Problem

Since the advent of the one room school, teachers have relied on personal resources to supplement the acquisition of instructional materials. However, over the past three years a technology enabled phenomenon emerged. Today, public school teachers are not only using their personal dollars but increasingly utilizing their time to master skills once reserved to digital marketers and tech entrepreneurs. Through the production of persuasive written content, digital photography, and social networking, K-12 teachers are raising money for the supplies needed for their students. In the United States, the widening chasm between educational funding and student need can be primarily attributed to the decrease in post-recession local, state, and federal revenue, low property taxes, and inflation (Bibbs, 2016). Although the federal government allows teachers to claim an annual Educator Expense deduction, their expenses typically exceed the allowable \$250 income tax deduction. A 2015 national survey of public school educators revealed, teachers spent \$530 of their own money on classroom items; teachers in high-poverty schools spent nearly 40 percent more, an average of \$672 (Will, 2016).

One educational researcher notes:

In an economic climate of lean budgets and dwindling resources, district personnel going it alone should do their research to identify new pools of money—no matter how small—to supplement existing funds. Crowdfunding websites, like DonorsChoose.org, and foundations are good places to investigate for potential funding. (Emeagwali, 2016, p. 22)

DonorsChoose.org, one of the earliest and most successful crowdfunding sites, noted that 79% of all public schools in America have at least one teacher who has created a crowdfunding campaign; this trend is slightly more pronounced for high poverty schools, at which 82% of teachers have crowdfunded using this platform (DonorsChoose.org, 2018). In 2016, classroom crowdfunding increased nationally; patrons raised \$106 million on DonorsChoose.org during this same period (Fine, 2017). In Texas, the phenomenon is no less pronounced. During the 2017-2018 school year, 22,257 projects were funded statewide (Data.donorschoose.org, 2018). Viewed in aggregate, 11,545 teachers raised \$15 million during the 2017-2018 school year, impacting an estimated 2,413,692 students (Data.donorschoose.org, 2018). Comparison of the 2016 and 2017 crowdfunding statistics indicates a year-over-year growth rate of 54 percent (see Figures 1.1 & 1.2).

In 2013, Houston native Andyshea Saberioon started the crowdfunding company PledgeCents to address shortages in public schools. Saberioon believes “it’s completely wrong in a sense that teachers have to find outside sources for funding” (Radcliffe, 2014). Amphi Foundation director Leah Noreng decries “We don’t want our teachers to have to pay for things out of pocket. No other profession exists where you’re expected to pay for things out of pocket and not get reimbursed by your company. Teachers are doing that every day” (Leingang & Campbell, 2017). According to a report issued by the Texas State Teachers Association, Texas spends an “estimated average of \$9,561 per student, compared with the national average of \$12,251, placing it 38th among states and the District of Columbia” (Chang, 2016).

While there are a handful of studies detailing crowdfunding in higher education, there are far fewer studies pertaining to teacher-led crowdfunding; the first peer reviewed journal on this subject was published in 2014 (Meer, 2014). During the first half of 2017, only three peer reviewed journal articles were published pertaining to crowdfunding in public schools (Curriculum Review, 2017; Fine, 2017, Reese & Miller, 2017). Currently, there are no published dissertations on the topic of crowdfunding and K-12 classrooms. Specifically, this study seeks to address the reasons teachers in local public schools are resorting to online, entrepreneurial models of fundraising. Exploratory reading of the nascent literature leads the researcher to a series of propositions regarding teacher motivations. Potential reasons for K-12 teachers' use of crowdfunding include limited district resources, limited parent resources, limited teacher resources, and lengthy approval processes for supply and field trip requests.

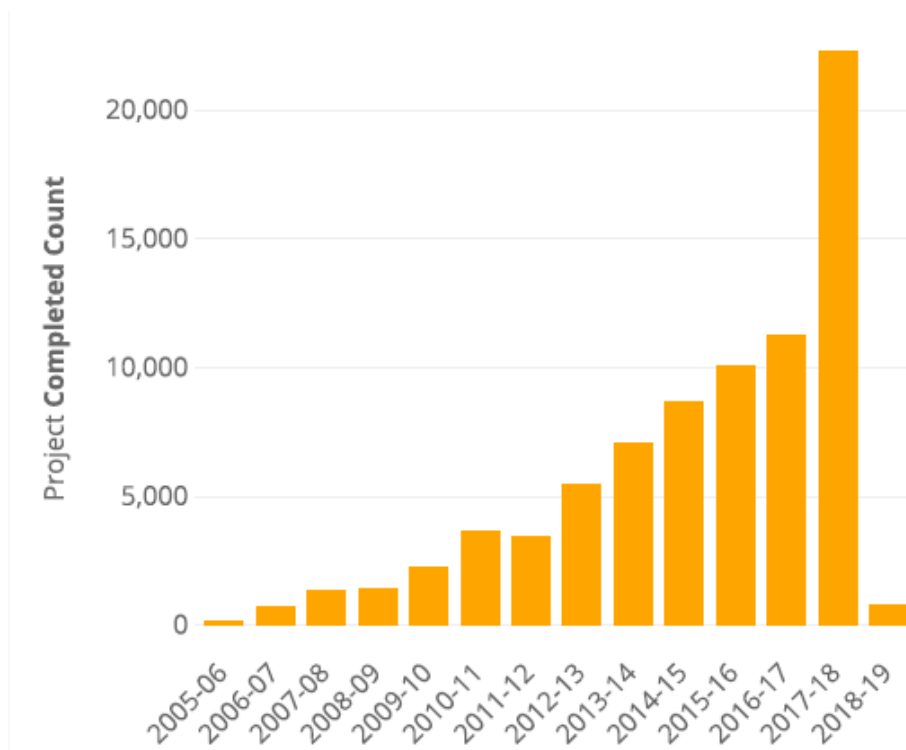


Figure 1.1. Crowdfunding Projects in Texas Schools (Data.donorschoose.org, 2018)

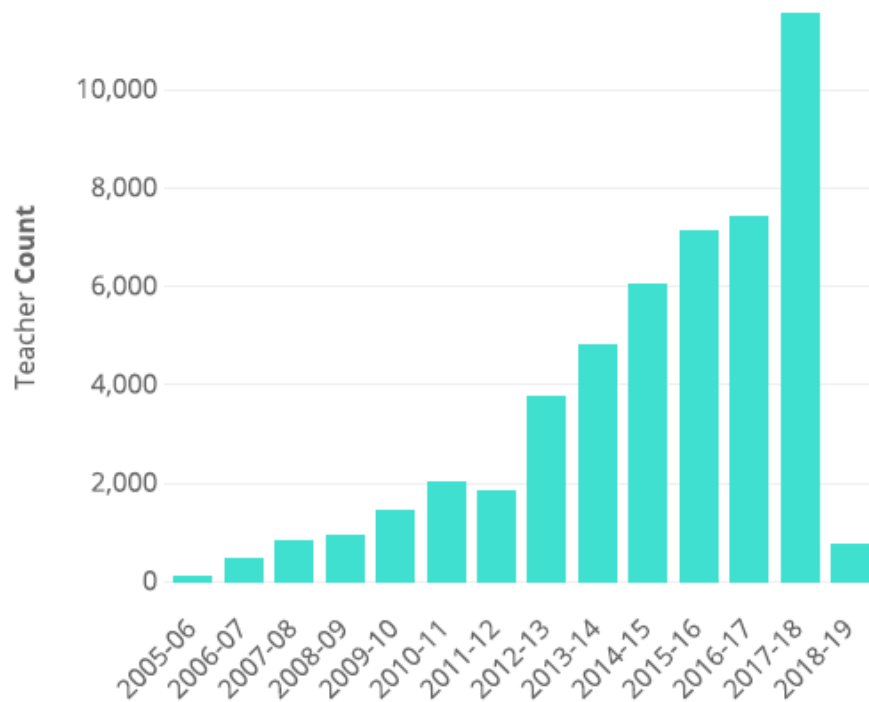


Figure 1.2. Texas Teachers Using DonorsChoose (Data.donorschoose.org, 2018)

Purpose of the Study

Despite the growing number of teachers using crowdfunding across the nation, little is known regarding the impact of crowdfunding on student outcomes, teacher efficacy, and educational finance legislation. This investigation explored an emerging school reform movement fueled by the entrepreneurial practice of teachers and the influx of more than 100 million dollars in annual private donations. Publication of the researcher's findings shed light on this online fundraising movement and teachers' creative use of crowdfunding platforms. This dissertation addresses the reasons why teachers in one school district utilized crowdfunding platforms. This study also uncovered additional crowdfunding rationales not rooted in constrained budgets and fiscal processes. One example includes certified teachers use of crowdfunding as a form of social media marketing, to highlight innovative curriculum and build online

community. The study also determined the motivations and factors that contribute to successful crowdfunding in public elementary schools. The research questions that guided the investigation are:

1. What are the motives of public school teachers who initiate crowdfunding campaigns?
2. What are the methods of public school teachers who execute crowdfunding campaigns?
3. What are the internal organizational factors that impact decisions of teachers who execute successful crowdfunding campaigns?
4. What are the external influences that impact decisions of teachers who execute successful crowdfunding campaigns?

Significance of the Study

Currently, there is a need for the development of a guide for crowdfunding practitioners. By employing a grounded theory research methodology, the researcher determined the factors that are predictors of a successful teacher-led crowdfunding campaign. Publication of these findings have the potential to benefit teacher leaders and campus administrators. Herein, educators new to online-fundraising may access evidence-based strategies and metrics for theoretical generalization. Specifically, the researcher presented findings which practitioners may apply or adapt under different circumstances and conditions. According to Morrow (as cited in Fraenkel, Wallen, & Hyun, 2015), this process, known as transferability, was achieved by providing detailed information regarding the researcher, research context, participants, and the researcher-participant relationship to enable the reader to decide how the findings may transfer.

It is presently difficult to determine the predominate reasons for teacher led crowdfunding. While teachers commonly use crowdfunding websites for books and school supplies, a growing number of teachers are seeking funds for innovative resources, like tablets, and furniture to create collaborative learning spaces (Fine, 2017). Despite the rapid growth of crowdfunding, “we understand little about how crowdfunding users build ad hoc online communities to undertake this new way of performing entrepreneurial work” (Hui, Greenberg, & Gerber, 2014, p. 62). Through a series of iterative open-ended /in-depth interviews, the researcher explored the reasons why educational leaders utilize crowdfunding within the context of K-12 public schools.

This study is distinct from contemporary works centered on crowdfunding as means of generating wealth for profit ventures. Within this study, crowdfunding methods and rationales were explored from the perspective of non-profit and civic organizations. Ideally, this study on crowdfunding has the potential to be incorporated into the scholarly community as a democratic approach to school improvement. When teachers share campus-based needs on crowdfunding platforms, members of the community at large are encouraged “to pick and fund stories they want to see covered,” thereby increasing visibility and support for grassroots campaigns (Bennett, Chin, & Jones, 2015, p. 146). Crowdfunding demonstrates that even small contributions can add up to major support for future innovation, research, and social change (Herther, 2016).

Overview of Research Design

This section delineates the processes the researcher utilized to select the site of study. These processes are based on metrics available within publicly available data. This source of data was analyzed utilizing basic quantitative methods. The overall

picture presented by analyzing quantitative methods was used to determine the subset of schools to include in this study. In order to achieve this end, the study employed a grounded theory methodological approach. This qualitative approach required the researcher to facilitate multiple interviews. In order to conduct subsequent analysis, the researcher recorded each interview. The overarching goal of the grounded theory approach is the generation of a theory to describe the motives of teachers leading crowdfunding efforts within their respective schools.

The initial phase of this investigation yielded the sites of study and the respective sample of teachers and administrators. To achieve this end, the researcher retrieved and analyzed a publicly available dataset consisting of school district sites participating in crowdfunding between 2006 and 2017 via the DonorsChoose platform. DonorsChoose was selected as the site of study, as opposed to GoFundMe, due to DonorsChoose sole focus on education. Moreover, DonorsChoose offers a publicly accessible, open sourced dataset consisting of over one million crowdfunding transactions. During this observational phase, the researcher explored the relationships between variables. The relevant variables in the DonorsChoose dataset include the total number of successful crowdfunding campaigns per school, the number of successful crowdfunding campaigns per teacher, the total amount of dollars raised per school, and the total amount of dollars raised per teacher. By analyzing the archival data set, the researcher devised a list of four schools, out of 120 campuses in the district, demonstrating the highest levels of crowdfunding efficacy. The researcher also computed descriptive statistics such as the mean, median, mode, and range of all campaigns. After computing statistics, the researcher generated a series of histograms illustrating the campuses with the largest

number of campaigns, largest dollar amount raised, and greatest degree of teacher participation.

Mollick (2014) notes, “it is important to understand what role, if any, geography continues to play in new ventures in a crowdfunding regime” (p. 4). The researcher addressed this facet of the study by generating a heat map to display the geographic areas of greatest crowdfunding density. The composite picture of the aforementioned quantitative metrics assisted in site selection. The most active schools were invited to participate in this study. The site selection process ceased after receipt of confirmation from four schools. The researcher confirmed participation of both administrators and certified teachers at each of the four sites. Additional information pertaining to site selection and qualitative methodology is presented in Chapter Three.

Currently, “crowdfunding is at a nascent stage with no established investigative framework across the multiple disciplines where research is beginning to emerge...” (Beaulieu, Sarker, & Sarker, 2015, p. 21). Given the lack of theory relevant to educational crowdfunding, the researcher employed a grounded theory methodological approach. According to Kilbourn (2006), “qualitative studies lie along a continuum of theory application at one end and theory development at the other. In the latter case, the emphasis is placed on developing a theoretical perspective as it emerges from the phenomenon itself” (p. 545). The corresponding goal of the primary study was to generate a substantive-level theory rooted in the analysis of ABC Independent School District teacher and administrator interviews. In accordance with the tenets of grounded theory, multiple rounds of interviews accompanied by interim analysis took place until each category reached theoretical saturation. Johnson and Christensen (2013) describe

theoretical saturation as “the situation in which understanding has been reached and there is no current need for more data” (p. 588). Hence, theoretical saturation supersedes repetitive stories or processes encountered by the researcher during data collection; saturation occurs when patterns cease to inform theoretical categories (Charmaz, 2014). Additional details regarding the grounded theory research methodology and methods employed in this study are discussed in Chapter Three.

According to Bowen (2009), “the qualitative researcher is expected to draw upon multiple (at least two) sources of evidence; that is, to seek convergence and corroboration through the use of different data sources and methods” (p. 28). The corresponding data collection sources included in this study consist of documents, photographs, and artifacts. Documents examined in this study include webpages that comprise teacher-created crowdfunding sites, also known as campaigns. The text within each teacher’s page consists of essays and verbiage outlining classroom needs and expected student outcomes. Stiver (2013) notes the content of a crowdfunding platform can be utilized as a site for non-participatory observation. To the advantage of the researcher, “observation of public online communities, and the consideration of the explicit rules and conventions of interaction” were undertaken in a non-invasive manner (Stiver, 2013, p. 5).

The artifacts analyzed included physical objects in the teacher’s classroom that provided additional insight into the outcomes of the crowdfunding initiative. Although research based on studying artifacts evokes images of archaeologists working within the dusty confines of an excavation site, Willis (2008) notes “an artifact can be anything produced by humans” including portfolios and stories developed by students (p. 64). According to Merriam and Tisdell (2015), “artifacts are usually three-dimensional

physical ‘things’ or objects in the environment that represent some form of communication that is meaningful to participants and/or the setting” (p. 162).

Another type of data the researcher utilized consisted of photographs. In this study, researcher-generated photographs were utilized to document the application of the teacher-procured materials. This visual record of the artifact was utilized to document the impact of the donated item on a select group of students. In-line with the qualitative method known as photo elicitation, photographs of crowdfunded items were also presented to administrators participating in the interview process. Visual research suggests photographs have the potential to “stimulate deep and meaningful dialogue between researchers and participants” (Patton, Higgs, Smith, 2012, p. 118). While the collection and analysis of interview data, documents, photographs, and artifacts may appear to follow a linear path, the researcher conducted the data collection and analysis procedures in parallel. According to Saldaña (2011),

Qualitative data analysis is concurrent with data collection and management. As interviews are transcribed, fieldnotes fleshed out, and documents filed, the researcher uses the opportunity to read the corpus and make preliminary notations As these data are initially reviewed, the researcher also composes supplemental analytic memos ... that include first impressions, reminders for follow-up, [and] preliminary connections. (p. 95)

Potential Limitations of the Study

In this section, the researcher sought to highlight the contextually sensitive information that potentially undermined the validity of the study. As the selection of participants and sites is largely determined by the quality of the dataset, the strength of

this study is founded on the quality of the DonorsChoose.org dataset. In addition, the researcher's interpretation of the crowdfunding metrics influenced each iteration of analysis and subsequent theory. To address these concerns the researcher triangulated findings with information obtained from participant interviews and site observations.

Since the sites of study were selected based on an archived dataset spanning ten years, some of the teachers initially selected for this study were no longer employed at the respective campus location at the time interviews commenced. To address this potential problem, the researcher confirmed teacher employment prior to selecting sites of study. In the event prospective teachers relocated to another school within the ABC Independent School District, the researcher contacted these participants individually, on a case by case basis. Hence, site selection adjustments were made after the completion of participant identification.

The publicly accessible dataset provided on the Data.donorschoose.org website did not include the number of students served per campus. To counter this lack of information, the researcher gathered student impact data by including questions pertaining to student impact within the teacher and administrator interviews. This finding has the potential to benefit the community of public school educators in correlating the types of crowdfunding campaigns that yield the most significant impact upon the larger campus community.

The second item not included in the publicly available dataset is the number of attempted / failed campaigns per campus. The sites selected during the preliminary phase of this study consisted of schools with a high number of projects that have reached 100

percent, fully funded status. As such, this study does not directly address failed projects but rather teacher efficacy and outcomes of successful campus-based crowdfunding.

According to Fine (2017), the types of supplies most requested by teachers are classroom supplies and books. As a result, the researcher's ability to capture artifacts was limited in cases where donated goods consisted of disposable commodities or items granted to students to take home. Statewide, 40% of funded projects are for classroom supplies and 20% for books (DonorsChoose, 2017). In the event the researcher was unable to examine the donated items, the researcher asked the teacher for existing photographs or similar online product descriptions. The researcher followed similar steps for donated services. Examples included donations applied to field trip expenses and / or guest presenter fees. On average, field trips and class visitors account for 1% of funded projects (DonorsChoose, 2017). DonorsChoose requirement for reciprocation enabled the researcher to obtain access to teachers' artifacts posted on the DonorsChoose website. After a project is fully funded, teachers and students are expected to post photos of the project in action, personalized messages, and a follow-up report denoting the impact of the project upon the classroom (Emeagwali, 2016).

Definition of Terms

Crowdfunding – Crowdfunding allows entrepreneurs to raise funds through an open call on the Internet. An important characteristic of crowdfunding is the actual or perceived benefit funders receive by participating in the crowdfunding mechanism (Belleflamme, Lambert, & Schwienbacher, 2014, p. 585).

Funder / Crowdfunder – The individuals or organizations that provide financial support in response to online proposals hosted on crowdfunding platforms such as GoFundMe. In cross-disciplinary literature, these individuals may also be referred to as donors, supporters, and backers.

Teacherpreneur – Berry (2013) notes, Teacherpreneurs are “classroom experts who teach students regularly, but also have time, space, and reward to spread their ideas and practices to colleagues as well as administrators, policy-makers, parents, and community leaders” (p. 310). As such teachers who practice crowdfunding “lead outside the classroom but do not lose their connection to students” (Berry, 2013, p. 309).

Organizer / Entrepreneur – Macht and Weatherston (2015) define crowdfunding organizers as the fund-seeking entrepreneurs who attempt to raise capital for projects. Given the sites of the study (DonorsChoose, only allows teachers to post projects) the terms “organizer” and “entrepreneur” are used interchangeably with “teacher.”

Platform – The online crowdfunding platform is the intermediary which brings together entrepreneurs and funders. Non-profit and for-profit crowdfunding platforms such as GoFundMe, Kickstarter, IndieGogo, and DonorsChoose maintain fiscal viability by retaining a percentage of the funds donated.

Campaign – The term campaign refers to a round of fundraising launched by entrepreneurs on crowdfunding platforms such as Kickstarter (Hui, Greenberg, & Gerber, 2014). Most campaigns feature the following information: start date, end date, fiscal goal, donation levels, teacher essay / statement of request and requested resource.

Campaign Goal – The campaign goal is the amount of money the crowdfunding organizer sets as a target prior to launching an online funding campaign.

Poverty Level – Each crowdfunding campaign is categorized according to the economic status of the school. These categories include: highest poverty, high poverty, moderate poverty, and low poverty. Schools with 65 percent or more students receiving free and reduced-price lunch are classified as highest poverty. Schools with 40 to 64 percent of students receiving free and reduced-price lunch are classified as high poverty (DonorsChoose.org, 2016).

Fully Funded – When the total amount of donations equals the initial campaign goal, the project website indicates the project has been 100% funded. In this study, fully-funded indicates any donation that meets or exceeds 100%.

CHAPTER II

REVIEW OF LITERATURE

This review of literature addresses the practice of crowdfunding by teachers within the context of public schools. The motivations for seeking fiscal support of teacher-led crowdfunding campaigns is also explored. This chapter also examines the literature on social capital, signaling theory, stakeholder theory, and inter-sectorality. Subsequently, the interactions between the agents comprising a crowdfunding triad is explored. Finally, this review describes the opportunities and challenges educators face as they apply this relatively new method of fundraising within their respective learning communities.

Crowdfunding

Crowdfunding is an online fundraising method that attempts to generate collective support of projects via an open call to the public. Crowdfunding websites, also known as crowdfunding platforms, provide an open forum for matching project creators and financial donors based on their common interest in the proposed service or product (Wash & Solomon, 2014). Crowdfunding, originally referred to as crowdsourcing in a 2006 article by Wired Magazine, emerged as a nontraditional method of sharing ideas and gaining financial support via the Internet (Herther, 2016). While collective fundraising is not a new practice, the differentiating factor between other forms of philanthropy and crowdfunding is the context of the meeting between the project author and donors. Namely, crowdfunding platforms are 100% web based, facilitated by the integration of credit card processing, video clips, photos, and integration with social media sites such as Facebook and Twitter.

While the use of the aforementioned tools is beneficial, adept campaign organizers also rely on traditional methods of offline partnership development. Offline systems such as telephone calls, postal mailers, and face-to-face networking undergird the formation of short-term and long-term fiscal support. Crowdfunding projects, also known as campaigns, assume one of the following four forms: donation-based, reward-based, equity-based, or lending-based (see Appendix A). The most prevalent models, reward-based and donation-based, facilitate the financing of creative projects and charitable causes without disbursement or yields to project backers (Lam & Law, 2016).

Crowdfunding is revolutionizing fundraising similar to the way travel websites transformed travel agencies (Mintz, 2015). As the crowdfunding industry matures, a range of specialist sub-genres are emerging to fulfill the needs of diverse industries such as politics, scientific research, consumer products, and manufacturing (Davies, 2015). As it pertains to education, crowdfunding donors are empowered to dictate where their money goes and how it will be used by the school. In 2015, a single donor contributed to 1,649 campaigns because she enjoys connecting with the classrooms by reviewing teacher uploaded artifacts such as essays and photographs (Sherburne, 2016). Moreover, this type of fundraising technology appeals to the data-driven members of the Millennial generation, who are not merely satisfied with writing checks to good causes (Mintz, 2015). Currently, Millennials are overwhelmingly supportive of sites like Etsy and crowdfunded projects that appeal to their desire to buy organic and protect the environment (Schoch, 2016). In 2015, national talk show host and comedian Stephen Colbert spearheaded an effort to underwrite all classroom projects posted on

DonorsChoose.org by South Carolina teachers; in total Colbert pledged \$800,000 (Social Media, 2016).

Crowdfunding in Education

As it pertains to the educational sector, crowdfunding aligns predominately with the donation-based model. Crowdfunding is an approach “that offers donors a gamelike experience, with pledges being collected only if the project reaches its funding goal by a certain deadline” (Dawkins, 2013, p. 14). Although supporters contribute without expectation of reciprocity, in-kind gifts such as thank you cards and digital photographs are commonly sent to project donors by the organizers of the non-profit campaign. In 2012, the crowdfunding site Indiegogo was utilized by librarians to raise awareness and financial support for the information literacy game, SEEK!. Although the authors ultimately released the game for free to the public domain, campaign donors were rewarded with pre-release access. As of January 2014, SEEK! had been downloaded 1,040 times by users from 43 countries and implemented in schools, colleges, and universities globally (Walsh, 2014).

In higher education, academic crowdfunding (ACf) has emerged as a means for universities to support faculty research. To increase the likelihood of success, organizers are encouraged to limit campaigns to \$10,000 (Marlett, 2015). In the United States, leading portals for ACf include Experiment, Kickstarter, Indiegogo and RocketHub. Aside from reliability, the main advantage for universities posting to established sites is the potential to attract a larger number of donors due to increased site traffic (Fitzgerald, 2015). Currently, over 50 colleges and universities worldwide have partner pages located on established crowdfunding portals; these institutions include: MIT, Columbia, Stanford,

Duke and the University of Edinburgh (Martlett, 2015). While some universities have partnered with Kickstarter or Indiegogo, many universities use either a proprietary niche crowdfunding platform or their own locally developed platform (Riley-Huff, Herrera, Ivey, Harry, 2016). Examples of these institutions includes: Marquette University, the University of Virginia, Oklahoma State University, and Georgia Tech (Fitzgerald, 2015). As administrators in higher education embrace web 2.0 technologies, one of the potential benefits of crowdfunding is the increase in democratic participation by students, faculty, and staff (English, 2014).

Outside the realm of higher education, for-profit educational vendors, especially educational technology startups, have achieved success promoting products on crowdfunding platforms. In a 2013 research study, “six of the top 10 performing crowdfunding campaigns focused on creating learning materials (e-books, an entertainment game) or training programs (an online course, a video tutorial, a summer camp) that focused on the teaching and learning of programming languages...” (Antonenko, Lee, & Kleinheksel, 2014, p. 38). Despite the increasing scope and size, academic research pertaining to this phenomenon has been limited by the relatively small number of websites suitable for quantitative study (Vismara, 2016).

Crowdfunding in K-12 Education

Initially directed towards artists and entrepreneurs, crowdfunding has emerged as a way for teachers to secure classroom supplies and funding for campus based projects (Fink, 2015). With limited federal, state, and local funding, school budgets may be supplemented by the use of educational crowdfunding sites such as AdoptAClassroom, DonorsChoose, IncitED (Crossley & McNamara, 2016). According to Dawkins (2013),

parent teacher associations qualify to use fundraising sites like Causes, Razoo, and Crowdrise, as long as they are a domestic 501(c)3 charity. As it pertains to public school teachers raising funds to fulfill classroom needs, platform DonorsChoose is one of the earliest and most successful crowdfunding sites, attracting over 1.5 million donors, 638K projects, and \$282 million dollars in donations (Althoff & Leskovec, 2015; Dawkins, 2013).

To create a campaign on DonorsChoose, a teacher must complete the following steps: (a) select supplies from a list of approved vendors, (b) submit a synopsis detailing student needs and the purpose of the supplies, and (c) upload photographs of the classroom and students (Meer, 2014). After submitting the required data, the project request is screened by the crowdfunding site's project management staff. The vetting process for DonorsChoose involves contacting the principal to verify the status of the teacher, school, and project (Wash, 2013). When the "project is funded, DonorsChoose purchases the materials and ships them directly to the teacher to ensure quality" (Meer, 2014, p. 116). DonorsChoose is an "all or nothing" platform; materials or funds are only released to the classroom after campaigns reach 100% fully funded status (Mollick, 2014). In the event the crowdfunding project does not meet the teacher's goal, funds are returned to donors in the form of a credit. In this context, successful crowdfunding occurs when the amount of funds received from donors equals the amount of funds requested by the teacher. Donors searching the site may select charitable causes based on the project type, content area, school name, geographic location, and the school's level of economic need. Herein, economic need is based on the percentage of students at a campus qualifying for free and reduced-price lunch (Mintz, 2015).

It is important to note that the role of federal, state, and local legislation as it pertains to public school finances. According to the US Census Bureau, in fiscal year 2012, state and local revenue sources combined to make up about 90% of the funding for public elementary and secondary education in the United States, and the federal government funded the remainder (Hardin, 2016). Marder & Villanueva (2017) note

In 2011, the Texas Legislature cut \$5.3 billion from the two-year public education budget—about \$500 per student each year of the biennium—leaving local school districts and campuses scrambling to make decisions on how to operate with less revenue despite a growing student body. (p. 1)

The measures enacted by the legislature were due to the “expiration of federal funding from the American Recovery and Reinvestment Act of 2009, increased enrolment growth in Texas schools, settle-up cost in school districts, and declining values of local properties...” (Moulick & Taylor, 2017, p. 991). The effects of this action are still being felt today. Although spending on instructional programs is beginning to rebound, a comparison of 2016 spending to 2008 pre-recession levels indicates elementary schools spent \$65 less on instructional programs per student; middle schools spend \$268 less per student; and high schools spend \$428 less per student (Marder & Villanueva, 2017). The following figures illustrate the amount spent per student since 2006 (Figure 2.1) and the phenomenon known as the Texas Public School Five-Year Funding Hole (Figure 2.2).

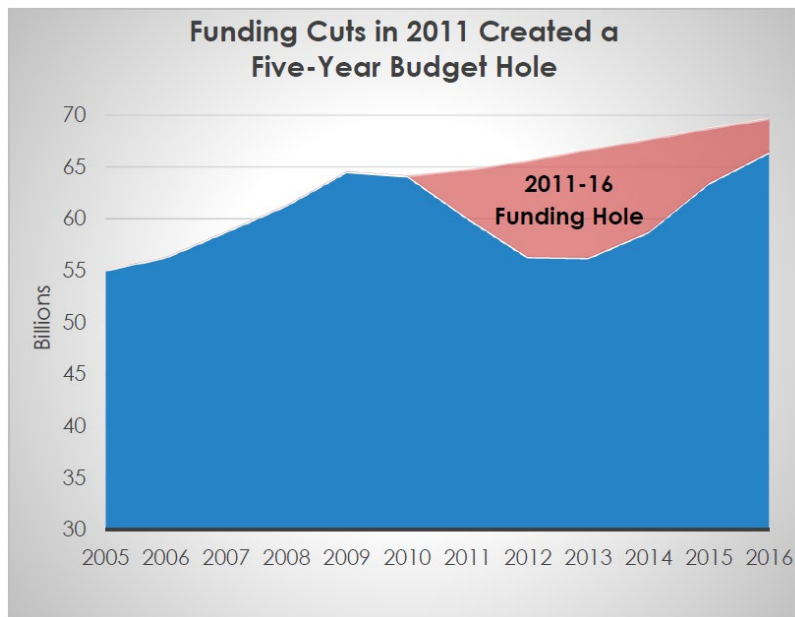


Figure 2.1. Five-Year Budget Hole (Marder & Villanueva, 2017)

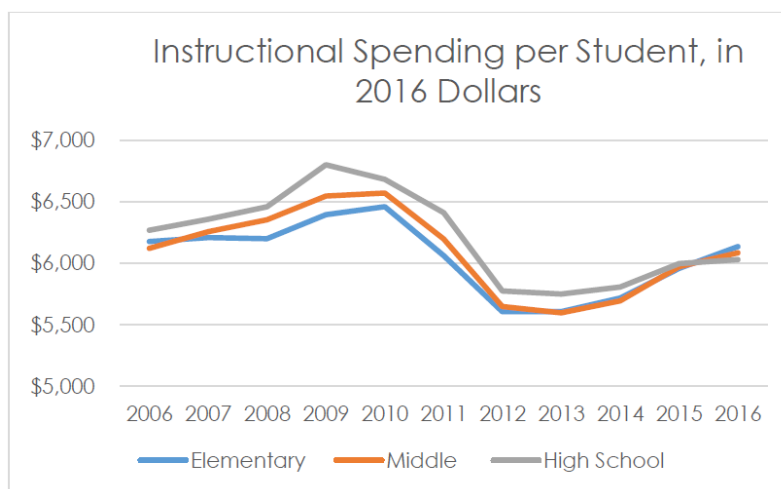


Figure 2.2. Instructional Spending per Student, in 2016 Dollars (Marder & Villanueva, 2017)

According to Knight and Strunk (2016), “the Great Recession of 2008 led to unprecedented reductions in public education funding in the United States” (p. 395). Reports of impacted schools and districts span the nation. Caskey & Kuperberg (2014) attribute the Philadelphia public school district budget crises of 2012, 2013, and 2014 to

“an abrupt reduction in federal and state funding, the inability of the district to cut many of its costs, and political pressures on the district to spend available revenues in a given year” (p. 22). In Arizona per-student funding ranks among the lowest in the nation; “as funding levels continue to lag years after the Great Recession ... teachers ask friends, family and strangers to pitch in on basic classroom costs through crowdfunding sites like GoFundMe and DonorsChoose” (Leingang & Campbell, 2017).

To date, approximately 80% of all public schools in the United States have raised money for their classrooms through crowdfunding platform DonorsChoose (DonorsChoose.org, 2018). One such project titled "Standing Students" was submitted by an elementary school teacher requesting standing desks, based on her observation that her class focused better while standing (Sherburne, 2016). A second project titled “Mango” centered in K-12 education was created by a school teacher working in New York City, Public School 98. The elementary teacher, Ms. Edwards, requested \$305 worth of materials, including assorted permanent markers and design books to create paisley art inspired by the students’ favorite fruit from India, the mango (Althoff & Leskovec, 2015). On a macro level, thirty companies, including Google and Microsoft, patronized the Hour of Code crowdfunding campaign, enabling millions of students to participate in computer science related activities during Computer Science Education Week 2014 (Wilson, 2014).

The concept of crowdfunding has been steadily gaining media attention, raising a great deal of discussion surrounding the possibilities of funding creative ideas without the intervention of conventional financial intermediaries (Bennett, Chin, & Jones, 2015; Davies, 2015). The results of a recent Google search yielded news reports pertaining to

crowdfunding in public schools from each major broadcast network and multiple local affiliates. Despite increased visibility in popular culture, crowdfunding studies related to school based populations have not been empirically investigated. To date, there are no published dissertations or theses pertaining to teacher-led crowdfunding. A recent search of peer reviewed journals returned nine articles related to this phenomenon (Fink, 2015; Gilsbach, 2016; Jacobson, 2016; Meer, 2014; Moore, 2015; Schaffhauser, 2014; Sherburne, 2016; Walsh, 2014; Wilson, 2014). A less restrictive query of non-peer reviewed literature uncovered three additional articles (Althoff & Leskovec, 2015; Dawkins, 2013; Moskowitz, 2016). Similarly, a search of books related to crowdfunding in K-12 schools yielded a total of two books available on Amazon.com (Mikhaylova, 2016; Phelps & Smythe, 2015). These self-published works, comprising less than 100 pages in total content, are available for purchase only in Amazon's proprietary e-book format. Presently, "the nascent literature on the entire field of crowdfunding is found primarily in popular journals and the blogosphere" (Byrnes, Ranganathan, Walker, & Faulkes, 2014, p. 3). Moreover, the limited number of scholarly analyses pertaining to crowdfunding have emerged from fields such as investment finance and computer-supported co-operative work (Davies, 2015).

Related Theoretical Frameworks

The intersection of public, private, and non-profit activity is aptly described as the inter-sectorality framework (Robichau, Fernandez, & Kraeger, 2015). At the center of this ecosystem, partners emerge from each sector to share ideas, dollars, goods, and services within a virtual space known as the crowdfunding platform. The three stakeholders in this ecosystem include donors, project creators, and crowdfunding

website hosts. In K-12 schools the initiator of the crowdfunding process is the teacher. Herein, the teacher presents a marketing campaign to the crowdfunding host with the intent of financing school-based student need. If the proposed project is approved, the website host posts the project for the review and support of potential donors. Although teachers do not directly generate profits from crowdfunding, the process of crowdfunding is similar to traditional entrepreneurship, except the funds are raised online (Meyskens & Byrd, 2015). As the motive is charitable and the method is crowdfunding, teachers can be classified as social entrepreneurs.

As socially minded projects are birthed at the intersection of public, private, and non-profit sectors, the resulting dynamism is mitigated by the stakeholders' evaluation of signals. As in capital markets, the signals of quality which social entrepreneurs put forth impact investors willingness to part with fiscal resources. Similarly, the signals put forth by the owner of a crowdfunding website influence donors and teachers considering online commerce platforms. Throughout the inter-sectoral ballet known as Crowdfunding K-12, social capital acts as a moderator of resource exchange. According to Tsai and Ghoshal (1998), trust and shared vision are the two primary elements which comprise relational resources known as social capital. Social capital influences donors similar to posted speed limits along a delivery driver's route. Social capital moderates the time it takes to deliver goods to schools and the amount of fiscal capital donors are willing to send via crowdfunding vehicles. At the end of the crowdfunding process, the primary outcome is the creation of social value. The tangible evidence of social value is substantiated by delivery of goods and services to the requesting teacher's classroom and reciprocally by the delivery of thank you letters and photos from students to donors. Figure 2.3

illustrates the confluence of the following frameworks: inter-sectorality, social entrepreneurship, stakeholder theory, signaling theory, and social capital.

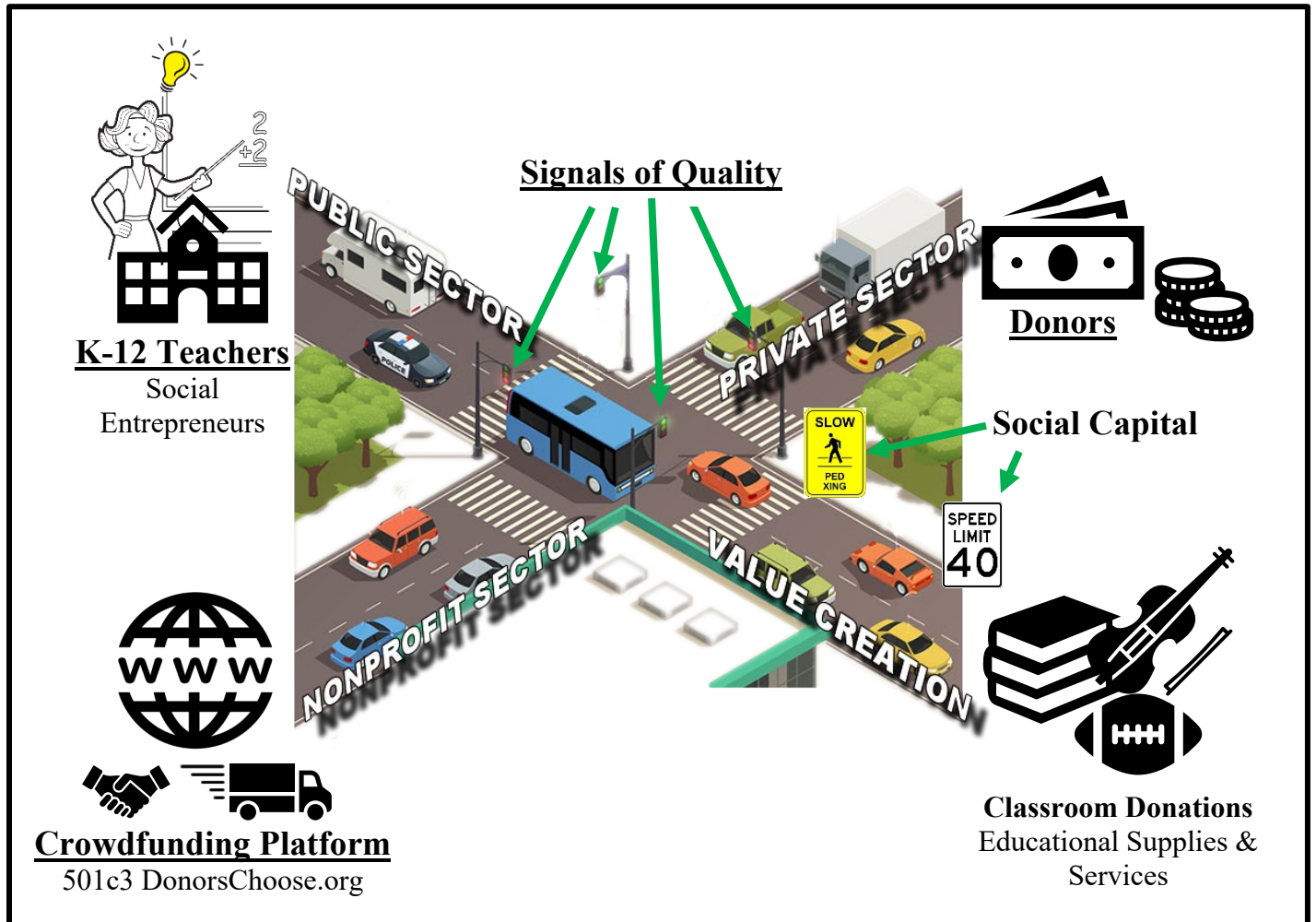


Figure 2.3. Conceptual Framework: Crowdfunding K-12

While these theories are historically situated in the academic journals of entrepreneurship, business, and information technology, they were selected due to their regular appearance in crowdfunding articles published between 2013 and 2016. Today, educational crowdfunding research is still in a nascent form. As a result, 33 peer reviewed articles on Social Capital, 6 articles on Signaling Theory, and 5 articles on

Stakeholder Theory were sourced for constructs related to one of the four fundamental forms of crowdfunding outlined by Lam and Law (2016): donation-based crowdfunding. At the most fundamental level, donation-based crowdfunding is a superset which encompasses the emergent offshoot, educational crowdfunding, and more specifically crowdfunding in K-12 schools. The first peer reviewed crowdfunding article, published in 2010, referred to traditional entrepreneurship and the development of a relative newcomer, social entrepreneurship crowdfunding. As this qualitative study is intended to explicate a social process, social entrepreneurship was selected as the overarching process situated at the intersection of three sectors: public, private, and non-profit. The conceptualization of this tri-sector confluence in the support of civic programs is defined by Robichau, Fernandez, and Kraeger (2015) as the Inter-Sectorality Framework.

According to Imarhiagbe (2015), the key theories relevant to crowdfunding are theories that have been used to describe small and medium-sized enterprise access to finance; these theories include agency cost, credit rationing, pecking order, discouraged borrower, stakeholder, social capital, and network exchange. This section includes a discussion of social entrepreneurship, inter-sectorality, stakeholder theory, social capital, and signaling theory. Similar to agency cost theory, signaling theory identifies information asymmetry and hazard avoidance. Before spending money to support a cause via crowdfunding, members of the public are charged with the task of overcoming gaps in knowledge in order to make an informed decision. The researchers “Giudici et al. (2012) and Agrawal, Catalini, & Goldfarb (2013) believe that information asymmetry, moral hazard and adverse selection represent major issues in crowdfunding” (Imarhiagbe, 2015, p.193).

Belleflamme, Lambert, and Schwienbacher (2010) provided early insights into the construction of theoretical models pertaining to donor behaviors. In the same year, Schwienbacher and Larralde (2012) published “one of the first descriptions of crowdfunding, which included a brief case study of a French music crowdfunding startup” (Mollick, 2014, p. 4). Although the subsequent model presented by Belleflamme, Lambert, and Schwienbacher (2013) is cited across disciplines, it has limited application to the field of education. In the first scenario, the crowdfunding campaign organizer invites consumers to pre-order a product. The second scenario involves crowdfunding organizers soliciting individuals to provide money in exchange for a share of the profits or equity shares. While these practices fall under the umbrella of crowdfunding, they are aligned to a venture capital perspective. Solely viewing crowdfunding from this perspective constrains an understanding of the full range of crowdfunding in its modern context (Müllerleile & Joenssen, 2015). Since the publication of the first empirical crowdfunding study in 2010, a broader taxonomy of crowdfunding models has emerged: (a) Donation-based (without any reward or financial return), (b) Civic crowdfunding (producing public assets without compensation to the donor), (c) Reward-based (non-monetary products/services as rewards), (d) Lending-based (monetary return with interest), and (e) Equity-based (monetary return such as dividends or equity) (Demiray & Aslanbay, 2016). In summary, contributions from the crowd range from simple donations or pre-payments to formal debt and equity investments (Lehner, 2014). As it pertains to civic crowdfunding, particularly in education, projects are classified as part of the donation model.

Social Entrepreneurship

In the wake of economic crises, corporate scandals, and the inability of government to meet the needs of their constituents, social entrepreneurship has become a social, economic, and cultural phenomenon (Pless, 2012). Ideally, “social enterprises seek to attain a particular social objective or set of objectives through the sale of products and/or services, and in doing so aim to achieve financial sustainability independent of government and other donors” (Domenico, Haugh, & Tracey, 2010, p. 682). In light of education budget cuts, it is important to develop a theory that explains crowdfunding within this context. When teachers participate in online fundraising for the benefit of their students, their methods are simultaneously entrepreneurial and not-for-profit. As such, educational crowdfunding classifies teachers as entrepreneurs with a social mission or social entrepreneurs (Dees, 1998). Although social entrepreneurship and commercial entrepreneurship bear similarities, the two can be distinguished by the type of value entrepreneurs generate. While commercial entrepreneurs are primarily motivated by generating economic value, social entrepreneurs are concerned with creating social value (Smith & Stevens, 2010). In essence, “social value creation is a process that results in the creation of something of value for society” (Dietz & Porter, 2012, p. 23). While commercial entrepreneurs seek new markets exhibiting capacity and growth, social entrepreneurs seek markets characterized by resource scarcity; herein, constraints push the social entrepreneur to utilize existing resources in creative ways while acquiring new resources to achieve financial sustainability and positive social outcomes (Domenico, Haugh, & Tracey, 2010). In the wake of shrinking budgets, “the innovative institutional form—crowdfunding—has emerged to address the needs of social entrepreneurs and

other entrepreneurs with limited access to traditional sources of capital” (Calic & Mosakowski, 2016, p. 738). Subsequent studies centered on social entrepreneurship and social enterprises’ unique behaviors, characteristics, and typologies holds great potential for advancing research and creating public wealth (Ebrashi, 2013).

Inter-sectorality

The inter-sectorality framework builds upon extant perspectives describing the delivery of goods and services through a public-private lens. Robichau, Fernandez, and Kraeger (2015) interject the influence of nonprofits into the public-private dichotomy. Although their research is situated within public administration, the end goal is congruent with the ideals of educational leadership and school improvement: to help educational programs empower students to understand and appreciate work spanning multiple sectors (Robichau et al., 2015). By extension crowdfunding in educational institutions, specifically the transfer of goods, services, and capital, sits comfortably upon the foundation of this public-private-nonprofit theoretical framework. Inter-sectorality is an ideal framework for public and nonprofit administrators, as well as business leaders, to interact with the end goal of solving complex social problems. Essentially, the inter-sectorality framework applied to crowdfunding in public schools can be employed to understand the interactions of organizations outside of traditional governmental paradigms. This model provides the researcher with a cross-sectional and cross-sectoral view capturing the practices of organizations operating at the boundaries of the public, private, and non-profit sectors. Robichau et al. (2015) indicate that “the nonprofit sector continues to diversify and connect with the government and market sectors in the delivery of goods and services” (p. 33). This interaction is illustrated in the

corresponding diagram, Framework of Inter-sectorality (see Appendix B). This conceptual model encapsulates the fluidity between state, market, civil, and societal interactions by extending Bozeman and Moulton's (2011) integrative publicness framework. Herein, social entrepreneurs employing crowdfunding generate their own resources and co-create social good through the stewardship of private resources (Robichau et al., 2015). Moreover, this model is a worthy contender for future research pertaining to civic crowdfunding and crowdfunding in K-12 schools due to the inherent focus on public service.

Signaling Theory

As it pertains to crowdfunding, the legitimacy of a venture moderates the crowd's willingness to invest (Lehner, 2013). Since crowdfunders cannot physically investigate the proposed project, they are required to base their decision to invest on the signals sent by entrepreneurs (Macht & Weatherston, 2015). Wang, Liang, Ge, and Xue (2015) employed signaling theory as a theoretical lens to investigate the relationships between signals from creators, project websites, and the resulting amount of funds raised on Kickstarter.com. The researchers determined signals from creators, such as prior experience crowdfunding, had a positive influence on the total amount pledged by donors. In contrast, signals conveyed by the project website description, such as campaign duration, had no significant effect upon fundraising success. Interestingly, online social interaction, the number of donor comments and project creator replies, significantly improves the likelihood of a project reaching the target goal. This finding is in line with the research of Columbo, Franzoni, & Rossi-Lamastra (2014) who

determined social contacts built within crowdfunding communities are a vehicle to attract seed money.

Viotto da Cruz (2016) notes that quality signals are positively correlated with the probability of successfully attracting investors. In contrast to the findings of Wang et al. (2015), Viotto da Cruz (2016) positions the addition of videos and the quality of the text input by project organizers as positive predictors of success. Although a cause's neediness is thought to be the signal of importance, research of donation trends reveals a cause's attractiveness is actually more important (Sonenshein, Herzenstein, Dholakia, 2013). While positive signaling is correlated with success, failure can also occur when signaling is not combined with adequate marketing. Li and Duan (2014) note, the number of investors visiting project pages fluctuates daily. As a result, "even high-valuation projects may fail to attain a critical mass of funding if the project fails to inform a relatively [large] number of potential investors at the early stage of the funding cycle" (p. 32). Early crowdfunding research by Mollick (2014) notes the successful crowdfunding campaign is also correlated with lower financial targets set by the campaign organizer. When the signals are agreeable to potential donors, the resulting support generates social capital.

Social Capital

In contrast to physical capital, social capital exists within an individual's social infrastructure (Zheng, Li, Wu, & Xu, 2014). According to Putnam, the degree to which an organization can achieve its goals is largely dependent on the ability to respond to the three elements of social capital; these elements include: trust, reciprocity and networks of civic engagement (as cited in Diaz & Cacheda 2016). The research of Zheng et al. (2014)

echoes this sentiment in their multidimensional approach to crowdfunding which states, “the social networks in which individuals are embedded can facilitate resource exchanges and knowledge sharing among the individuals through the structural dimension (e.g., network ties), the relational dimension (e.g., trust), and the cognitive dimension (e.g., shared narrative)” (p. 489). In aggregate these three components are moderated by the culture in their influence on crowdfunding performance. The application of social capital to crowdfunding undergirds the metrics of success in conjunction with social media use. Essentially, “the social aspect of entrepreneurship increases the probability of entrepreneurial success by increasing the likelihood of raising funds in crowdfunding campaigns” (Vismara, 2016, p. 581).

Stakeholder Approach

The third model that can be applied to crowdfunding is based on a stakeholder approach. Beaulieu, Sarker, and Sarker (2015) applied stakeholder theory to categorize the major participants in the crowdfunding ecosystem and their respective influence on the process. In line with the inter-sectorality framework, the research of Laplume, Sonpar, & Litz indicates stakeholders are not isolated groups but act and interact with each other to create a dynamic environment (as cited in Beaulieu et al., 2015). According to Valančienė and Jegelevičiūtė (2014), crowdfunding can be viewed through a stakeholder lens since its simplest form requires satisfying the interests of three main stakeholders. These stakeholders include backers (investors), business (or startups), and the crowdfunding platform that provides the space for backers and startups to interact.

When viewed from a macro level, this crowdfunding framework specifies two broad groups of stakeholders, namely contextual stakeholders and organizational

stakeholders. Organizational stakeholders include managers and employees involved in the organization's activities, while contextual stakeholders maintain the external environment through structures such as government and society at large. Herein, contextual stakeholders act as thermostats, with the power to regulate a climate conducive towards or restrictive of co-creation. The use of the stakeholder approach blurs the lines between internal and external as well as the traditional roles of buyer and seller. The act of crowdfunding "creates a type of customer/investor hybrid that further challenges traditional conceptual models of what it means to be an 'organization', not to mention concepts such as 'upstream' and 'downstream'" (Gleasure & Feller, 2016, p. 110). Researchers Valančienė and Jegelevičiūtė (2014) recommend stakeholders, traditionally named as customers and suppliers, be unified and reframed as users, which includes both backers (investors) and businesses (startups).

The Agents of Crowdfunding

The finished website presented to the world is a minor piece of the crowdfunding puzzle. Crowdfunding is sustained by a myriad of online and offline relationships between campaign organizers, donors and website providers. In its simplest form, crowdfunding involves an individual who proposes ideas to be funded and the crowd, the group of people who donate small amounts of money to support the proposed idea (Antonenko et al., 2014). Using a stakeholder approach, Beaulieu et al. (2015) present the major participants in the crowdfunding ecosystem. The participants include creators, donors, and crowdfunding website providers. Herein, the crowdfunding creators post their project idea on the crowdfunding provider's website. Donors use this crowdfunding website to search for potential projects to contribute funds. The website provider offers

web space to the founder to post updates, upload promotional videos, communicate with donors, assess website analytics, and receive funds.

Donors

Donors, also referred to as sponsors and backers, are typically first-time entrepreneurs utilizing social networks and respective social capital to raise seed money for new opportunities (Vismara, 2016). The four types of donors include: (1) donors that expect no return for their donations, (2) donors that provide funds as a loan, (3) donors that receive rewards (rewards-based model), and (4) donors who will receive equity shares for their investment (Mollick, 2014). Donors may consist of individuals as well as for profit or non-profit corporations. On education crowdfunding website DonorsChoose, five percent of the donations originate from foundations and corporations (Meer, 2014). On sites like DonorsChoose, donors do not expect a monetary return for their donation. Gleasure and Feller (2016) define this online activity as crowd charity: an investment made without expectation of additional material or financial returns. Lam and Law (2016) define this practice as donation-based crowdfunding. The donation-based crowdfunding model is the overarching construct utilized to classify K-12 crowdfunding.

Civic Crowdfunders

A nuanced category which encompasses crowdfunding in K-12 public schools is civic crowdfunding. Bennett, Chin, and Jones (2015) define civic crowdfunding as “an emerging practice that involves citizens, working in collaboration with government, to crowdfund projects that provide a service to the local community” (p. 144). Stiver, Barroca, Minocha, Richards, and Roberts (2015) note civic crowdfunding finances projects for the public’s repeated use; these projects include: green spaces, education

programs, and technology access. In comparison to popular reward-based sites Kickstarter and Indiegogo, donors utilizing civic crowdfunding sites give without expectation of short term, monetary reward. These altruistic projects complement public services and foster long-term involvement. A study commissioned by the Australia Council for the Arts (2012) categorized six reasons people offer support to crowdfunded projects, which include: (a) familiarity (donors pledge to projects via personal connection / recommendation), (b) the desire to help creative artists, (c) creative belonging, (d) cultural production, (e) social kudos (hip by association), and (f) perks, such as in-kind gifts and personalized thank you notes. In response to the growing interest in civic crowdfunding, a number of sites have emerged worldwide. On the civic crowdfunding site Citizinvestor, “a large chunk of the proposals come from departments that have recently had their budgets slashed.” (Moskovitz, 2016, p 18)

Campaign Organizers

One of the responsibilities of crowdfunding campaign organizers is communicating with potential and existing donors. Initially, creators look to their personal network; this includes obtaining feedback and support from friends as well as family (Hui, Greenberg, & Gerber, 2014). For example, Milwaukie Elementary School teacher Harmony Brown sent a series of personal emails to friends and family to secure \$1,000 for three Samsung Chromebooks; the project titled “Technology Toward a Bully Free Zone” was also emailed to parents and officers within the parent-teacher organization (Schaffhauser, 2014, p. 46). Although Brown publicized on the social media site Facebook, she believes the personalized, informative email resulted in the majority of the financial donations. Shisir Khanal, founder of Teach for Nepal, believes

that social media is the tool that allows him to access people, otherwise inaccessible through traditional mailing campaigns (Amtzis, 2014). In addition, Althoff and Leskovec (2015) found that increased communication with donors can yield a significant impact on the amount collected; essentially, it is “more cost-effective to maintain relationships with existing donors than to recruit new donors” (p. 2). The common practice of launching a crowdfunding campaign involves initiation by the campaign organizer. This process involves marketing. In large scale fundraising endeavors, campaign creators spend on average 2-11 hours a day marketing “their project by publicizing their idea through social media, contacting people individually through email, and sending press releases to news media outlets to reach a wider audience” (Hui et al., 2014, p. 6).

Envisioned from a macro perspective, organizers also consist of groups representing larger organizations. Depending on the level of positive or negative publicity, the individual educator managing a crowdfunding campaign has the potential to draw a wider audience than possible through traditional means of communication. Ideally, teachers transform into ambassadors of the larger school community when they initiate campaigns on behalf of their classroom and the respective needs of that student group. Amtzis (2014) notes, social media use makes it easier for local non-profits to obtain donations from individuals and organizations who are not able to visit the school or site of interest. Essentially, establishing a social media presence via crowdfunding empowers organizations to reach beyond the limits of their campus, neighborhood, and city.

Donor Motivations

According to Gahran, the value of technology for fundraising became evident in 2010 after the American Red Cross raised \$43 million via text messaging, at a rate of \$10 per text, to provide support for earthquake survivors in Haiti (as cited in Mintz, 2015). Today, the emerging demographic of crowdfunding philanthropists consists of civic minded consumers under the age of thirty who want to be a part of a project that addresses “global warming, lowers the cost of living, makes a donation to underprivileged people in the United States or abroad and/or has an established, consistent social media presence (including regular updates on crowdfunding sites) to keep them informed” (Schoch, 2016, p. 11).

Although there is no integrating theoretical framework regarding donor motivation, the motivations-based approach studies what causes and drives behavior towards a certain goal. In a qualitative study of funders, Gerber & Hui (2013) identified four donor motivations: (a) to collect rewards, (b) to support a cause, (c) to help others, and (d) to be a part of a community. Although donation-based models of crowdfunding do not offer monetary rewards, these charitable ventures attract investors motivated by lower risk as well as philanthropic and ideological intentions (Gleasure & Feller, 2016). After donors self-select into a community of choice, crowdfunding campaign organizers attempt to build trust by ensuring donors enjoy a degree of community benefits (Belleflamme, Lambert, Schwienbacher, 2014)

Apparently, the type of incentive offered affects individuals’ motivation to finance an untested venture. Cholakova and Clarysse rely on warm glow and cognitive evaluation theoretical perspectives, which hold that nonfinancial (intrinsic) motivators are not significant in predicting a pledge (as cited in Bruton, Khavul, Siegel, & Wright,

2015). Some research supports this view. For example, external factors such as the ability to receive tax breaks has been identified as one of the predictors of support for charitable crowdfunding campaigns (Meer, 2014). A second extrinsic factor that influences donor participation is the relative distance between the donor and the crowdfunding campaign organizer's cause. This construct is referred to in academic literature as both distance and geography. Mollick (2014) notes, geography appears to be linked to the nature and success rates of projects. Agrawal (as cited in Ryu & Kim, 2016) indicates the distance between a project creator and potential donor plays an important role; for example, local donors are more likely to pledge in the earlier stages of a crowdfunding campaign. Foundational research in this area indicates geographic dispersion of investors has negligible effects upon trust. Lehner's (2013) findings stand in contrast to traditional finance theory, which indicates increased distance between parties corresponds to decreased trust.

Metrics of Success

The success of crowdfunding in public schools hinges on the condition that the amount requested by the educator is matched by an equal amount of funds from private donors. Popular sites such as Kickstarter.com and DonorsChoose.org are based on the all or nothing rule:

Namely, a target capital is fixed, then the project is posted on the platform together with a deadline for collecting it. If the target capital is reached by the deadline, the proponent receives the collected amount and is thus successful.

(Giudici, Guerini, Rossi-Lamastra, 2013, p. 3)

Regardless of the online crowdfunding platform, there are several factors that successful campaigns have in common. For example, family members and friends of project creators who are involved in the project are the most likely to donate (Schafbuch, Vincent, & Mazur, 2016). Emerging academic literature delineates best practices and indicators, which over the relatively short history of crowdfunding, have been linked to campaigns reaching their projected goal. These metrics presented in academic literature can be explored based on the following categories: social media, marketing experience, signals of quality, non-profit vs. for-profit status, and offline partnerships.

Social Media

As it pertains to social media, there are three groups of individuals that must be reached to increase the likelihood of success. These include the “project creator’s direct network (friends and acquaintances), the supporters from the ‘crowd’ who have no direct connections with the project creator, and the opportunists, who only select campaigns with a high likelihood of succeeding” (Lacan & Desmet, 2017, p. 316). Through interactions with these three agents, the crowdfunding project creator has the potential to correspondingly strengthen his or her social network. It is through the process of attracting supporters, known as followers, that word of mouth transforms into online social cache. According to Lacan and Desmet (2017) “the feeling of social utility encourages electronic word of mouth (e-WOM) and helps develop the social capital of the project creators” (p. 315).

According to Amtzis (2014), in order to generate donor support crowdfunding creators must have more than an account on Facebook or Twitter; creators must have clearly articulated content, including videos and photos of activities and proof of positive

performance. This information must also be updated regularly. This momentum transforms the online page from a static object to a dynamic information repository, thereby signifying the campaign as relevant in the online world and real world. Mollick's (2014) research reveals that establishing a crowdfunding effort without a Facebook account is better than having an account with few Facebook friends. According to Mollick (2014) "large networks are associated with successful fundraising" (p. 8).

Non-profit vs. For-profit

The structure of the organization soliciting funding plays a role in the relative likelihood of success. Non-profit organizations that initiate crowdfunding ventures "tend to be significantly more successful than other organizational forms in achieving their fundraising targets, even after controlling for various project characteristics" (Belleflamme et al., 2013, p. 313). Empirical evidence from multivariate analyses supports the theoretical prediction that nonprofit entrepreneurs tend to be more successful in generating funds than companies because donors perceive non-profits as credible, committed entities focused on creating community goodwill (Belleflamme et al., 2013). While this research describes the nature of non-profit organizations in general, the aforementioned results likely can be applied to schools operated by municipalities such as K-12 public schools.

Signals of Quality

Signaling theory provides a lens for understanding how signals are used by crowdfunding creators to convey project quality information and how backers screen these signals to assist investment decisions (Wang, Liang, Ge, & Xue, 2015). Within the context of crowdfunding, signals are conceptualized as the variables preparedness and

organizational legitimacy. According to Wang et al. (2015) preparedness is a signal of quality which refers to the time and the effort creators spend preparing crowdfunding projects. Organizational legitimacy is a signal of competence which has the potential to foster external partnerships and financial investment (Frydrych, Bock, Kinder, & Koeck, 2014). Indicators of legitimacy and preparedness include the crowdfunding creator's education, prior experience, and the incorporation of text and video within the project website (Wang et al., 2015; Frydrych et al., 2014).

Colombo, Franzoni, and Rossi-Lamastra (2014) note when the quality of a product is not directly observable, individuals derive information by looking at the behavior of others. When applied to crowdfunding, potential donors often delay offering assistance depending on the project's perceived popularity. Colombo et al. (2014) found that the founder's social capital "is critical to attract backers and raise capital in the initial days of a campaign" (p. 7). At the point of reaching a critical mass of early backers or early capital "success-breeds-success" as word-of-mouth and observational learning reduce uncertainty, thereby accelerating the campaign's success (Colombo et al., 2014, p.7). One of the best analogies to describe this trend was penned by Schelling (1978), who noted that if a large number of faculty or students gathered the first time an event was held, a larger crowd would gather the next day. Conversely, if few people participate at the beginning of a faculty-seminar or spontaneous volleyball game, the subsequent time the event was held it would attract fewer and fewer participants. Colombo et al. (2014) note this rule has been applied to online community and e-commerce behavior and deserves to be applied to crowdfunding.

Although early signals of success may drive observers to contribute, “potential sponsors may choose not to support a project that already has significant funding because they may perceive it to be secure enough without their help” (Ryu & Kim, 2016, p. 44). As a result, crowdfunding projects tend to attract the most donations during the beginning of a campaign and at the end when accompanied by sufficient publicity. Ryu and Kim (2016) affirm this claim noting that in their research “frequent project updates in the final days of the funding period increased the number of project sponsors and decreased diffusion of responsibility” (p. 44). In a two-year quantitative study of Kickstarter data, Kuppuswamy and Bayus (2015) found projects that successfully achieved their goals were more likely to have an update in the last weeks of funding; these projects also generated more excitement from recent backers than competing projects that fell short. Antonenko et al. (2014) found “all high-performing projects also posted status updates and progress reports to inform their supporters of the recent developments. These status updates were often presented as videos demonstrating the new functionality, conference presentations, screenshots, and photos of the system components” (p. 40). Mollick (2014) echoes these findings stating, “Signals such as videos and frequent updates are associated with greater success while spelling errors reduce the chance of success. Success is therefore linked to the quality of products, and not just to the social networks of founders.” (p. 8). The lack of a video decreases the chance of success by 26%, the lack of an early update reduces the success by 13%, and spelling errors correspond to a 13% decrease in project success (Mollick, 2014).

Offline Partnerships: Going Local

One of the ways to generate success online is to involve students in the offline publicity. Requesting the assistance of students not only provides a human face to the initiative, it also teaches students the fundamentals of marketing and advertising (Fink, 2015). Through the impact of advertising and developing rapport, donors are often converted into repeat supporters. According to Moore (2015), schools are harnessing the power of social networks to engage alumni and community partners to fund “everything from band instruments, to new uniforms and needed sports equipment” (p. 6).

Hui, Greenberg, and Gerber (2014) found that campaign creators who seek feedback tend to be more successful. This includes seeking feedback before the campaign begins as well as during the campaign. Typically, campaign creators initially seek the counsel of their personal network, such as friends and family, while other creators formatively utilize the feedback of supporters during the campaign (Hui et al., 2014). The research of Davidson and Poor (2015) indicates that the individuals most likely to support someone’s first campaign are likely members of that person’s immediate social circle. The only exception is in cases where the project creator had an established network of funders or fans. Similarly, “those who are willing to donate a large amount of money to a project and a founder would also be likely to be members of an individual or team’s proximate network of strong ties” (Davidson & Poor, 2015, p. 136).

The formal training and skills of the project creator is noted as a predictor of success. Hui et al. (2014) revealed the creators who had an established career in the arts had less trouble marketing their work than creators of science projects. Since the “art project creators described having experience organizing public fundraising efforts

throughout their career, they felt more comfortable asking their friends and family for support and had already developed an interested audience prior to launching their campaign” (Hui et al., 2014, p. 68). Although asking family is a common trend that correlates to reaching the preset funding goal, it has the potential to be unsustainable. Davidson and Poor (2015) highlight the online and offline social constraints involved in crowdfunding. Heavy dependence on a small group is a self-consuming process; project creators who are unable to expand their network beyond close social ties reframe crowdfunding as a short-term financial solution to a longer-term problem.

Marketing Experience

Multiple studies across various industries reveal the skill of price setting is essential to crowdfunding non-profit ventures. According to Mollick (2012) smaller goals result in a larger number of successfully funded campaigns. Antonenko et al. (2014) suggest educational technology entrepreneurs would be wise to piecemeal their larger projects into smaller development and production phases. After taking a grant writing course, fourth grade public school teacher Harmony Brown began studying the completed listings on DonorsChoose. She determined 75% of the time projects set near the \$800 mark were successful (Schaffhauser, 2014). Her informal research aligns with the recommendations of Abigail Feuer, vice president of teacher success and marketing at DonorsChoose.org. Feuer notes, the size of the donation directly correlates to project funding success. Projects less than \$1,000 are funded 70% of the time, compared to 43% success rate of projects costing more than \$1,000 (Fink, 2015).

Concerns

Despite the numerous factors that comprise a crowdfunding project, “the success of a crowdfunding project depends entirely on the participation of potential sponsors” (Ryu & Kim, 2016, p. 44). The corresponding process of translating potential donors to crowdfunders is based on the mitigation of information asymmetry between funders and fund seekers (Gleasure & Feller, 2016, p. 103). Simply put, “familiarity breeds trust, and the commonness of purchasing everything from books to airplane tickets online has paved the way for other forms of exchange through the Internet that require even more trust” (Fleming & Sorenson, 2016, p. 10).

Platform Selection

While Kickstarter and Indiegogo are the top platforms for crowdfunding, choosing between these or one of the many others is essential for project success, as an organizer or donor (Herther, 2016). Meer (2014) notes, teachers have relatively little control over the fees incurred on DonorsChoose, since materials are available only from the vendors selected by the management of DonorsChoose. While this does not apply to requests for services, such as field trips and guest speaker honoraria, this limitation applies to the list of supplies including reading materials, sporting goods, electronics, and classroom equipment. Although this applies to only one site, DonorsChoose is the educational crowdfunding equivalent of Walmart; they are the dominant player of an emerging industry. Currently, 79% of all public schools in the United States have at least one teacher who has created a project on the site (DonorsChoose.org, 2018). Fink (2015) notes that the educational crowdfunding site Adopt-A-Classroom has a similar policy, which stipulates teachers’ use of donated funds to purchase classroom supplies from

Adopt-A-Classroom's network of 40 vendors. Subsequently, the product is shipped directly to the school. This is in contrast to PledgeCents, which allows K-12 teachers to raise funds for education. The differentiating factor of the aforementioned site is the direct access to capital. At the close of the campaign, PledgeCents sends a check to the school; each check contains a memo with the name of the teacher and cause (Fink, 2015). Overall, it is advisable for educators to familiarize themselves with the compensation scheme of each site that they intend to host their project. Herther (2016) suggests due diligence for organizers, including contacting groups with similar goals or projects to get an assessment of what worked or did not. As each site has its own set of strengths and weaknesses, "looking at the types of projects the site seems to favor and the success rates that each platform is able to attract" is highly recommend (Herther, 2016, p. 34).

Privacy and Online Security

As social contacts are built within crowdfunding communities, the online crowdfunding platforms "appear to progressively develop into environments rich in social interactions, norms, and behaviors" (Colombo et al., 2014, p. 21). In contrast, the mishandling of personal information has the potential to adversely impact supporters' attitude towards crowdfunding sites, teacher-led campaigns, and online donation in general. When you couple privacy concerns with the risk of cyber insecurity, crowdfunding platform operators are advised to take extra precautions to garner the trust of internet users (Lam & Law, 2016). There is a direct correlation between online users' level of trust and the amount of money they are willing to invest via the Internet. Fleming and Sorenson (2016) note that fifteen years ago the prospect of sending money via computer to a stranger with the promise of receiving a good or service months in the

future would have been inconceivable. Although the work of Mollick (2014) shows little indication of fraud among crowdfunding campaigns, to maintain an atmosphere of trust project creators are expected to deliver within their self-appointed timeline. The funded projects have legal responsibilities to their backers to complete the projects and fulfill any reward promises made to solicit funding as outlined by the Jumpstart Our Business Startups Act (JOBS Act) (Herther, 2016).

Ultimately, when these issues are not taken seriously, they may lead to negative attitudes towards crowdfunding websites, campaign organizers, and the online donation process in general (Bandyopadhyay, 2012). Online security concerns highlight the need for crowdfunding site operators, the intermediaries between schools and the public, to invest in the highest level of web security. Although the crowdfunding sites act as a neutral meeting place, platform operators have the fiduciary responsibility to ensure that the personal and financial information of donors remains secure. A study commissioned by the Australia Council for the Arts (2012) found that, in addition to suspicion of online security, respondents were concerned about the lack of personal connection with the online donation process, tax deductible eligibility, and whether the project team would follow through with the proposed plan.

The recent advance of crowdfunding in K-12 has outpaced the creation of professional development and policies to protect student privacy. According to Gilsbach (2016), these infractions include violations of the Family Education Rights and Protections Act (FERPA) and the Individuals with Disabilities Education Act (IDEA). Gilsbach (2016) describes a South Carolina teacher that violated FERPA by including text and a photograph of her students which indicated the iPads were to improve

communication with the class of autistic students and nonverbal students. The author recommends adding an administrator layer of approval into the current process. Gilsbach (2016) notes that referring to students by their specific disability is a FERPA violation unless the teacher previously obtained parental consent for disclosure. While pictures and teacher essays often achieve the end result of project finance, violation of student privacy and incurring legal action should be of the utmost concern of school administrators. Ideally, teachers interested in raising funds for a school would be required to obtain written approval from their campus administrator or superintendent's office, after submitting a proposal detailing the project.

Following the Crowd: Privatized Supplies

Currently, aside from the article by Gilsbach (2016), there is only one other publication with an unfavorable stance towards crowdfunding in public school districts. This concern is largely positioned in policy, at the intersection of the charter school vs. public school debate. While there is no empirical research to substantiate these claims, Moskowitz (2016) claims that once privatization becomes common, municipalities will expunge services formerly subsidized by tax payer dollars. As a result, the author warns readers to be wary of the potential reclassification of supplies that are actually essential needs and not supplemental wants. New Orleans kindergarten teacher Emma Hoffman uses DonorsChoose, albeit with less enthusiasm than most teachers surveyed in the popular news and academic literature. Hoffman uses the crowdfunding platform to pay for basic school supplies, such as books, blocks and pencil sharpeners. Hoffman said, "I hate the fact that I have to use Donors Choose...It gives administrations and politicians an easy way out. They don't have to worry about giving their teachers what they need

anymore, because other people will” (Moskowitz, 2016, p. 18). Although “Crowdfunding Is Evil At Least When It Comes to The Public Good” is not a scholarly article, Moskowitz (2016) offers a unique position pertaining to fiscal responsibility of both school district and municipal leadership. The stance is also noteworthy because it was published by *Wired* magazine, the magazine that coined the antecedent to the term crowdfunding, “crowdsourcing,” in 2006 (Howe, 2006, p. 2).

Equitable Access

As the crowdfunding sites conceptually mirror online marketplaces, the influence of wealth and resulting power differentials are reason for concern. Although there is a generalized assumption in the media that crowdfunding civic ventures are beneficial, there are also concerns that crowdfunding forms a social wedge disproportionately favoring projects in wealthy neighborhoods (Zuckerman, 2012; Stiver et al., 2015). In schools where parents, alumni, or affiliated supporters are more affluent, it stands to reason that the amount of support could potentially exceed that of neighboring schools with less access to capital. Essentially “the more entrepreneurial, innovative and wealthy the society is, the more users crowdfunding could possibly have, and this leads to success of crowdfunding” (Valančienė & Jegelevičiūtė, 2014, p. 602). Although crowdfunding is available to anyone with enough time and energy to click a mouse, the crowd must be trained in order to use the mouse; moreover, the end user must have access to a mouse as well as the Internet (Davis, 2015).

In addition to fiscal capital, the intellectual capital of project organizers and affiliated supporters has the potential to make or break a crowdfunding campaign. Crowdfunding “creators also express difficulties spreading the word about their project

and mobilizing interest, which could be explained by creators having less business, marketing, and management experience, as well as lower social status and fewer social ties” (Hui et al., 2014, p. 70). Specifically, in the area of marketing, researchers Hui et al. (2014) suggest that crowdfunding creators who market their project too often are likely to be ignored by members of their social network. This abuse of social media and / or traditional electronic communication has the potential to stunt the growth of an otherwise worthy cause. Although creators studied by Hui et al. (2014) relied “on community efforts to help them publicize their project, they still expressed difficulties building an audience, getting people to spread the word, and managing discussions with supporters” (p. 67).

Since crowdfunding campaigns are not easy to find on the web, linking the campaign to the affiliated organization’s website as well as posting to other sites is key for generating endorsements (Herther, 2016). The practice of spreading the message beyond the one page hosted by the crowdfunding platform has the potential to increase offline and online visibility. When viewed through an appreciative lens, the words of Livermore, California fourth grade teacher Lisa Wilson provide hope for teacherpreneurs with little experience in advertising or marketing. In 2009 Wilson’s classroom had one functional computer; today there are Chromebooks for each student because she went online and asked the community to contribute (Fink, 2015). Wilson said, “You get better the more you do it I’ve posted a lot of projects that didn’t get funded, but that’s okay. Look at all the ones I did get funded...” (Fink, 2015, p. 51). A seventh-grade English teacher in Memphis used the lesser known site PledgeCents to raise money for a classroom projector; a teacher in Oregon used DonorsChoose to supply Chromebooks to

her 4th grade class. Despite lack of formal training in the domain of online-fundraising, classroom teachers are simultaneously learning and teaching a valuable lesson: “if they can do it, the rest of us can too” (Schaffhauser, 2014, p. 44).

Feedback Mechanisms

A major distinction between crowdfunding and traditional funding is the potential to involve multiple parties in co-creation across the duration of project implementation (Xu, Zheng, Xu, & Wang, 2015). Currently there is no private means of receiving feedback from the crowd before going public with one’s idea. Therefore, to test the concept and improve the likelihood of success, campaign creators tend to rely on their personal network for feedback. In the research by Hui et al. (2014), the people who turned to their inner circle of friends and family noted their “opinions were often not representative of the public as shown by their campaign success or failure. Participants also expressed worries that asking for help before the campaign would use up social capital” prior to launching their campaign (p. 67).

Beyond Fundraising: Improving Teacher Agency and Offline Collaboration

Crowdfunding was conceived as a societal response to the financial crisis of 2007-2008, business loan regulations, and diminished funding from federal and state agencies as well as private and corporate foundations (Antonenko et al., 2014). In approximately ten years, the phenomenon has morphed from a handful of platforms to 1,250 platforms worldwide (Marketwired, 2015). Although the dynamics of crowdfunding have been largely unstudied, crowdfunding represents a concrete way in which user-innovators, in conjunction with online communities, can influence the creation of new ventures (Mollick, 2014). Within the realm of new ventures lies the

opportunity for new methods of parent teacher involvement and community participation within school campuses.

As crowdfunding in education is a relatively young subject, future studies have the potential to improve the success of ventures undertaken by teachers. This phenomenon appears to be more than a passing fad, since at least one representative from 79% of American public schools utilized DonorsChoose to raise funds for classroom expenses (DonorsChoose.org, 2018). The resulting investigation of this trend has the potential to shape the future of professional development in this relatively new area of educational leadership and teacher agency.

Strengths

The strength of crowdfunding in public education includes the ability to generate offline support and community through the focal point of an online project. In the world of for-profit enterprise this has been described as launching a proof of concept or generating market buzz. In the case of relatively small scale interventions raising funds are an end unto themselves. However, when crowdfunding campaign organizers tackle larger scale civic minded projects (e.g. public squares and community centers), public endorsement can be interpreted as support from the public and used as leverage to promote further the projects to the authorities (Pak, 2016). Given the open and far reaching nature of Internet commerce, crowdfunding has the potential to change the methods and topology of social interaction for active participants. Mollick (2014) posits that, even as crowdfunding imposes new challenges and constraints, it reduces the importance of traditional geographic constraints, thereby opening the door for feedback and collaboration from public and private partners both near and far.

The poignancy of this type of exchange is exemplified in Mason's (2014) research pertaining to the *Virginia Skateboard Project*. This initiative, birthed within a school in an economically challenged rural area of Virginia, drew financial support from local residents as well as supporters from as far away as Germany. The \$6,000 collectively raised secured the guest speaker and equipment necessary for students to build and design skateboards after school. Ultimately, the momentum of the project snowballed into support from the office of the mayor to ensure the project would meet its required funding goal. Although the particular platform was not listed in this article, the Virginia Project and other K-12 crowdfunding initiatives highlight the great potential of galvanizing support and visibility through the online crowdfunding platform.

Sustainability

The creators of crowdfunding campaigns are advised to maintain regular contact with their community of supporters. Hui et al. (2014) note this is in contrast to the results of research pertaining to entrepreneur and investor / customer relations. The ongoing community aspect of crowdfunding requires creators to actively post updates and monitor feedback available on discussion boards. In a similar fashion, educators are encouraged to maintain connections with funders once the work has been crowdfunded. Researchers advise faculty to keep supporters involved with the process and results of their work. For science teachers, the "constant contact has two benefits: first, it should enable more successful repeat crowdfunding, and potentially higher levels of future funding. Second, and more importantly, it will yield direct social benefits by connecting progressively more people to science" (Byrnes, Ranganathan, Walker, & Faulkes, 2014, p. 24).

Charles Best, founder and CEO of DonorsChoose.org, believes, “Sustainability is a major issue...In a few years’ time more than a quarter of public high schools will not have any sports because of these cuts...We think we can engage an entire group of citizen philanthropists who will become ongoing supporters of the programs” (Wolf, 2015). In an attempt to counter the negative side effects of budget constraints, Dick’s Sporting Goods and Donors Choose created “Sports Matter,” a multiyear matching program intended to donate up to \$3 million dollars to school programs. Organizers hope that individual, local supporters of the *Sports Matter* campaign will ultimately establish long-term relationships with their respective neighboring school, thus contributing to public school sports programs more than one time (Wolf, 2015). Stiver et al. (2015) found that offline community complements online community and holds promise for both long-term connections and sustainability.

The Need for Future Research

This qualitative study investigating teacher engagement in crowdfunding research addresses limitations inherent in the literature. This study includes an examination of both intrinsic and extrinsic factors that motivate K-12 public school teachers to seek funding through this financial vehicle. It also examines school leaders’ perspectives on crowdfunding. One potential question is “How are campus administrators involved in teacher initiated crowdfunding?” Determining the degree of campus administrator buy-in and the extent to which teacher agency contributes to principal support are additional questions explored. Another area of study is the type and quality of teacher preparation for social media use within the crowdfunding realm.

Studying the longitudinal effects of crowdfunding campaigns is a worthwhile endeavor. As the typical duration of a campaign is thirty days (Colombo et al., 2014), one question addressed is “To what extent are teacher initiated campaigns translated into sustainable products and projects?” Unless crowdfunding is to become a regular task added to the classroom teacher’s job description, their efforts should be catalytic, leading to the development of a supportive online and offline culture. Ideally, first time donors become repeat sponsors, without the need for time consuming solicitation. Those that are not inclined to become regular donors would ideally serve as volunteer campaign organizers for future crowdfunding projects. To date, there are few studies in the realm of education and crowdfunding that study the sustainability or longitudinal effects of this phenomenon. Studying this construct requires investigating crowdfunding as an intersection of online and offline community development. One of the areas addressed in this study is whether crowdfunding in K-12 improves communication among teachers, parents, students, volunteers and campus administrators. As recent research suggests, there is a need to explore ways in which online and offline community activity can complement and strengthen each other (Stiver, Barroca, Petre, Richards, & Roberts, 2015).

Summary

This review of literature discussed the signals of quality that correspond to a successful teacher-led crowdfunding campaign. The importance of teacher persistence and partnering was also examined as a potential means of establishing offline networks. In addition, this review explored the complementary nature of offline and online networking through the lens of social capital. The literature presented addressed the

ways in which one's social network influences early-stage financial support. The research presented herein underscores the importance of information management and professional development to insure educational leaders protect the personal information of their students while limiting legal action against themselves or their affiliated school district. Additionally, the extant research supports additional studies highlighting the beneficial work taking place on campuses daily. The literature points to the potential of continued research to identify best practices for teachers participating in online-fundraising for the benefit of their student body.

CHAPTER III

DESIGN OF THE STUDY

This study explored the emerging phenomenon known as crowdfunding within the context of K-12 schools. In order to understand the motives, methods, and impact of educators' efforts, the researcher investigated the experiences of certified teachers and administrators. This end was achieved by relying on the inductive research methodology, grounded theory, which suggests theories are discovered in the data. The epistemological assumptions in this study are rooted in a constructionist approach. According to Creswell (2013), the constructivist approach to grounded theory requires researchers to "recognize that their own background shapes their interpretation" and to acknowledge "their interpretation flows from their own personal, cultural, and historical experiences" (p. 25). The multifaceted perspectives obtained via the initial collection and analysis of quantitative metrics as well as subsequent teacher and administrator interviews contributed to a substantive grounded theory. The primary byproduct of this study was the generation of an explanatory theory of teacher-led crowdfunding inductively derived from the data, "from the ground up" (Timmermans & Tavory, 2010, p. 493). This was achieved by socially constructing the participants' responses and complementary visual and archival data in conjunction with the researcher's interpretations captured in the form of codes, categories, and tentative theories. A secondary benefit of approaching this study from a social constructivist perspective was the development of theory that uncovered the dynamics of invisible hierarchies, systems of communication, and supportive relationships (Creswell, 2013).

Research Methods

In line with qualitative methods, a purposive sampling procedure was employed by the researcher to select individuals and sites that “purposefully inform an understanding of the research problem and central phenomenon in the study” (Creswell, 2013, p. 156). When conducting purposive sampling, researchers attempt to select a representative sample based on prior knowledge of the population and the purpose of the investigation (Fraenkel, Wallen, & Hyun, 2015). The qualitative study consisted of interviews of twelve ABC Independent School District (ABCISD) teachers and their respective campus administrators. In this study, interviews were considered advantageous over Likert-style questionnaires due to the in-depth answers that were obtained from respondents. To capture participant perceptions in their own words, open-ended questions were utilized. Moreover, increased respondent interaction and spontaneity is a beneficial byproduct of the interview method of data collection (Mack, Woodsong, MacQueen, Guest, & Namey, 2005). Four campuses were included in the study, with the sample consisting of three teachers and one administrator per location.

Crowdfunding is having an increased impact on the fiscal viability of creative and charitable organizations; however, the lack of academic research concerning this phenomenon calls for analysis to uncover the overarching trends of coproduction and consumer empowerment (Obal, Krey, & Bushardt, 2015). Currently, neither public institutions nor the crowdfunding industry carry out follow-up initiatives to verify what happens once a project has been funded (Brüntje & Gajda, 2015). This study sought to address this disparity by exploring multifaceted data corresponding to successfully completed campaigns by public school educators. As such, grounded theory

methodology was suitable for exploring “the blurred connection between finance and employment predominant in crowdfunding practices” (Brüntje & Gajda, 2015, p. 102).

Overview of Grounded Theory Methodology

Glaser and Strauss (1967) are credited with the origins of the grounded theory research design described in their seminal publication, *The Discovery of Grounded Theory*. According to Birks and Mills (2015), grounded theory resonated with social scientists as a means of generating new theory from data, as opposed to testing existing theory; Glaser and Strauss’s work served as the stepping stone for subsequent publications by Clarke (2005), Charmaz (2006), and Bowers and Schatzman (2009).

Figure 3.1 illustrates the Genealogy of Grounded Theory.

Glaser and Strauss’ first collaboration, a four-year study titled *Awareness of Dying* (1965), inspired reforms in the medical community and spawned a methodology which attempted to close the gap between theory and empirical data (Hallberg, Paulsson, & Ziergert, 2010). Denzin and Lincoln (1994) situate Glaser and Strauss’s grounded theory as a work that attempted to increase formalization of qualitative research methods in the post war era (as cited in Locke, 2001). The publication of their first book, *The Discovery of Grounded Theory* (1965), disputed the division between the phases of data collection and analysis and “proposed that scholars could develop theory from qualitative research” (Charmaz & Bryant, 2008, p. 374).

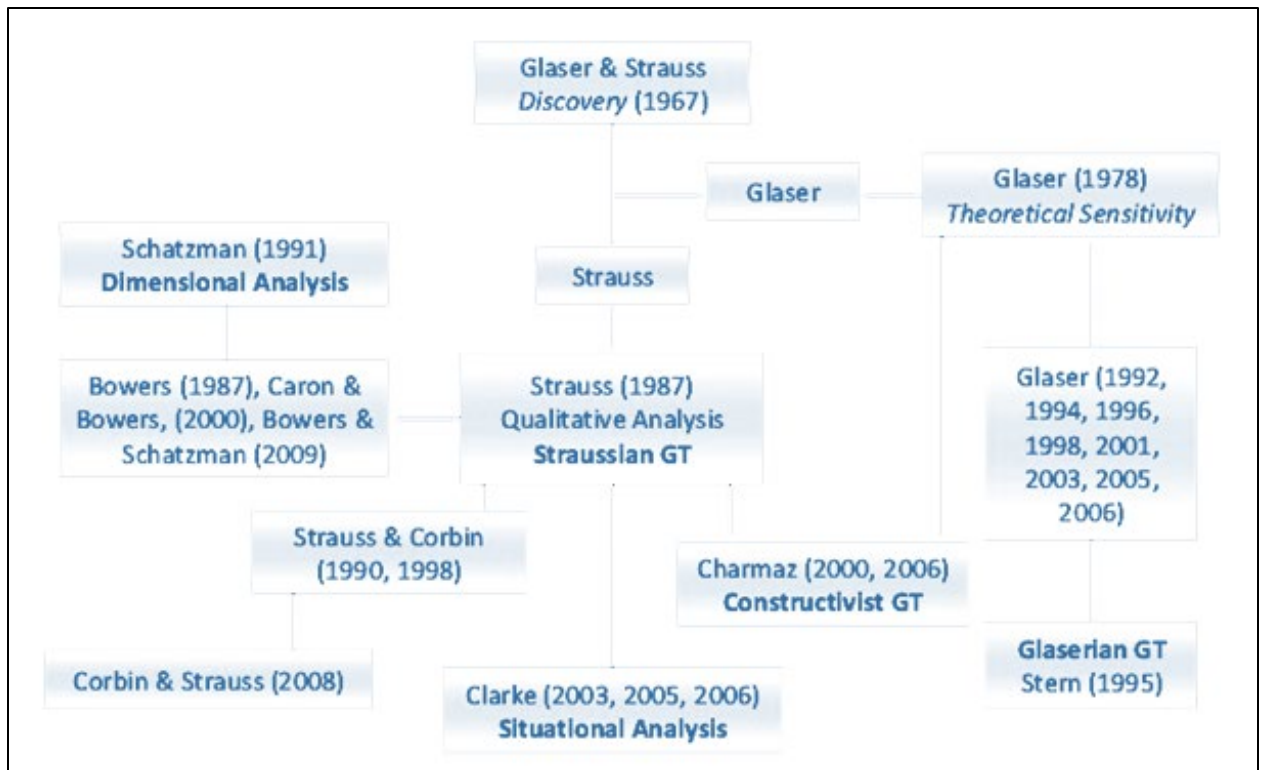


Figure 3.1. Genealogy of Grounded Theory: Major Milestones (Morse, Stern, Corbin, Bowers, Charmaz, & Clarke, 2016)

Currently, grounded theory studies can be situated within one of three major categories: Glaserian, Strauss and Corbin, and Constructivist (Bryant & Charmaz, 2007). To date this mode of qualitative study has spread from its original use by sociologists to practitioner fields including business, education, public health, and nursing (Strauss & Corbin, 1997). As a method of exploration,

grounded theory is particularly well suited for investigating social processes that have attracted little prior research attention, where the previous research is lacking in breadth and/or depth, or where a new point of view on familiar topics appears promising. The purpose is to understand the relationships among concepts

that have been derived from qualitative (and, less often, quantitative) data ...

(Milliken, 2010, p. 548)

While grounded theory overlaps to a degree with multiple approaches to qualitative inquiry, it has more in common with ethnography; herein, the researcher “interweaves data collection and theory building so that, as the research progresses, the analyst successively redefines and narrows her focus of study” (Locke, 2001, p. 18).

In grounded theory studies, interviewing is the main tool for generating data which can be used inductively for the development of conceptual categories (Charmaz, 2014). Between each interview session the researcher is expected to document potential theories and categorical trends in a personal memo journal. According to Corbin and Strauss (1990), “writing theoretical memos is an integral part of doing grounded theory” (p. 422). Gibson and Hartman (2013) note that memo writing should happen throughout the process of grounded theory as a means of thinking theoretically in terms of categories. During iterations of coding and analysis, hypotheses based on the noted categories and their respective relationships are taken back into the field where they are verified and revised as needed (Corbin & Strauss, 1990). As such, grounded theory is described as a constant comparative method, where the researcher is expected to memo similarities and differences in the coded data. Ideally, continuous memoing assists the researcher with saturating categories as well as developing a dense and integrated theory (Gibson & Hartman, 2013). In its optimal form, Glaser and Strauss (2009) believe theory should provide clear enough categories and hypothesis so that crucial ones can be verified in present and future research; they must be clear enough to be readily operationalized in quantitative studies when these are appropriate. The

theory must also be readily understandable to sociologist of any viewpoint, to students and to significant laymen. (p. 3)

At the root of each grounded theory investigation, the fundamental question is “What is happening here?” (Glaser, 1978, as cited in Charmaz, 2014). The researcher’s analysis of preliminary interviews is intended to explore what is happening; the key findings ultimately contribute to the content of subsequent interview questions (Charmaz, 2014). According to Glaser and Strauss (2009), “generating a theory from data means that most hypotheses and concepts not only come from the data, but are systematically worked out in relation to the data during the course of the research” (p. 6). In contrast to positivist standards of validity and reliability, Milliken (2010) notes grounded theory is assessed according to four standards:

- (a) Fit – a theory with categories generated from data
- (b) Work – a theory that explains what happened, is happening, or will likely happen
- (c) Grab – a theory that resonates with participants and is immediately recognizable
- (d) Modifiability – a theory that can be extended and qualified to accommodate new data

Selection of Participating Schools

The researcher gathered quantitative data to assist with the selection of campuses for investigation. This process included a comparison of ABC Independent School District sites utilizing website DonorsChoose.org between 2006 and 2017. To achieve this end, a comprehensive data set was downloaded from the website Data.donorschoose.org. The dataset included the following variables: school name, teacher name, project title, project URL, subject, grade level, request amount, and date of

project completion. The researcher initiated a selection process by generating a frequency distribution of crowdfunding projects completed between 2006 and 2017. The resulting distribution was represented in graphical format as a two-dimensional plot of the number of projects (Y-axis) to campuses (X-axis). In addition to generating a histogram of campus crowdfunding projects, the researcher computed and reviewed the range, mean, median, and mode for the dollars raised per campus and the number of teachers participating at each campus. According to Fraenkel, Wallen, and Hyun (2015), the primary advantage of utilizing descriptive statistics is to enable the researcher to describe multiple scores with a few indices. Based on the aforementioned data, four sites of study were selected based on the following criteria. The sample included participants from schools that raised at least \$25,000 and initiated at least 45 projects on DonorsChoose between 2006 and 2017. Within these four schools, the target group of interviewees included teachers who launched one or more fully funded project on DonorsChoose. In addition to studying teacher perceptions and practices, at least one campus-level administrator per site was interviewed. The practice of selecting participants based on quantitative data prior to the qualitative investigation follows the explanatory sequential research design. Mixing datasets was recommended as it afforded the researcher with a better picture of the problem than if either dataset had been used alone (Creswell & Clark, 2007). The aforementioned archived data downloaded from DonorsChoose was utilized to formulate interview questions and conceptual categories throughout the theory development process.

Qualitative Data Gathering

In a research study relying on grounded theory, “data consist of any form of information about the research topic that can be gathered, including the researcher’s own field notes” (Milliken, 2010, p. 549). Documents, “whether online or available only in traditional printed form, can tell the researcher about the inner meaning of everyday events [and] ... highly unusual or idiosyncratic human experiences ...” (Merriam & Tisdell, 2015, p. 166). Corbin and Strauss (1990) note in grounded theory studies data collection and analysis are intertwined; data collection procedures involve interviews, observations, government documents, video tapes, newspapers, letters, books and any other source that may potentially clarify the research questions; analysis begins as soon as the first bit of data is collected.

Interviews

The target group of interview participants were certified teachers and administrators employed by a public school district. This group of participants was selected from schools with a demonstrated track record of crowdfunding success. The interview data was captured in the form of digital audio recordings. Each audio recording was transcribed for subsequent analysis. Intensive qualitative interviews were employed as both grounded theory methods and intensive interviewing are compatible, based upon their open-ended, in-depth, exploratory nature (Charmaz, 2014). This approach enabled the researcher to inductively generate “theoretical ideas or hypotheses from the data as opposed to testing theories specified beforehand” (Gibbs, 2007, p. 49). Initial coding of interview material helped the researcher discover participants’ views rather than assuming both researcher and participants shared a common ontology. The

questions devised for teacher interviews were classified into five distinct categories: External Influences, Internal Organizational Factors, Motives, Methods, and Outcomes. The overarching question the researcher sought to understand is “How do public school teachers develop crowdfunding praxis that is both successful and sustained?” A conceptual map (Figure 3.2) is included as follows.

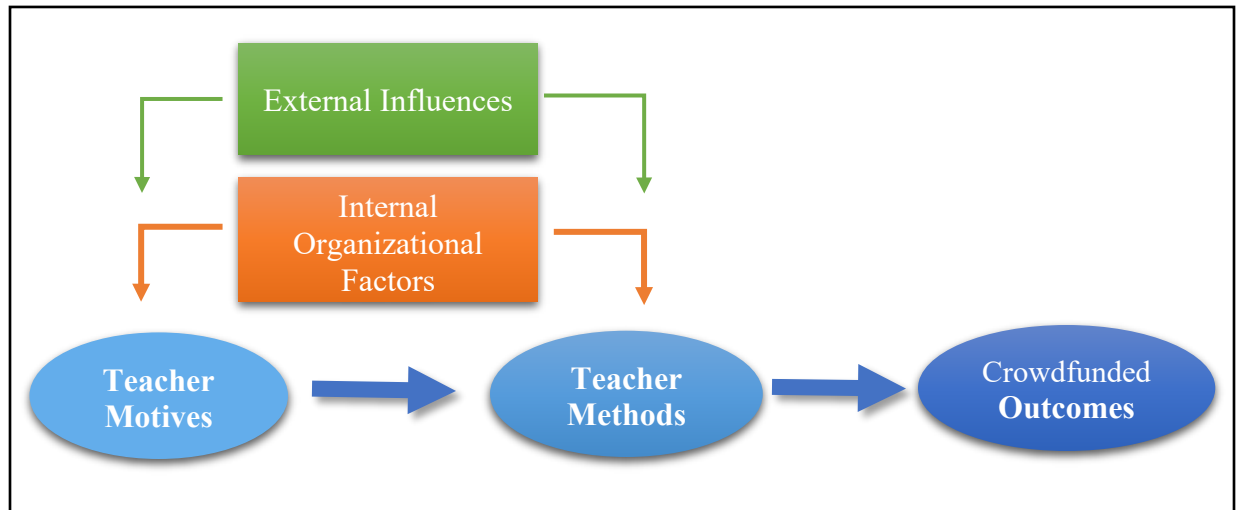


Figure 3.2. Conceptual Map: Factors Influencing K-12 Teacher Crowdfunding

The interview questions posed to administrators were intended to capture the degree that instructional supervision moderates the success of teacher-led crowdfunding. The overarching questions directed towards administrators were (a) “Why is there a large number of teachers participating in crowdfunding on your campus?” and (b) “What is the reason your campus is more successful at crowdfunding compared to other schools in the district?” This list of questions was provided as a preliminary outline for the initial round of inquiries. Since grounded theory “researchers cannot know exactly what the most significant social and social psychological processes are in particular settings ... they start with areas of interest to them and form preliminary interviewing questions to open up those areas” (Charmaz, 2002, pp 675-676). As the researcher progressed through the

study, the content of participant responses and researcher memos influenced the questions generated for subsequent interviews. A detailed list of interview questions is included in the appendices (see Appendix C and Appendix D).

Documents and Artifacts

The data collected included crowdfunding campaign webpages created by certified teachers on DonorsChoose.org. These archived webpages served as a baseline for data collection. Regardless of school location or grade level, crowdfunding campaign pages are archived and retrievable by teacher and / or school name. Campaign pages contain an essay written by the teacher demonstrating need, school poverty level, subject, grade level, as well as an estimate of how many students will be served if the project is fully funded (Althoff & Leskovec, 2015). As part of the on-campus interview process, the researcher requested access to view, copy, scan, or photograph additional documents related to the teacher's successful crowdfunding campaign(s). The researcher also requested permission to photograph artifacts present in the teacher's classroom.

In this study, documents refer to written and digital material including imagery; whereas, artifacts are physical objects in the environment that are meaningful to participants (Merriam & Tisdell, 2015). According to Althoff and Leskovec (2015), once a DonorsChoose campaign is successful and the requested materials arrive at the school, the teacher is responsible for composing an impact letter to donors. Typically, impact letters consist of photos of students using the donated materials.

Photographs

Visual images have been utilized by anthropologists since the late 1800s; more recently, arts-based researchers such as Elliot Eisner have shown that individuals

comprehend differently when examining a phenomenon through a visual lens (Butler-Kisber, 2008). According to Merriam and Tisdell (2015), there are three types of photographs commonly utilized in qualitative studies: (a) found photographs - pre-existing photographs in the public domain or personal collections, (b) researcher generated photographs, and (c) participant generated photographs. When researchers take field-work photos and discuss them with others, this epistemological method is called photo elicitation; when researchers provide participants cameras and encourage them to photograph their own world this empowering method is called photovoice (Harper, 2012).

In this study, the researcher photographed donated materials to document product use. Specifically, the researcher sought to qualify student impact; this included the number of students served as well as the duration in which the donation contributed to the learning environment. Unlike videography, photography is less intrusive, less expensive, and more easily to incorporate into a research study (Merriam & Tisdell, 2015). In this study, the researcher obtained permission to photograph crowdfunded items within participating teachers' classrooms.

When donated artifacts were not retrievable by the teacher, the researcher located similar photographs of crowdfunded artifacts on the DonorsChoose website. To insure validity, the researcher verified the photograph in conjunction with text on the teacher's archived website. In addition to collecting artifacts, the researcher utilized photographs as prompts to assist in select administrator interviews. Since teachers have greater access to classroom donations than principals, using photographs in administrator interviews improved respondent validity. According to Keegan (2008), researcher-introduced

photographic material has the potential to focus participants on the topic and assist in the recall of additional details.

Data Analysis

Qualitative research involves analyzing and interpreting texts and interviews in order to discover meaningful patterns which describe a particular phenomenon of interest (Auerbach & Silverstein, 2003). In grounded theory research, the overarching “purpose and outcome of data analysis is to reveal to others through fresh insights what we’ve observed and discovered about the human condition” (Saldaña, 2011, p. 89). In contrast to thin description, which merely states facts, thick description paves the way for iterations of analysis and description (Denzin, 1989). It is through analysis that the researcher obtains a fresh view of the data; thus allowing one to progress from initial description, data decomposition, and ultimately construction, where the researcher envisions how the disparate bits connect (Dey, 2003). In contrast to complementary qualitative methods, “grounded theory provides researchers with guidelines for analyzing data at several points in the research process, not simply at the ‘analysis’ stage” (Charmaz, 2002, p. 683).

Analysis of Interviews

The process of data analysis included the transcription of audio recordings obtained from teacher and administrator interviews. While it was possible to code directly from an audio or video recording, coding was more efficient and less tedious when based on a printed transcript (Gibbs, 2007). Upon receipt of the professional transcription, the researcher initiated a refining process known as pre-coding which involved highlighting participant quotes or passages deemed code-worthy (Saldaña,

2009). The formal coding process involved two distinct phases: initial / open coding and selective / focused coding. Although some researchers apply Strauss and Corbin's (1990, 1998) axial coding procedures, in line with the constructivist approach to grounded theory, codes were kept simple, direct, analytic, and emergent (Charmaz, 2014). The first phase of coding in grounded theory work, open coding, entailed reading reflectively line-by-line to identify conceptual categories. Denzin and Lincoln (2017) recommend the initial codes remain short, simple, precise and tightly linked to the data. During the second step of coding, selective / focused coding, the researcher refined relationships between the previously specified categories. During focused coding the researcher captured and synthesized larger segments of data with the goal of elevating codes to a set of interrelated conceptual categories (Denzin & Lincoln, 2017). Ultimately, the central categories, produced by selective coding, unified categories into a theory that articulated an emerging story line (Gibbs, 2007).

Grounded theory coding was used to simultaneously describe and dissect the data; during the coding process, the researcher engaged in line-by-line coding, using active terms to define what was happening in the data, and followed up on leads after open-coding via additional data gathering (Charmaz, 2002). In parallel with coding procedures, the researcher developed analytic memos and diagrams. According to Charmaz and Bryant (2008), this practice highlights core categories and identifies potential gaps in the developing theory. The theoretical direction of the study emerged during interview analysis; while some interview statements initially stood out, other statements clustered during coding and memo writing (Charmaz, 2014). As such, the researcher revisited and reanalyzed interview data across the span of this study.

Analysis of Documents and Artifacts

The primary form of documents that were analyzed included archived crowdfunding campaign websites. According to Bowen (2009), document analysis entails “skimming (superficial examination), reading (thorough examination), and interpretation” (p. 32). Document analysis is an iterative process which combines elements of content analysis and thematic analysis. Content analysis is the process of organizing information into categories related to the central research question(s); thematic analysis is the process of recognizing patterns in the data, leading to the emergence of themes and categories (Bowen, 2009). To achieve this end, the researcher relied on memos commonly referred to as field notes. These analytic writings included the researcher’s transcriptions and inscriptions. Inscriptions are “descriptions of events and activities” while transcriptions are the “informant’s own words and dialogues” (Gibbs, 2007, p. 29).

Since teacher crowdfunding documents are openly accessible on the DonorsChoose.org website, the researcher initiated thematic analysis prior to conducting the onsite interviews. Analyzing archival sources, such as these teacher websites, afforded the researcher with an alternative source presented in “a nonthreatening and comfortable environment” where the perspectives of potentially “hard-to-reach groups” could be observed (Creswell, 2013, p. 159).

Analysis of Photographs

Each photograph was subject to direct analysis. According to Collier (2001), direct analysis entails the researcher examining photographs as data, giving consideration to contextual clues and visual content. To implement direct analysis, the researcher

categorized photos based on Collier's (2001) typology. Collection A consisted of images of the same subject or object (taken from multiple angles); collection B consisted of different images which when viewed in aggregate explain a larger concept or phenomenon. As the purpose of this study was to generate theory, collection B was valuable for identifying crowdfunding patterns across the four sites included in this study. The analysis of pictures is rooted in the descriptive theoretical memos the researcher writes after coding and applying the comparative process to each photograph; moreover, the practice of comparing photos gives the researcher additional elements to generate categories (Konecki, 2009).

Although the literature does not offer many guidelines for incorporating visual images into an interpretive analysis, visual materials are valuable for studying culture and social experiences (Boeije, 2009). When analyzing photos in conjunction with interviews, the following techniques recommended by Radley and Taylor (2003) were employed:

- Arranged photographs to categorize the types of images (i.e., time, place, event, subject)
- Listened to the interviews with the photos on hand
- Considered if the selected images represent the participant's narrative
- Noted limitations imposed by the use of still photography

According to Konecki (2009), we can apply theoretical sampling to photographs by looking for new data from different contexts comparatively until the category is saturated; herein, category saturation occurs when properties reoccur consistently during the collection and analysis of data.

Triangulation of Data

In contrast to post positivists, Hastings (2010) recommends

researchers influenced by a constructivist philosophy consider the benefits of triangulation to lie not in its potential to verify information but in its capacity to provide multiple viewpoints on the phenomenon of interest and to amplify the perspectives of participants who have been ignored or overlooked in traditional scientific inquiry. (p. 1538)

To ensure multiple viewpoints were presented, the researcher included data from the sources recommended by Glaser and Strauss (1967); these sources included semi-structured interviews, archival sources, and field observations. While this practice was not originally referred to as triangulation, Glaser and Strauss (1967) advocate for gathering slices of data with the goal of understanding conceptual categories (Locke, 2001).

By examining information collected through different methods, the researcher corroborated findings across data sets and thus reduced the impact of potential biases in the study (Bowen, 2009, p. 28). As such, the open-ended nature of grounded theory requires flexibility and multiple trips to the field to collect additional data with the intent of answering analytic questions and filling conceptual gaps (Charmaz, 2002). In accordance with Glaser & Strauss (1967) constant comparative method, grounded theorists are expected to compare data with data, data with code, code with code, and code with new data (Denzin & Lincoln, 2017). This practice ultimately led the researcher to devise theoretical codes which identified gaps in the data and guided subsequent interviews until the researcher was no longer able to find new information pertaining to

that construct; this point is known as theoretical saturation. According to Milliken (2010) once the researcher and participants agree that the theory is saturated and explains the phenomenon, a final literature review should be conducted to connect the theory with previous work in the field. A general model highlighting the logical flow of this grounded theory study is presented in Figure 3.3.

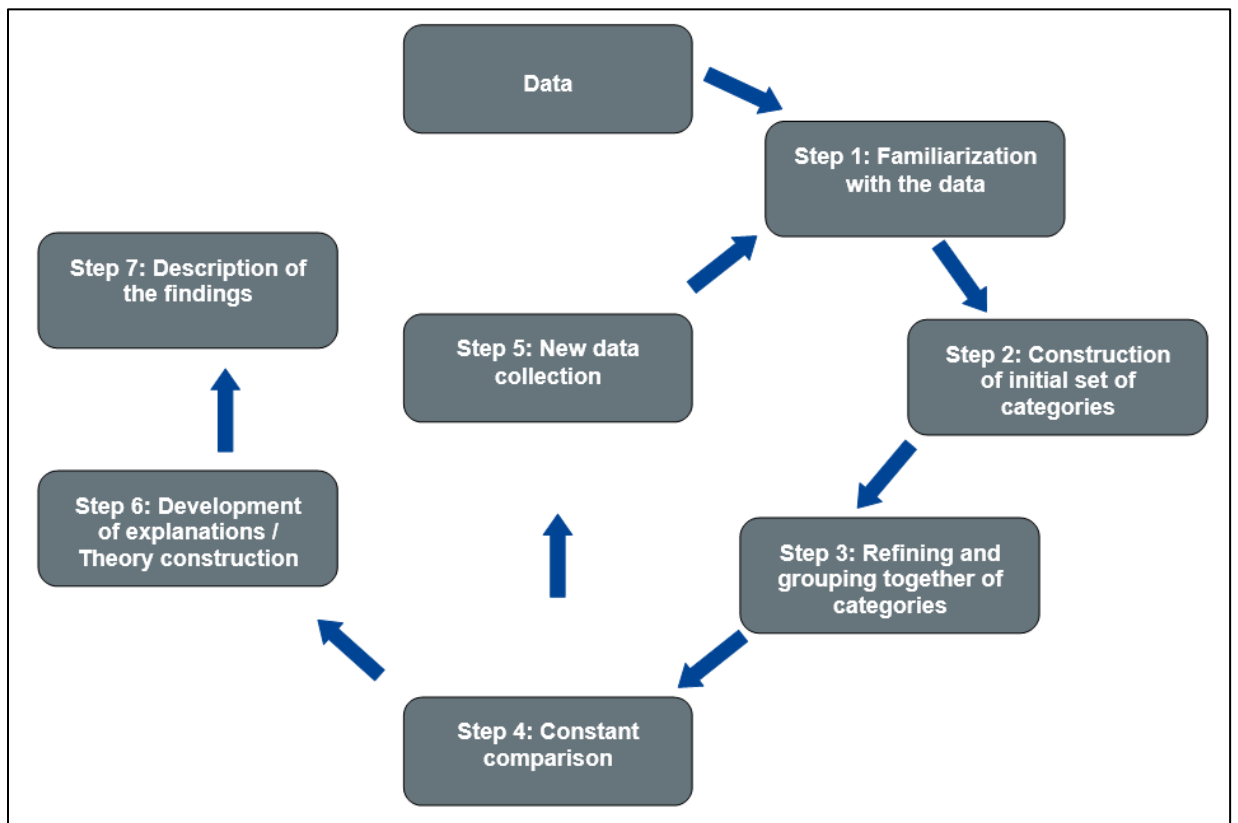


Figure 3.3. Conceptual Representation of Iterative Process of Qualitative Analysis With an Inductive Approach (Kohn & Christiaens, 2016)

Ethical Considerations

Ethical considerations of grounded theory may arise when gathering observation or interview data. In order to avoid ethical issues, it is important to communicate to the participants how their written, audio, and visual data will be handled (Länsisalmi, Peiro,

& Kivimäki, 2004), and it is imperative to inform participants before the data collection phase. Photo consent information must be presented to each individual participating in the study. When using images in presentations and publications, agreements must be reached about the availability or display of the subjects (Boeije, 2009). After reviewing the information pertaining to the data analysis and data presentation, participants must be afforded the opportunity to withdraw from the study (Lämsäsalmi, Peiro, & Kivimäki, 2004).

To ensure this study was in line with academic standards for ethical research, the research plan, including consent forms, was submitted to the Texas State University Institutional Review Board (IRB). Informed consent documents contained a standard set of elements acknowledging protection of human rights (Creswell, 2014). Essential ethical considerations prescribed by Creswell (2014) included: (a) consulting with the code of ethics for professional associations, (b) obtaining permission from gatekeepers to obtain access to the sites and respective participants, (c) selecting a site that presents no conflict of interest, (d) disclosing the purposes of the study, and (e) respecting the privacy of the participants. This study also relied on the code of ethics outlined by the American Psychological Association and the American Educational Research Association.

CHAPTER IV

RESEARCH FINDINGS

In line with the research questions presented in Chapter One, this section presents the researcher's findings organized in the following seven subsections:

- Motivations for Crowdfunding
- Methods for Successful Crowdfunding
- Supports for Teacher-led Crowdfunding
- Barriers
- Outcomes
- Student Outcomes: Technology, Literacy, and Social-Emotional Learning
- Summary

The purpose of this study is to understand the phenomenon of crowdfunding within the context of public schools. The sample included sixteen educators: twelve teachers and four administrators. Four sites of study were selected from 120 potential ABC Independent School District campuses employing teachers who crowdfund on the website DonorsChoose.org. The site selection criterion was based on a decade of archived, open source fiscal metrics. The four sites selected for study included schools that employed at least 17 teachers who collectively raised between \$25,000 and \$56,000 for their respective campuses from March 2006 to January 2017. For each of the four elementary schools studied, the researcher used methods in line with grounded theory to determine the factors influencing individual success and campus-wide crowdfunding efficacy. Specifically, participants were interviewed to gain a better understanding of their crowdfunding practice, supports, barriers, and resulting outcomes. These factors were

useful in the formation of conceptual categories based on participant experiences. The interaction of each participant was viewed through the lens of the researcher's Crowdfunding K-12 Conceptual Framework. Namely, the interpretation and subsequent results were produced by studying the public sector participants working in the school district, the non-profit sector participants operating the 501(c)(3) DonorsChoose, and the degree of value created on behalf of the recipients of crowdfunded materials, the students.

The administrator and teacher interview protocols aligned with the research questions outlined in Chapter One. The researcher also applied methods of photographic and document analysis to archived website content to extract salient quotations underscoring teachers' perceptions and practices. The research questions guiding this study are as follows: (a) What are the motives of public school teachers who initiate crowdfunding campaigns? (b) What are the methods of public school teachers who execute crowdfunding campaigns? (c) What are the internal organizational factors that impact decisions of teachers who execute successful crowdfunding campaigns? (d) What are the external influences that impact decisions of teachers who execute successful crowdfunding campaigns? The resulting major themes that emerged from this grounded theory study are presented within the following five categories:

- Motivations for Crowdfunding
- Methods for Successful Crowdfunding
- Supports for Teacher-led Crowdfunding
- Barriers to Success
- Outcomes

Motivations for Crowdfunding

Outdated Technology in the Classroom

The acquisition of updated technology was a preeminent need expressed during the data collection phase of this study. During the initial round of interviews, a third-year teacher expressed discontent towards the lack of modern and functional technology at the teacher's school:

I was at this training with people at higher performing and higher income schools that had all this technology. And when I first inherited my art classroom, I had a broken projector and a computer so old that I.T. wouldn't come work on it anymore. And I was just really passionate and am still passionate about bringing technology into our students from Ozobots, to computers, to iPads, and things like that. So that was what I think [was] the initial motivation.

The subsequent advantage of procuring technology for classrooms through DonorsChoose was the reduced dependence upon district employees for care and maintenance. Items granted through teachers' crowdfunded proposals fall under the purvey of the individual who wrote the proposal. In essence, this limits the sphere of accountability for items such as the Boardmaker, visual picture exchange system. Ms. E., a veteran special education teacher, noted that when resources are shared sometimes "people don't take care of them." Shortly after gaining access to a district issued Boardmaker, the device stopped working:

I had one and it broke, and it was gonna be really hard to get a replacement, so I just got one from DonorsChoose. And now it's mine and I don't have to share it, I don't have to return it.... And so, I have also encouraged other teachers to even go

that route. You might have to get your technology from DonorsChoose, 'cause it's not gonna come from above.

A teacher from another campus emphasized the importance of modern technology equipment as well as the favorable ratio of devices per child:

The school has supplied us with one iPad per classroom. We really can't do much with just one iPad in the classroom. And a lot of our technology's becoming very outdated or they're not working anymore. I would be down to one iPad and one fully functional computer. And that really would not give the kids the opportunity to be able to grow technology wise into the 21st century that we're teaching kids to be more technologically savvy and whatnot.

A second teacher expressed similar sentiments:

They want us to do all of these things online with the kids, but I have four computers in my classroom, and three of them are dependable [chuckle] and one of them is not very dependable, so I thought, "Okay, I need some tablets in order to do Istation."

The term "one-to-one" was used by a teacher when referring to her vision for technology access in an ideal elementary classroom. Given the relatively high price for one tablet computer, this teacher planned to submit at least one crowdfunding proposal per semester in hopes of acquiring four iPads per school year. When sharing her rationale for shifting crowdfunding efforts from books to electronic tablets, she said,

I'm switching over to technology, mostly because I'm very fortunate with the books that I have, that I've been taking care of them, and things like that. So, I

wanna change it over towards the technology side to see if that's a little bit helpful...

New Books and Culturally Relevant Reading Materials

Aside from technology, the other most common reason teachers were motivated to utilize DonorsChoose was for the procurement of reading materials. The first problem teachers pointed to was the urgent need to replace dilapidated books. A reading specialist said, “we were replacing worn and torn out ones, so the Charlotte's Web came from that. Those books were literally being held together by tape everywhere. The purpose was to replace originally the original sets of 20...” While this case is extreme compared to other sites under study, it underscores the pertinent need and subsequent action taken by certified teachers. Although initially motivated to replace worn out books, this reading specialist and her grade level colleagues proceeded to procure enough books to supply classroom sets for the entire 4th grade at this campus. The teacher noted, “We did get some funds through the district, some through grants, but we wanted to get more, so as teachers we started trying to get some more books through DonorsChoose. It's all to build our literacy program...” Given the ubiquitous nature of dictionaries and thesauri in our culture, one may assume the goal of a one-to-one student dictionary ratio would have long since been achieved. Surprisingly, teachers like Mrs. L. turned to crowdfunding to insure their school surpassed the state mandated 1:5 ratio (one dictionary for every five students) taking The State of Texas Assessments of Academic Readiness (STAAR). Mrs. L. notes,

Dictionary skills weren't really a big part of STAAR testing previously, so obviously it's mandated by the state, the district is not funding that, so what do

you do? [chuckle] So, we're crowdsourcing. Our principal's able to buy some. Mandated actually one for every five children. But that's not practical if you're teaching dictionary skills. If you really want them to have the skills you need one for every child, to use it. We're trying to fill in those gaps so that there's one per child.

Another teacher noted the lack of books available to her when she entered the profession. In her first year of teaching she did not realize she was supposed to have "leveled readers." She admitted her first year was rough "because I came in October." However, finding out about DonorsChoose made her transition to teaching much smoother:

If I had not known for DonorsChoose I guess I wouldn't have had books. I had no idea I was supposed to have little textbooks, little readers for my students, so when I found that I didn't have any, I was like, "What am I gonna buy them with? What am I gonna do?" I think that had it not been for that I probably would have had a harder year. I would have been stressing myself of getting those funds, of getting those books.

The second problem that teachers sought to solve through crowdfunding literary materials was a shortage of culturally relevant reading materials. One teacher noted, I did a set of multicultural books because I felt like, "Oh, I want more books with people of color in them that aren't tied to that specific culture," if that makes sense. 'Cause in children's literature, most books are about animals or, I don't know, old traditional families. Anyway, so I did a project for that and then also including special needs in that.

Another teacher, intent on linking curriculum and culture, said,

I do a lot of social studies requests for different books, and for children around the world, and understanding cultures. And it goes along with several months of things and reading we're doing in class. So like I said, I just connect it to the curriculum and what I don't have in the classroom on my own without having to worry about checking out [books] in the library.

Fellow teacher Mrs. V. pointed to the difficulty of finding diverse reading materials on campus:

I taught a unit called "Sylvia & Aki", it was the Mexican American experience and Japanese American experience ... during World War II, and I thought it was really important to bring that literature into the classroom, and it was really hard for me to find that anywhere, including our school libraries.

Mrs. V. had recently transitioned from teaching upper elementary grades to first grade dual language. Now she says, "I'd like to see about bringing more culturally diverse books into the classroom, not just Hispanic heritage, but other heritage [such] as Japanese American. I feel like we kinda need to branch out into other cultures." She planned to use DonorsChoose in the future to crowdfund books that introduce first graders to non-traditional fiction. Mrs. V. noted, "I'd love to do something with fairy tales in first grade to kinda introduce them to that, but not the traditional stories, more like the Native American version of Cinderella, or I know there's an Aztec one as well..."

The motivation for crowdfunding also stemmed from the need for multilingual and social emotional learning (SEL) related books. In reflecting on her practice, one teacher noted, "I'm a dual language teacher, so a lot of materials are in English, but we

need some more materials in Spanish.” She stated, “I have a current life project and it's SEL, and I think that that's very important to me and I feel like I don't have enough.”

This teacher reiterated a theme common to teachers across multiple sites, “I want the kids to have the current literature.” Veteran crowdfunder Mrs. M. agreed: district issued curriculum has a shelf life. She noted,

The textbooks and stuff that, when they do order them, we have them for so long, they start to get dated. That's one more reason for getting things through DonorsChoose; you get updated materials that have more current information other than just getting on the internet and searching.

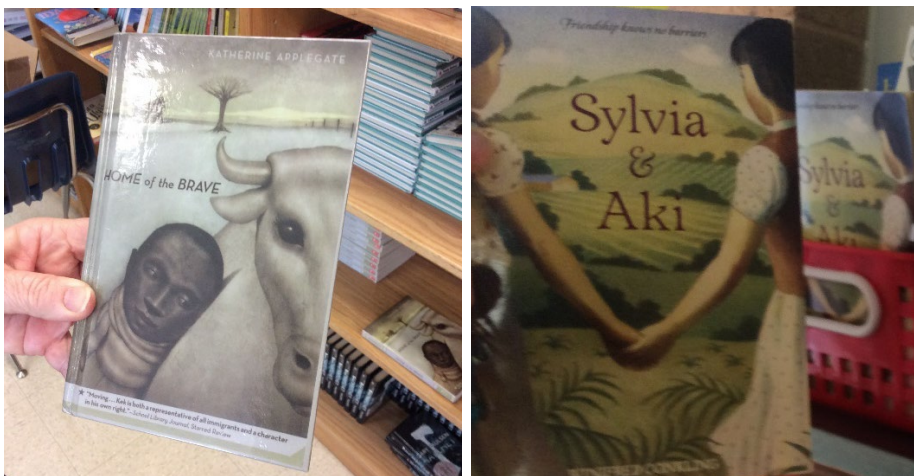


Figure 4.1. Crowdfunded Reading Materials

The quest for new books is more than a personal preference or whim of the teachers included in this study. Mrs. V. noted her need for more books was based upon empirical research pointing to the importance of well-stocked classroom-based libraries:

My first year of teaching, I spent about \$2,000 just buying books for my library, and I still did not have enough to meet what studies say, statistically say, that to have a successful child in reading, you should have at least 10 books per child,

per student, in the classroom. And I still wasn't even able to meet 10 books per kid. And that was with me spending already \$2,000 of my own money.

This perspective is backed by the research by the American Library Association (1993) which recommends classroom libraries include approximately

300 titles, single and multiple copies, as part of a permanent collection, with supplements from a well-stocked school library. The International Reading Association recommends that classroom libraries start with at least 7 books per child and purchase two additional new books per child each year. (Neuman, 2001. pp 2-3)

Two of the teachers interviewed mentioned buying used books before the discovery of DonorsChoose. Second grade, bilingual teacher Mrs. C. said,

My classroom library was too sparse, and I needed some more books. And I was getting books through Half Priced Books or other ways and donations. But then I saw that DonorsChoose would be a good way to get exactly what I wanted.

Purchasing half priced books helped balance the need for new materials for elementary readers and teachers' respective checkbooks. One of the downsides pertaining to this practice that teachers mentioned was the inability to procure comprehensive and homogenous sets of readers. The practice of bargain shopping at the local bookstore was at best a hit or miss experience mitigated by supply, demand, and the availability of teachers' personal funds and free time.

Budget Cuts

Federal and state funding shortages underscored the motivations for teachers turning to crowdfunding. This topic was a recurring theme in the interviews conducted

across campuses. Special education teacher Ms. E. noted the money in special education has dwindled at a national level, thus impacting the availability of local funds. As a Preschool Program for Children with Disabilities (PPCD) teacher,

you get \$250 a year from special ed monies; that doesn't go very far at all, that gets you a few items It's exactly \$250. Every special ed teacher gets \$100, and then if you're a specialized unit like PPCD or life skills, you get an additional \$150. So my motivation [for crowdfunding] was not having the things I wanted for my classroom.

As it pertains to state level funding in Texas, kindergarten teacher Mrs. S. explained how the expiration of the Texas Literacy Initiative (TLI) grant impacted her school. She noted, “our grant ran out two years ago, for the TLI money, and so that meant no reading specialists for the little kids, no additional support. And so, yeah, it's definitely gotten tighter over the years.” Formerly, “the state gave us money where we could buy supplies or materials, and they gave us a great deal of things that we needed.” Across town, a reading specialist said things have gotten worse: “our budget at our school particularly has been slashed by over \$100,000 since last year.” Special education teacher Ms. E. pointed to 2010 as the year when education budget cuts reached a tipping point:

Yeah... It was 2010, the spring of 2010. Yeah, I feel like there used to be a little more wiggle room, where you could say, "I need this," and the district would have a little, or the school would have gotten more money. There used to be this thing where it's like in January, we would get some money from the district. And I didn't understand where it came from or why, but there always seemed to be a

little more and I don't ever hear about that anymore. Yeah. I feel like it's up to me to make my classroom what I want it to be, 'cause it's not gonna come from any other money.

When asked about the changing landscape of school finance and crowdfunding since launching her first campaign, Ms. E. responded that after the reduction in force (RIF) cuts, “everything got a little bit tighter.” A survey of news articles released in 2011 substantiates this claim. In retrospect, it appears that federal, state, and local budget reforms converged during the 2010-2011 school year. This was a significant motivator for teachers like Ms. E. to turn to the crowdfunding website DonorsChoose.org. One administrator noted,

there's not a lot of extra money for teachers to do any projects like this. When we spend our campus budgets, there might be some money here and there, we give money for supplies, we give money to our reading programs, but typically we look at more of an overall school benefit rather than a specific classroom or a specific grade level.

Inequity Within the School

The underlying reason teachers cited as core motivation for crowdfunding books, technology, and other materials was the lack of equitable access. This problem was explicated first from the macro level (the district) and secondly at the micro level (the school). The examination of inequities between schools is neither novel nor new; however, the discourse on inequity that exist within the school itself was a potentially volatile subject participants explained with both tact and candor. One school's adoption of bilingual instruction highlighted a chasm within the school itself. Mrs. V. noted,

when we first started the dual language two-way program, we quickly realized that we had... Our two groups of students, we had a very, very low SES population, and then ones that came more from a middle-class family. And what we quickly realized was that if you walked through the school, through the Gen Ed classes and the DL classes, you would see that there was a lack of equability within the items that were in the classrooms, whether it be books in the classroom library, flexible seating, whatever, technology even.

The recognition of the problem prompted Mrs. V. to insure both groups of students had similar experiences in the dual language program. On her DonorsChoose profile Mrs. V. mentions that over 90% of her students do not have access to technology in the home. One of the methods of overcoming this gap was to help her students utilize iPad software that reinforces math and reading all while innocuously teaching students how to code. When asked to share about the crowdfunding campaigns that exemplify excellence, Mrs. V.'s administrator replied without hesitation,

I have liked.... some that our bilingual teachers have put together in order to try to get more equity in the classroom as far as stuff like reading materials or just different activities, hands-on activities that they can use with their classes.

At the same campus, access to technology was a priority for Mrs. M., the most tenured user of DonorsChoose that participated in the study. She started using DonorsChoose at another school within the same district sometime "before 2005." She commented that materials from DonorsChoose "open up a lot more opportunities for kids that also don't have some of these materials at home, like the iPad's technology for instance. Or the books that I get. They have that opportunity here." Two teachers from a

school across town were motivated to crowdfund for essential supplies including snacks and personal hygiene products (see Figure 4.2). Art teacher Ms. B. had a unique teaching position that allowed her to reach almost every student in the school at some point during the week. Aside from financing specialized materials for her art room, her use of DonorsChoose allowed her to be a resource to the entire campus. Ms. B. shared,

I have told teachers hey, if your student comes to school and they are hungry and they missed the breakfast time or maybe they just came to school late and they have a tummy ache, or they have a need or whatever. Send them to my room, I have these things. And so that has been really good especially on testing days, a kid comes to school late and has to be in that test immediately and doesn't have time to even go to the cafeteria and ask if he can get a piece of toast. Just send him to my room, here's a protein bar, go back to your class and eat it while you take the test. And that's been really helpful. And I think ... kids can't learn if they're hungry.



Figure 4.2. Crowdfunded Snacks and Personal Hygiene Products

Another teacher from the same campus utilized DonorsChoose for a similar purpose. Ms. N. noted,

With extra snacks and food, I was able to implement that throughout the day and that really motivated them and so they're happy to get some Goldfish while they're working. It makes me happy too, 'cause I know they're getting that extra little food intake.

The sources of inequity uncovered in this study were not limited to student socio-economic status. The lack of equity between special education classrooms and early childhood classrooms emerged during the interview process. One special education teacher said, "in special ed. we tend to be the sad child that doesn't get the things that everybody else gets." She was motivated to try crowdfunding because, "Pre-K was having all this money thrown at them and all these awesome materials and I'm over here like, "Well where are my new dolls?" She recounted "going next door to my partner teacher's room and saying, "Oh, I wish I had that." Then she decided, "I am gonna go ahead and do a DonorsChoose for it."

Inequity Within the School District

The final overarching rationale for crowdfunding classroom resources is the lack of equity between campuses within the district. Specifically, teachers were aware of other teachers (at non-Title I schools) who did not experience the same fiscal limitations. When asked if her campus lacks funding, Art teacher Ms. H. said,

We have money. But we don't have very much, and... There's another school here and it's on the west side and it's mostly white, and they have a lot of money. Her budget was \$25,000, because she gets district money and then she does

fundraising, and the parents buy products, and they had \$25,000. My budget is \$2,000. Why should my kids have less?.... so I'm gonna hustle.

A veteran teacher at the same school explained how policy drives school finance.

Specifically, she cited how the school's percentage of English Language Learners (ELL) can make a dramatic difference in the budget:

The funding is not equitable among schools in the district. It's based on the number of, the percentage of low income and ELLs. So, you could be a small school of 100 children and have an 80% and you will get more money than a school like ours that has around 700 children that's at 70%. So, we have more children in high need, but they get more money because it's a percentage. It's not a number per child. It's a number per percentage. It's not equitable. So, some of the smaller schools may have six or seven specials funded, have extra money to buy materials, and yet a school like ours, we don't have that funding because our percentage, even though our numbers claim it, our percentage does not.

Methods for Successful Crowdfunding

Taking the Plunge

There are two quotes which epitomize the campus pioneers who are successful in crowdfunding. First, "The journey of a thousand miles begins with one step" (Laozi, 2018). Second, "You don't just luck into things as much as you would like to think you do. You build step by step, whether it is friendships or opportunities" (Bush, 2018). The teachers interviewed frequently mentioned feelings of apprehension and uncertainty. Mrs. S. said, "the first time you do it, I think some teachers...they've told me that the first

time you do it, it's just so overwhelming.” When reflecting over the first time she wrote a crowdfunding proposal, Mrs. S. noted

...the first time I did it, I was so scared. I mean every little word, I looked to see, I was scared to punch the save button, I'm like, "I wanna save it but, do I wanna send it really? Am I ready?" And I mean it took me hours, I'm like, "Oh my gosh, just write the paragraph. It's only 250 words, you can do this!"

Mrs. S. reflected upon the seemingly difficult experience as well worth the effort. She notes, “it's been so beneficial for my kids, and it was easy.... I'd totally recommend it. I mean, I've gotten thousands of dollars for my classroom.” Fellow teacher Ms. E. refers to her first project as a “dud.” However, she proudly declared, “I wrote it, I got the stuff really fast... And so then, once I got stuff, I was [like] all I have to do is write something and I'm gonna get free things, yes, please. So, then it snowballed from there.” A third-year teacher said, “I think that it's such an important resource and that it's a lot less daunting than most teachers think. I think once you get your first project funded, things just open up.”

The attribute common to the teachers in this study is the willingness to take a chance on a new technology-driven experience for the benefit of their students and their pedagogy. When reflecting on her first crowdfunding proposal reading specialist Mrs. L. thought, “The worst thing that would happen is that you use time that you didn't have, and I felt like it was worth it. I'm always gonna think I can make this happen.”

Kindergarten teacher Mrs. C. said, “I have people that doubt that their project would get funded. And that's what I thought too; for a while I've had projects that I don't get

anything, and then all of a sudden I get that notification that it's funded.” She went on to say,

I think that's the biggest thing, the myth that, "Oh, you're so lucky you get funded." No, I'm not, I'm writing well thought-out statements, I'm not putting anything that's not true, and it's really not anything tedious, because I'm saving myself money and I'm getting what exactly they need.

By overcoming the fear of limited time, skill, and the potential for proposal rejection, each teacher interviewed in this study demonstrated persistence and a firm belief that investing personal time was worth the results.

Researching Past Projects

The teachers in this research study were avid and outspoken researchers. Although some did not specifically use the word “research,” it is apparent that before they composed their respective crowdfunding proposals, they did their homework. The most common way they achieved this goal was by reviewing active and archived projects on the DonorsChoose.org website. A kindergarten dual language teacher described the process of crowdfunding for her “big, blue easel:”

First, I looked up to see what other teachers have requested easels. And then I went off and I compared, what did they write to get their's funded? How can I match it to mine? Or what can I tweak? Or if I would see somebody that didn't get funded, "Okay, well, what did they leave out that wasn't detailed for the donor to understand why they were using that?" So again, it's like if you're gonna buy a new car, you're gonna look up the reviews of the car. So that's what I do with each

project. I look up what information's already up there to see what I can add to have it more likely to get it funded.

Another teacher noted, "Sometimes when I don't know what I want, I just browse other people's projects, and find something that sounds cool."

Researching Corporate Matching Opportunities

DonorsChoose describes the match offer as “a way for a corporation or a foundation to match individual donations for projects that meet certain criteria.... donors can see their donations double, dollar-for-dollar (or more!), to help you bring your project to life.” (help.donorschoose.org, 2018c). One teacher distinguished between responding to a match offer and posting a crowdfunding proposal as a soloist. Her response implied that posting a project from scratch requires teachers to generate their own momentum to attract potential donors to their crowdfunding campaign:

I always look for a project...where I could get double matches or 50% off the project. I think when you can do that, it helps in the beginning before you just make an on-its-own project and just requesting any items. So I would always try and find those type of company matches.

A second teacher stated she participated in campaigns simply “because I noticed that there's a matching fund.” The practice of seeking match offers before posting a campaign was deemed to be “a very effective way to get funded.” One principal mentioned teachers awareness of “when specials are going on” as a primary reason her teachers are successful at crowdfunding. Another administrator touched on the importance of including links to match offers in the school’s weekly email newsletter:

When we're able to do the matching part of DonorsChoose, if that's available for that campaign, then we'll send that out on a timely... Like Facebook, if needed, just so that parents are aware that whatever their donation is made at that certain point will be matched.

Aside from generating momentum, the secondary benefit of researching and participating in DonorsChoose Match Offers is that less money is required from the general public (individual donors) to reach the targeted project goal. The partnership between individual and corporate dollars also accelerates the time to completion, thereby mitigating the potential for the project timing out before the four-month expiration. Pre-kindergarten dual language teacher Ms. A. noted that

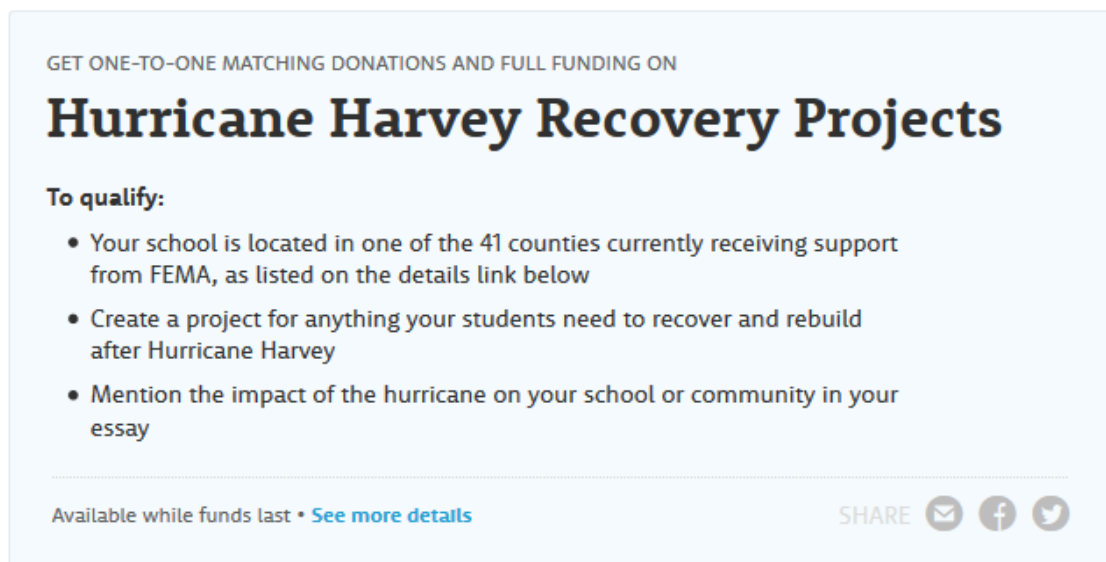
...a lot of the projects that I've done, when you submit them, then they can give you a half off, another foundation or some sort of organization is providing funds to cover half of the cost, so we've looked for those too, like, "Oh, if there's this organization that's covering science materials, we wanna submit projects that are gonna meet those criteria." That way, they can be half-funded by this organization.

Starting a project with this end in mind allows the teacher to effectively cut their solicitation for funds in half. After finding a project earmarked by a corporation, teachers ask "donors to come in and cover the other half." Ms. A. notes, "this is what we look for also when we do projects.... when they match." One of the additional ways teachers research matching opportunities is geographically. Ms. A. stated,

because corporations will only cover either certain areas or states or certain Midwest and East Coast kinda things. You can go on and see what's in your area...

I remember one of them, I think, was a STEM project. I submitted a proposal for different STEM kits that students could use in centers and stuff, and I think it was half covered by... I don't remember if it was Techron. It was some sort of tech company or something, engineer or something or whatever, to be able to then cover half of that cost.

Figure 4.3 below is a screen capture of a DonorsChoose “One-to-One” match offers applicable to certified teachers working in Texas schools. The listing is not only geographically relevant but also timely as it relates to current events and local needs. The figure displays matching offers for educators interested in teaching coding and a general match offer for teachers impacted by Hurricane Harvey.



GET ONE-TO-ONE MATCHING DONATIONS AND FULL FUNDING ON

Hurricane Harvey Recovery Projects

To qualify:

- Your school is located in one of the 41 counties currently receiving support from FEMA, as listed on the details link below
- Create a project for anything your students need to recover and rebuild after Hurricane Harvey
- Mention the impact of the hurricane on your school or community in your essay

Available while funds last • [See more details](#)




SHARE   

Figure 4.3. Screen Capture of Texas Match Offers (DonorsChoose.org, 2018)



GET ONE-TO-ONE MATCHING DONATIONS FROM LEARNING RESOURCES ON

Botley Coding Robot Projects

To qualify:

- Create a project requesting a Botley coding robot bundle from Kaplan, one of our vendors
- You can request more than one bundle, but keep your total project goal under \$1,000

Available while funds last • [See more details](#)

SHARE   

NATIONAL OFFER

Figure 4.3. Screen Capture of Texas Match Offers (DonorsChoose.org, 2018)

Two teachers from different campuses tailored crowdfunding proposals to focus on financial literacy. This decision was based on the fact that a financial firm was participating in the DonorsChoose matching program. Mrs. V. said, “I researched to see who was matching at the time. And I quickly learned that, at the time, Charles Schwab was matching if you wrote a grant on financial literacy. So, I included some of those in there.” In describing her methodology for participating in the Charles Schwab match offer, Ms. N. said,

I had to make sure that my materials were all math oriented and had to do something with money and jobs. And so I made sure that my resources fit the criteria and then my description of how the students and why they needed it was really to what the company wanted.... It wasn't something that I thought off the top of my head like, "Hey, my students really need this," but I saw the match and I thought, “Oh, this would great.” These are just extra resources, extra exposure for my students hands-on learning that they can do and be excited about.

Researching Materials

The third and final type of research expressed by teachers interviewed is research on the effectiveness of the requested classroom materials. When composing the narrative for the proposal, teachers are required to input background information as well as a justification for the materials requested. Mrs. V. notes,

...when you write the background of your school or whatever, that doesn't change. What changes is the project, so what I try to look for when I'm looking at different types of research or statistics, I try to get that information. For example, with flexible grouping, that was becoming a really popular trend in some school districts. So, I was kind of looking for their objective, and then just basically rewording that, not obviously plagiarizing but rewording some of that.

A less rigorous, but seemingly effective, method of selecting effective academic materials is online window shopping. Mrs. V. notes the hustle and bustle of "Fall is just really crazy with getting the kids organized and teaching them and training them." However, she notes, "I do a lot of my researching for what's next in coming in education more during my summer time....I have a little list of things that I write down in a notebook..." Special education teacher Ms. E. said, "now what I do, is sometimes if I feel like writing a project, I just go on to Lakeshore and I just browse and say, "Oh that looks awesome, I want that," and then I write a project for that."

The most experienced crowdfunder in this study pointed to research on "successful classrooms and learning environments" as a key factor for her projects being fully funded. Her research was broad and spanned sources outside the DonorsChoose website, including other teachers' blogs and a variety of educational resources. One

specific source she cited was National Association for the Education of Young Children (NAEYC) publications. Mrs. M. noted,

When I go in and start to create my project, I don't usually do it in one sitting, it takes time and I do research as I'm doing it. So, I'll look up things that they've found and why these materials make learning successful in the classroom. So, I really...didn't come in with a set of skills that made it easier, I just developed as I've gone and it gets a little easier as you go. But again, when you really want something, I think digging deeper with the research and the data behind it...I think that's when I get my projects.

Social Media: The Facebook Factor

At each site studied, interview respondents pointed to one social media platform as instrumental to their crowdfunding practice. Facebook was cited as the go-to platform by teachers, including those who maintained accounts on rival services Twitter and Instagram. Art teacher Ms. B. said,

I think Facebook is like the number one. For me, I just noticed that. I would recommend it for other teachers. I put it on my teacher Twitter, it's out there. I don't really think that people are logged on Twitter or logged onto Instagram are there to look at a teacher's DonorsChoose. But Facebook is, I think that's a great platform. It's easy for people to write a comment. It's easy for people to re-post it. It's easy for people to send it to a specific person that they might think would enjoy that project. So yeah, I think Facebook has been by far my favorite platform for social media sharing.

In this study, three out of four campuses utilized an official school Facebook page to leverage DonorsChoose patronage. At the remaining site, teachers had the option to use their personal (non-school affiliated) Facebook account to generate leads. One principal noted how, initially, teachers were not allowed to access the school's account; however, the popularity and success of their efforts on DonorsChoose created a policy that opened the door for any teacher to publicize their campaign on the school's official Facebook page. The principal decided to let all teachers post a link to their DonorsChoose campaigns "because that way more folks can see what the project is and more folks can fund." This administrator noted that Facebook increased parental awareness of teachers' requests:

DonorsChoose is shared through Facebook and the school does have a Facebook page. And so a lot of parents kinda find out that way. And so if they can, then they might participate in that way or not. But they do hear about it and see about it through our social media.

When asked if an email distribution list or a personal social media account was used to increase visibility, first grade teacher Mrs. V. said,

I email my parents and just say, "Hey guys, I've written up a project, hopefully you can try to help fund it." And I usually explain why in detail I wanna use that particular project.... But I think I get the majority of my donations from Facebook.

Fellow teacher Mrs. M. pointed out that her Facebook and Twitter is integrated with DonorsChoose. She noted, "...I do it through the DonorsChoose site. I can click and have it go to Facebook and Twitter." A third teacher at the same campus indicated, "I do

have the link on both my school email, and then I have a link with Twitter, and then I have a link on Facebook.” When asked about the use of personal social media versus the school's social media account, one teacher paused and replied, “I guess my DonorsChoose is technically attached to my personal Facebook.” Overall, the integration of teachers' social media and DonorsChoose accounts was a recurring theme related to crowdfunding methodology. Ms. E. described the automation:

over the years DonorsChoose has gotten more savvy so now they post on my Facebook and I don't even have to do anything. They post the, "Thank You's" and they post the reminders. So that's how helpful for when I'm pre-occupied or tired of asking people for money; then they do the work.

This teacher also participated in the creation of a grade-level Facebook account.

Although this is unique case, it highlights the ways in which social media conceptually mirrored organizational structures and leadership hierarchies. Ms. E. noted,

We also created a [school] Facebook page for early childhood. So we started out just for Pre-K and that way we were able to kind of share. We got permission, specific permission, able to share photos of our field trips, special projects, get out the word that really was just for Pre-K. 'Cause what we found is that in early childhood we tend to be more communicative at least on social media and we felt like we are blowing up the school Facebook page. So, we were like, "Okay here's just for you guys." And then kindergarten added to ours also.

A small group of teachers in this study were successful without using social media to promote their efforts. In an explanation of her rationale for not using Facebook, Ms. N. said, “I know some people do. I don't know, I just feel bad about, on Facebook or

something, going, 'Hey, I'm doing this project and I want you to donate.' I just feel bad to do that, so I don't." While the disdain for cashing in on one's social capital is a legitimate concern, it was only shared by a total of three participants in this study. Mrs. C. is a web savvy teacher who preferred not to "pressure" her Facebook friends or those individuals who read her blog:

I do blogging myself, but I don't affiliate it with my school, so I don't put it on there either. I've seen other people do it, but I don't know, I don't feel comfortable asking other teachers or family members or friends for help, as far as with this stuff.

The third teacher with negative sentiments regarding Facebook promotion said,

I'm so not tech savvy. I stay away from social media. So, doing this was like going out on a limb. I have a Facebook, but I never use it. So I didn't have any knowledge of it and I just trial and error...so this is something that I wish DonorsChoose would realize, is that if I had all my donations via family and friends, I wouldn't need DonorsChoose.... I can't always run to them for projects. The whole crowdfunding idea is like \$5 for 10 different people or something to get money they just wanna be able to donate to a good cause.

In this study, teachers active (and passive) use of Facebook was cited as a positive influence in 75% of the teacher interviews. One testimonial of how Facebook and DonorsChoose uniquely connects geographically distant donors and teachers was shared by a kindergarten teacher, Mrs. C., who explained,

I have used Facebook before, and in one particular time when I shared it, one of my friends shared it with my kindergarten teacher, and then I receive five minutes

later like, "Oh your project has been funded." So, it was my kindergarten teacher from years ago, helping out.

Although she no longer actively posts links on Facebook, or solicits family and friends, she potentially benefits from the integration of her DonorsChoose and Facebook account. Mrs. C. noted, "DonorsChoose still has permission to automatically post updates like "Oh, so-and-so, got a donation" or, "The project was fully funded."

Fall Proposal Writing: The Season for Giving

The majority of teachers in this study preferred to launch their crowdfunding campaigns during the fall semester, for three reasons. First, teachers identified fall as the back to school season: "a better time because people have education on their minds." One teacher elaborated, "families might... think their own child will benefit. Sometimes it's parents from the same classroom or grandparents from the classroom. And there's lots of anonymous people too." Another teacher commented, "I mean, it's just an awareness, everybody kind of knows back to school and supplies and everything like that."

Secondly, fall was noted as an opportune time to attract donors who are looking for income tax deductions. When asked about the ideal time for writing crowdfunding proposals, one teacher noted,

It's probably usually fall. I think that's probably when I have more energy for the extra things in the job... Oh, and also I think tax, like at the end of the fiscal year people are more motivated to give money because a lot of them deduct for charities, and also companies. So, what I have found is that November, December's a great time.

Kindergarten teacher Mrs. C. stated,

I prefer fall if I have time and if I see a need I will try to do another one maybe in the beginning of spring. I also try to share with my colleagues like "Hey, it's almost close to December, people are looking for a tax write-off. They're likely to donate towards your project." I also try to motivate everybody to have a project up by November, December.

A third reason for fall proposal submission, parental involvement, was highlighted by a campus administrator. When asked about the time of year when teachers are most likely to crowdfund, this principal replied,

We encourage them to do them earlier in the year, because the parents that might be in your class right now that might donate would certainly want to donate if their kids are gonna be able to use it, so you have a better chance of getting funded the earlier on in the year that you do it.

One teacher noted that the end of the fall semester can be a challenge, but it can be capitalized on by teachers who know how to look for a matching offer. Ms. N. said,

it's a little bit harder to get funded around the holidays unless DonorsChoose does their everyday essentials and they have a project match they'll match themselves.... So in December, I would only do usually the everyday, essential types of donations or projects.

According to teacher statements, the spring semester starts off slowly as it pertains to donor response. One participant believes this is due to the large capital outlay by consumers between Thanksgiving and the end of winter break. One long standing user of DonorsChoose said, "It's sometimes harder the beginning of the [calendar] year, which makes sense, with people's financial after holidays and celebrations and stuff. But

then like February, March, I've put in some and I've got them before the end of the school year.” The upswing in giving at the end of the school year was attributed to corporate support. Ms. E. said,

toward the end of the school year is a great time because, again, with the companies specifically, that's when they like to shower people with surprise gifts. For example, I think Google one time funded all the projects in [this city]. I think it was them. So, every project in the city got funded, including my two.... I wanna say it was like April or May that happened.

Holding true to form, at the end of March, less than a month after interviewing this teacher, Cryptocurrency startup Ripple donated \$29 million of its own digital currency to fund every requested project on the DonorsChoose website. This single corporate donation supported 28,000 public school teachers across 50 states (CNBC, 2018). Charles Best, founder and CEO of DonorsChoose said, “A million students, overwhelmingly in low-income communities, are going to feel the impact of this gift within the next few weeks” (Chokshi, 2018).

Although the majority of teachers in this study launch at least one project in the fall, many have demonstrated crowdfunding can bear fruit even when initiated in the late spring and summer months. Ms. E. noted, “I've done a few projects towards the end of the school year, and I thought maybe during the summer it would be slow and I wouldn't get things funded, but that's not the case.” Fellow teacher Mrs. S. experienced mixed results when posting a project in the spring. She explained, “Yes, I did have one that was not funded. And I think the reason it didn't get funded was because I did it so very late in the year, and it wasn't exactly a good time to do it.” However, when speaking about her

request for Samsung Tablets she said, “I might be contradicting myself but I did my last Galaxy one at the end of last year, just, like, "Ah I'm just gonna see," and it got funded, fully." She continued, “I actually did it in the summer and then I got a thing in October that said, "Hey, you've been fully funded." And I was like, ‘What? Really?’ So, it was cool, it was surprising.” Although her crowdfunding request sat idle during the summer months, in October a single donor picked up the tab for eight Samsung Galaxy tablets. Essentially, the perspectives shared by the teachers in this study highlight the fall semester as the prime season for giving. In addition to receiving donations from donors seeking tax deductions, teachers launching crowdfunding campaigns in the fall are afforded time to complete the necessary follow up and accountability tasks. Reading specialist Mrs. L. prefers to launch her proposals in the fall because,

it requires a follow up, and you need it funded in time for you to be able do the follow up that you need to do. The thank-you letters, the pictures that you send, and explaining how it was used, and how effective it was.

Crowdfunding on Personal Time: Working from Home

Eleven out of twelve teachers interviewed prefer to write crowdfunding proposals after school or on their personal time. In this study it would appear Benjamin Franklin’s (1748) quote “Remember that time is money” is apropos. When asked when she wrote crowdfunding proposals, Ms. E. said,

I would say it's mostly personal time. I mean, maybe sometimes I write it during my planning time but then that means I do something else not during my planning time. You know there's never enough time in the day, so it's probably usually after the hours of 3:30.... I'm sure it's not usually during school hours.

An art teacher resonated with the label “one-woman army.” She noted,

Once I get a project funded, I let my administrators know and they are like awesome. You put in work to get free stuff for our kids. That’s amazing. And they are very supportive of that. But I wouldn’t say that there’s a push for anyone... it’s really me on my laptop most of my time at night, in my bed, writing these things.

One teacher noted the reasons she prefers to post from home is because of technology access and timing her projects for fall. Kindergarten teacher Mrs. C. said,

I do it at home a lot, mostly because I'm faster with my computer than the school computer. I also do it a lot over the summer, where in the summer I'm brainstorming what project would I like to have, what materials would I like to use. Mostly because I feel it's more successful if I have the project up and posted like around August, September when school's coming back.

Mrs. C. also pointed to the weekend as a time for agile crowdfunders to respond to email notices pertaining to corporate match offers. She explained,

Every now and then, since I'm a part of those groups, I'll see somebody say, "Hey, heads up. National day for donating will be coming up this day, If you want a project get it up by this time." And if at that time I don't have a project, then I'll take a weekend where I'm just kind of quickly trying to put up my project because, I don't know if you noticed, sometimes celebrities get in on it too, that will match your donation and they have initiatives where like, "Today we wanna donate one million projects or fund one million projects." Or every now and then I'll see Best Buy or Staples, like "Hey, today we wanna fund a project, do you

have a project linked? That's where like, if I hadn't had anything planned, I'll take a weekend to get something up; that way I have a chance of getting mine funded as well.

One pre-K teacher points to the hybridized nature of crowdfunding: at home and at school. Ms. A. said that she is

submitting the proposals, usually after school, on my own time, when actually I have time to sit down and think about and look at it. And then once it's funded, obviously, we take pictures of the students using them in the classroom, so that's during school time. And then the thank-you cards, yeah, during school time also.

When they get the materials, we sit down, we make it a whole circle time where I let the kids open it and they get so excited, so we're taking pictures of that. And then we're showing them how to use the materials, and so that's more pictures.

And in center is when they're using them, that's when we're taking pictures. So it's a mixture of both, because obviously then, I can't post that stuff and write about it until after the kids have gone and I can actually sit down and do it.

After nine years of using DonorsChoose, Mrs. S. has found a seemingly laid back approach to writing successful crowdfunding proposals:

I mostly do it while I'm sitting in my recliner at home watching either a Spurs game or a football game, or sometimes I don't have the TV on and I would just do it after, and it doesn't take very long; the more you do it the faster you get at it.

Two participants from different schools pointed to the use of planning time to write their proposals. Mrs. D. said, "usually I get an inspiration and I usually do it on planning because I'm right there at school.... I get a good idea and I'll just do it." Mrs. L.

said she writes proposals, “In between planning time or at home, but this year they've been during school hours, our planning or after school.” In addition to the aforementioned statements, participants frequently referred to the space in which the bulk of their crowdfunding took place as “my personal time”, “my off-time”, and “my own time.”

Supports for Teacher-led Crowdfunding

Teachers Teaching Teachers: Professional Development Workshops

The DonorsChoose website limits the generation of crowdfunding proposals to full-time educators employed at public schools, charter schools, or Head Start centers in the United States. In addition, the website denotes registration is not accepted from principals and administrators (help.donorschoose.org, 2017). As a result, the person most likely to teach a teacher how to crowdfund is another teacher. While the majority of teachers in this study were supported by peers informally, teachers at two campuses received formal teacher-led professional development pertaining to crowdfunding best practices. At one site this training was optional and offered afterschool. At the other campus, the training was mandatory for teachers that had not launched a campaign on DonorsChoose. When asked if this mandatory professional development would be held again next school year, the principal said,

I think it will be an annual event.... Last year we had small group sessions that teachers cycled through for the various things that they're doing. And so I was thinking, "Well, it'd be nice to go ahead and have that as one of the sessions." So that teachers that are new and coming into it then can learn about it and see what's going on. And then teachers who already use it wouldn't have to do it. So just part

of their differentiated PD, I think. At least for sure at the beginning of the year and then maybe mid-year again, just as a refresher.

According to the teacher that facilitated the workshop, Ms. E., the concept for professional development was initiated by the DonorsChoose:

DonorsChoose reached out, I think, to probably a large group of teachers...Maybe in October, November, December, about being a DonorsChoose teacher ambassador. And the idea was to get the word out to more teachers. So, I signed up to do it.

According to the Teacher Ambassador Program website, DonorsChoose selected teacher ambassadors to represent specific geographic regions where large numbers of "teachers in low-income communities had yet to access funding from DonorsChoose.org." The initial goal of this national program was "to help 4,000 new teachers across the nation create their very first project on DonorsChoose.org, getting the resources they need for their classroom without needing to pay out of pocket" (help.donorschoose.org, 2018b). After becoming a teacher ambassador, Ms. E. was provided a PowerPoint presentation by DonorsChoose with the expectation that she would "volunteer to give workshops" and "get the word out to more teachers." Ms. E. received permission to give the presentation at her campus after feeling less than successful spreading the word to teachers outside of her school via email. She recalled, [In my district] is really hard to communicate with large groups of people. Like we're so insulated in our own schools, I didn't really know how to figure out how to train other people, other than I guess I could have gone through the PD department, but I wasn't gonna get paid...

To the credit of Ms. E. and her principal, the first crowdfunding professional development at her campus was attended by approximately ten teachers. The presentation was hands on and interactive, designed with the intent of “introducing them to DonorsChoose, and getting them to, at least, make a profile and get started.” Ms. E. elaborated,

when I talked to other people about it, it's like they're envious that I've gotten all of this stuff, but they don't do it. And it sounds like they're overwhelmed by the writing part of it. And I think people have this idea that grant writing is really complicated, and that's where I talked about, "You just have to start writing, because you know what you need and you know your class." But it's overwhelming, I think, to sit down and find the time to do that. So, we had a little workshop about it where we talked about it, and I gave them ideas of things they might want for their classroom. And I told them, "Sometimes when I don't know what I want, I just browse other people's projects, and find something that sounds cool."

Teachers Teaching Teachers: Informal Instruction

All teachers interviewed indicated they received initial support and/or ongoing support from another teacher. The majority of the interchanges were informal, unscheduled, and untethered from the agenda of structured events. On occasion the topic of crowdfunding surfaced in professional development workshops and professional learning community meetings; however, this appeared to be the exception rather than the norm. Apparently, the bulk of teacher to teacher instruction happens *en passant*; in hallways curious teachers ask “what’s in the box?” Reading specialist Mrs. L. noted

helping a colleague is “very informal, as we're walking, ‘Hey, I saw you have that, where'd you get that?’ ‘Oh. I put it on DonorsChoose.’ ‘How do you do that?’ We help each other sometimes start. I've helped several teachers start a project.” Another teacher illustrated the informal teaching and learning process with a story:

One of my coworkers keeps asking me to help her do a project now, and except we're always... We can never get the right time to sit down and hash it out, because it is a little time consuming. So we kind of talk about it a lot. Actually, just yesterday we're talking about it, because I had just got a package and she was just trying to hear us. I was like, "It's real easy, you just sit down, you gotta add, type a couple of things, and things like that.".... She just wanted to see, "Well, how do you know what to get or where to shop?" And so I kinda ran her through it.

When asked if there was any type of professional development for teachers interested in crowdfunding, one principal said,

None that I know of, at least not through the district.... Most of the teachers who do run active campaigns are already well-versed in it, so sometimes they will help a colleague as well. It's not an official training, it's really just more of a helping someone after you've been through the process.

One teacher shared the arrival of boxes is often the catalyst for brainstorming sessions:

“We've talked about our projects before... I guess we share when we get new projects...When they come in.” Another teacher notes that the process is not formal but organic. The learning happens:

Not at a meeting, or a staff meeting, or anything like that. Maybe just more individually.... When you do a DonorsChoose project, it for some reason sends an email out to your campus saying, "So and so has just gotten a project funded," or something. And I think it's the teachers who have opened a DonorsChoose account at some point, whether they've used it or not.... That's why I had my teammate tell me, "Hey, I know that you write DonorsChoose, can you help me write this?"

Another teacher agreed that the process is collaborative:

I'll check in with other teachers and will share like, "Hey, I got these good books on DonorsChoose." With one particular teacher, she'll give me the heads up, "Hey, heads up, they're funding projects this weekend." or "Hey, heads up, there's a grant that's tied to DonorsChoose." So a lot of it... At least the people that are invested in DonorsChoose, I feel like it's very collaborative with us.

Interviews revealed informal networks of support transcend campus boundaries.

At offsite meetings and workshops, successful crowdfunding teachers namedrop

“DonorsChoose” in the midst of brainstorming and group dialogue. Mrs. M. recalled, when I have been at various workshops and trainings outside of the district, and something comes up in the workshop, in discussions about something, I have mentioned about getting materials through DonorsChoose. And, "Oh, really?"

And people ask questions about it and they'll write it down.

Fellow teacher Mrs. D. said,

I have a good friend that... She's at another school you might know, her school might be in the list. I notice her on Facebook and things too, so I know she's...

[on] DonorsChoose and I know she did it way before I ever started doing it.

Mrs. D. recalled that the prompting of her friend telling her “it was pretty simple to do” was enough to inspire her to launch her first campaign. Art teacher, Ms. H. has acted as a catalyst outside of her own campus. She shared,

I am the kind of person that says to my other friends when they're saying, "Well I want something." I'll say, "Well you should try DonorsChoose." And so, finally the woman who won the potters [wheel], or not won but was funded for the potters wheel, is because I was like, "Really? You're a better writer than I am, we have the same type of school. Why don't you go get what you want?"

The teachers' responses indicated a willingness to support; however, the term collaboration was not agreeable to all of the participants. Ms. N. describes her experience as cordial but siloed:

I really don't know if there was any collaboration either, it was just sort of, I would tell that teacher, "I got some things and you should go check it out. I was able to match with Target or somebody, they might still have some funds, you should go check it out." But I sort of felt like I was in a solo endeavor.

At a minimum, the teachers in this study were willing to offer encouragement and advice when fellow educators were seeking funding alternatives. They benefitted from knowing other teachers utilizing DonorsChoose; however, each teacher exemplified a measure of willingness to go at it alone and blaze their own trail. The comments of Ms. H. embody

the synergy that exists between the teachers simultaneously teaching other teachers whilst mastering the practice of crowdfunding on the DonorsChoose.org website. Ms. H. said,

There's a woman upstairs who has, I don't know 10, 15, [projects]. And she's the one... Once I was asking about DonorsChoose, somebody said, "Well, you should talk to her." And I did. She gave me a few tips ... but I'm also motivated. I'm competitive. So, the fact that she's doing it, means I must try.

Within the campuses studied, the crowdfunding success of a small group of teachers inspired a viral-like following. Whether the teacher's efforts were publicized by DonorsChoose automated emails, administrator kudos, or the arrival of boxes, other teachers took note. One teacher describes the cyclical progression of this phenomenon as motivating and exciting:

It starts out with a couple of us.... You get motivated because when somebody else gets funded [DonorsChoose] sends [out] an email. And so to me that's always been motivating because, then you can go congratulate that person, or you can go and say, "Hey, what did you get?" And then it gives you that excitement of like, "Hey, I need to go do another project. It's been a little while." So I could do it. And there've been more and more, I think, as more of us have done the projects and feel more comfortable with them, then more people have done them and they've asked other people, "Hey, can you help me do this?"

DonorsChoose: Technical Support

DonorsChoose enlists a team of volunteer reviewers in order to ensure teachers select the correct materials and effectively market their request to potential donors.

According to the DonorsChoose website, after a teacher clicks the submit button a “team

of trained teacher volunteers will jump into action to review your project and make sure it fits our project guidelines.” (help.donorschoose.org, 2016). This type of pre-release feedback was cited as a much needed and appreciated service offered in support of teachers. Mrs. M. said, “The volunteers on DonorsChoose are incredibly helpful. And the site itself gives you ideas for promoting. And so I think the site has evolved slightly...” Fellow teacher Mrs. D. recalled a time when she was directed by the DonorsChoose reviewers to revise and resubmit her proposal:

I did have to rewrite one which is good. DonorsChoose has somebody to look over the proposal and if it's not clear... They asked me... They said that I had mentioned something, a need, but that I didn't request it with the materials. So that's kind of out of whack. If you ask for something, you should have it in the materials [section] too. So, they double check for you.

DonorsChoose also provides automated messages and prompts pertaining to proposal pricing. Although they do not originate from a volunteer, automated communication from Donors Choose provides visual cues for teachers (see Appendix E). One teacher noted,

DonorsChoose does a really good job about giving you little flash of icons, that if you lowered your project by \$100...now it's 85% more likely that you're going to get it funded.

The teachers interviewed were aware and appreciative of DonorsChoose metrics and support communications. When mentioning automated Facebook posts, one teacher commented that DonorsChoose posts thank-you messages and reminders on her Facebook page. Another teacher noted, DonorsChoose is “really good at communicating

information: ‘Hey you have a project here it's sitting... Did you forget?’ And it might just be the reminder that makes you go in there and finish it.” Occasionally, this teacher received time sensitive reminders:

Sometimes DonorsChoose will send you something that says, "Hey this is gonna happen this day.... If you have a project you will be more likely to be successful". And so then I might resubmit one of my old ones if I don't have time.

Barriers

Funders Keepers: A Tale of Two Policies

Across multiple sites, participants mentioned a disconnect between DonorsChoose policy and district policy pertaining to the stewardship of materials. DonorsChoose Materials Ownership Policy (2018) states, “The teacher who created the project is the sole steward of the donation while employed at the school, carrying out the project for which the materials were donated.” While this does not seem controversial, DonorsChoose policy has an added loophole for teachers who leave a school yet continue teaching in another public school. Specifically, the Materials Ownership Policy states that if a teacher changes schools after they implement their project they may take the materials if “The principal gives consent for the teacher to take funded materials to use in his/her new classroom” (help.donorschoose.org, 2018a). To the chagrin of the several participants, the district’s crowdfunding guidelines restrict the transfer of donations from campus to campus. Moreover, the district policy states that items greater than or equal to \$500 in value must be tagged as fixed assets.

When asked about the changing landscape of DonorsChoose, the first thing that an experienced crowdfunder mentioned was “the question of who do the materials belong to...who owns them?” The teacher recalled,

At the beginning, there was no mention of that, if I remember correctly on DonorsChoose. It was basically the teacher goes through these efforts so they belong to her/him in that classroom, obviously. So, if they wanted to switch schools or districts, it made sense that those materials went with them. Since then that has been a big change, I think there's now some disclaimer on there that administrators at your campus can make some decisions. I'd have to go re-read it, but it's kind of changed a little as well here on our campus. When they hear of us putting through any projects through DonorsChoose, they want us to claim them as this school's property. And so that brings mixed feelings with me, because I've done all the work, all the leg work to get it.

When asked if there has been any pushback from parents as it pertains to crowdfunding, one teacher pointed to this potential source of contention:

I think the one thing that we were struggling with, with some parents, was that there's something on DonorsChoose that says if you were to leave teaching, or you leave the school, [who] the money was donated to, whether the project was to stay here or not. I think that's a principal decision [to be made together] with the teacher. And I think some parents were at one point pretty hesitant because teachers were leaving and taking their projects with them, and they were donating to build this project for our school. So, I think that's probably the downfall with this, with DonorsChoose.

The same teacher noted that parents' reticence to support teachers using DonorsChoose was not directed at her but rather a "general" concern. She explained,

[This] is our principal's way of saying, "Well, now the projects have to stay here," which is kind of hard because not always are 100% of your donors [also] parents from here. Sometimes it's our own personal friends and family. And if we're gonna go work at another school, we'd like to take our projects with us. So, I haven't run across that yet just 'cause obviously I'm still teaching here, but that, I think, would be the negative thing about DonorsChoose...

Another teacher noted that most of her crowdfunded resources moved with her when she took a teaching assignment at another school within the district. This teacher said,

I feel that all of those resources are accountable from me. So, I took the resources with me. I felt like those students are moving on to the next grade, so technically would those materials go on to the next grade? They weren't just direct funded; they were as if I just went somewhere and set up a stand and said, "Hey, help me with my classroom." So, I took the materials with me and have obviously implemented them in my new classroom.

This teacher expressed concern that if she leaves materials behind, the resources may not be valued or utilized. She elaborated,

And you never know if that previous teacher would even use them... I mean, sometimes it's sad, but things can be very wasteful. And so I'm like, "I'm going to take them because I know how to use them, and I know I will use them." So that's kind of my defense for that.

While this action goes against currently policy posted on the DonorsChoose website and school district website, the policy in effect when this teacher changed schools (several years prior to this study) is unknown. Moreover, this teacher indicated that she started her career working under one administrative team and departed under the leadership of a new campus administrator. Therefore, it is unclear how this issue would be resolved should the teacher in question change schools again.

Additional District Requirements

One administrator noted the list of crowdfunding guidelines posted on the district website. These guidelines apply to teachers using the following sites: DonorsChoose, PledgeCents, Snap! Raise, and GoFundMe. In addition to not moving materials between campuses, the district requires teachers to complete a crowdfunding application prior to publishing a fundraising campaign. Subsequently, crowdfunding campaigns must be accompanied by a crowdfunding summary report, to be submitted to the district at the end of the fundraising campaign. It appears that the process for application has improved over the years, as the district has an archived paper form as well as a more streamlined web form. According to the district website, after a teacher submits this online version of the crowdfunding application the principal will be automatically notified. In practice, the standards may be less rigid than viewed on paper. None of the interview participants mentioned the required extra steps: submitting pre-paperwork and post-paperwork to the district prior to launching each crowdfunding campaign.

Interestingly, one participant noted that there are some administrators within the district who bar their teachers from using DonorsChoose. Ms. A. shared the following:

When we go to Pre-K meetings, we have team leader meetings or just professional development or whatever it is, we do talk about materials and what their classroom looks like, what my classroom looks like, and I let them know, "I actually get a lot of things from DonorsChoose. Have you tried it?" And that's where I hear sometimes, "Oh, we don't do that at our campus for some reason," or, "We're not allowed do that crowdfunding and whatnot."

Dollar Threshold

One of the emerging themes from participant responses is a theoretical fiscal barrier, referred to herein as the "Dollar Threshold." Interview participants frequently mentioned the importance of making their project price palatable to potential donors. The recurrence of the words "they say" pointed to the fact that DonorsChoose advised teachers to lower their project price to increase the probability of getting funded. Statements from the teachers indicated it was best to set their request between \$200 and \$500 dollars. This advice was most relevant for teachers new to the platform. One teacher noted that DonorsChoose tacks on an additional administrative fee; therefore, it is wise to keep the cost of requested materials closer to \$350. When asked if there is a dollar threshold or a price point where teachers are less likely to be funded, Ms. H. said,

Less than \$500. And they tack on some, so if your project is \$350, they're gonna tack on, which is totally fine, they're gonna tack on the other \$150. So you have to... The one that's in there now waiting for me is over \$1,000. Just because the thing itself and the shipping. And add theirs on, makes it that, it'll be harder.

Mrs. H. also pointed out that those new to this process are required to start small due to the DonorsChoose point system: "initially when you're just starting out, you have

to have a certain amount of points to have the bigger project. And you have to earn the points by doing the smaller ones.”

Another teacher recalled an instance when she went over the dollar threshold. She said, “One time I wanted several iPads, and I think... I did get my iPads, but I think it would have been better to have requested two iPads and two iPads and maybe two iPads.” When speaking about her strategy for launching multiple crowdfunding proposals, Mrs. L. said, “I try to keep 'em in low numbers 'cause that kinda helps too.” When asked if there was a dollar threshold that works for her, she said, “I think they recommend \$400 or less.... [However, the project that brought live animals to our school] was a little bit more than that, so that's, I think, affected the funding the second year I tried to get it. It was pretty big project.” A teacher from another campus said the proposal pricing strategy depends on how quickly she needs the items:

And I've also figured out... I feel that if my project is... The amount that it costs is less, then it gets funded faster, and so you think about, "Okay, what do I need? What can I put the cost at to get it funded easier and faster?" Then that's how I've been doing my projects, and so they get funded.

When speaking specifically to the DonorsChoose Dollar Threshold she said,

I usually tend to stay under 300 or try to, 'cause \$200 to \$300 is a little bit more manageable. People donate five to 10 bucks, and that's a number that you get to faster. But it also depends on what my project is for. I think most recently, I did one for our social-emotional learning, and so I just needed a few items and that got funded pretty quickly.

One administrator attributed the high rate of success at her school to teachers' selection of affordable items:

Most of the time, I don't think they pick something that is really expensive. I think they pick things that really connect and show that they're gonna make a difference in the classroom. And so it could also be what they write about it.... They're not these huge lofty, "Oh my gosh." And they are things that I think that are necessary for a classroom.

Outcomes

Reducing Planning and Preparation Time

When asked about the impact upon teaching and learning, teachers spoke about the ways in which crowdfunding through DonorsChoose increased efficiency and self-efficacy. After considering what life would be like without DonorsChoose, Ms. A. said, "I feel like I would definitely be spending a lot more time creating materials. Just because I personally don't wanna spend a lot of my own money, and so I would probably be creating a lot of materials." Despite the time invested in crafting a winning proposal, one teacher notes crowdfunding is more efficient than sales-driven forms of fundraising:

I wouldn't call it easy but it's easier for me than selling cookie dough, right? I have two fundraisers a year and it's so much work on my end. I can have the kids sell as much as I want but really, it all ends up on me to be counting money and to be depositing it and to be writing the report summaries and all of those things. That's hard work for me. I think the DonorsChoose is a lot more bang for your time, if that makes sense.

In sharing the rationale for crowdfunding a \$1,000 clay cutting tool called a slab roller, one of the art teachers included in this study said,

We just did clay and it takes a lot of time for me to cut all the slabs... So, I went and stuck it in there and I'm waiting right now to see if I get it. But if I don't, I'll resubmit it.

Incorporating learning materials into the curriculum is exemplified as a turnkey experience. Overall, the time and effort involved to write the proposal and manage the subsequent (thank you notes and photo uploads) accountability process was deemed a worthy tradeoff by participants. Ms. A. noted,

It's just more fun to be able to do a STEM program with things that are already created for you. You just literally open up a box, and everything is in there for you, the instructions, everything that you need to create. Even, I think, a lot of cards have extension activities and stuff like that, so it just takes a little bit less planning time for me, to then be able to just have a fun and enriching experience for the kids.

Another teacher noted that using materials from DonorsChoose “makes planning easier.” This response was based on the claim that crowdfunded materials are linked to relevant, as opposed to “dated,” curriculum. This teacher noted the reason why she is “getting things through DonorsChoose” is to “get updated materials that have more current information.” Apparently relying solely on district issued “textbooks and stuffs” would require this teacher to take extra time “getting on the internet and searching” for more current resources.

This study also revealed crowdfunding success impacted teachers' sense of emotional well-being. When reflecting upon crowdfunding and the impact upon teaching, one teacher noted, "I think just as a teacher, I feel supported in an interesting way and more capable." Another teacher mentioned that crowdfunding developmentally appropriate materials "definitely improved my teaching as well as their learning." A third teacher said, "I think as far as with my own personal teaching, it's making me a little bit more organized, it's getting me the resources that I otherwise wouldn't have." This statement was based on the teacher's ability to crowdfund her own curriculum of "diverse literature" for "all the books needed for a full year." She explained, without these materials on hand, "I'd have to be scrambling to the library or looking for it online or go buy it myself week after week." A third-year teacher also expressed how crowdfunding learning materials has improved her perception of teaching and her practice:

I don't want to do the same thing that I did when I was a kid. I want to give the student something else. So, I think it's interactive and I think my teaching is, just having more access to resources makes it less stressful.

On Campus Collaboration

A relevant finding observed across all of the sites was the willingness of teachers to share crowdfunded materials with other teachers on their campus. The sharing of materials was not limited to the teachers participating in DonorsChoose. On the contrary, the beneficiaries of crowdfunding were often the teachers who chose not to use DonorsChoose. The practice points to the potential impact upon the whole campus when three or four teachers excel in writing successful crowdfunding proposals. This

collaborative practice spans a continuum that ranges from informal collaboration to formal collaboration: from sharing to partnership.

Sharing. The evidence of teachers sharing resources emerged in the responses of teachers interviewed. When asked about participation in crowdfunding and its effects upon teaching and learning, one teacher explained:

As a result of having those kinds of resources in my classroom, we've been able to have programs like coding club where they are borrowing my six Ozobots right now. We don't have to spend our budget on it. She doesn't have to crowdfund it. It's something where she knew I had six Ozobots and I could just lend her my bots with all of my supplies in it. She's using it for the next six weeks and then it's returned to me. So that's cool, too, to be a resource to share these things with other teachers and share my Legos with the librarian when she has a certain project or whatever that may be.

Teachers from multiple sites in the study utilized DonorsChoose to supply their classrooms with programmable robots called Ozobots (as displayed in the figure below).

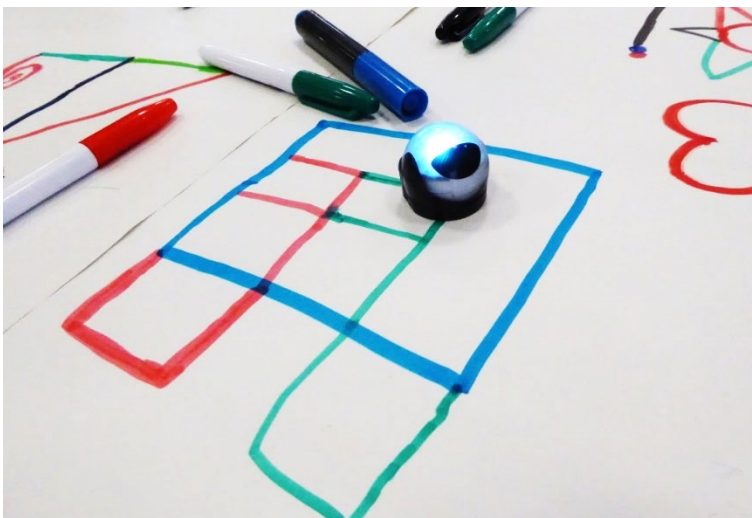


Figure 4.4. Ozobot on the Move (Libraries Taskforce, 2017)

One teacher discussed how she shared books and technology and benefited from another teacher's willingness to share crowdfunded resources. Mrs. V. explained,

We do collaborate with the things that we do have. For example, when I taught third grade and I got the class literature for the unit that I was doing about "Sylvia & Aki"... it was a class set of books, so other teachers borrowed them. One teacher did a DonorsChoose on gardening tools, for a gardening unit she wanted to do, so the whole grade level got to use them. I have my iPads from DonorsChoose and I'm about to create GT projects for all the kids in first grade. So, we're gonna create some sort of technological GT project to submit. We share the tools that we get from DonorsChoose, but not necessarily the coming together to discuss and write.

Partnership. Some teachers were joining forces to strategically write proposals for the benefit of the student body. At one school a teacher and reading specialist had partnered to plan their crowdfunding efforts with the intent of improving access to books. Formerly, when the pages and spines of supplemental reading materials wore out, the school went without. Since excelling in their individual crowdfunding efforts, these two educators had entered into a partnership to pool donated books into a repository available for all teachers on this campus. This well-organized grade level library, existing outside of the campus library, ensures that each student has access to a book that has been well cared for and is in excellent condition. The reading specialist interviewed indicated that novel reading had become a large part of the reading program:

So, we try to get a set for a whole classroom of children, and actually we've now built it where we have enough for a whole grade [level]. We did get some funds

through the district, some through grants, but we wanted to get more, so as teachers we started trying to get some more books through DonorsChoose. It's all to build our literacy program...

When discussing her success with funding a makerspace for her elementary school, one teacher noted,

We've been trying to beef up our STEM and STEAM programming, and then the makerspace. And so I hadn't ever written a project for something outside my classroom before, but this time, I was like, "Well, I'll just go ahead and do it, and we can advertise it more heavily on Facebook because it does impact all the students." My students probably won't use that this year, but eventually they will, I hope.... And then I was able to tell other people, "If you have an idea, it doesn't just have to be for your classroom. It could be anywhere."

Pre-kindergarten teacher Ms. A. admits that she primarily crowdfunds for her own classroom, but she also partners with a co-teacher:

I also do share the materials with the other Pre-K class, so we share. So, whenever we fill out the DonorsChoose project, I do not put just my class but [also] the other class [in the proposal], because we are sharing materials.... And then also with [the other teacher], we share students because we're inclusion, and so I look at what are maybe some of the things that her kids might need coming into my room for the school year, and so talking with her about what we can improve on in my room.

Her closing comments related to the redistribution of resources within her campus underscores the collaborative spirit that embodies her philosophy of teaching and permeates her campus. Ms. A. added,

I feel like teaching is a profession where it's not just you and it's not just your classroom, it's what great ideas do your colleagues have, what can we do to improve our grade level as a whole, not just the kids that are in this classroom?

Student Outcomes: Technology, Literacy, and Social-Emotional Learning

When asked "How do you think your life or the lives of your students would be different without DonorsChoose?" teachers pointed to the impact of literacy and technology upon their students' academic, social, and emotional well-being. When asked if they could quantify or qualify the effects of crowdfunding on their style of teaching or on their students' ability to learn or succeed in school, many teachers pointed to the efficacy of tablet computers:

I think that the most used project has been the iPads. And actually last year though, I did get a couple of Kindles, which are also good for reading... the iPads were very easy for the kids, because as the teacher... I used to be third and fourth grade, so second graders have more technology problems, so an iPad is better for them.

When asked which types of iPad applications are most helpful, this teacher mentioned:

I've purchased many math apps. But now, this year, this district... I was always the math teacher, and now I'm the reading teacher, and I noticed that the district apps work pretty well on the iPad too, such as iStation, and then our school has

iExcel, which is a math one. But I didn't purchase that myself, the school did.

Those work pretty well on the iPad.

A bilingual reading specialist started crowdfunding tablets in 2009 (prior to the release of the Apple iPad). At the time she found the ideal product was the Barnes and Noble Nook E-book reader. Today, she still manages to engage third through fifth graders by adding new and engaging titles. She noted,

I'm still using the Nooks for my children. I bought enough for every group that I serve. I bought one set, I serve 10 children at a time. I have 10 Nooks to serve the 10 children and I just keep adding the books on there. Sometimes I use hardbacks, sometimes I use Nooks. Some things aren't available ...on the Nooks, and those are the ones I use at hardback.

With access to two iPad Minis for her entire class, one teacher posted online about the pro-social changes she observed in her students:

I have seen partnerships strengthen in the classroom among my students when they work together on different activities with the iPads. With warmer Texas weather, our scientists have used these iPads to record video journals of the progress of our classroom garden. My students are creating and sharing their composed music with each other. In kinder, an important reading skill is being fluent in high frequency sight words. With our new iPads, my students are recording videos of themselves reading aloud these sight words. Their confidence is growing each day.

Teacher interviews pointed to the ways in which DonorsChoose has enabled students to develop technical skills in a manner that is fun and engaging. One of the art teachers interviewed commented,

I need to teach students the line. And what a fun way to draw lines and make a robot follow it. They don't even realize that they are coding when they put red green red and it makes it turn around. They don't even know that that's what they are doing but it's giving them the building blocks of coding. And so it's fun, it's interactive and it's 21st century learning....

Teachers frequently pointed to the increased levels of student engagement and motivation achieved through the introduction of crowdfunded materials. Pre-K teacher Ms. A. shared,

I think it's actually made my teaching definitely more hands-on and engaging, just because I'm able to show them and give them something to touch and manipulate and use, not just during our circle time where we do our whole group lesson, but then also in putting it into our centers. We can have any kinds of materials and the way that we introduce it is engaging.... I feel like when it's something that's age appropriate, developmentally appropriate for them, which is what I've pretty much gotten from all of my DonorsChoose, then it makes their learning more fun. Yeah, so I think it's definitely improved my teaching as well as their learning.

When asked to discuss student outcomes, many teachers first response was the ways in which the supplies made their students feel: special, unique, and cared for. One teacher said, "I make sure they're very aware that other people cared enough about them learning to read to give us these resources." When asked if students feel supported

because a stranger cared enough to send these items, she replied, “Yes. I usually get, ‘Wow! You mean somebody that doesn't know us, wants us to be able to read?’ They have really great reactions.” Another teacher said that the influx of crowdfunded learning materials

definitely had a positive effect. My students are really excited when boxes would come in and we'd get to open them together and they would write thank-you letters and they would get to be creative and be able to kind of get in touch with their feelings and talk about why they liked it or why it made them happy.... So I think that had not only positivity in their spirit but also a physical response which goes mentally. I think that they were always excited to get new things and be out of their seats and being able to work with the materials.

One art teacher described how her DonorsChoose funded Legos are a focal point and motivational tool. After multiple days of positive behavior, students are afforded the opportunity to have a Lego “art party.” This teacher incentivizes learning and positive behavior by reminding students “we have to act right because we are one dollar away from our art party.” She explained in her behavioral system, one good day earns the class one dollar; ten dollars equals one Lego party. The teacher noted, “It’s like they see the Legos on the bookshelf every day. They know that they’re there. They are motivated by it. Their behavior is affected by it and as a result of having those kinds of resources in my classroom.” An art teacher at another school utilized crowdfunded books to organize peer reading sessions. She notes her initial motivation for the big brother, big sister style reading sessions was to keep fifth grade students motivated after prolonged periods of standardized testing:

After the testing, they check out, and so what I did with the books was I have my fifth grade [students] adopt a kinder or a first grader, and I set up little places all around the room, and they adopt a kid, and they read to that kid. Not only did the fifth graders get better at it, but the kindergarteners got much better at it.

In addition to showing improvements in reading, students maintained lasting social interactions. The teacher noted the development of “community” that spanned the typical grade level barriers: “you had fifth graders waving to the kinders, and that wasn't happening prior. So that definitely made a difference.”

Although initial teacher responses trended towards social emotional student outcomes, follow-up, probing questions pertaining to academic metrics yielded the following observations from a reading specialist:

With the program that we use using these materials, they're reading a grade level higher in these books.... And I teach the struggling readers. Nonetheless, my 3rd graders are reading 4th grade level books. My 4th graders are reading 5th grade level. We read them together, so it's increasing their vocabulary, which is a very important aspect of it. Their pronunciation, if they're having trouble, we actually stop. We learn tongue placement. We learn mouth placement, so that they can pronounce the words correctly. So you see that effect coming out of it.... And of course, if you look at our STAAR scores at our school, I think they prove that since we started, our scores have gone up and up.

A second teacher reiterated the impact crowd-funded tablets have upon student literacy:

The Galaxies have really helped my kids. Their computer skills have really improved. They've been able to find things and do things... I had more children on

it. They get to spend more time reading a book 'cause we're doing Mayan now, and so they can find the books they want more easily. They can go to DreamBox; they can go to iStation.

She also pointed to an improvement in younger students' dexterity and ability to write:

I got a lot of things that work for fine motor. And so I saw a lot of kids who had a difficult time holding a pencil or cutting with the things I got, like the putty and the different things, it helped, it improved their fine motor. So, I've really seen a lot of benefit from having the kids use it.

When asked about the effect of crowdfunding upon students' academic outcomes, one teacher shared about her winning proposal that brought a petting zoo to her school for a hands-on presentation aligned with the Texas Essential Knowledge and Skills (TEKS):

This was tied to... a SLO goal. We had a test for animal adaptations, and we measure that over the year and at the end of the year we measure to see if they showed growth, and yes, I could tie this with that, 'cause that... was the whole topic of the test, to show progress on that science test. With this, I feel that helped them make that connection with the animal adaptations.

One Kindergarten, ESL inclusion teacher noted that she could teach without the crowdfunded materials, but given her lack of artistic abilities, crowdfunding materials is ideal for improving the students' learning experience:

If you looked in my closet, you'll see... I like Lakeshore games and games that kids can do together. And I'm not very artistic, so it's so much better for me to buy

them. [chuckle] We could do it without it, we could, but it makes my job easier and it makes their... I think it enriches their lives.

Her sentiments were echoed by other teachers who work with students with special needs. Across town, first grade dual language teacher Mrs. M. explains the benefit crowdfunded wobble stools have made upon her students:

I have a student that has severe ADHD. I actually have six of them. So, for me to find tools for them to be successful in the classroom, to help them get their wiggles out, that's when I put the DonorsChoose in.

In addition to seating, Mrs. M. speaks highly of the pairing of iPads and Osmo wireless manipulatives for spelling and math. She said,

I had a couple of students that were still struggling with spelling, more of at a younger age.... They were also special needs students. So, they needed a lot of manipulatives, things to work with, to kinda maneuver around, to grab their interest, to make them more engaged. So, I bought one of these first. And then it was so effective that I had to request more.

In an archived thank-you letter, an inclusion teacher writes about the impact crowdfunded costumes and puppets have made upon her kindergarten students:

The puppets and dress up materials have encouraged even my quietest students to engage with others and throw themselves into pretend adventures. The games have helped to build vocabulary, increased sight word recognition, and helped with letter sound identification. Each of the children use one of the many games, manipulatives, or resources (puppets, dress up items, masks, props) daily. Thank you so very much for helping to enrich their lives socially and academically.



Figure 4.5. Crowdfunded Social Puppets

Summary

The participants in this study approached crowdfunding from a non-competitive and collaborative standpoint. The sharing of resources and information was common across all sites studied. The participants pointed to their willingness to try, and to their willingness to fail, as the reason they succeeded in writing their initial proposals. Their motivations point to an awareness of disparities that exist within their campus as well as among schools in the district. Participants were not driven by mandates or top-down policy, but rather acted in response to their own personal values and judgements as to what their students deserved and what they deemed fair and equitable. In an attempt to mitigate their out-of-pocket expenses, participants reported trading personal time for dollars. Overcoming the uncertainty of writing the first proposal yielded a new method of material procurement. Each participant continued to refine their methods into a

process for obtaining classroom supplies without reducing their disposable income. The observance and response to signals conveyed by DonorsChoose, such as corporate match offers, increased the probability of success: namely, crowdfunding proposals reaching fully-funded status. Many of the participants reported that they never had a project fail. When viewed from a macro level, each campus exhibited a measure efficacy. The researcher defined this metric as the Campus Crowdfunding Conversion Rate ($CCCR = \frac{\text{\# proposals submitted}}{\text{\# of proposals fully funded}} \times 100\%$). Over the span of ten years, the conversion rates for the four schools included in this study were 86.7%, 85.7%, 85.0%, and 70.1%. On average, teachers launched one to two projects per semester. Fall semester was the time of year when the bulk of proposals were uploaded to improve the likelihood of receiving full funding. The major external influence deemed to be a factor for participants was social media. Administrators at three of the four sites allowed the school's Facebook page to feature text and links directing visitors to teachers' crowdfunding campaigns.

While participants said they could live without DonorsChoose, they admit life would be different for their teaching practice as well as their students learning and behavior. Teachers reported the benefit of saving time by implementing ready-made instructional materials sourced from DonorsChoose vendors Lakeshore Learning, A.K.J Books, and Amazon.com (see Figure 4.6). Feelings of increased support, organization, as well as reduced stress were benefits revealed by teacher interviews. The teachers included their students in the unboxing and incorporation of crowdfunded materials into the curriculum. This practice was utilized to take compelling photos of student enthusiasm (for accountability reports) as well as to generate students' enthusiasm for new learning materials. Teachers reported their students demonstrated increased

engagement, peer collaboration, reading skills, mastery of the English language, and student learning objectives. Moreover, interviews revealed students' awareness of external financial support (from donors not affiliated with the school) broadened their worldview and buoyed their sense of self-esteem. Overall, the process of crowdfunding is a transformative practice that permeated each of the campuses studied. While teachers often wrote in silos, the resources they obtained were shared with the campus at-large. Each participant bridged the boundary of the public and private sectors, offering a window into the condition of their classroom and school. The participants acceptance of an invitation to be part of the solution inspired parents, foundations, corporations, as well as local and geographically distant donors to make a difference in the lives of elementary learners by redirecting private dollars into public schools.

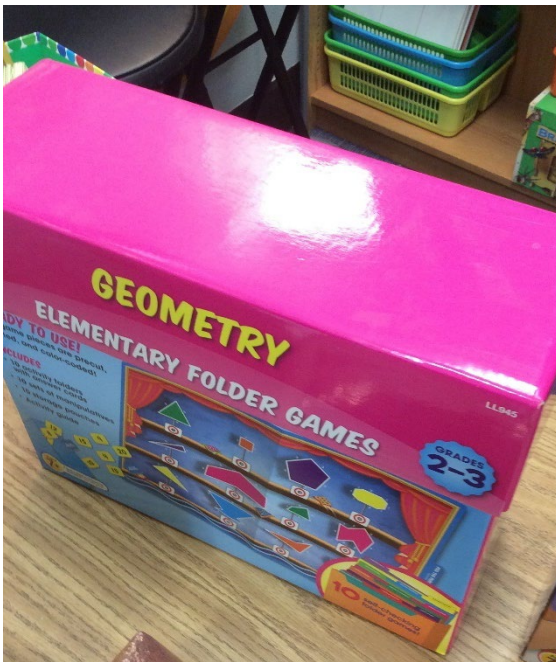


Figure 4.6. Crowdfunded Instructional Materials

CHAPTER V

DISCUSSION

This study explored the process of crowdfunding in public schools and its impact upon students and teachers. The purpose of this study was to explore an emerging school improvement intervention responsible for the influx of 100 million dollars in annual private donations into public school classrooms. Although 79% of public schools in the United States have benefitted from crowdfunding through one website, DonorsChoose, this is the first formal research study to explore the phenomenon. The research questions that guided this study were:

1. What are the motives of public school teachers who initiate crowdfunding campaigns?
2. What are the methods of public school teachers who execute crowdfunding campaigns?
3. What are the internal organizational factors that impact decisions of teachers who execute successful crowdfunding campaigns?
4. What are the external influences that impact decisions of teachers who execute successful crowdfunding campaigns?

The participation of sixteen educators contributed to the findings presented in this research study. Twelve participants were certified teachers working in the same school district. The remaining four participants were principals, specifically the administrators of the twelve certified teachers. The data gathered from the sixteen participants consisted of audio recorded interviews. After each interview, the recordings were transcribed for subsequent coding. Multiple rounds of coding yielded conceptual categories and

ultimately themes the researcher applied to the research questions. Grounded theory methodology was utilized to understand the nascent phenomenon of crowdfunding within public schools. In line with Glaser & Strauss' (1967) constant comparative method, the researcher compared multiple sources of data to generate theory grounded, including interview recordings and transcripts, crowdfunding statistics, campus demographics, archived photographs, archived texts, and field observations.

Interpretations

Budget Cuts

The relationship between the 2011 budget cuts and teachers' motivation for crowdfunding classroom materials was supported by the interview participants as well as the literature on school finance. The Texas Legislature's 2011 reduction of \$5.3 billion (from the two-year public education budget) had an impact of \$500 per student per year during this biennium, "leaving local school districts and campuses scrambling to make decisions on how to operate with less revenue despite a growing student body" (Marder & Villanueva, 2017, pp 1-2). This statistic reifies initial motivations of the teachers in this study who reported crowdfunding was their countermeasure to budget cuts. This motivation is also supported by text within teachers' archived proposals on the DonorsChoose website. The justification for requesting elementary novels was outlined by one teacher as follows:

Due to budget cuts over the last few years there is no longer money for books that are not state adopted texts. The ability to continue to provide this literature to my students due to your generosity is invaluable. Thank you....these books will last much longer than the worn-out copies we had.

Social Justice

The teachers in this study were concerned with issues of equity and access. As such, these educators noted their rationale for crowdfunding was to eliminate disparities between students. As it pertains to dual language classrooms, participants noted bilingual students had limited access to reading materials, flexible seating, and technology compared to their peers enrolled in general education classrooms. Teachers and administrators noted the use of crowdfunding enabled them to level the playing field. In the absence of crowdfunding, more affluent families can apply a monetary Band-Aid to cover the effects of budget cuts upon their child. This may be achieved by donating to the child's classroom, donating to the PTA's general education fund, or purchasing supplemental learning materials for their child. Ideally, a parent with two students enrolled in different grades could say, "I'm going to give the [5th grade] general education teacher \$20 and I'm going to give the [Kinder] dual language teacher \$50" to make the classrooms "more equitable." Unfortunately, this example presented by an interview participant is the exception rather than the norm.

The most productive crowdfunding teachers in the district worked in schools that served an overwhelming population of students from economically disadvantaged households. A correlation between crowdfunding efficacy and school economic status exists nationally as well. The statistics listed on the DonorsChoose (2018) website claim that "75% of funded projects are from schools where half or more of students are from low-income households." As it pertains to meeting the needs of bilingual students, the educators participating in this study serve a significant number of English Language

Learners, 30% to 68% of the school population; the state average is 18.9%. (Texas Education Agency, 2017).

A second motivation for teachers using DonorsChoose was the lack of culturally relevant reading materials available to their students. Similarly, Freire and Valdez (2017) study of dual language teachers reified lack of culturally relevant materials made implementing culturally relevant pedagogy challenging due to “limited content in the school library, lack of availability of materials in Spanish, limited representation of people of color in materials, and lack of cultural authenticity in materials” (p. 62).

Despite the language taught in the classroom, teachers participating in this study pointed to the importance of crowdfunding books for their classroom library. While improved student outcomes were cited as the primary benefit of teaching culturally responsive texts, the interview participants expressed a secondary benefit. Teachers mentioned that ready-made, out of the box crowdfunded materials reduced the amount of time they spent preparing for lessons. This is a significant finding, as Freire and Valdez (2017) noted the main problem with implementing culturally relevant pedagogy in the dual language classroom was the factor of time; specifically, translating district issued curriculum from English to Spanish was extremely time consuming. In this study both dual language and English language classroom teachers said crowdfunding improved their pedagogy by reducing preparation and planning time.

The Dollar Threshold

The participants reported their success was based on strategically pricing their proposals below \$400. In the event teachers needed items above this amount, they recommended breaking their request into multiple smaller proposals. Given the lack of

literature pertaining to crowdfunding in primary and secondary schools, the researcher generated a theory based on interview responses and the work of scholars studying crowdfunding in higher education and entrepreneurship. The literature pertaining to for-profit crowdfunding indicates increasing goal size is negatively associated with success (Mollick, 2014). In colleges and universities, academics who submitted crowdfunding proposals experienced a greater likelihood of success when limiting campaigns to \$10,000 (Marlett, 2015). Although the dollar threshold for a crowdfunding in higher education is greater than in K-12 schools, the participants in this study emphasized the correlation between proposal pricing and reaching fully funded status. DonorsChoose notes projects less than \$1,000 are funded 70% of the time, compared to a 43% success rate for projects costing more than \$1,000 (Fink, 2015).

Social Media

The influence of social media was a common thread observed and expressed by each participant. Three of the four campuses represented in this study utilized their official Facebook page to amplify teacher's active crowdfunding campaigns. Additionally, the majority of teachers used Facebook at some point during their participation on DonorsChoose. While there were teachers who were successful in using DonorsChoose without using personal social media, the majority of teachers and administrators pointed to the importance of Facebook in amplifying school communications. This practice aligns with the research of Amtzis (2014), who determined social media use makes it easier for non-profits to obtain donations from individuals and organizations who are unable to visit the actual school. The principals and teachers interviewed in this study pointed to Facebook as the social media site of

choice. The ability to connect with parents and community members who are “friends” of the school requires a lower expenditure of time and resource than acquiring new donors. Similarly, Althoff and Leskovec (2015) found that it is “more cost-effective to maintain relationships with existing donors than to recruit new donors” (p. 2). Moreover, Mollick (2014) noted Facebook is effective for crowdfunders when the account holder already has an established (and large) base of Facebook friends.

Social Capital

While teachers have other alternatives to the DonorsChoose website, participants described the platform as “neighborly,” “helpful” and even “addicting.” The district’s public school teachers are advised to use one of the following platforms: PledgeCents, DonorsChoose, Snap! Raise, and Edbacker.com. Interview participants stated they preferred to use DonorsChoose because of the supportive staff, volunteers, and donors that patronize the site. A seminal study written in 2013 points to DonorsChoose as the earliest and most successful crowdfunding website for public school teachers (Althoff & Leskovec, 2015; Dawkins, 2013). Analysis of the quantitative data available on the DonorsChoose website indicates this is still the case. Currently, over 79% of schools in the United States employ teachers that have utilized DonorsChoose (DonorsChoose.org, 2018). The research indicates successful crowdfunding takes place on websites devoted to crowdfunding, rather than on school or district managed websites. In a study of university crowdfunding, Fitzgerald (2015) indicated academics are more likely to achieve success on established crowdfunding sites (like Kickstarter, GoFundMe and Indiegogo) due to the correlation between high web traffic and a larger number of

donors. Similarly, K-12 crowdfunding website DonorsChoose acts as a magnet for donors and is advantageous to public school teachers.

Although the DonorsChoose website is a virtual space, run by a 501(c)(3), this crowdfunding platform is an effective meeting place and intermediary between the public and private sectors. This intersection of public, private, and non-profit is conceptualized by the inter-sectorality framework (Robichau, Fernandez, & Kraeger, 2015). After teachers upload their proposals and photos to the website run by DonorsChoose, private citizens, corporations, and foundations donate to fund classroom projects. Herein the participants' ability to post compelling narratives, supported by student photos, generates social capital and trust. Gleasure and Feller's (2016) crowdfunding research indicates the process of translating potential donors to actual financial backers is a result of overcoming information asymmetry (between the donors and the proposal writer).

Correspondingly, in this study each teacher interviewed linked their success to their ability to adequately demonstrate student need. This was achieved by providing a teacher's eye-view: a window into the teacher's classroom. In addition, each participant pointed to their persuasive written and photographic content as integral to their online success. Similarly, Amtzis (2014) noted crowdfunding project creators must post clear and articulate content, including videos and photos of activities demonstrating a track record of positive performance and past success. The process of crowdfunding in public schools is illustrated in Figure 5.1. This diagram is the researcher's synthesis of the participants' methods as explicated by teachers and administrators during the data collection phase. As it pertains to using DonorsChoose, Figure 5.1 highlights the best practices of certified teachers crowdfunding in the district.

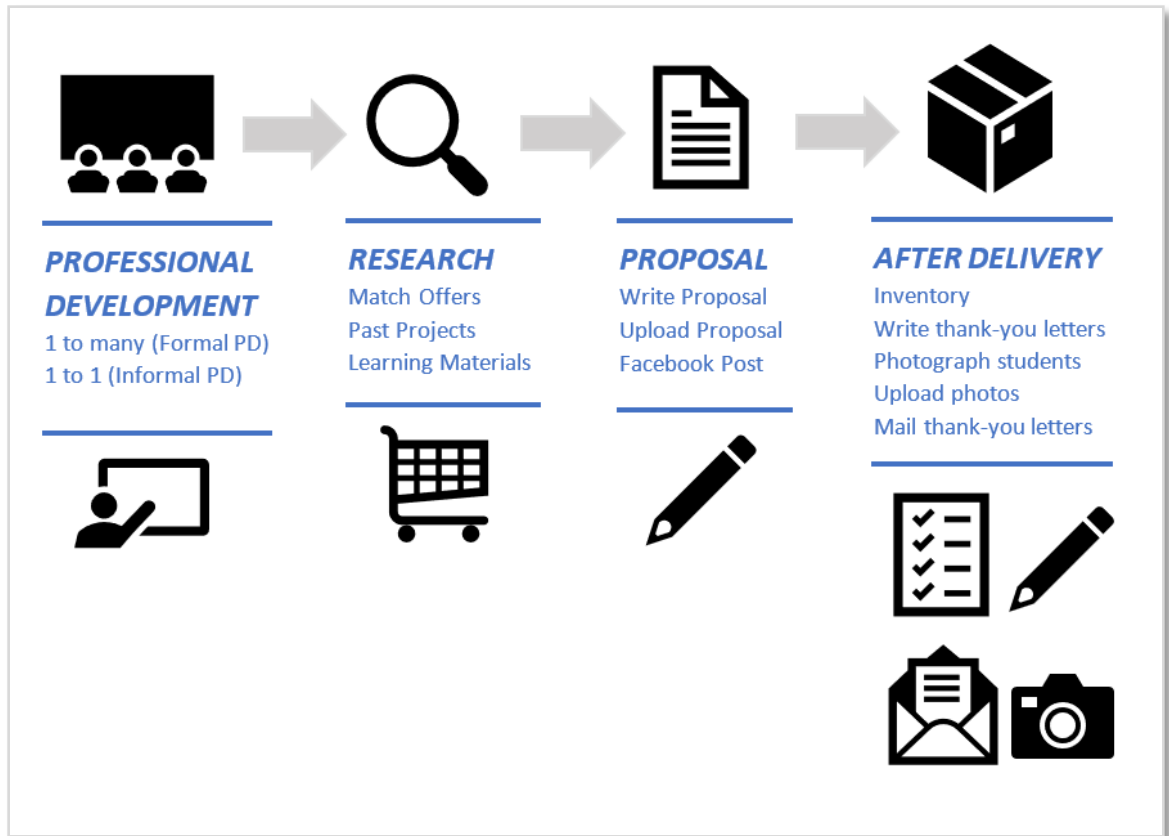


Figure 5.1. Process Overview: Crowdfunding K-12

Crowdfunding is a viral phenomenon, as illustrated by the public schools included in this study. The process begins with a handful of teachers. Then, as more teachers see the parade of incoming boxes, they ask questions like, “How did you get that?” As time progresses, informal training occurs. Subsequently, teachers meet with fellow teachers and help them draft out proposals. Ultimately, new crowdfunding teachers become veteran crowdfunders who teach the next generation of social entrepreneurs.

Conclusions

1. Effective crowdfunding in the district where this study took place can be attributed to the efforts of self-motivated teachers employed in schools serving students of high economic need. The top performing district schools on

DonorsChoose (according to dollars raised and number of projects funded) were led by four or five teachers per campus. Each of the top performing schools was classified as Title I. Three of the four schools in this study were listed as serving economic disadvantaged students, between 80% and 90% of the student population (Texas Education Agency, 2017). Educational leaders were motivated to overcome disparities driven by budget cuts as well as socioeconomic factors. Teachers and administrators applied crowdfunding as a means of making general education and dual language classrooms equitable. Research by Alanís and Rodríguez (2008) affirms their actions, as the power of a dual language program is “in the pedagogical equity that exists for both language groups” (p. 316).

2. The DonorsChoose website provides a space where teachers leveraged social capital, social media, and personal time to procure classroom materials that benefitted students and, indirectly, teachers. Teachers found that the use of ready-made materials reduced preparation time and stress. Students were motivated to use the new materials, which resulted in improved learning outcomes and behavior. Improved student behavior was observed in both student-to-student and student-to-teacher interactions.
3. Teachers achieved their crowdfunding goals by writing proposals and conducting researching prior to writing. The following activities comprised pre-proposal research: researching other teachers’ projects, researching classroom materials, and researching foundations and corporate match offers. Teachers contributed to their campus by sharing instructional materials with other teachers and instructing fellow teachers new to crowdfunding. Instruction was typically informal.

However, two administrators required teachers to attend a professional development workshop (on campus) to learn about this alternative to spending personal funds for classroom materials.

4. Teachers noted that their proficiency in crowdfunding was not based on attending professional development or being web savvy but rather on resilience: a willingness to try, fail, and try again. It is through this process that teachers navigated the DonorsChoose website and overcame fears of rejection, feelings of self-doubt, and the unknowns of proposal writing. Each teacher mentioned that they initially observed another teacher's success at their school. Ultimately, their first crowdfunding campaign was launched on the premise that, "if they could do it so can I." The teachers interviewed had little experience marketing via social media or utilizing for-profit crowdfunding platforms such as Kickstarter.
5. Administrator support was issued in the form of email distributions and verbal praise. Teachers in this study were not expected to crowdfund on behalf of their students. Teachers received no additional compensation for utilizing their personal time to raise funds via DonorsChoose. Teacher motivation for crowdfunding was intrinsic. Although administrator support is difficult to quantify, the administrators in this study effectively maintained a pro-crowdfunding campus climate. Two of the four administrators indicated they had utilized crowdfunding platforms DonorsChoose and GoFundMe prior to becoming a principal.
6. Crowdfunding in these schools was a catalyst for community development and increased communication between schools and external partners. The teacher's

narrative opened a window into his or her classroom, demonstrating need and demystifying the struggles and successes within their school. This form of transparency created a window that allowed neighbors, parents, and corporations to see how their dollars made a difference. Teachers in this study frequently mentioned receiving the majority of their support from local donors. Teachers occasionally received donations from individuals who identified with their cause because they attended the same school in the '70s or '80s. Similar comments from alumni were posted throughout the DonorsChoose website. One donor wrote that he was a student at one of the elementary schools and subsequently attended a Texas university where he graduated with a degree in engineering. This former student's donation was matched by his employer.

The Emergent Theory

Grounded Theory Visual Model

A diagram is presented to explicate the social process of crowdfunding within the context of public schools. This illustration is presented in accordance with a social constructionist approach to grounded theory intended to help the reader understand research participants' social constructions while addressing the "why" questions (Charmaz, 2008). Figure 5.2 contrasts conventional fundraising and crowdfunding in K-12 schools via website DonorsChoose. The left-hand column represents the local practice of generating funds for schools by tapping the crowd of parents. This method is a top-down process practice wherein donations are collected and redistributed by Parent and Teacher Organizations in conjunction with campus leadership. The right-hand column represents the practice of generating funds from an online community. As

DonorsChoose only accepts proposals from teachers, crowdfunding is a grassroots teacher driven phenomenon.

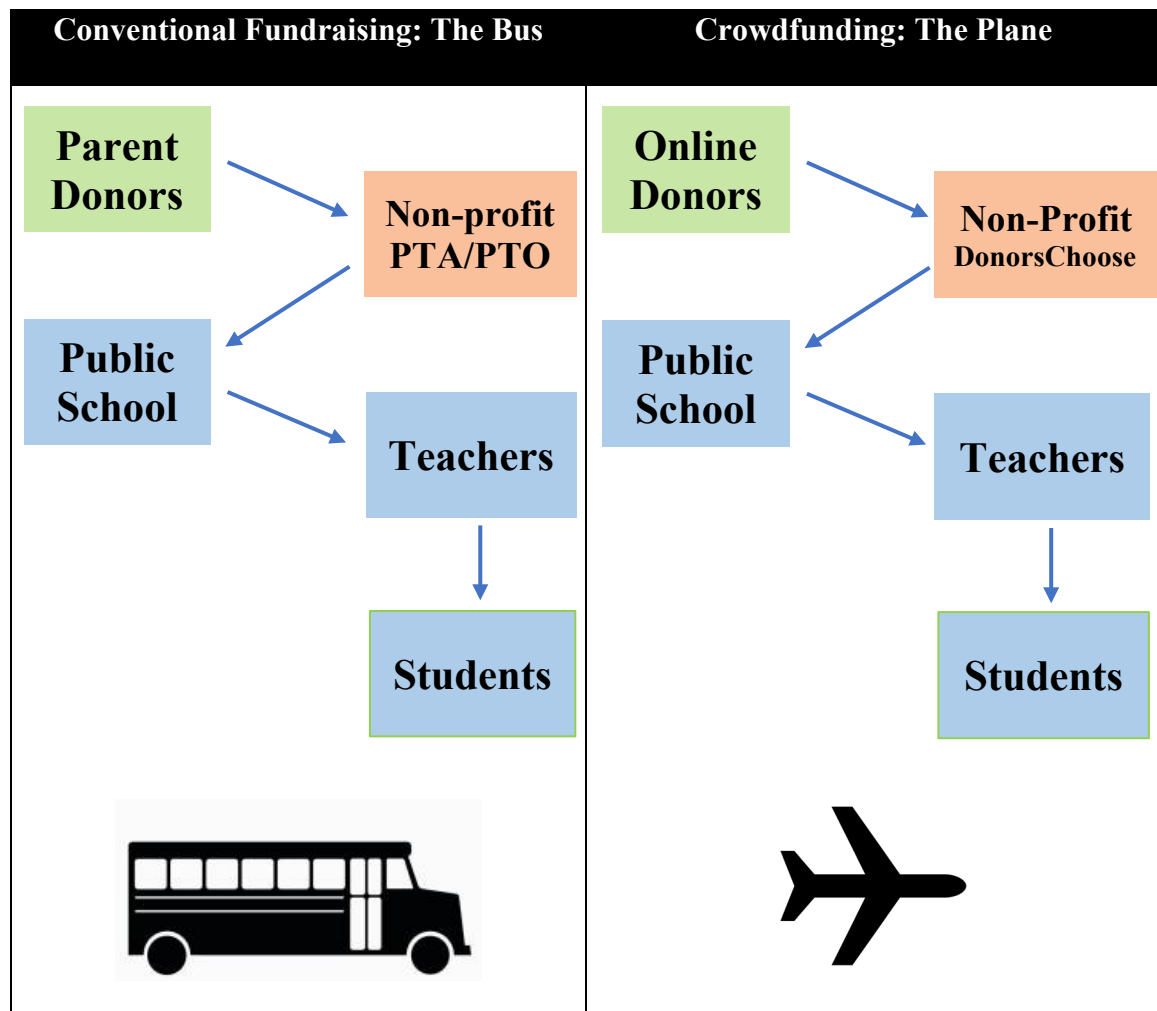
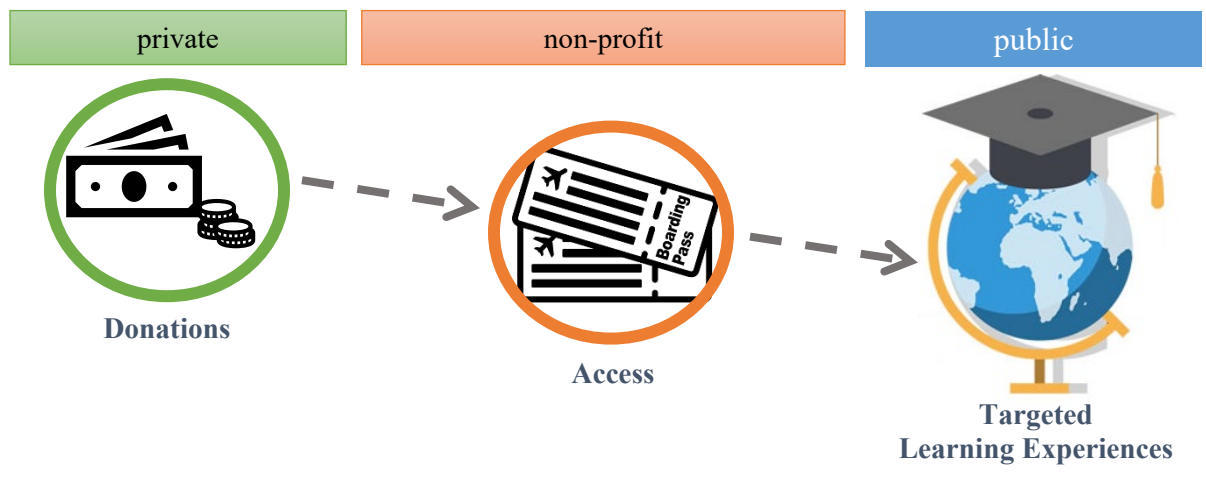


Figure 5.2 School Fundraising Vehicles

The subsequent figure 5.3 incorporates the components of Figure 5.2 and extends the conceptual framework, Crowdfunding K-12, presented formerly in the Review of Literature (Chapter Two). Figure 5.3 represents a model for the theory grounded in the data collected from teacher and administrator interviews. Specifically, DonorsChoose serves students with customized educational experiences. These experiences are not a function of the net worth of the school’s parent community nor the available funds in a teacher’s bank account but rather the teacher’s ability to ask. This “ask” requires

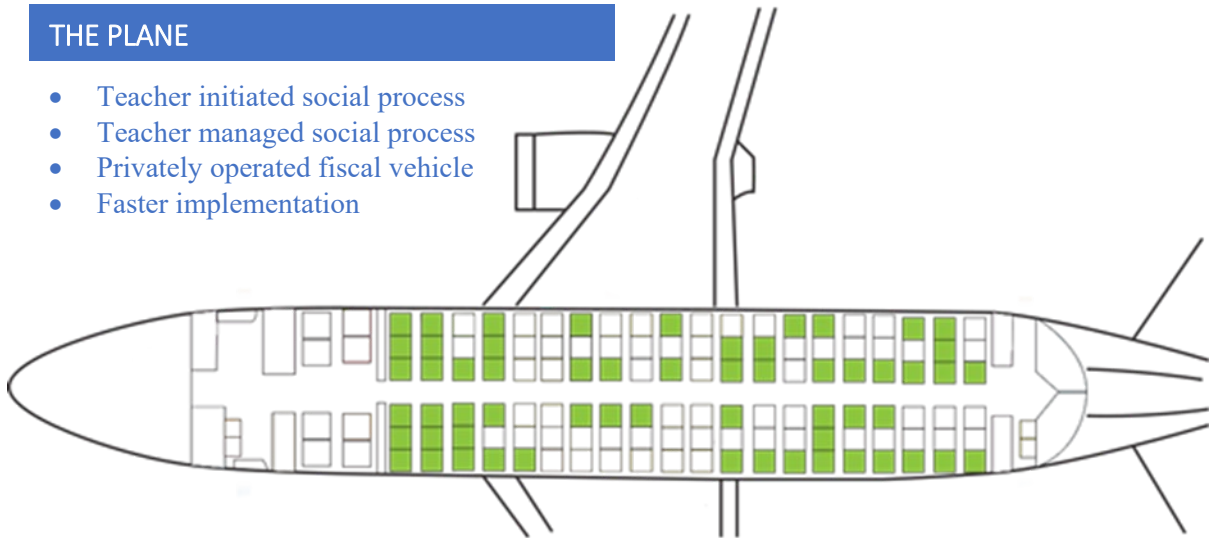
teachers to utilize time outside of their regular instructional time, yet it most often yields increased access to enriching resources and opportunities for their respective students. This social process is illustrated in Figure 5.3: The Bus versus Plane Theory of Crowdfunding K-12. Herein, teachers solicit the private sector on behalf of the students in their classrooms. The end result of each successful request is access. When donors choose to contribute to teacher proposals, posted on the DonorsChoose website, students then gain access to board a relatively new and unique type of educational vehicle. This vehicle is neither funded nor conceived by the school but rather the product of the ideating teacher and the crowdfunding webhost.

Traditionally, students take the bus, but DonorsChoose allows them to fly. School buses are efficient for short distances. However, they are less effective at bridging great divides. The crowdfunding model of school finance allows teachers to take their students to customized and previously unreachable educational destinations. Crowdfunding is a paradigm which enables teachers to transport their students to participate in culturally, technologically, and pedagogically richer experiences. The coded teacher transcripts reverberate with passion and an unwillingness to allow intercampus disparities to hinder students from equitable learning experiences. Teachers are saying, “I want my students to see the things they otherwise could not” ... “If other classrooms can fly, why can’t I?” Telling their students “the sky is the limit” but restricting them to ground transportation is no longer an acceptable option. Envisioning crowdfunding as a vehicle rather than a social process enabled the researcher to construct the following substantive theory based on educator experiences and the analysis of financial transactions between the private and public sector via a non-profit intermediary.



THE PLANE

- Teacher initiated social process
- Teacher managed social process
- Privately operated fiscal vehicle
- Faster implementation



THE BUS

- Administrator initiated social process
- Institutionally managed social process
- Institutionally driven fiscal vehicle
- Slower implementation

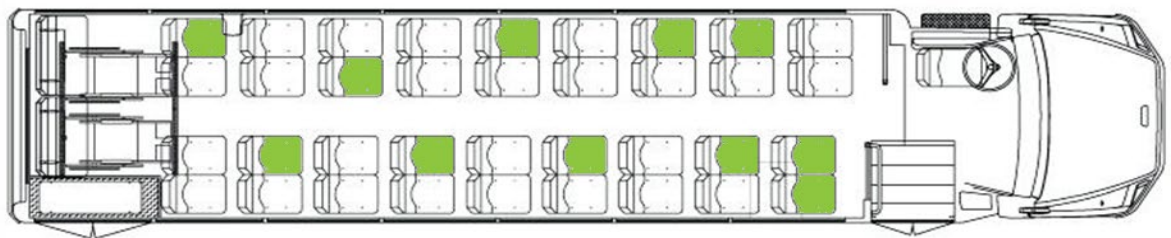


Figure 5.3 Theory of Crowdfunding K-12: Bus v. Plane

Summary

Crowdfunding site DonorsChoose affords public school teachers with a vehicle to transport their students and teaching practice to heights existing school budgets are unable to support. The teachers who participate in crowdfunding are afforded with a safe space to interact with the general public through an online 501(c)(3) non-profit intermediary webhost. It is within this context that teachers are able to ask the private sector to underwrite educational tickets for their students. As a result of this request students are afforded with targeted academic and enrichment experiences. Given that teachers are not compensated for crowdfunding, the learning materials and sponsored field trips funded are akin to priority boarding passes for every child in the crowdfunding teacher's classroom. This theory of Crowdfunding K-12 is grounded in data extracted from the interviews of sixteen educators, and it points to decreased teacher preparation time as well as increased student relational skills, academic skills, technical skills, and student worldview. To date over 29 million students in 79,617 schools have benefited from teachers participating in crowdfunding (DonorsChoose.org, 2018).

Recommendations

Recommendations for Teachers

To increase the likelihood of successfully funding their project, teachers should gain an understanding of foundation and corporate matching prior to crowdfunding. The importance of match offers on the DonorsChoose website cannot be minimized. The teachers interviewed in this study and DonorsChoose website advise teachers to leverage project visibility by partnering with larger donor organizations. Since corporations offer promotions year-round, I recommend teachers take time to review matching offers

available in their state on the following website <https://www.donorschoose.org/match-offers>. Unfortunately, there are no videos or tutorials online that explain match offers; therefore, I advise teachers to learn more by seeking out teachers at their school or within their school district. Secondly, they may benefit from reading the overview provided on the DonorsChoose website: <https://help.donorschoose.org/hc/en-us/articles/213178417-How-it-works-Match-offers>. In the event teachers desire formal professional development, they should request a workshop facilitated by DonorsChoose partner Horace Mann Financial Services. According to interview participants and the company's website, Horace Mann provides free workshops to show teachers how to crowdfund for the supplies they need to give students the best education possible (HoraceMann.com, 2018). Teachers and administrators can request a workshop by completing the form at the following address: <https://www.horacemann.com/teacher-lounge/WorkshopsDonorsChoose/>.

Teachers should also consider using social media, particularly Facebook, in tandem with the DonorsChoose website. This social media network has the potential to increase awareness of campus need and the number of supporters. Teachers wary of mixing their personal network with their professional practice should, at the minimum, consider posting to their campus Facebook page. This practice aligns with the researcher's conceptual framework illustrating the relationship between social capital and fiscal capital. When establishing online community, the development of social capital is a precursor to securing fiscal capital (from donors to teachers and their respective students). This proposal is consistent with the research of Colombo, Franzoni, and Rossi-

Lamastra (2014), who noted the social capital of the proposal writer is critical to attracting donors and dollars at the start of a crowdfunding campaign.

Recommendations for Campus Administrators

While campus administrators are not allowed to create a crowdfunding account on DonorsChoose, they have the ability to indirectly influence teachers' use of the platform. Administrators should work with a crowdfunding teacher on their campus to facilitate an annual crowdfunding workshop. Since fall is the time of year when projects are more likely to reach fully funded status, crowdfunding workshops should be offered prior to the first day of school. Ideally, training in crowdfunding would include tips on social media, research, and how to write winning proposals. This annual workshop has the potential to increase teachers' sense of self-efficacy while decreasing the amount of personal funds they spend on classroom materials. In essence, principals should allot time during their August professional development meeting(s) for teachers to create an account, upload a photo, and upload text that conveys campus need. One teacher noted, "if more principals could get on board, more staff members are likely to say, 'Hey, my principal's supporting me getting help. I'm gonna do it too.'" In the event principals feel uncomfortable initiating their own training program, they should request a workshop facilitated by a professional from Horace Mann.

Administrators can also indirectly participate in the crowdfunding process by offering project ideas to teachers. One principal notes, "I have wanted to [post] on DonorsChoose, but as an administrator, you cannot. It has to be a teacher. Because I've just thought, 'Oh, I want this for the school.' So, to circumvent that now I'll just ask a teacher to say, 'Hey, can you do this? We need it.'" This type of front office

collaboration ultimately resulted in the funding of equipment used to create a coding and engineering lab the principal refers to as “The Makerspace.”

Administrators should also encourage the formation of learning communities centered around this practice. One way this can be achieved is by encouraging teachers skilled in crowdfunding to compile a how-to manual. The creation of this document could serve as a focal point for campus crowdfunding efforts and act as a catalyst when shared with educators outside of the school. Potential outlets for this resource include the school district’s office of professional development, grants, and technology. Ultimately, teachers who serve as contributors to this knowledge base can share their findings at academic conferences and submit manuscripts for publication.

Recommendations for District Administrators

School district leaders have the latitude to craft policy that influences teacher perspectives and thus crowdfunding. Existing partnerships between the employee benefit office and local businesses can be leveraged to offer low cost or no-cost incentives to teachers who launch their first crowdfunding campaign. Offering a five-dollar gift card for coffee or a free sandwich coupon could increase awareness of crowdfunding opportunities and nudge teachers past their trepidation of writing their first crowdfunding proposal. As it pertains to spreading the word, a local art teacher said, “I think it would benefit a lot of teachers in the district, and especially our teachers, because our budgets are small and art supplies aren’t cheap. I think it would be really beneficial if more people knew about DonorsChoose.” She goes on to explain that a district-wide, fine arts professional development would be a great way to encourage teachers to “bring their laptops” and “make them create an account in the professional development because so

often you go to professional development and you get all these papers and you feel all inspired and then you go home and you never do anything with it.”

Like campus administrators, district administrators foster environments that either promote or stifle the growth of crowdfunding. To ensure campuses employ teachers that feel equipped and supported, administrators should craft a policy which states teachers’ use of DonorsChoose is not only allowed but encouraged by the district. This will counteract the creation of competing campus level policies that hinder or officially ban teachers from using crowdfunding. Last year, Evergreen School District in Washington State put a moratorium on all forms of teacher fundraising (Azar, 2017). Two years prior, Framingham, Massachusetts Public School administrators put a halt to teachers using DonorsChoose in a memo that read, “from this point forward, any type of DonorsChoose requests should be stopped until further notice” (Petroni, 2015). While district officials are charged with ensuring students and their schools are appropriately represented online, it is imperative for administrators to trust teachers who use DonorsChoose in the same way they trust teachers who use Facebook and Twitter. The formal canonization of policy is essential to sustaining teacher’s use of non-profit crowdfunding websites like DonorsChoose.

To insure the continued practice of crowdfunding, district administrators must also be willing to reduce the amount of paperwork and bureaucratic red tape. This can be achieved by limiting the number of requirements on top of those already required by DonorsChoose. Given the effective series of checks and balances put in place by DonorsChoose (and their eighteen-year track record of success), district administrators are wise to omit district level mandates, such as permission forms. Pre-screening

teachers at the district level places an added hurdle in the path of first time crowdfunding teachers. This practice may be beneficial for the administrator but seemingly counteracts the flow of supplies to classrooms and students. Administrators should become familiar with the accountability measures that are already in place. Currently, each item successfully fundraised is shipped directly to the school. DonorsChoose sends an email to the principal containing the name of the teacher and the item he or she successfully crowdfunded. At one of the campuses studied, the principal maintains a spreadsheet of the names of the crowdfunding teachers and the items that have shipped to the campus. Even if administrators are not this organized, they can track the history of donations by running a report on the website [Data.DonorsChoose.org](https://data.donorschoose.org). If desired, administrators can sort donation data by dollar amount, project title, date, and teacher's name.

Central office administrators have the authority to introduce policy that inspires the creation of learning communities and formal professional development. The initiation of district wide professional development can be an inhouse production or produced in partnership with an education consultancy. Given the large number of teachers utilizing DonorsChoose in public school districts, administrators would be wise to leverage extant intellectual capital by bringing crowdfunding leaders together for strategic planning sessions. Central office administrators seeking to identify the teachers that have demonstrated high levels of crowdfunding efficacy are advised to utilize the aforementioned [Data.DonorsChoose.org](https://data.donorschoose.org) reporting tool. Since administrators are not allowed to directly participate in the DonorsChoose proposal process, it would be ideal for content creators to author two professional development tracks. One high-level

workshop for campus administrators and a second hands on, practical training series for certified teachers.

The topics of discussion for administrators should include the ways in which schools can effectively craft their statement of need to attract donors. Essential training for administrators would also include a component on social media, namely Facebook and its demonstrated impact upon DonorsChoose crowdfunding success. The topics of discussion for teachers' professional development sessions would focus on the key takeaways listed in the Interpretations, Conclusions, and Recommendations for Teachers sections of this study.

Recommendations for Future Research

Social and emotional learning. The results from this study indicate teachers use crowdfunded classroom materials to improve classroom behavior and student learning outcomes. The impact upon student learning suggests a relationship between crowdfunded materials and three of the five core competencies outlined in the Social and Emotional Learning (SEL) framework: (a) relationship skills, (b) self-management, and (c) social awareness. The relationship between crowdfunding classrooms and student gains on core competencies of SEL is worthy of future study. It appears that crowdfunding in public schools may promote "intrapersonal, interpersonal, and cognitive competence" (CASEL, 2018). As the student outcomes of crowdfunding in public schools have yet to be codified, initiating future research upon established SEL research will provide both authority and rigor. Additional research utilizing the framework for SEL in conjunction with the researcher's theoretical framework, *Crowdfunding K-12*,

holds the potential for legitimizing crowdfunding as more than online fundraising but rather a strategy for school improvement.

The budget Band-Aid: PTA revenues. It is worth noting that all of the schools in this study are Title I schools. Regardless of the geographic location within the city, all of the sites in the district that excelled at crowdfunding shared two characteristics: most were elementary schools and all of the schools reported serving a large number of students with high economic need. During the course of this study, it became apparent to the researcher that teachers who crowdfunded at Title I schools and moved to non-Title I schools were far less successful. According to the statements of one teacher, crowdfunding is much harder at a school that has less socio-economic need. The teacher admitted her first three projects at her new school failed to reach full funding even though she was applying the same methods and techniques. The researcher posits that teachers who transfer between Title I schools experience continued success crowdfunding; however, teachers who transfer from Title I to non-Title I schools receive decreased levels of support from individuals patronizing the DonorsChoose website. One recommendation relative to this phenomenon observed in the district where the present study was conducted is a multi-district study to determine if this pattern is present in other districts. A related, qualitative study could consist of interviews of the administrators, teachers, parents, and parent support specialist in schools without crowdfunding to identify the motives and methods utilized to maintain equity in the absence of crowdfunding.

Primary vs. secondary school crowdfunding. Third and finally, this research study and the archival data point to a disproportionately high level of crowdfunding in

elementary school, compared to crowdfunding in high-school and middle school. In the district where the present study was conducted, there was only one middle school in the top 10 schools (based on dollars raised, number of crowdfunding projects, and number of teachers using DonorsChoose). There are currently no peer reviewed studies which address this disparity. Additional research applying similar research questions to middle school and high-school educators could help to shed light on their unique needs being met through crowdfunding. A starting point for future research includes what the researcher defines as the “Homeroom Teacher Effect.” Essentially, teachers in elementary schools attend to the same group of students each day; whereas, the subject-based nature of high school instruction affords teachers less time with the same group of students. Thus, pedagogical positionality may be a key factor in explicating the motives of teacher crowdfunding across the K-12 spectrum. A future study could explore this proposition.

Donor Profiling. Although this study is focused on the motives, methods, supports, and barriers facing crowdfunding teachers, there is room for a secondary perspective: the donor point of view. A profile of the individuals, foundations, and corporations that make teachers’ proposals come to fruition would provide an alternate perspective into the phenomenon taking place in public schools. Donor motivations were explored in the first educational crowdfunding articles in 2014; however, little has been published since this time. Ideally, future research would seek to explicate both the motivations as well as the methods donors use to select recipient schools and teacher proposals. A written account of the selection process and preferences of K-12 crowdfunding donors could assist teachers in crafting winning proposals. Moreover, the

study could potentially assist DonorsChoose with streamlining their online matchmaking processes. A sample listing of the donors that have funded one million dollars or more in teacher requests include: Google, Ripple, Chevron, Verizon, Staples, Samsung, the College Football Playoff Foundation, Dick's Sporting Goods, the Rebuild Texas Fund, and the Bill and Melinda Gates Foundation.

Social Entrepreneurship vs. Necessity Entrepreneurship. The large numbers of teachers using DonorsChoose raises a series of questions and corresponding topics for additional study. One such question is, “has crowdfunding in K-12 moved from the realm of innovation to necessity?” In 2015 \$92 million was redirected from private citizens, foundations, and corporations to public school classrooms via DonorsChoose. In 2016 this figure increased to \$113 million; in 2017 \$118 million was raised. When this study began in 2016, 76 % of the schools in the United States were represented on DonorsChoose. Two years later, the number of schools in this country crowdfunding on DonorsChoose is 80%. So, what difference does 4% make? This four percent difference represents approximately 4,000 schools, an average of 167 new schools signing up each month.

Given that at least 8 of 10 public schools employ a teacher that has tried crowdfunding, at what point is the crowdfunding conversation a legitimized topic for school districts and school reform experts? If economic trends persist, and private donors continue giving, could we see a day when 90% of schools crowdfund through this one website. Given the year over year increases in donations and teachers utilizing crowdfunding, should this practice be considered a necessity as opposed to the celebrated practice of innovative teachers? At what point should school reformers

consider DonorsChoose an integral part of the public educational system: at 90%, 95%, or perhaps 99% saturation? As a researcher, I am left to wonder what would happen if DonorsChoose instantly went away. Would the public-school teachers pay for supplies out of pocket? Would school districts attempt to pick up the slack? Would another entity rush in to fill the void left by this non-profit intermediary?

Recommendations on Emergent Theory. When well-crafted proposals demonstrating student need reach private donors, teacher-led crowdfunding meets students' academic and social-emotional needs faster than traditional supply requests and top down interventions. Teachers know the needs of their classrooms. Therefore, the results of this study and emergent theory suggest promoting teacher agency in the areas of student need assessment and the procurement of evidence-based learning materials.

Teachers that crowdfund are early adopters of a hybridized form of social media infused school finance reform technology. As such, K-12 administrators and researchers are wise to shift their focus from the social process of crowdfunding to acculturating campus leadership teams and professional development tracks focused on building the next generation of crowdfunding leaders. Administrators who view crowdfunding as a sideshow are missing the opportunity to promote a teacher-led practice that not only relieves the school budget, but also inspires resource sharing and informal professional development. Each teacher who has racked up high dollars in classroom donations has a story to tell, not merely a narrative of how they did it, but why they continue.

While training teachers how to crowdfund is the logical next step, the bridge between research and practice must be maintained. Correspondingly, teachers must be well versed in assessing the efficacy of the classroom supplies they request in

crowdfunded proposals. The findings of this study indicated that teachers successful in garnering financial support spent time before writing proposals researching the efficacy of the intended crowdfunded materials. As such, there is great potential for the development of university-school partnerships which leverage the talents of academic researchers and the rich knowledge base of practitioners in the field.

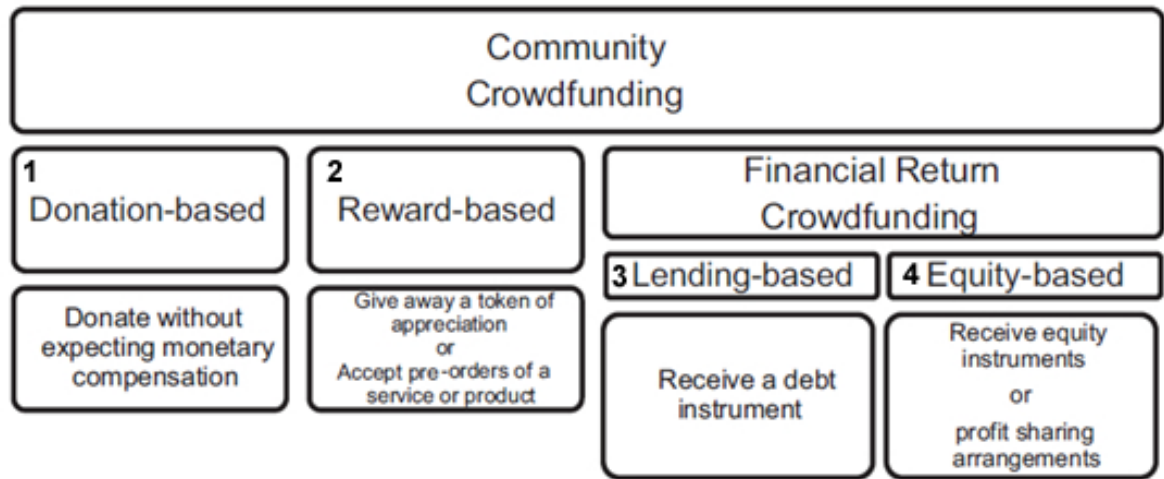
Concluding Thoughts

One of the biggest surprises in this study came from a teacher who said she didn't realize she was crowdfunding: "I was just using DonorsChoose!" Upon receiving my email request for participation, the teacher searched the web for the definition of crowdfunding. During an interview she recalls how she got started using DonorsChoose: "I heard about the other teacher, she had success, and here was an opportunity for me to get some funding.... I didn't really know about the whole crowdfunding aspect of it, but I just decided to make a project and see where it took me." This teacher, like many others in this study, embarked upon a journey. While they were motivated to improve students' educational experience, crowdfunding teachers received personal and professional benefits including reduced stress and reduced planning time. Since the year 2000, at least 430,000 certified teachers have pioneered a new path for their classrooms through crowdfunding. Whether they call it "crowdfunding" or "just using DonorsChoose" teachers are simultaneously developing skills in social media, digital marketing, and online fundraising. Given this method of improving schools has surpassed the stage of fad and made its way into the latest edition of *The Principals Guide to School Budgeting*, perhaps it's time to commend teachers who successfully trade their personal time writing

proposals for classroom materials. Perhaps it's time to bestow upon teachers who engage in crowdfunding the title of social entrepreneur.

APPENDIX SECTION

APPENDIX A: FOUR MODELS OF CROWDFUNDING



Model 1: Donation-based

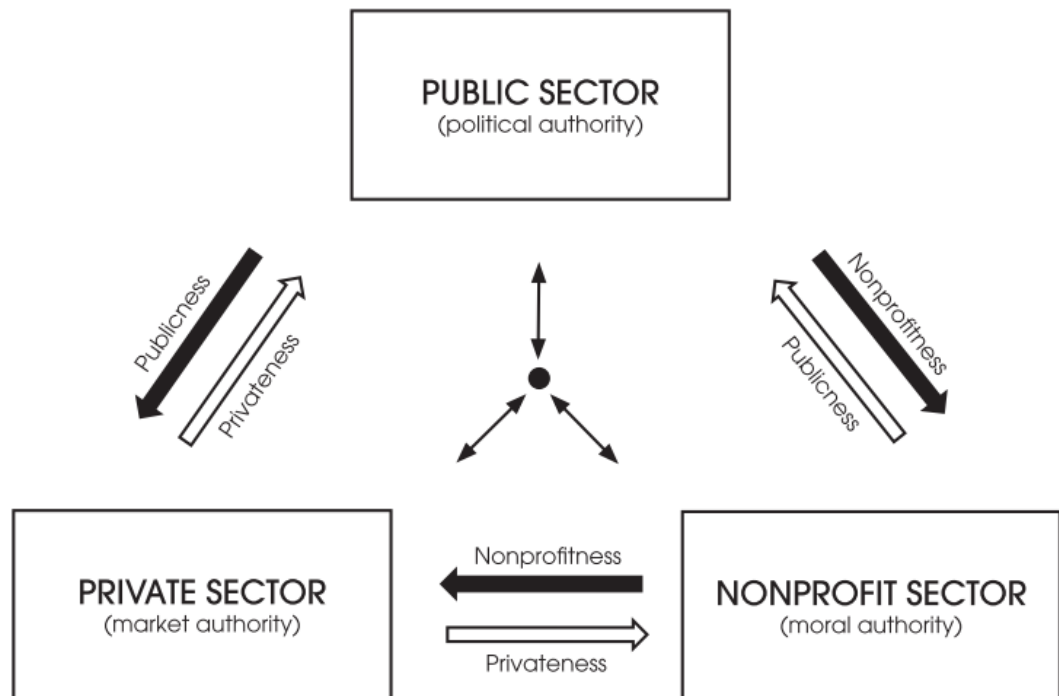
Model 2: Reward-based

Model 3: Lending-based

Model 4: Equity-based

Source: Lam & Law, 2016

APPENDIX B: MODEL OF A FRAMEWORK OF INTER-SECTORALITY



Source: Robichau, Fernandez, & Kraeger, 2015

APPENDIX C: TEACHER INTERVIEW QUESTIONS

External Influences

- 1) Describe the demographic of your average donors
- 2) Have you interacted with your online donors outside of the crowdfunding website? i.e., email, phone, in person.
- 3) How have parents responded to your crowdfunding?

Organizational Factors

- 1) What type of support have school administrators provided?
- 2) Do the teachers at your school discuss their successes or challenges?
- 3) Describe the types of collaboration or competition between teachers?
- 4) Is there competition between your campus and other schools in the district?

Motives

- 1) What motivated you to launch your first crowdfunding project?
- 2) How did you learn about crowdfunding?
- 3) Has your crowdfunding project ever failed? If so, please explain?
- 4) How do develop new ideas for crowdfunding projects?
- 5) What is your next great idea?

Methods

- 1) Have you composed any personalized help documents? (i.e., letter templates, budget templates, checklists, Word documents, Excel files)
- 2) How did you develop the skills necessary to engage in crowdfunding?
- 3) Do you create crowdfunding projects at school or on your personal time?
- 4) When do you launch new crowdfunding projects? (i.e., fall semester / spring semester / summer / student holidays / year-round)

Outcomes

- 1) What, if any, have been the effects of crowdfunding on teaching and learning at your school?
- 2) Has crowdfunding at your school led to community building among different groups (teachers, administrators, students, parents, donors, the larger community served by the school)? If so, what are some examples of that community building?

APPENDIX D: ADMINISTRATOR INTERVIEW QUESTIONS

External Influences

- 1) What does your area superintendent think about your school's practice of crowdfunding?
- 2) How are parents involved in crowdfunding efforts?
- 3) Has crowdfunding involved any partnerships with organizations in the community or community members?


Organizational Factors

- 1) Has any teacher been commended for crowdfunding?
- 2) Has any teacher been reprimanded for crowdfunding?
- 3) How are campus administrators involved in crowdfunding?
- 4) Have you launched a crowdfunding campaign: personally or professionally?
- 5) Does your school regularly post to social media? If so which platform?
- 6) What type of professional development, if any, is available for teachers interested in crowdfunding?
- 7) Do you have a great idea for a new crowdfunding request? If so, please share.

Outcomes

- 1) What are a few exemplars of teacher-led crowdfunding projects in your school?
- 2) What is the most successful campaign you have seen thus far?
- 3) Approximately how many teachers in the school are engaged in crowdfunding?
- 4) What is the school's approximate success rate in crowdfunding (percentage of projects that have met or approached funding goals)?
- 5) To what factors do you attribute this success rate?

APPENDIX E: TEACHER PROJECT PAGE



Good afternoon, Ms. Fong

What do you need for your classroom? We'll guide you through every step of the way as you create your first project.

[Start your first project](#)

1

SET UP YOUR ACCOUNT FOR SUCCESS

- ☐ Upload a photo of yourself
- ☐ Upload a classroom photo
- ☐ Set up Facebook automatic updates for easy sharing
- ☐ Make an easy-to-remember link for your teacher page

[Hide this guide](#)


2

[See what teachers near you are asking for](#)


3

TOOLS & RESOURCES

- [See projects near your school](#)
- [Find match offers](#)
- [Tips for teachers on our blog](#)
- [Your teacher page](#)
<https://dev6-www.donorschoose.org/we-teach/4804406>
[Customize URL](#)



You're currently eligible for a **dollar-for-dollar match** on your first project. Don't miss out!



DID YOU KNOW?

Projects under \$600 are 85% more likely to be fully-funded than more expensive projects.

Source: DonorsChoose, 2017

Good afternoon, Mr. Jordan

1 YOUR PROJECT UPDATES

Edit and resubmit "One World"

due OCT 27

Check out your thank-you package instructions for "Off We Go! "STEM"ing with Osmo"

due NOV 17

Check out your thank-you package instructions for "Making Math Matter!"

More updates ▾

2

You have a draft project: "One World" Edit Archive

You have a draft project: "Draft project 08/25/17" Edit Archive

Physical Play in Pre-K!

My students need toys for physical play. This includes sand toys, bean bags, beach balls, bubbles, and playground balls."

Print fundraising flyers

7 DONORS SO FAR

\$245

STILL NEEDED

\$123

FOR NOW

2X

Donations to this project are currently matched, thanks to An Anonymous Funder.

One World

My students need a Silhouette and Heat Press machine, vinyl, and transfer sheets."

INSPIRE YOUR FIRST DONATION

\$617

STILL NEEDED

3

TOOLS & RESOURCES

See projects near your school
Find match offers
Tips for teachers on our blog
Your teacher page
<https://dev6-www.donorschoose.org/jordan4>

Recent Donations

See donation amounts and more

Michael Evans from NY gave to "Physical Play in Pre-K!" with a match from An Anonymous Funder

Love this project idea! Thank you for being a light of inspiration.

Thank this donor

Hide

Source: DonorsChoose, 2017

172

REFERENCES

- ABCnews.com. (2015). Texas mom shares one-of-a-kind PTA fundraising letter.
Retrieved from <https://abcnews.go.com/Lifestyle/texas-mom-shares-kind-pta-fundraising-letter/story?id=33381268>
- Alanís, I., & Rodríguez, M. (2008). Sustaining a dual language immersion program: Features of success. *Journal of Latinos and Education*, 7(4), 305-319.
- Althoff, T., & Leskovec, J. (2015, May). Donor retention in online crowdfunding communities: A case study of DonorsChoose.org. In Proceedings of the 24th International Conference on World Wide Web (pp. 34-44). ACM. Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4827627/>
- Amtzis, R. (2014). Crowdsourcing from the ground up: How a new generation of Nepali nonprofits uses social media to successfully promote its initiatives. *Journal of Creative Communications*, 9(2), 127-146.
- Antonenko, P. D., Lee, B. R., & Kleinheksel, A. J. (2014). Trends in the crowdfunding of educational technology startups. *TechTrends*, 58(6), 36-41.
- Auerbach, C. F., & Silverstein, L. B. (2003). *Qualitative data: An introduction to coding and analysis*. New York: NY: NYU Press.
- Australia Council for the Arts. (2012). How to work the crowd: A snapshot of barriers and motivations to crowdfunding. Retrieved from <http://eprints.qut.edu.au/57675/4/57675P.pdf>
- Azar, K. (2017, August 29). Evergreen School District teachers told to stop using crowdfunding site Donors Choose. *KATU News*. Retrieved from <http://katu.com/news/local/teachers-stopped-from-fundraising-for-school-supplies>

- Bandyopadhyay, S., 2012. Consumers' online privacy concerns: Causes and effects. *Innovative Marketing* 8(3), 32–39.
- Beaulieu, T., Sarker, S., & Sarker, S. (2015). A conceptual framework for understanding crowdfunding. *Communications of the Association for Information Systems*, 37(1), 1-31.
- Belleflamme, P., Lambert, T., & Schwienbacher, A. (2010). *Digital business models: Understanding strategies*. Retrieved from http://economix.fr/pdf/workshops/2010_dbm/Belleflamme_al.pdf
- Belleflamme, P., Lambert, T., & Schwienbacher, A. (2013). Individual crowdfunding practices. *Venture Capital*, 15(4), 313-333.
- Belleflamme, P., Lambert, T., & Schwienbacher, A. (2014). Crowdfunding: Tapping the right crowd. *Journal of Business Venturing*, 29(5), 585-609.
- Bennett, L., Chin, B., & Jones, B. (2015). Crowdfunding: A New Media & Society special issue. *New Media & Society*, 17(2), 141-148.
- Berry, B. (2013). Teacherpreneurs: A bold brand of teacher leadership for 21st-Century teaching and learning. *Science*, 340(6130), 309-310.
- Bibbs, R. (2016, December 18). Teachers look to the internet to raise money for classrooms. *The Herald-Bulletin*. Retrieved from <http://libproxy.txstate.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=n5h&AN=APcd3334fa4d744fdaab5b6d47ce5fe4ff&site=eds-live&scope=site>
- Birks, M., & Mills, J. (2015). *Grounded theory: A practical guide*. Thousand Oaks, CA: Sage.
- Boeije, H. (2009). *Analysis in qualitative research*. Thousand Oaks, CA: Sage.

- Bowen, G. A. (2009). Document analysis as a qualitative research method. *Qualitative Research Journal*, 9(2), 27-40.
- Bowers, B., & Schatzman, L. (2009). Dimensional analysis. In J. Morse, P. Stern, J. Corbin, B. Bowers, K. Charmaz, & A. Clarke (Eds.), *Developing grounded theory: The second generation* (pp. 86-126). New York, NY: Routledge.
- Bozeman, B., & Moulton, S. (2011). Integrative publicness: A framework for public management strategy and performance. *Journal of Public Administration Research and Theory*, 21(SUPPL. 3), i363-i380.
- Brüntje, D., & Gajda, O. (Eds.). (2015). *Crowdfunding in Europe: State of the art in theory and practice*. New York, NY: Springer.
- Bruton, G., Khavul, S., Siegel, D., & Wright, M. (2015). New financial alternatives in seeding entrepreneurship: Microfinance, crowdfunding, and peer-to-peer innovations. *Entrepreneurship Theory and Practice*, 39(1), 9-26.
- Bryant, A., & Charmaz, K. (Eds.). (2007). *The Sage handbook of grounded theory*. Thousand Oaks, CA: Sage.
- Bulter-Kisber, L. (2008). Representational forms of dissemination. In L.M. Given (Ed.), *The Sage encyclopedia of qualitative research methods* (pp. 756-761). Thousand Oaks, CA: Sage.
- Byrnes, J. E., Ranganathan, J., Walker, B. L., & Faulkes, Z. (2014). To crowdfund research, scientists must build an audience for their work. *PloS One*, 9(12), e110329.
- Bush, B. (2018). Barbara Bush Quotes. Retrieved from https://www.brainyquote.com/quotes/barbara_bush_158792

- Calic, G., & Mosakowski, E. (2016). Kicking off social entrepreneurship: How a sustainability orientation influences crowdfunding success. *Journal of Management and Studies*, 53(5), 738-767.
- CASEL. (2018). *What is SEL?* Retrieved from <https://casel.org/what-is-sel/>
- Caskey, J., & Kuperberg, M. (2014). The Philadelphia School District's ongoing financial crisis. *Education Next*, 14(4), 20-27.
- Chang, J. (2016, May 6). Teacher group: Texas spends less on its students than 37 states. *Austin American-Statesman*. Retrieved from <http://libproxy.txstate.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=tih&AN=2W61753538044&site=eds-live&scope=site>
- Charmaz, K. (2002). Qualitative interviewing and grounded theory analysis. In J. F. Gubrium & J.A. Holstein (Eds.), *Handbook of interview research: Context and method* (pp. 675-694). Thousand Oaks, CA: Sage.
- Charmaz, K. (2006). *Constructing grounded theory*. Thousand Oaks, CA: Sage.
- Charmaz, K. (2008). Constructionism and the grounded theory. In J.A. Holstein & J.F. Gubrium (Eds.), *Handbook of constructionist research* (pp. 397-412). New York, NY: The Guilford Press.
- Charmaz, K. (2014). *Constructing grounded theory*. Thousand Oaks, CA: Sage.
- Charmaz, K., & Bryant, A. (2008). Grounded theory. In L.M. Given (Ed.), *The Sage encyclopedia of qualitative research methods* (pp. 374-377). Thousand Oaks, CA: Sage.

- Chokshi, N. (2018, March 30). How to get \$29 million for classroom projects? Just ask. *NYTimes.com*. Retrieved from <https://www.nytimes.com/2018/03/30/us/donors-choose-donation-ripple.html>
- Clarke, A. (2005). *Situational analysis: Grounded theory after the postmodern turn*. Thousand Oaks, CA: Sage.
- CNBC (Nightly Business Report). (2016, September 14). *Teachers turn to Internet to crowdfund educational tools* [Television broadcast]. New York, NY: CNBC. Retrieved from <http://nbc.com/2016/09/14/teachers-turn-to-internet-to-crowdfund-educational-tools/>
- CNBC. (2018). *Ripple gives away \$29 million of its cryptocurrency to public schools*. Retrieved from <https://www.cnbc.com/2018/03/28/ripple-gives-away-29-million-of-its-cryptocurrency-to-public-schools.html>
- CNET. (2015). *Kickstarter raised half a billion dollars in pledges in 2014*. Retrieved from <https://www.cnet.com/news/kickstarter-raised-half-a-billion-in-pledges-last-year/>
- Collier, M. (2001). Approaches to analysis in visual anthropology. In T. Leeuwen & C. Jewitt (Eds.), *The handbook of visual analysis* (pp. 35-60). Thousand Oaks, CA: Sage.
- Colombo, M. G., Franzoni, C., & Rossi-Lamastra, C. (2014). Internal social capital and the attraction of early contributions in crowdfunding. *Entrepreneurship Theory and Practice*, 39(1), 75-100.
- Corbin, J. M., & Strauss, A. (1990). Grounded theory research: Procedures, canons, and evaluative criteria. *Qualitative sociology*, 13(1), 3-21.

- Creswell, J. W. (2013). *Qualitative inquiry and research design: Choosing among five approaches*. Thousand Oaks, CA: Sage.
- Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches*. Thousand Oaks, CA: Sage.
- Creswell, J. W., & Clark, V. L. P. (2007). *Designing and conducting mixed methods research*. Thousand Oaks, CA: Sage.
- Crossley, S. A., & McNamara, D. S. (Eds.). (2016). *Adaptive educational technologies for literacy instruction*. New York, NY: Routledge.
- Curriculum Review. (2017). *Crowdfunding your classroom*, 56(8), 4-5.
- Data.donorschoose.org. (2018). *Community impact dashboard - Data for education*. Retrieved from <https://data.donorschoose.org/explore-our-impact/>
- Davidson, R., & Poor, N. (2015). Factors for success in repeat crowdfunding: Why sugar daddies are only good for Bar-Mitzvahs. *Information, Communication & Society*, 19(1), 127-139.
- Davies, R. (2015). Three provocations for civic crowdfunding. *Information Communication and Society*, 18(3), 342-355.
- Davis, L. S. (2015). Cities by consensus: Crowdsourcing and crowdfunding take planning to a new level. *Planning*, 81(4), 30-32.
- Dawkins, T. (2013). Tap the power of the internet for your fundraising campaigns. *Our Children: The National PTA Magazine*, 38(3), 14-16.
- Dees, J. (1998). The meaning of social entrepreneurship. Retrieved from <http://www.redalmarza.cl/ing/pdf/TheMeaningofsocialEntrepreneurship.pdf>

- Demiray, M., & Aslanbay, Y. (2016). The crowdfunding communities and the value of identification for sustainability of co-creation. *Crowdfunding for Sustainable Entrepreneurship and Innovation*, 155.
- Denzin, N. K. (1989). *Interpretive interactionism. Applied social research methods series*. Thousand Oaks, CA: Sage.
- Denzin, N. K., & Lincoln, Y. S. (1994). *Handbook of qualitative research*. Thousand Oaks, CA: Sage.
- Denzin, N. K., & Lincoln, Y. S. (2017). *The Sage handbook of qualitative research*. Thousand Oaks, CA: Sage.
- Dey, I. (2003). *Qualitative data analysis: A user friendly guide for social scientists*. New York, NY: Routledge.
- Díaz, J., & CACHED, B. (2016). Financing social activism: Crowdfunding and advocacy social movement in Spain in times of crisis. *Proceedings of the 9th International Conference on Theory and Practice of Electronic Governance*. Montevideo, Uruguay. Retrieved from https://www.researchgate.net/profile/Javier_Diaz47/publication/297737982_Financing_Social_Activism_Crowdfunding_and_Advocatory_Social_Movement_in_Spain_in_Times_of_Crisis/links/56e2896908ae3328e0782e9d.pdf
- Dietz, A. S., & Porter, C. (2012). Making sense of social value creation: Three organizational case studies. *Emergence: Complexity & Organization* 14(3), 23-43.
- Domenico, M., Haugh, H., & Tracey, P. (2010). Social bricolage: Theorizing social value enterprises. *Entrepreneurship: Theory & Practice* 44(0), 681-704.

- DonorsChoose.org. (2016). *Impact*. Retrieved from <http://www.donorschoose.org/about/impact.html>
- DonorsChoose.org. (2016). Students using crowdfunded social puppets [digital image]. Retrieved from <https://www.donorschoose.org/>
- DonorsChoose.org. (2017). *Impact*. Retrieved from <http://www.donorschoose.org/about/impact.html#TX>
- DonorsChoose.org. (2018). *Impact*. Retrieved from <http://www.donorschoose.org/about/impact.html>
- DonorsChoose.org. (2018). Screen Capture of DonorsChoose Texas Match Offers. Retrieved from <https://www.donorschoose.org/match-offers>
- Ebrashi, R. (2013). Social entrepreneurship theory and sustainable social impact. *Social Responsibility Journal* 9(2), 188-209.
- Emeagwali, S. (2016). Crowdfunding as a Way to Fund Smaller Projects. *Techniques: Connecting Education & Careers*, 91(5), 23.
- English, R. (2014). Rent-a-crowd? Crowdfunding academic research. *First Monday*, 19(1), 5.
- Fine, A. (2017). Top K12 stories of 2016. *District Administration*, 53(1), 50-51.
- Fink, J. W. (2015). Army of funders. *Instructor*, 125(2), 49.
- Fink, J. W. (2016). Crowdfunding the classroom. *District Administration*, 52(9), 50-54.
- Fitzgerald, N. (2015). Crowdfunding undergraduate research projects. *Council on Undergraduate Research Quarterly*, 36(2), 18-21.

- Fleming, L., & Sorenson, O. (2016). Financing by and for the Masses. *California Management Review*, 58(2), 5-19.
- Fraenkel, J. R., Wallen, N. E., & Hyun, H. H. (2015). *How to design and evaluate research in design*. New York, NY: McGraw-Hill.
- Franklin, B. (1748). *Advice to a young tradesman*. Retrieved from <http://founders.archives.gov/documents/Franklin/01-03-02-0130>
- Freire, J. A., & Valdez, V. E. (2017). Dual language teachers' stated barriers to implementation of culturally relevant pedagogy. *Bilingual Research Journal*, 40(1), 55-69.
- Frydrych, D., Bock, A. J., Kinder, T., & Koeck, B. (2014). Exploring entrepreneurial legitimacy in reward- based crowdfunding. *Venture Capital*, 16(3), 247–269.
- Gerber, E. M., & Hui, J. (2013). Crowdfunding: Motivations and deterrents for participation. *ACM Transactions On Computer-Human Interaction (TOCHI)*, 20(6), 1-32.
- Gibbs, G. (2007). *Analyzing qualitative data*. Thousand Oaks, CA: Sage.
- Gibson, B., & Hartman, J. (2013). *Rediscovering grounded theory*. Thousand Oaks, CA: Sage.
- Gilsbach, E. D. (2016). Crowdfunding 101. *American School Board Journal*, 203(5), 62.
- Giudici, G., Guerini, M., & Rossi-Lamastra, C. (2013). Why crowdfunding projects can succeed: The role of proponent's individual and territorial social capital. *Social Science Research Network*. Retrieved from <http://ssrn.com/abstract=2255944>
- Glaser, B., & Strauss, A. L. (1965). *Awareness of dying: A study of social interaction*. Chicago, IL: Aldine Publishing.

- Glaser, B. G., & Strauss, A. L. (1967). *The discovery of grounded theory; Strategies for qualitative research*. New York, NY: Aldine Publishing.
- Glaser, B. G., & Strauss, A. L. (2009). *The discovery of grounded theory: Strategies for qualitative research*. New Brunswick, NJ: Transaction Publishers.
- Gleasure, R., & Feller, J. (2016). Does heart or head rule donor behaviors in charitable crowdfunding markets?. *International Journal of Electronic Commerce*, 20(4), 499-524.
- GoFundMe. (2016). *GoFundMe expands into education, launches national contest to get Chromebooks in schools*. [Press release]. Retrieved from <http://search.ebscohost.com/login.aspx?direct=true&db=edsgbc&AN=edsgcl.445499872&site=eds-live&scope=site>
- GoFundMe. (2017). *Chromebook Challenge*. Retrieved from <https://www.gofundme.com/education/chromebooks-challenge>
- Hallberg, U., Paulsson, G., & Ziegert, K. (2010). Book review: Developing grounded theory. The second generation. *International Journal of Qualitative Studies on Health and Well-Being*, 5(2), 10.
- Hardin, M. B. (2016). Show me your budget and I will tell you what you value: Why states should require school districts to publicize their budgets. *Iowa Law Review* 101(2), 807-839.
- Harper, D. (2012). *Visual sociology*. New York, NY: Routledge.
- Hastings, S. (2010). Triangulation. In N.J. Salkind (Ed.), *Encyclopedia of Research Design* (pp. 1537-1539). Thousand Oaks, CA: Sage.

- help.donorschoose.org. (2016). *What happens to my project when it's under review?*
Retrieved from <https://help.donorschoose.org/hc/en-us/articles/202112556-What-happens-to-my-project-when-it-s-under-review->
- help.donorschoose.org. (2017). *Which teachers and schools can use this site?* Retrieved from <https://help.donorschoose.org/hc/en-us/articles/202000407-Which-teachers-and-schools-can-use-this-site->
- help.donorschoose.org. (2018a). *DonorsChoose.org Materials Ownership Policy*. Retrieved from <https://help.donorschoose.org/hc/en-us/articles/203139017-DonorsChoose-org-Materials-Ownership-Policy>
- help.donorschoose.org. (2018b). *DonorsChoose.org National Teacher Ambassador Program*. Retrieved from <https://help.donorschoose.org/hc/en-us/articles/115012130108-DonorsChoose-org-National-Teacher-Ambassador-Program>
- help.donorschoose.org. (2018c). *Match offers*. Retrieved from <https://help.donorschoose.org/hc/en-us/articles/202032496-Match-Offers>
- Herther, N. K. (2016). Crowdfunding: Research and academic fundraising's new era. *Online Searcher*, 40(5) 30-36.
- HoraceMann.com. (2018). Retrieved from <https://www.horacemann.com/teacher-lounge/WorkshopsDonorsChoose/>
- Howe, J. (2006). The rise of crowdsourcing. *Wired Magazine*, 14(6), 1–4.
- Hui, J., Greenberg, M., & Gerber, E. (2014). *Proceedings of the 17th ACM Conference on Computer Supported Cooperative Work and Social Computing*. Baltimore, MD. Retrieved from <http://search.ebscohost.com/login.aspx?direct=true&db=edselc&AN=edselc.2-52.0-84968830741&site=eds-live&scope=site>

- Imarhiagbe, B. O. (2015). Exploring the spheres of crowdfunding. In D. Assadi (Ed.), *Strategic approaches to successful crowdfunding* (p. 190). Hershey, PA: IGI Global.
- Jacobson, L. (2016). Librarian launches coding blocks. *School Library Journal*, 62(9), 17.
- Johnson, B., & Christensen, L. (2013). Educational research: Quantitative, qualitative, and mixed approaches. Thousand Oaks, CA: Sage.
- Keegan, S. (2008). Photographs in qualitative research. In L. M. Given (Ed.), *The Sage encyclopedia of qualitative research methods* (pp. 619-622). Thousand Oaks, CA: Sage.
- Kilbourn, B. (2006). The qualitative doctoral dissertation proposal. *Teachers College Record*, 108(4), 529-576.
- Knight, D. S., & Strunk, K. O. (2016). Who bears the costs of district funding cuts? Reducing inequality in the distribution of teacher layoffs. *Educational Researcher*, 45(7), 395-406.
- Kohn, L., & Christiaens, W. (2016). *Conceptual representation of iterative process of qualitative analysis with an inductive approach*. Retrieved from <http://processbook.kce.fgov.be/node/348>
- Konecki, K. (2009). Teaching visual grounded theory. *Qualitative Sociology Review*, 5(3), 64-92.
- Kuppuswamy, V., & Bayus, B. L. (2015). Crowdfunding creative ideas: The dynamics of project backers in Kickstarter. *UNC Kenan-Flagler Research Paper No. 2013-15*. Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2234765

- Lacan, C., & Desmet, P. (2017). Motivations for participation and e-WOM among supporters of crowdfunding campaigns. In A. Kavoura, D.P. Saka, & P. Tomaras (Eds.), *Strategic Innovative Marketing* (pp. 315-321). Cham, CH: Springer International.
- Lam, P. T., & Law, A. O. (2016). Crowdfunding for renewable and sustainable energy projects: An exploratory case study approach. *Renewable and Sustainable Energy Reviews*, 60, 11-20.
- Lämsäsaarni, H., Peiro, J. M., & Kivimäki, M. (2004). Grounded theory in organizational research. In C. Cassell, & G. Symon (Eds.), *Essential guide qualitative methods in organizational research* (pp. 242-255). Thousand Oaks, CA: Sage.
- Laozi. (n.d.). In *Wiktionary*. Retrieved April 29, 2018, from https://en.wiktionary.org/wiki/a_journey_of_a_thousand_miles_begins_with_a_single_step
- Lehner, O. M. (2013). Crowdfunding social ventures: A model and research agenda. *Venture Capital*, 15(4), 289-311.
- Lehner, O. M. (2014). The formation and interplay of social capital in crowdfunded social ventures. *Entrepreneurship & Regional Development*, 26(5-6), 478-499.
- Leingang, R., & Campbell, K. (2017, July 28). Arizona public schools find ways to adapt to funding cuts. *Arizona Capitol Times*. Retrieved from <http://libproxy.txstate.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=bwh&AN=L541009042AZCT&site=eds-live&scope=site>
- Li, Z., & Duan, J. A. (2014). Dynamic strategies for successful online crowdfunding. *Social Science Research Network*. Retrieved from https://papers.ssrn.com/sol3/Papers.cfm?abstract_id=2506352.

- Libraries Taskforce. (2017). *Ozobot on the Move*. Retrieved from <https://www.flickr.com/photos/135302410@N02/34574604073>
- Locke, K. (2001). *Grounded theory in management research*. Thousand Oaks, CA: Sage.
- Macht, S. A., & Weatherston, J. (2015). Academic research on crowdfunders: What's been done and what's to come?. *Strategic Change*, 24(2), 191-205.
- Mack, N., Woodsong, C., MacQueen, K. M., Guest, G., & Namey, E. (2005). *Qualitative research methods: A data collectors field guide*. Research Triangle Park, NC: Family Health International. Retrieved from <https://www.fhi360.org/sites/default/files/media/documents/Qualitative%20Research%20Methods%20-%20A%20Data%20Collector's%20Field%20Guide.pdf>
- Marder, M., & Villanueva, C.K. (2017). Consequences of the Texas public school funding hole of 2011-16. Retrieved from https://www.forabettertexas.org/images/EO_2017_09_SchoolFinance_ALL.pdf
- Marketwired. (2015, March 31). Crowdfunding market grows 167% in 2014: Crowdfunding platforms raise \$16.2 billion. Massolution. Retrieved from <http://libproxy.txstate.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=pwh&AN=B2IDMKE1184866&site=eds-live&scope=site>.
- Marlett, D. (2015). Crowdfunding art, science and technology: A quick survey of the burgeoning new landscape. *Leonardo*, 48(1), 104-105.
- Mason, S. (2014). The Virginia Project. *School Arts*, 113(7), 21.
- Meer, J. (2014). Effects of the price of charitable giving: Evidence from an online crowdfunding platform. *Journal of Economic Behavior And Organization*, 103, 113-124

- Merriam, S. B., & Tisdell, E. J. (2015). *Qualitative research: A guide to design and implementation*. San Francisco, CA: John Wiley & Sons.
- Meyskens, M., & Bird, L. (2015). Crowdfunding and value creation. *Entrepreneurship Research Journal*, 5(2), 155-166.
- Mikhaylova, E. (2016). Crowdfunding For K12 Education: A guide for teachers, parents and children. Retrieved from <https://www.amazon.com/Crowdfunding-K12-Education-Teachers-Classroom-ebook/dp/B01DEB8XNC>
- Milliken, J. (2010). Grounded Theory. In Salkind, N. J. (Ed.), *Encyclopedia of Research Design* (pp. 548-552). Thousand Oaks, CA: Sage.
- Mintz, S. (2015, October 26). *The business of philanthropy*. SAGE Business Researcher. Retrieved from <http://businessresearcher.sagepub.com>
- Mollick, E. (2012). The Dynamics of crowdfunding: Determinants of success and failure. *Social Science Research Network*. Retrieved from http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2088298
- Mollick, E. (2014). The dynamics of crowdfunding: An exploratory study. *Journal of Business Venturing*, 29(1), 1-16.
- Moore, D. P. (2015). Future looks bright. *School Planning & Management*, 54(12), 6.
- Morse, J. M., Stern, P. N., Faan, N., Corbin, J., Bowers, B., Charmaz, K., & Clarke, A. E. (2016). *Developing grounded theory: The second generation*. New York, NY: Routledge.
- Moskowitz, P. (2016). Crowdfunding is evil at least when it comes to the public good. *Wired*, 24(3), 17.

- Moulick, A. G., & Taylor, L. L. (2017). Fiscal slack, budget shocks, and performance in public organizations: Evidence from public schools. *Public Management Review*, 19(7), 990-1005.
- Müllerleile, T., & Joenssen, D. W. (2015). Key success-determinants of crowdfunded projects: An exploratory analysis. In B. Lausen, S. Krolak-Schwerdt, & M. Böhmer (Eds.), *Data Science, Learning by Latent Structures, and Knowledge Discovery* (pp. 271-281). Berlin-Heidelberg, Germany: Springer.
- Neuman, S. B. (2001). *The importance of the classroom library*. Retrieved from <http://teacher.scholastic.com/products/paperbacks/downloads/library.pdf>
- Obal, M. W., Krey, N., & Bushardt, C. (Eds.). (2015). *Let's get engaged! Crossing the threshold of marketing's engagement era: Proceedings of the 2014 Academy of Marketing Science (AMS) Annual Conference*. New York, NY: Springer.
- Pak, B. (2016). ICT-enabled bottom-up architectural design. *International Journal of Architectural Research*, 10(1), 26-40.
- Paterson, J. (2016). Sports funding. *Principal Leadership*, 17(3), 32.
- Patton, N., Higgs, J., & Smith, M. (2012). Envisioning visual research strategies. In J. Higgs, A. Titchen, D. Horsfall, & D. Bridges (Eds.), *Creative spaces for qualitative researching: Living research* (pp. 115-124). Rotterdam, Netherlands: Sense Publishers.
- Petroni, S. (2015, January 28). Framingham School Administration puts halt to teachers using Donors Choose. *Framingham Patch*. Retrieved from <https://patch.com/massachusetts/framingham/framingham-school-administration-puts-halt-teachers-using-donors-choose-0>

- Phelps, P., & Smythe, G. (2015). Crowdfunding for the classroom: A guide to student-led fundraising. [Kindle Edition]. Retrieved from https://www.amazon.com/Crowdfunding-Classroom-Guide-Student-Led-Fundraising-ebook/dp/B018ZKU3NA/ref=sr_1_1?s=digital-text&ie=UTF8&qid=1481953597&sr=1-1&keywords=phelps+and+smythe
- Pless, N. M. (2012). Social entrepreneurship in theory and practice—an introduction. *Journal of Business Ethics, 111*(3), 317-320.
- Radley, A., & Taylor, D. (2003). Images of recovery: A photo-elicitation study on the hospital ward. *Qualitative Health Research, 13*(1), 77-99.
- Radcliffe, J. (2014, January 19). Crowdfunding catching on in cash-strapped schools. *Houston Chronicle*. Retrieved from <http://search.ebscohost.com/login.aspx?direct=true&db=pwh&AN=AP361fccacdbf4e91a8ccdbbe8385ad1f&site=eds-live&scope=site>
- Reese, J., & Miller, K. (2017). Crowdfunding for elementary science educators. *Science and Children, 54*(6), 55-59.
- Riley-Huff, D., Herrera, K., Ivey, S., & Harry, T. (2016). Crowdfunding in libraries, archives and museums. *Bottom Line, 29*(2), 67-85.
- Robichau, R., Fernandez, K. M., & Kraeger, P. (2015). An integrated framework for intersectorality: Nonprofitness and its influence on society and public administration programs. *Journal of Public Affairs Education, 21*(3), 315-336.
- Ryu, S., & Kim, Y. G. (2016). A typology of crowdfunding sponsors: Birds of a feather flock together?. *Electronic Commerce Research and Applications, 16*, 43-54.

- Saldaña, J. (2009). *The coding manual for qualitative researchers*. New York, NY: Oxford University Press.
- Saldaña, J. (2011). *Fundamentals of qualitative research*. New York, NY: Oxford University Press.
- Schafbuch, M. M. L., Vincent, S. K., & Mazur, J. (2016, February). *Establishing a crowdfunding sustainability project for resource-depleted secondary agricultural education programs*. Paper presented at the Annual Convention of the Southern Region Conference of the American Association for Agricultural Education, San Antonio, TX. Retrieved from <http://aaaeonline.org/resources/Documents/Southern%20Region/2016%20Poster%20Session%20Proceedings.pdf#page=38>
- Schaffhauser, D. (2014). 3 ways to raise money for tech in the classroom. *Education Digest*, 80(4), 43.
- Schelling, T.C. (1978). *Micromotives and macrobehavior*. New York, NY: W.W. Norton.
- Schoch, S. (2016). The best is yet to come. *Retail Merchandiser*, 56(4), 10-11.
- Schwienbacher, A., & Larralde, B. (2012). Crowdfunding of small entrepreneurial ventures. In D. Cumming (Ed.), *Handbook of entrepreneurial finance* (pp. 369 – 391). Oxford, UK: Oxford University Press.
- Sherburne, M. (2016). Supporting education by reimagining the philanthropic experience. *The Journal for Quality and Participation*, 38(4), 16.
- Smith, B. R., & Stevens, C. E. (2010). Different types of social entrepreneurship: The role of geography and embeddedness on the measurement and scaling of social value. *Entrepreneurship & Regional Development*, 22(6), 575-598.

- Social Media. (2016). *Chronicle of Philanthropy*, 28(7), 12-13. Retrieved from <http://libproxy.txstate.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=edb&AN=115095520&site=eds-live&scope=site>
- Sonenshein, S., Herzenstein, M., & Dholakia, U. (2013, October). *Crowdfunding to make a difference: The role of choice in funding social ventures*. Paper presented at the 44th Annual Conference for the Association for Consumer Research, Chicago, IL. Retrieved from <http://www.acrwebsite.org/volumes/1014718/volumes/v41/NA-41>.
- Stiver, A. (2013). Crowdfunding and online community: Maximising mutual benefit. In: Interact 2013, 2-6 September 2013, Cape Town. South Africa. Retrieved from <http://oro.open.ac.uk/39203/>.
- Stiver, A., Barroca, L., Minocha, S., Richards, M., & Roberts, D. (2015). Civic crowdfunding research: Challenges, opportunities, and future agenda. *New Media And Society*, 17(2), 249-271.
- Stiver, A., Barroca, L., Petre, M., Richards, M., & Roberts, D. (2015). Civic crowdfunding: How do offline communities engage online?. *Proceedings of the 2015 British HCI Conference* (pp. 37-45). New York, NY: ACM. Retrieved from http://oro.open.ac.uk/43465/1/BCSHCI2015_StiverBarrocaPetreRichardsRoberts_26May2015.pdf
- Strauss, A., & Corbin, J. M. (1997). *Grounded theory in practice*. Thousand Oaks, CA: Sage.
- Texas Education Agency. (2017). *2016-2017 School Report Card*. Retrieved from <https://rptsvr1.tea.texas.gov/perfreport/src/2017/campus.srch.html>

- Timmermans, S., & Tavory, I. (2010). Advancing ethnographic research through grounded theory practice. In A. Bryant & K. Charmaz (Eds.), *The Sage handbook of grounded theory* (pp. 493 – 514). Thousand Oaks, CA: Sage.
- Tsai, W., & Ghoshal, S. (1998). Social capital and value creation: The role of intrafirm networks. *Academy of Management Journal*, 41(4), 464-476.
- Valančienė, L., & Jegelevičiūtė, S. (2014). Crowdfunding for creating value: Stakeholder approach. *Procedia-Social and Behavioral Sciences*, 156, 599-604.
- Viotto da Cruz, J. (2016). Beyond financing: Crowdfunding as an informational mechanism. Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2870545.
- Vismara, S. (2016). Equity retention and social network theory in equity crowdfunding. *Small Business Economics*, 46(4), 579-590.
- Walsh, A. (2014). SEEK!: Creating and crowdfunding a game-based open educational resource to improve information literacy. *Insights*, 27(1), 63-67. Retrieved from <http://libproxy.txstate.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=lls&AN=94772763&site=eds-live&scope=site>
- Wang, N., Liang, H., Ge, S., & Xue, Y. (2015). How to crowdfund more: A signaling perspective. *DIGIT 2015 Proceedings*. Retrieved from <http://aisel.aisnet.org/cgi/viewcontent.cgi?article=1014&context=digit2015>
- Wash, R. (2013). The value of completing crowdfunding projects. *Proceedings of the 7th International Conference on Weblogs and Social Media, ICWSM 2013*, 631-639. Retrieved from <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.374.6606&rep=rep1&type=pdf>

- Wash, R., & Solomon, J. (2014, February). Coordinating donors on crowdfunding websites. In *Proceedings of the 17th ACM conference on Computer supported cooperative work & social computing* (pp. 38-48). New York, NY: ACM.
- Retrieved from <http://libproxy.txstate.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=edselc&AN=edselc.2-52.0-84898938978&site=eds-live&scope=site>
- Will, M. (2016). How educators fill classroom equity gaps; 'Teacher & Principal School Report'. *Education Week*, (14).
- Willis, J. (2008). *Qualitative research methods in education and educational technology*. Charlotte, NC: Information Age Publishing.
- Wilson, C. (2014). Hour of code: We can solve the diversity problem in computer science. *ACM Inroads*, 5(4), 22.
- Wolf, J. (2015). Crowdfunding a huge help to schools. *USA Today*. Retrieved from <http://link.galegroup.com/apps/doc/A423541212/OVIC?u=txshracd2550&xid=087e49a3>
- Xu, B., Zheng, H., Xu, Y., & Wang, T. (2015). Configurational paths to sponsor satisfaction in crowdfunding. *Journal of Business Research*, 69(2), 915-927.
- Zheng, H., Li, D., Wu, J., & Xu, Y. (n.d). The role of multidimensional social capital in crowdfunding: A comparative study in China and US. *Information & Management*, 51(4), 488-496.
- Zuckerman, E. (2012). How do we make civic crowdfunding awesome? Retrieved from <http://www.ethanzuckerman.com/blog/2012/08/10/how-do-we-make-civic-crowdfunding-awesome>