An Exploratory Study of K-12 Music Educators' Use of the Online Crowdfunding Platform *DonorsChoose*

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Abstract

Music educators contending with resource insufficiency have developed novel ways of acquiring assets. The advent of internet-based crowdfunding, where individual teachers directly solicit contributions from personal and professional associates, now stands as the most frequently-employed means of finding external sources of funding for teaching projects. The purpose of this study was to explore K-12 music educators' use of one such crowdfunding web site, DonorsChoose.org, to obtain resources to support their teaching endeavors. Participants comprised a sample of teachers (n = 102) running campaigns on DonorsChoose.org in January and February of 2019. The majority of participants were females teaching elementary or middle school in underserved communities who turned to crowdfunding out of necessity when traditional resource channels failed. They set out to raise an average of $1,274.81 and strongly endorsed the effectiveness of the DonorsChoose platform. Their self-reported levels of work motivation and entrepreneurial self-efficacy were moderately strong and compared favorably to the same measures reported by members of a control group. Findings of this exploratory study help create a baseline portrait of music educators who turn to crowdfunding to obtain resources for their teaching initiatives.

Keywords: crowdfunding, DonorsChoose, urban music education, entrepreneurship, motivation

Music education is a resource-intensive endeavor. This resource-dependency creates struggles for music educators in underserved schools and also stymies teachers in well-resourced contexts whose teaching dreams require unconventional assets. Like many of their colleagues, music teachers often acquire what they need through advocacy and fundraising efforts, or by purchasing materials using their own money. Such efforts are admirable, yet symbolize flaws and inequities in America's educational system (Berger, 2018; Spatig-Amerikaner, 2012). The fact remains, most teachers who depart the profession cite resource deficiency and lacking administrative support as key reasons for leaving (Carver-Thomas & Darling-Hammond, 2017). According to Abril and Bannerman (2015), music teachers remaining in the profession "have been called upon to take increasingly proactive stances toward protecting and improving their programs" (p. 347).

Higgins (2012), paraphrasing Sigmund Freud, cast music teaching as "a difficult branch of an impossible profession" in light of its placement within "an institution and a culture that is not particularly hospitable" (p. 227). At the local level, music educators remain most concerned about funding, facilities, and administrative support (Abril & Bannerman, 2015). Budget cutbacks can result in elimination of music programs (Major, 2013; Shaw, 2018) or a variety of other consequences, including staffing reductions, increased class sizes, introduction of student fees, and music educators teaching outside of their expertise (Burrack, Payne, Bazan, & Hellman, 2014). Surface-level perceptions of healthy, growing music programs may obscure an underlying reality in which music teachers bear the brunt of cutbacks, only persevering by being resourceful, innovative, and self-determined in their approach (Ryan & Deci, 2002). When music teachers are self-determined in their work, they are better-equipped to cope with the challenges of their teaching context and more apt to find inventive ways to meet students' needs (Angeline, 2014; Evans, 2015; Eyal & Roth, 2011; Hanson, 2018; Pelletier & Sharp, 2009). Further, self-

determined music teachers exhibit higher entrepreneurial self-efficacy, or confidence in their ability to innovate and create value amid the uncertainty of resource-poor environments (Hanson, 2017). Recently, these motivated, entrepreneurial music teachers have embraced a novel approach: acquiring assets through crowdsourcing and crowdfunding.

Crowdsourcing, or the practice of soliciting knowledge and/or resources from a large group of people toward a common goal, has come into its own in the internet age. Numerous investigations of crowdsourcing demonstrate its ability to aggregate and amplify individual contributions to solve complex problems (Afuah & Tucci, 2012; Brabham, 2008; Halman, 2015). Leveraging collective knowledge, creativity, and resources through crowdsourcing has produced benefits in the fields of information technology (Leimeister, Huber, Bretschneider, & Krcmar, 2009), business (Dimitrova, 2013), government (Haltofová, 2018), and within the very research circles that scrutinize it (Behrend, Sharek, Meade, & Wiebe, 2011; Graber & Graber, 2013). Researchers have identified four primary crowdsourcing strategies in education: crowd wisdom (collective sharing of knowledge and problem-solving), crowd creation (collaborating to develop a product or service), crowdfunding (pooling resources), and crowd voting (collective decision-making) (Solemon, Ariffin, Din, & Anwar, 2013). The most prominent thread of research on educational crowdsourcing focuses on curricular and instructional refinement via peer-generated knowledge (Hatfield, Lynskey, Economos, Nichols, Whitman, & Nelson, 2016; Hills, 2015; Paulin & Haythornthwaite, 2016; Scott, 2015). A second major strand of educational crowdsourcing research investigates the rise of online education, massive open online courses (MOOCs), gamification of instruction, and computer-mediated learning networks (Anderson, 2011; Llorente & Morant, 2015; Porcello & Hsi, 2013; Prpic, Melton, Taeihagh, & Anderson, 2017).

Previous scholarship also demonstrates how artists and musicians embrace crowdsourcing to collaborate remotely (Koszolko, 2015), build supportive networks (Forst, 2016; Gamble, Brennan, & McAdam, 2017), exchange feedback (Wang, Oh, Salazar, & Hamilton, 2015), and harness the collective artistic imagination of the public (Literat, 2012). Pioneering music educators have crowdsourced ensemble rehearsals (Johnson Turner, 2013) and online choral performances (Cayari, 2016; Whitacre, 2011). Others have suggested integrating crowdsourcing into modernized music curricula reflecting participatory culture and the ways students engage with music outside of school (Ruthmann & Hebert, 2012; Tobias, 2013). A growing trend among music teachers who do not have the assets they need is resource acquisition through *crowdfunding,* a financially-focused arm of crowdsourcing. Crowdfunding is "the act of soliciting, via an open call, resources from a wide variety of contributors in order to realize a new idea" (Wash, 2013). Within the past 20 years, crowdfunding has become an effective way for teachers, artists, non-profit workers, and anyone in need to raise money by leveraging the ubiquity of technology and social connectivity. Early forms of crowdfunding include municipal bond programs, credit unions, and the first "fan-financed" music tour, in 1997, by the British rock band Marillon. In the early 2000s, as internet connectivity proliferated, crowdfunding gained prominence within a broader context of crowdsourcing (Poetz & Schreier, 2012), microfinance (Morduch, 1999), and peer-to-peer lending (Klafft, 2008). More recently, platforms such as GoFundMe, Kickstarter, and Indiegogo have facilitated crowdfunding online.

Scholarly literature specifically exploring crowdfunding in education is emerging but relatively limited. Colleges and universities have found success employing crowdfunding to support faculty research endeavors (Fitzgerald, 2015; Marlett, 2015). Researchers have discussed cases of crowdfunding's effectiveness in creating educational resources (Fink, 2015; Walsh, 2014), investigated variables influencing donative behavior on online platforms (Meer, 2014;

Sherburne, 2016), and explained the drawbacks of using crowdfunding to support classroom activities (Gilsbach, 2016; Moskowitz, 2016). The first major study of the phenomenon from the teacher's perspective (Lee, 2018), limited to four K-12 schools in Texas, found that motivated, resilient teachers in high-needs districts used crowdfunding to improve educational equity and cultural relevance, and to create an online meeting space to provide a "teacher's eye view" of classroom realities (p. 146). Established in 2000, DonorsChoose (www.donorschoose.org) has fast become the leading educational crowdfunding platform in America, supporting over a half-million teachers working in over 80,000 schools. It exemplifies how crowdfunding aggregates relatively small contributions from disparate parties into powerful financial support for new initiatives.

About *DonorsChoose*

Like Kickstarter, GoFundMe, and similar crowdfunding sites, DonorsChoose enables individuals to launch fundraising campaigns and easily share them widely via social media. What differentiates DonorsChoose is its exclusive focus on K-12 education. In 2000, Charles Best, then a history teacher at a public high school in New York City, created DonorsChoose as a means of connecting donors with teachers who were struggling to obtain the materials they needed. Best wanted donors to be able to choose exactly how their contributions would be used. Since then, Best's idea has developed into the DonorsChoose non-profit organization, backed by notable leaders in business, politics, and entertainment, which likely generates more direct financial support for teachers than any other third-party entity in America. To date, approximately 3.7 million donors have contributed 818 million dollars

[1] to fund teaching projects via DonorsChoose, impacting 33.5 million American students. Over 80% of schools in America have at least one teacher who uses the site to get what they need ("About Us," 2019).

DonorsChoose is available to teachers, counselors, librarians, and school nurses in America's public and government-financed charter schools. Teachers register a project on www.donorschoose.org by entering a title, a brief description of their teaching initiative, and a breakdown of how their requested dollar amount will be spent. Once DonorsChoose staff members vet and approve the project, the campaign is established on the site and can be located via search and/or shared electronically. Only projects receiving full funding from donors proceed to fulfillment; if a project does not reach its goal, all contributions to it are refunded to donors as account credits. No money is exchanged; instead, DonorsChoose purchases the requested items and ships them directly to the participating teacher's school. Since a key element of DonorsChoose's mission is transparency, all donors receive numerous thank-you messages and explanations of how their donations were spent when a project to which they contributed reaches fulfillment. Site-wide, the average campaign goal is $551, and the average new donor contributes $54 (note that the minimum donation amount is $1). Funded campaigns typically require an average of 27 days to reach fulfillment; interestingly, only 61% of projects are ever fully-funded ("Impact," 2019).

Few studies have explored how and why teachers utilize DonorsChoose.org, and what types of endeavors they seek to launch when they begin a fundraising campaign on the site. One analysis of teachers' ability to attract and retain donors via DonorsChoose (Althoff & Leskovec, 2015) demonstrated the site's effectiveness, especially when teacher-referred donors lived close to the schools they helped fund and could see the impact of their contributions. Other assessments of education-related crowdfunding indicated that successful projects were realistic in scope, carried an average goal of approximately $450, and provided acknowledgement and feedback to donors (Mollick, 2014; Pak & Wash, 2017). A group of physical educators (Bulger, Jones, Katz, Shrewsbury, & Wood, 2016) analyzed DonorChoose.org in a case study of an

attempt to fund a teaching project. They found the site efficient and effective at delivering results, and also linked it to innovative teaching: "The most important ingredient in a successful crowdsourcing project remains the identification of an innovative, attention-getting solution to a relevant educational problem or challenge" (p. 24).

After an extensive search of the music education literature, no studies investigating music educators' use of crowdfunding could be located. However, in keeping with Bulger et al.'s innovation orientation stated above, the phenomenon of educational crowdsourcing does nest fittingly within an emerging body of music education research concerning contextually-specific, place-based, and entrepreneurial teaching approaches (Brook, 2011; Fitzpatrick-Harnish, 2015; Hanson, 2017; Smith, 2014; Stauffer, 2009). A better understanding of the role of DonorsChoose in supporting music teaching and learning may help equip stakeholders with insights to make music learning in America more feasible and equitable. Therefore, the purpose of this study was to explore K-12 music educators' use of the crowdsourcing web site, DonorsChoose.org, to obtain resources to support their teaching endeavors. A secondary purpose was to assess participating teachers' work motivation and entrepreneurial self-efficacy, two variables related to teacher innovation that I examined in a previous survey study using a similar population of music educators. The following research questions guided the study:

1. Why do music educators use DonorsChoose? Do they find it to be an effective means of addressing their goals?

2. How do music educators who use DonorsChoose vary demographically, and do these variations relate to why and how they use the site?

3. To what extent do music educators who use DonorsChoose feel self-determined at work, and how do their perceptions compare to a control group?

4. To what extent do music educators who use DonorsChoose feel confident in thinking and behaving entrepreneurially, and how do their perceptions compare to a control group?

Method

The population of this study was music educators working in diverse teaching contexts within the United States who launched funding campaigns on DonorsChoose during the first two months of 2019. Online survey methodology proved to be the most efficient approach to gathering data from this geographically-diverse population. Although not problem-free, web-based questionnaires bear numerous benefits including speed, accuracy, cost-effectiveness, and accessibility (Fogli & Herkenhoff, 2018). Teachers who use DonorsChoose tend to be comfortable with technology and accustomed to participating in occasional survey studies ("DonorsChoose.org Data," 2019). Therefore, as detailed below, I designed a self-administered online questionnaire that addressed my research questions using established, previously-validated scales as well as open-response items I developed specifically for this project.

I designed the questionnaire to gather a variety of demographic data from participating teachers: gender, years of teaching experience, level and specialization of their current position, and the setting (urban, rural, or suburban) and relative affluence of the school community where they did the majority of their teaching. To explore participants' perceptions of and experiences with DonorsChoose, I wrote several open-response items. These enabled participants to describe the most recent campaign they launched on the site, the amount of money they sought to raise, and the degree to which they found the site to be an effective platform for supporting their teaching initiatives. In addition, participants reported the number of times they had used DonorsChoose in their teaching career and ranked the reasons why they used it for their most recent project via items I developed from a review of past research (Althoff & Leskovec, 2015; Bulger et al., 2016; Mollick, 2014; Wash, 2013).

The final section of the questionnaire consisted of two existing scales that I adapted previously for use with music educators (Hanson, 2017). The first was a nine-item adaptation of

Deci and Ryan's (1985) *Basic Needs Satisfaction at Work* scale, which captures participants' perceptions of organizational support for relatedness, autonomy, and competence. Participants used a seven-point Likert-type scale (1 = *not true at all*, 7 = *very true*) to indicate their agreement with statements such as "I have the freedom to decide how my work gets done." Researchers confirmed the scale's validity and reliability in previous studies (Baard, Deci, & Ryan, 2004; Deci et al., 2001; Foreman, 2005; Klassen, Perry, & Frenzel, 2012); my adapted version produced Cronbach's alpha estimates above .70 for all items.

The second scale was a six-item adaptation of McGee et al.'s (2009) survey instrument assessing entrepreneurial self-efficacy (ESE), or the extent to which individuals feel confident thinking and acting entrepreneurially. Like the original, my adaptation featured a five-point Likert-type scale (1 = *very low confidence*, 5 = *very high confidence*). Participants rated their perceived personal capability to, for example, "estimate the time, resources, and personnel necessary to launch a new musical endeavor." The scale demonstrated strong validity and reliability in both its original and adapted version, with Cronbach's alpha estimates above .80 (Hanson, 2017).

Initially, I contacted a senior member of the research staff at DonorsChoose to inquire about partnering on a cross-sectional study of music educators who use the site. We discussed designing a survey that would address my research questions while also collecting data pertinent to DonorsChoose's internal research initiatives. After several e-mail and phone conversations, we could not reach an agreement that met the research goals of both parties. I opted to proceed independently. I created my sampling frame by conducting a search for the term "music" on www.donorschoose.org in January 2019, which produced a list of 1,563 active campaigns involving music. I sorted the results by "most urgent," which DonorsChoose programmers designate as projects with the fewest days remaining that are closest to being fully funded. Many

campaigns did not directly involve music teaching and learning (e.g., physical education projects involving background music), so I removed those from the list.

As data compiling continued, I noticed that the same campaigns appeared in the results list with increasing frequency. This data sorting anomaly, which appeared to be a common occurrence on www.donorschoose.org, revealed that the actual number of campaigns was a fraction of the stated total of 1,563. Therefore, I continued compiling information until I reached the point where further progression through the search results generated only repeat listings. This gleaned 223 separate campaigns. DonorsChoose does not provide user contact information, so I utilized online school district staff directories to obtain the e-mail addresses of teachers appearing in the results list. In several cases, I could not locate valid e-mail addresses through online searching, so I removed those teachers from the pool. The end result was a sampling frame of 207 music educators actively using DonorsChoose. I compiled the final list of campaign titles, descriptions, school locations, and teacher names into a spreadsheet.

I used SurveyMonkey as the online platform for my study. Prior to full deployment, I pilot tested the questionnaire with a small group of pre- and in-service music educators and incorporated their suggestions for minor wording and formatting improvements. I deployed the final version of the questionnaire in mid-January 2019. To maximize response, I included an option where participants could enter a random drawing to receive a small contribution to their DonorsChoose campaign. All protocols, including those pertaining to consent and anonymity of data, conformed to IRB guidelines at the host university. After several reminders over a four-week deployment period, 102 teachers (49%) elected to participate. I loaded quantitative data into SPSS 25 to perform descriptive and inferential analysis, and I transferred open-ended responses into ATLAS.ti 7 for text analysis.

To address the control group comparison components of research questions 3 and 4, I compared motivation and ESE sample means from the current study to those gathered from a comparison group of music educators in a previous survey study (Hanson, 2017). The wording of motivation and ESE items was identical for both groups. The 2017 comparison group consisted of 576 music educators working in diverse teaching contexts within one U.S. state. Demographically, the group resembled the current sample, but it was more balanced in terms of gender and teaching level and included a higher proportion of instrumental teachers and those working in suburban schools. Members of the comparison group demonstrated high levels of classroom-based innovation, but few reported using crowdfunding platforms to obtain resources. Thus, I thought it opportune to compare the two groups to determine if DonorsChoose users reported significantly different levels of work motivation and/or ESE.

Limitations of survey research include response bias, reliance on volunteer samples, and an inherent favoring of breadth over depth of understanding. However, these potential confounds did not appear to influence results more or less than in published survey studies of a similar nature. Nevertheless, findings should not be generalized to larger populations, but may glean insights that are transferrable to other contexts.

Results

Female (75%), male (24%), and non-binary (1%) teachers participated in the survey and had accrued an average of 11 years of teaching experience ($SD = 9.5$, range = 1–40 years). They taught at elementary (53.5%), middle (16.8%), high school (12.9%), and mixed (16.8%) levels, in general (53.5%), instrumental (25.7%), mixed (12.9%), and vocal (7.9%) specialty areas. They hailed from 41 states, with highest representation from Illinois (10.6%), California (10.6%), North Carolina (9.7%), and Texas (7.2%). Each remaining state contributed less than 3% of participants, forming a broadly-representative sample. Participants taught in urban (40.6%), rural

(33.7%), and suburban (25.7%) settings and reported that they perceived their school communities to be impoverished (76.2%), of average affluence (20.8%), or highly affluent (3%).

Most participants were new to DonorsChoose: either they were using it for the first time (24%) or had used it 1-3 times in the past (31.2%). Another 28.1% had used it 4-9 times, and 16.7% had used it 10 times or more. Campaign objectives varied; after a thorough review, I developed categories to organize and understand teachers' stated goals (see Table 1). Further, I tracked whether requested funding was earmarked exclusively for instruments/equipment, or for more varied purposes. Fifty-eight percent of campaigns consisted of standalone requests for instruments, technology components, or sets of materials. The most common requests included music technology, general/classroom music supplies, and ukuleles. Drums, keyboards, Orff instruments, and other band, string, and classroom instrument were requested too, but less frequently. The other 42% of campaigns encompassed diverse requests, including seed funding for new ensembles and curricula, recruitment support, classroom storage and organizational systems, student travel support, and funding for professional development opportunities. The average amount participants attempted to raise was \$1,274.81 (*SD* = 1,812.87), ranging from a \$100 request for books and CDs to an \$11,700 campaign to fund student travel to a marching band performance.

Table 1. Categorized objectives of DonorsChoose teaching initiatives launched by sampled music educators (with examples), January-February 2019.

Stated Objective of Initiative	Percentage of Requests
Enhancing existing offerings with novel ideas (e.g., a new steel drum band, recording studio equipment for a new STEM initiative)	33.0%
Obtaining program essentials (e.g., valve oil, mouthpieces, and reeds for band; a digital piano for the general music classroom)	22.7%
Organizing the learning environment (e.g., storage shelving, carts for music stands, binders and folders)	11.3%
Attending to the needs of diverse learners (e.g., adaptive instruments, headphones to reduce auditory stress in autistic students)	9.3%
Overcoming resource deficiencies to reach or include more participants (e.g., more hand drums so that every student can play simultaneously rather than sharing or taking turns)	9.3%
Other (travel costs, professional development opportunities)	9.2%
Recruiting and retaining students (e.g., a loaner ukulele station in the school library so students who cannot buy an instrument can check one out for several days at a time)	5.2%

Table 2 displays participants' rankings of different rationales for using DonorsChoose to support their teaching (Althoff & Leskovec, 2015; Bulger et al., 2016; Mollick, 2014; Wash, 2013). Overwhelmingly, teachers turned to crowdfunding out of necessity; in fact, in their open-ended commentary on their reasons for using the site, 27% used the word "desperation" or a similar term. Accompanying commentary cited the visibility of colleagues' success using the platform, its ease of use, its accessibility to donors regardless of their geographic location, and how it provides an ideal alternative to typical "bake sale" fundraisers. Participants awarded DonorsChoose strong ratings for overall effectiveness in supporting their instructional initiatives. On a scale from 1-5, with 5 being "very effective," the mean rating was 4.2 ($SD = 1.1$). Seventy-two percent of teachers rated it a 4 or 5.

Table 2. Participants' rankings of reasons for using DonorsChoose.org.

Rank	Rationale	Mean out of 5 (*SD*) (5 = most important, 1 = least important)
1	*Necessity:* I had virtually no other options for finding funds for my teaching projects.	4.2 (1.2)
2	*Visibility:* The site helps promote the music learning happening in my classroom.	3.2 (1.1)
3	*Opportunity:* I wanted to try an unconventional teaching idea that required extra funding.	2.7 (1.5)
4	*Efficiency:* Using the site to get what I want is much easier than dealing with the administration at my school.	2.6 (1.4)
5	*Transparency:* I felt it was important to show donors where their money was going.	2.5 (1.3)

All continuous data met the assumptions for parametric statistical testing. I summed subscores for each construct of participants' work motivation (autonomy, competence, and relatedness) to create composite scores based on 21 possible points per construct. Cronbach's alpha estimates for the motivation scales (α = .77-.89) confirmed their reliability. On average, participants rated their autonomy at 15.0 (*SD* = 3.6), competence at 16.4 (*SD* = 3.6), and relatedness at 14.9 (*SD* = 3.8). Paired-samples *t* tests with Bonferroni adjustments indicated significantly higher levels of competence as compared to both autonomy, $t(95)$ = 4.09, $p < .001$, d_{Cohen} = .39, and relatedness, $t(95)$ = 3.81, $p < .001$, d_{Cohen} = .41. The 2017 comparison group's mean ratings of autonomy (14.8, *SD* = 3.4), competence (16.1, *SD* = 3.4), and relatedness (14.6, *SD* = 3.5) did not differ significantly from those reported by the current sample.

Subgroup analysis of participants' work motivation, the frequency with which they used DonorsChoose, and their assessment of its overall effectiveness revealed no significant differences based on gender, teaching context, or other demographic variables. Regarding the fundraising goals of participants, the lone statistically significant one-way ANOVA result, $F(4, 91)$ = 2.67, p = .04, d_{Cohen} = .42, indicated (via Tukey HSD post hoc test) that instrumental

music specialists sought to raise more money on average ($2,041.22) than general music specialists ($748.92, $p = .03$). Other subgroup differences emerged when analyzing participants' reasons for using DonorsChoose. Instrumental music teachers ranked the "opportunity" rationale significantly lower than general music teachers, $F(4,77) = 2.98$, $p = .02$, $d_{Cohen} = .47$. High school teachers ranked "transparency" significantly higher than both elementary and middle school teachers, $F(3, 88) = 5.33$, $p = .003$, $d_{Cohen} = .80$. Teachers working in urban schools ranked "efficiency" higher than teachers in suburban schools, $F(2, 94) = 3.46$, $p = .04$, $d_{Cohen} = .53$, and, perhaps surprisingly, ranked "necessity" lower than their suburban counterparts, $F(2, 84) = 4.76$, $p = .01$, $d_{Cohen} = .49$.

Table 3 displays participants' mean ratings of their ESE at work, or the extent to which they felt confident using entrepreneurial mindsets and behaviors to act on new pedagogical ideas. Cronbach's alpha estimates for the ESE scale ($\alpha = .83$) confirmed its reliability. Participants felt most confident in experimenting with novel teaching approaches and identifying opportunities for pedagogical innovation, and less confident in estimating resources and maintaining persistence. Though the 2017 comparison group rated their ESE levels similarly, DonorsChoose users reported significantly higher average confidence in identifying opportunities, $t(670) = 2.31$, $p = .02$, $d_{Cohen} = .25$, generating buy-in, $t(669) = 2.81$, $p < .01$, $d_{Cohen} = .31$, and combining the means at hand in unconventional ways, $t(667) = 2.97$, $p < .01$, $d_{Cohen} = .33$. Broadly speaking, DonorsChoose users did not express higher confidence in estimating resources than members of the comparison group, even though the site requires users to submit a detailed materials and budget plan. However, when segmented by usage history, teachers who reported using DonorsChoose 10 times or more reported significantly greater confidence in estimating resources than those using the site for the first time, $F(4, 91) = 2.84$, $p = .03$, $d_{Cohen} = .52$. Subgroup analysis of ESE ratings by demographic variables produced no significant differences.

Table 3. Participants' ratings of their entrepreneurial self-efficacy (ESE) at work.

Item	Mean out of 5 (*SD*) (5 = very confident, 1 = not confident)	Percentage with high/very high confidence
Take chances and experiment when teaching	4.13 (.84)	80.4%
Identify opportunities to develop new teaching methods and/or ensembles	4.10 (.91)	74.0%
Innovate by combining traditional teaching methods and existing resources in unconventional ways	3.85 (.94)	64.9%
Get others to buy into your vision for a new musical endeavor	3.77 (.99)	62.9%
Estimate the time, resources, and personnel necessary to launch a new musical endeavor	3.70 (.95)	62.9%
Stay persistent when new ideas seemed to fail initially	3.64 (.96)	59.8%

Participant Commentary

I reviewed participants' commentary from open response items to further explore their experiences with and perceptions of DonorsChoose. Comments regarding the utility of the site were generally positive, with participants stating that the site is "a great wind in my teaching sails" and promotes "dream thinking." Many participants discussed the realities of their high-needs context. For example, one teacher commented that "my district doesn't have the funds to support my classroom, and my students deserve the best education I can give them regardless of our community's financial difficulties." Others appreciated the embedded lesson in charity: "it shows my students that there are people in the world who care about their education." Another segment of participants recognized a more teacher-oriented appeal, citing how DonorsChoose allowed them to "add more diversity to teaching" and reinforced that "good ideas and innovative risks can be rewarded." Transparency and communication were other key features: "I enjoy being able to tell parents what I need and how they can help." Additional commenters expressed appreciation for the matching funds made available through DonorsChoose's organizational

partners program, and cited past success with the site as a key motivator for continued use: "I successfully funded three other projects last year. It works!"

A rather pessimistic tone regarding teaching colored the commentary of many participants: "I feel like I'm fighting an uphill battle every day." One teacher encapsulated the feelings of many when commenting as follows: "I think it is insane that we need things like DonorsChoose because of inadequate funding for arts in schools. I should not have to go out of my way to beg for money for my program, but I do it because I love my students and want to provide opportunities." Another was more succinct: "Without DonorsChoose, it's likely I would have to find a different job." Some commenters expressed frustration over the sheer number of campaigns running simultaneously on the site, describing how they felt "disheartened" when their projects received little attention and did not reach full funding. Several participants noted that DonorsChoose requires users to designate a single "home" school, making it difficult for teachers with assignments in multiple schools to create campaigns that are equally visible within all of the communities they serve. Others working in low-income areas noted that the number of potential donors within their school communities is limited, leading to overreliance on donations from their own friends and family members. Numerous commenters also reported that, as crowdfunding in education has become more commonplace, it has met resistance from school leaders. Several districts have instituted approval processes wherein any DonorsChoose campaign must first receive approval from the superintendent and school board before it can be launched. Other districts banned use of the site outright.

Discussion

The chief aim of this study was to develop a baseline portrait of music educators who use DonorsChoose to acquire teaching resources. A secondary goal was to understand participating music educators' work motivation, entrepreneurial self-efficacy, and how they compared to a

control group in these areas. Of a sampling frame of 207 music teachers, a volunteer sample of 102 (49%) elected to participate. Each of the sampled participants completed an online questionnaire via Surveymonkey.com that assessed their use of DonorsChoose, motivation at work, entrepreneurial self-efficacy, and demographics. The sample was largely female (75%), tended to teach general/classroom music at the elementary level (53.5%), and possessed an average of 11 years of teaching experience. A large percentage (76.2%) taught in communities with a high incidence of poverty. They strongly endorsed DonorsChoose, with 72% of participants rating it "effective" or "highly effective" as a resource to support their teaching.

Entrepreneurial mindsets and behaviors applied within educational environments can produce an array of benefits, from enhanced teacher motivation to increased student achievement (Brown & Cornwall, 2000; Flippen, 1998; Macke, 2003). Entrepreneurial impulses can arise anywhere on the continuum between opportunity, or the luxury of pursuing promising new ideas amid relative prosperity, and necessity, when conditions dictate change as the only option (Fairlie & Fossen, 2018). In categorizing campaign goals, I found a mix of both opportunity- and necessity-oriented requests: 33% of campaigns constituted novel enhancements to existing offerings, and 34% sought program essentials, including organizers like shelving and storage carts. Interestingly, this divide did not appear in participants' rankings of their reasons for using DonorsChoose—they felt that "necessity" and "visibility" were stronger rationales than "opportunity." Perhaps this can be attributed to differences in perspective. Initiatives I categorized as opportunity-based may be perceived by teachers as necessities. The fact that program visibility emerged as a top reason for using DonorsChoose speaks to issues of music teacher isolation (Sindberg, 2011; Sindberg & Lipscomb, 2005).

On average, responding music educators sought to raise almost $1,300 via DonorsChoose, or over two and a half times the site-wide average of $551 ("Impact," 2019).

Instrumental music teachers attempted to raise considerably more money than general music teachers, a result likely skewed by the presence of a few high-cost instrumental campaigns for equipment and travel funding. However, instrumental teachers also ranked the "opportunity" rationale much less important than their general music counterparts, indicating that their reasons for using DonorsChoose may be more necessity-oriented or motivated by other factors. Instrumental music is an expensive enterprise and may be more prone to necessitate urgent resource requests. The fact that a large percentage of responding teachers were female reflects nationwide teacher demographics in the United States ("Characteristics of Public School Teachers," 2018). Viewed another way, the preponderance of female participants aligns with educational research suggesting that female teachers wield less power over school governance than males (Sanchez & Thornton, 2010) and often earn less than their male counterparts (Iasevoli, 2018), which might make them more likely to try crowdfunding.

On the whole, only high school teachers felt strongly that transparency—DonorsChoose's ability to show donors how their contributions are used—was a strong factor in their decision to use the site. This likely mirrors the increasingly complex nature of school music fundraising at the secondary level (Costa-Giomi & Chappell, 2007; Elpus & Grisé, 2019; Fermanich, 2011) wherein donors insist that their contributions be used exclusively for a specific purpose (Goldstein, 2017). Teachers working in urban contexts favored the efficiency with which they could obtain resources via DonorsChoose, and surprisingly found the "necessity" rationale significantly less compelling than teachers in suburban schools. Though I can offer no definitive explanation for the latter finding, it is worth noting that urban teachers still ranked "necessity" as the top reason for using DonorsChoose; the difference lies in score dispersion. None of the suburban teachers ranked "necessity" as the least compelling rationale, but a few of the urban teachers did. To speculate, perhaps crowdfunding in an urban school is more commonplace and

therefore less uniformly conceived as necessity-oriented; on the other hand, suburban teachers may view it as more of a last resort.

Participants' work motivation—measured as levels of perceived autonomy, competence, and relatedness—was moderately strong and similar to levels reported by a control group (Hanson, 2017). In both cases, teachers reported significantly higher perceived competence compared to relatedness and autonomy. Analysis of participants' ESE levels revealed moderately strong levels of confidence in thinking and acting entrepreneurially. When compared to the 2017 control group, DonorsChoose users expressed significantly higher confidence in opportunity identification, consensus-building, and creative recombination. According to the seminal entrepreneurship scholar Joseph Schumpeter (1934), creative recombination, or using existing means in unconventional ways, constitutes the core behavior of the entrepreneur. Although DonorsChoose users felt more confident in their entrepreneurialism, it remains an open question whether the platform facilitates growth in that confidence, or if teachers who already feel entrepreneurial are simply more likely to use it.

Implications for Practice and Future Research

DonorsChoose facilitates value creation in resource-poor environments, leveraging the digital connectivity of the 21st century and engaging a contemporary, participatory culture that values prosocial behavior (Braswell, 2018). Results of this study suggest several implications for practice. Broadly speaking, these findings highlight the resourceful, inventive, and enterprising spirit of music educators in non-ideal circumstances, hopefully inspiring others to doggedly pursue support for their teaching passions and students' needs. Survey participants endorsed DonorsChoose as an effective means of acquiring resources and recommended it to other music teachers with inadequate assets and/or novel ideas. Music educators new to DonorsChoose can maximize their potential for success by learning from the experience of those who participated in

this study. In particular, the most effective campaigns were below average in cost, focused on high-impact needs and/or innovative teaching ideas, and featured meaningful and frequent engagement with donors, including detailed communication of the impact of contributions. Given the increasing pervasiveness of crowdfunding in education and resulting backlash from some school leaders, DonorsChoose is best viewed as one tool among an array of fundraising and advocacy options at music teachers' disposal. To avoid controversy, teachers would be wise to research their school or district's policies concerning educational crowdfunding before launching a campaign. It bears mentioning that many critics of crowdfunding in schools believe that it helps perpetuate inequities in funding and arts program support by masking larger policy issues that need attention (Moskowitz, 2016). Online privacy and security are also concerns that warrant further scrutiny.

Future research on crowdfunding in music education could replicate the exploratory approach of the current study within the ever-changing landscape of new campaigns on DonorsChoose, and within other online and mobile fundraising platforms. Interview and focus group research using a small number of music educators who use DonorsChoose would give voice to teachers' perspectives of the crowdfunding phenomenon. School district leaders and administrators could also contribute their views, especially in light of the administrative backlash that several teachers reportedly experienced. Research that explores the profiles, motives, and perceptions of donors who contribute to music campaigns on DonorsChoose would illuminate a different perspective of the educational crowdfunding phenomenon. Finally, to the extent that crowdfunding remains a growing presence in the landscape of public education, additional research on how to best prepare teachers, administrators, and policymakers to contend with the online platforms that facilitate it will be essential.

Conclusion

The education crowdfunding platform DonorsChoose exemplifies both the intractable challenges and dogged persistence found in America's public schools. Results of this study revealed that music educators used DonorsChoose mostly out of necessity and found it to be an efficient and effective tool to support their teaching activities. Resource insufficiency cut across demographic groupings and specializations, illuminating broad-based need among the diverse sample of teachers participating in the study. Yet, these participants reported moderately high work motivation levels similar to those of a control group, and outperformed the control group in their entrepreneurial approach to solving problems and practicing innovation. DonorsChoose and platforms like it are symptomatic of larger currents in media, culture, and education policy. Until those currents change, music educators will likely continue to use crowdfunding (and similar tactics) to acquire the resources they need.

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[1] A portion of total donations results from corporate matching programs that DonorsChoose establishes with partner organizations.

Appendix

DonorsChoose and Music Education

Demographics

Indicate your gender:

( ) female

( ) male

( ) other

For how many years have you been employed as a music educator?

[   ]

In which area of specialization is your music teaching position?

( ) general/classroom music

( ) vocal

( ) instrumental- winds/brass/percussion

( ) instrumental- strings

( ) Other (please specify)

[   ]

At which level is your music teaching position?

( ) elementary

( ) middle

( ) high

( ) Other (please specify)

[   ]

Which best describes the school where you do the majority of your teaching?

( ) rural

( ) urban

( ) suburban

How affluent is the community of your school?

1- High incidence of poverty	2	3	4	5- Very affluent
○	○	○	○	○

DonorsChoose and Music Education

Your DonorsChoose Project

When answering these questions, please refer to your MOST RECENT funding campaign on www.donorschoose.org

Approximately how many times have you used DonorsChoose to fund your teaching initiatives?

◯ this was the first time   ◯ 7-9 times

◯ 1-3 times   ◯ 10 times or more

◯ 4-6 times

Describe your most recent teaching project on DonorsChoose. What are you trying to do, and why? Is it a project that differs notably from your typical teaching practice, allowing you to be innovative or solve a problem? (Please be as detailed as you can.)

How much money are you trying to raise? What materials/equipment will you acquire with this funding?

Please rank (1-5) the following reasons for using DonorsChoose to support your most recent teaching project (1 = most important):

	I wanted to try an unconventional teaching idea that required extra funding. (opportunity)
	The site helps promote the music learning happening in my classroom. (visibility)
	I had virtually no other options for finding funds for my teaching projects. (necessity)
	I felt it was important to show donors where their money was going. (transparency)
	Using the site to get what I need is much easier than dealing with the administration at my school. (efficiency)

(Optional) In a sentence or two, list any other reasons you have for using DonorsChoose.

Overall, based on your experience so far, how effective is DonorsChoose as a means of supporting your teaching? (1 = not effective, 5 = very effective)

1- not effective	2	3	4	5- very effective
○	○	○	○	○

DonorsChoose and Music Education

Your Teaching Position

The following statements concern your feelings about working at your school. Please indicate how true each statement is for you, given your experiences in your teaching position. (1 = not true at all, 7 = very true)

Remember, your colleagues and supervisors will never know how you respond.

I have the freedom to decide how my work gets done.

1- not true at all	2	3	4- somewhat true	5	6	7- very true
○	○	○	○	○	○	○

Most days I feel a sense of accomplishment from working.

1- not true at all	2	3	4- somewhat true	5	6	7- very true
○	○	○	○	○	○	○

I feel pressured at school.

1- not true at all	2	3	4- somewhat true	5	6	7- very true
○	○	○	○	○	○	○

When not teaching, I tend to keep to myself at school.

1- not true at all	2	3	4- somewhat true	5	6	7- very true
○	○	○	○	○	○	○

I have been able to learn interesting new skills in my teaching position.

1- not true at all	2	3	4- somewhat true	5	6	7- very true
○	○	○	○	○	○	○

I am free to express my ideas and opinions at school.

1- not true at all	2	3	4- somewhat true	5	6	7- very true
○	○	○	○	○	○	○

I consider the people I work with to be my friends.

1- not true at all	2	3	4- somewhat true	5	6	7- very true
○	○	○	○	○	○	○

In my teaching position, I do not get many chances to show how capable I am.

1- not true at all	2	3	4- somewhat true	5	6	7- very true
○	○	○	○	○	○	○

People at school care about me.

1- not true at all	2	3	4- somewhat true	5	6	7- very true
○	○	○	○	○	○	○

DonorsChoose and Music Education

Your Confidence in Being Innovative

The following statements concern your confidence levels at work over the past year. (1 = very low confidence, 5 = very high confidence)

How much confidence have you had in your ability to:

Take chances and experiment when teaching.

1- very low confidence	2	3	4	5- very high confidence
○	○	○	○	○

Identify opportunities to develop new teaching methods and/or ensembles.

1- very low confidence	2	3	4	5- very high confidence
○	○	○	○	○

Get others to buy into your vision for a new musical endeavor.

1- very low confidence	2	3	4	5- very high confidence
○	○	○	○	○

Estimate the time, resources, and personnel necessary to launch a new musical endeavor.

1- very low confidence	2	3	4	5- very high confidence
○	○	○	○	○

Innovate by combining traditional teaching methods and existing resources in unconventional ways.

1- very low confidence	2	3	4	5- very high confidence
○	○	○	○	○

Stay persistent when new teaching ideas seemed to fail initially.

1- very low confidence	2	3	4	5- very high confidence
○	○	○	○	○

DonorsChoose and Music Education

Final Thoughts

(Optional) Use this space to share additional comments regarding your experiences using DonorsChoose, perspectives on your job, or any other insights that come to mind. If you experienced any challenges or unexpected issues when using DonorsChoose, be sure to list those here, too.

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