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The Efficacy of Third-Party Certifications and Memberships: Bridge to Institutional Sustainability at Colleges and Universities
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ABSTRACT

This study researches the effects of third-party certifications and memberships on decision-making pertaining to environmental practices at higher education institutions (HEIs). A survey containing up to 22 questions was sent to all colleges and universities on the Green Schools Listserv. The questions centered around the six main areas explored in the associated literature review—motivators, intra-institutional processes, benefits, public perception, best practices, and accountability.

The study revealed that publicity, guidance/inspiration, accountability, and an institution’s own culture are strong motivators for HEIs to obtain and maintain certifications and memberships. Publicity is the most common motivation, though, as it directly correlates to growing financial capital at HEIs. All told, they prevent unsustainable action 67% of the time and prompt sustainable action 83% of the time, according to responders.

INTRODUCTION

Third-party certifications and memberships exist to help institutions adhere to more sustainable practices. These involvements hold an institution accountable to environmental standards set by an external source (the third-party institution), and require adherence to their standards in order to achieve and maintain them. My interest in the efficacy of third-party certifications and memberships began with my involvement in leading Messiah College through part of the Audubon Cooperative Sanctuary Program, a voluntary certification program that promotes sustainable property management and high quality environmental education at all certified institutions.
Though certifications and memberships are growing in popularity among higher education institutions (HEIs), the amount of influence that they actually have on institutional decision-making remains ambiguous. Hence, this dilemma prompts the research question—what are the effects of third-party certifications and memberships pertaining to environmental practices at HEIs?

Figure 1. Logos from five third-party certification and membership organizations.

LITERATURE REVIEW

Biologist and bioethicist Garret Hardin defined the problem in his 1968 article “The Tragedy of the Commons,” which became a foundational piece in our contemporary study of the way in which communities manage their common resources. The basis of his argument is thus: in a commons, each person will do what most benefits them personally, regardless of the effect that has on the health and ultimate sustainability of the commons and one’s neighbors. The benefits reaped by that person are much greater than the negative consequences they experience from it, since they are the sole profiteer from their greed, whereas the negative consequences are diffused throughout the community. Therefore, the individual feels the positive effects much more than the negative consequences, as the latter become externalities borne by the rest of the community. However, the overall health of the commons is diminished, and will, given this pattern of usage, eventually cease to exist if everyone operates purely out of short-sighted self-interest. Complete privatization or external coercion are the only two ways of controlling this human tendency.

Political economist Elinor Ostrom follows up on Hardin’s work, affirming his contributions, though offering a third option. She asserts that unchecked exploitation of common
resources need not be the case. Rather, the key is to construct effective regulatory bodies that encourage compliance. Her work on this topic in *Governing the Commons* centers around several key themes: key principles of the success of long-enduring common pool resource (CPR) institutions, the scale at which accountability is most effective, and how these factors apply to institutions (Ostrom, 1990). She reveals ways in which a variety of institutions have utilized these systems effectively, offering insight on which I will elaborate later.

Unlike the cases of Ostrom’s successful examples of governing the commons, though, institutions often fall prey to Hardin’s tragedy of the commons. This influence is exacerbated by the sheer size of such organizations; businesses, universities, and other institutions can have a massive impact, either positive or negative, on their surrounding environment. Through the sum of their decision making, the governing bodies of institutions develop an attitude to their dealings with the flora and fauna around them. There must be a way to incentivize these governing bodies to make decisions that utilize CPRs in sustainable ways.

To address my research question, I will systematically examine third-party certification, analyzing first the motivators behind institutions’ involvement in third-party certification programs, the intra-institutional processes involved in adherence, the benefits reaped, public perception of these certifications, and best practices. Then, I will address the critical question of accountability. How are institutions held accountable to the parameters outlined by the certification? Where does their accountability come from and to whom are they accountable?

Motivation is key to compliance with third-party certifications. Since these certifications are voluntary, institutions must have some incentives to adhere to the regulations that benefit the broader society and natural environment. Motivators can be divided into two main sources—those internal to the institution and those external to it. These motivations are often social or
economic; the former due to student, faculty, staff, and/or administrative attitudes toward environmental practices, the latter due to the increased efficiency and decreased resource and energy consumption thanks to more ecologically efficient practices and technologies. These factors are certainly at play within the institution, as any shrewd administration knows that their funding and effort must yield lucrative pay-offs for the organization. Motivation to adopt more sustainable practices must begin with recognition of their current state; therefore, institutional awareness of their own environmental practices is key. This quality is evidenced in Boyd et al.’s research on the ENERGY STAR energy performance indicator (EPI). The EPI measures the amount of energy a company uses compared to its production processes and other factors, which gives the company the ability to compare its energy efficiency against other facilities. When an institution has more concrete data about its operations, they can measure their progress or decline in tangible ways, providing motivation to remain consistent or improve from within their own organization (Boyd et al., 2008).

Institutions are influenced not only by their internal culture, but by their surrounding community, as well. The institutions, especially educational institutions, and the broader culture of which they are a part can have a strong reciprocal relationship. Schools feel pressure from the surrounding community to conform to cultural norms, and in turn these universities can profoundly influence the community through their educational initiatives. A.M. Aleixo et al. illustrates this quality well:

Sustainability initiatives in education, research, operations and the external community could help [higher education institutions] to respond to a number of challenges such as attracting funding, reducing costs, promoting more effective management, and meeting societal challenges. A holistic sustainability vision will respond to the needs of the community and companies, as the
region and the HEI themselves [sic] become increasingly attractive to students (Aleixo et al., 2016, p. 9).

The institution is intrinsically connected to the opinions, needs, and desires of the community in which it operates, giving the community considerable power in the university’s decisions on environmental practices.

Therefore, the question must be asked—what institutional structures are necessary to effectively enact these standards and achieve their benefits? Institutions must have protocols that facilitate achievement of their environmental goals. Here we may borrow from Ostrom, as she identifies eight design principles that appear core to long-enduring CPR institutions. They are as follows: “clearly defined boundaries; congruence between appropriation and provision rules and local conditions; collective-choice arrangements; monitoring; graduated sanctions; conflict-resolution mechanisms; minimal recognition of rights to organize;” and, specifically for CPR institutions that are a part of larger organizations, “nested enterprises” (Ostrom, 1990, p. 90). In her case studies, individuals are the appropriators and their management system for the common pool resource forms the institution. Our analysis, however, begs the question—what to do when the institutions are the appropriators? I suggest that, in these large-scale instances, Ostrom’s rules for effective relations between appropriators may also be applied to relations within an institutional appropriator. In other terms, when an appropriator consists of all of the people needed to run the institution, her guidelines apply to the inner workings of the institution, as well. A certain amount of accountability and motivation must originate within the organization itself, making such internal conflict resolution skills and monitoring structures necessary.

One way to accomplish this objective is with an Environmental Management System (EMS), which helps an institution identify and carry out environmental best practices (Disterheft, 2012). Aleixo et al. and Disterheft et al. concur here, as they stress the ability of institutions to
influence their surrounding societies (Aleixo et al., 2016, Disterheft et al., 2015). Disterheft even takes this point a step further to say that sustainable education is key to promoting participation. Further, once an organization has identified its own goals and personal involvement in their achievement, it may then reach outward into the community. Community participation and empowerment are critical factors in enacting sustainable development—the community must have a sense of active involvement in order to be invested in institutional changes (Disterheft, 2015). To again reference the work of Aleixo et al., surrounding communities have a profound impact on the culture of a school, confirming Disterheft et al.’s assertions—lasting environmental change is best realized if its motivations come from the broader society, and not solely from an organization’s administration (Aleixo, 2016). Effective institutional processes within the organization are at the base of all of these initiatives.

Despite all of the best practices that can smooth out the implementation of a third-party certification, institutions still face obstructions to their achievement. As discussed previously, the priorities and practices of institutions, especially educational facilities, are strongly influenced by both campus culture and the culture of their surrounding community. Therefore, these prevailing attitudes strongly influence the formation of an administration’s priorities and goals; negative perceptions of sustainability efforts therefore become a roadblock to implementation when they are embodied by the administration. Even with an administration that cares about sustainability, failure to follow best practices for implementation can lead to vaguely-defined positions and responsibilities, burn-out on the part of the employees, and lack of engagement with the broader community (Hoover & Harder, 2015). Further, in order for genuine change to take place, organizations must be open about the challenges that they face; transparency is key to effectively addressing obstacles and continuing to grow (Hoover & Harder, 2015).
Lastly, every institution pursuing third-party certification must evaluate themselves for efficacy. Did they actualize meaningful changes in their institution? Two factors are of particular note when encouraging and evaluating efficacy—first, accountability; second, an emphasis on doing “more good,” as opposed to “less bad” (Toxopeus et al., 2015). First, accountability structures are integral to efficacy (Darnall & Sides, 2008). Institutions need not only vertical accountability (being accountable to higher up organizations), but also horizontal accountability (competitive partnerships between institutions themselves). Providing an example from their study of Cradle to Cradle certified establishments, Toxopeus et al. state that assessment groups “should be focusing on setting up partnerships between companies that are working on Cradle to Cradle developments. This would initiate and stimulate necessary innovations” (p. 389). Further, the concept of promoting positive growth as opposed to a sole focus on diminishing negative practice is vital to efficacy (Toxopeus et al., 2015). Having no effect is more favorable than having a negative one, but third-party certifications should be designed to go a step further, increasing the health of an environment, as well.

If they are effectively carried out, third-party certifications yield benefits to both the institution and their surrounding community. First, the benefits reaped by the institution are both environmental and economic. As more efficient infrastructure is installed and more sustainable practices are established, the institution requires fewer resources and energy to operate. This decreased resource and energy consumption not only leaves a lighter environmental impact, but also reduces the institution’s expenses (Rauen et al., 2015).

The institutions themselves are not the only parties that benefit from these certifications, though. The surrounding community is impacted positively, as well, as voluntary certifications may boost the socioeconomic status of a community, too (Kalonga & Kulindwa, 2016). Of
particular note is the observation that, in communities in which Fairtrade programs are prevalent, *even businesses not involved in the program* make more money because the market power of the middlemen has been reduced. In some instances, Fairtrade certification improved business in the broader community, and not just the businesses that were certified. (Podhorsky, 2015). Voluntary certifications do not limit the economic success of the affected institutions, as is sometimes the concern. Rather, they can either reinforce preexisting good management strategies or improve the conditions, benefiting the broader community.

Though third-party certifications yield a variety of benefits to the institution itself and the surrounding community, they will fail to actualize the full potential of certification if the public knows nothing of them. Public perception is key to successful certification. If the public knows of an organization’s certification and finds it credible, those inclined to care about the resources which it preserves are better equipped to act on their values. First, the certification must be seen as trustworthy—if consumers do not trust the label to effectively regulate the institution’s practices, then they have no incentive to support it. Currently, a plethora of voluntary certifications float around the market because they have become “trendy” (Renard, 2005). They vary greatly in their levels of rigor, and consumers are left with few resources on how to distinguish between meaningful ecolabels and those that are simply used to “greenwash” products in hopes of getting more consumer interest. With no easy way to tell which ones are trustworthy and which are not, consumers may ignore them altogether (Font, 2002). Those in the latter group may lack any real accountability structures to achieve the standards that they advertise (Bush et al., 2013). Therefore, in the world of third-party environmental certifications, quality is often lost in a sea of quantity.
Further, even when a certification is able to distinguish itself as credible, it cannot change consumers’ choices if the public knows nothing about it; institutions with third-party certifications need to effectively advertise and promote their certifications. Consumers’ purchasing power can strongly influence institutions’ environmental practices, as they can “vote with their dollars.” Their support of one business over another based on third-party certification compliance that aligns with their values sends a strong message to the industry. However, these practices are frequently under-publicized, leaving consumers who would care if informed with little knowledge to use their purchasing power to choose more sustainable businesses (Minoli et al., 2015). On the reverse, in a study of the effects of publicity for the ENERGY STAR label on consumer choice, when informed of a product’s reduced energy and environmental footprint, those sampled were motivated by both the economic and environmental benefits of energy efficient appliances (Ward et al., 2011). Publicity and credibility are foundational to the success of third-party certifications.

In addition to publicity, the success of the certification process is further advanced if it follows a series of best practices. First, how comprehensive should a certification be? Certifications address a variety of topics, some focusing purely on environmental health, others incorporating economic or social aspects into their regulations, as well (Muradian & Pelupessy, 2005). This reality raises the question—must certifications be combined for an institution to be comprehensively certified (Merger et al., 2011)? Therefore, the current system leaves it up to the institution to choose areas important to them to be the subjects of regulation. This area is still a candidate for future research, as the network of third-party certifiers must determine if it is acceptable to have this incomplete regulation. Will institutions be motivated to obtain the best
types of certifications for their contexts, or will this incompleteness become an “easy out” for businesses who are unwilling to put in the effort to regulate more aspects of their operations?

Further, the scale of a certification is most effective when it follows a set of best practices. Ostrom’s case studies largely dealt with smaller, local certifying bodies, touching upon the topic of larger-scale certifiers to mention that nesting of local certifiers within larger regulating hierarchies is key to their success in a larger system (Ostrom, 1990). The regulation goes from local to national. However, what about the cases, such as larger third-party certifiers, in which the regulating structure goes from national to local? Perhaps differing scales can provide differing strengths from which each certifier may learn. For instance, we may compare Fair Trade coffee and Forest Stewardship Council certifications, looking at how these organizations work within the current economic system to make it more socially just and environmentally sustainable. It suggests that both certification processes could help each other be more effective, as FSC can show Fair Trade how to incorporate and mesh with businesses and processes involved in the market, whereas Fair Trade could promote a greater understanding in FSC of how to connect producers and consumers more directly (Taylor, 2004). Perhaps this pairing illustrates a potential for mutual learning. The comprehensiveness and scale of a certification is an important indication of its efficacy.

At this point we may begin our analysis of the primary factor that determines the efficacy of third-party certifications—accountability. How, and to whom, are institutions held accountable? Ostrom’s work is extremely valuable in answering this question, and I will conduct a literature review of significant themes in her work *Governing the Commons* (1990) to set the stage for my study of this topic.
Let us take a moment to explore several key themes that appear strongly influential in the case studies which she cites. First, monitoring is key to effective accountability and compliance, especially when the monitors are directly accountable to the appropriators whose rights they protect. Further, transparency has also emerged as key to trustworthiness and therefore accountability, as illustrated in the Central Basin litigation in California. The data about the amount of water taken by each appropriator is released as public information, so every member is open to the analysis and opinions of all other members—this transparency greatly reduces the desire to violate the agreement because of the risk of public humiliation. Further, having hierarchical systems of authority and accountability is critical for the success of CPRs in larger systems—a failure to nest them in a hierarchy, having only a series of dissociated institutions, leads to their death. Ostrom illustrates this point vividly in her depiction of Canada’s management of fisheries:

If national policies were to change, and officials were to try to develop a set of nested rules that would help enforce the local regulations that have been developed over the years, … then this fragile rule system could survive, adapt, and enable fishers to make effective use of this local resource indefinitely into the future (Ostrom, 1990, p. 177).

In order for these principles to be carried out effectively, though, they need to be enacted at the right scale. As Ostrom illustrates in a number of her case studies, relational accountability works. Many of her case studies were set in intimate communities in which there was regular patrolling and enforcement with fines as need be. This system “put a face” to the CPR management, as the appropriators personally knew the other people being affected by their choice to follow, or failure to follow, the regulations. It humanized the process, and used human relationship, empathy, and loyalty to one’s community out of a shared identity to its advantage. Further, this personalization of the management system also motivates adherence by appealing to
people’s pride—if they perpetrate an infraction in a small community, their neighbors will find out, and this is shameful. Thus, appropriators are even more motivated to adhere to the system; the desire for personal gain is checked and outweighed by ego. Moreover, when analyzing the success of these arrangements, Ostrom offers a succinct summary of the agreement that appropriators must make in successful CPR management systems. As follows: “I commit myself to the set of rules we have devised in all instances except dire emergencies if the rest of those affected make a similar commitment and act accordingly” (Ostrom, 1990, p. 99-100). To elaborate, she defines the keys to success amongst a group of appropriators. First, specific principles for successful management of the resource must be agreed upon by all appropriators. Second, they have a stable provision for ordinary circumstances—a conditional commitment in which they will follow the principles agreed upon if all others will under ordinary circumstances. Third, they have a provision for desperate circumstances—the agreement allows them to change the rules, at least temporarily; as long as there is consensus, then no one actually broke their commitment. All affected parties work together to adjust the agreement. In this way, the system is such that it remains intact regardless of external circumstances (Ostrom, 1990). Now we will take a look at how this system applies to institutions.

Ostrom uses the example of the Gal Oya irrigation project in Sri Lanka to illustrate the graduated steps in accountability from smaller scale to larger organizational structures. I will quote a statement of critical importance here, set in the context of the farmers who were part of this group:

Mutual trust and reciprocity were nourished on a face-to-face basis prior to attempts to organize farmers into larger groups. At the distributory-channel level, formal organizations were developed by the farmers without following a single, externally authorized model. Eventually, farmers were organized on four mutually reinforcing levels and were given recognition and
encouragement. Most important, farmers saw that their own proposals were treated seriously, for the first time, by irrigation officials, and they saw definite results (Ostrom, 1990, p. 172).

She articulates this accountability structure in her concept of “nested accountability.” Defining this term, she states that: “appropriation, provision, monitoring, enforcement, conflict resolution, and governance activities are organized in multiple layers of nested enterprises,” articulating that “[all] of the more complex, enduring CPRs meet this last design principle” (Ostrom, 1990, p. 101). She cites systems in which appropriators “are organized on the basis of three or four nested levels, all of which are also nested in local, regional, and national governmental jurisdictions” which require their own individual and specific sets of rules in order for the whole system to work well. (Ostrom, 1990, p. 102)

Third-party certifiers are attempting to work against humanity’s natural tendency to manage resources in the manner of the “tragedy of the commons” by offering voluntary certifications meant to promote better environmental and social practices. This literature review has systematically addressed motivators, intra-institutional processes, benefits, public perception, and best practices to provide a framework for our understanding of institutional certifications and their success. Over the course of our study, it has emerged that their efficacy largely depends on accountability. Further, our analysis of Ostrom’s work provides the launching ground for further study of institutional success with third-party certifications and proves to be a promising area for continued research.

METHODS

In order to research the effects of third-party certifications and memberships on institutional decision-making pertaining to environmental practices, we sent a survey to all colleges and universities on the Green Schools Listserv, run by Brown University. The survey
contained up to 22 questions, which were centered around the six main areas highlighted in the associated literature review—motivators, intra-institutional processes, benefits, public perception, best practices, and accountability. First, we set parameters for the certifications and memberships that we would count in our study. These parameters dictated that 1) the achievement and maintenance of the certifications or memberships must rely on the organization fulfilling certain standards at regular accountability checks, and 2) it must certify or include either a whole institution or a sector of their operations, not just an individual employee. We then created a chart of a number of the questions, marked with their corresponding theme, data point sought, and question format. Afterward, we used the Qualtrics research platform to create a survey, editing, discarding, and adding questions as necessary to best address our research question. The survey contained 19 to 22 questions (3 questions used display logic, in which these questions only appeared if the respondent checked certain boxes in a previous question that made them applicable). Responses were recorded through a mix of matrix tables, multiple choice, check all that apply, and short answer formats, all centered around our research question. The surveys were then sent out via email to all of the HEIs on the Green Schools Listserv.

RESULTS

First, let us understand the general feedback we received from the demographic that responded. In descending order of popularity, responders favored the Association for the Advancement of Sustainability in Higher Education STARS program, Leadership in Energy and Environmental Design, Princeton Green Schools, Sierra Club Cool Schools, Second Nature, Tree Campus USA, Billion Dollar Green Challenge, Bee Campus USA, UI Green Metric, and
Further, the majority of schools also derive most of their funding for certification and memberships, and their related projects, from their Sustainability Office or Department budgets.

Moreover, responders were asked a number of questions about the rigor of their certifications, as well as institutional response to them. The following results reveal the averages of the responses recorded by the HEIs that answered this segment of the survey. First, they show that AASHE and Second Nature appear to be most rigorous, as these certifications ranked as the top two based on both time required to complete all certification and recertification materials annually, as well as the responders’ perceptions of the difficulty of initial achievement and continued maintenance of the certification or membership. Further, 100% of responders reported that the sustainability efforts of a department or office prompt other offices and departments to pursue more sustainability initiatives, as well. Second Nature and Sierra Club Cool Schools exhibit the greatest frequency of preventing an unsustainable project or program on campus, and AASHE and LEED had the greatest frequency with which they prompted a sustainable project or program on campus.
The survey also asked responders what, in their own words, motivated their school to be certified or become a member? I was able to group their responses into several main categories. Publicity, first to prospective students, then to current students, followed by employees, then donors. It’s important to note that this theme of publicity appeared in numerous responses. Further, schools used them for guidance and inspiration, giving them ideas and a game plan for their sustainability initiatives. Third, accountability seemed to be a significant motivation, too—in some situations, there appeared to be a smaller group on campus with a value system that supported more sustainable practices, and they wanted a way to help the broader school community adhere to them. Lastly, an HEI’s own culture can be a powerful motivator, too, in contexts where students, staff, faculty, and/or administration are personally convicted.

Now to address in more detail one of the big questions that our survey sought to address—do these certifications and memberships actually influence HEIs’ decisions? The
following percentages illustrate the number of occurrences in which a school reported that a particular certification or membership had the listed effect on their decision-making. In terms of prevention, we found that they *sometimes* prevented a project or program 54% of the time, and *often* prevented one 13% of the time out of 24 responses. On the flip side, they *sometimes* prompted a project or program 55% of the time, and *often prompted* one 28% of the time out of 29 responses. In sum, they effectively prevented an action 67% of the time and prompted action 83% of the time. It’s important to note that these certifications and memberships prompted action a significant majority of the time, but it is equally significant to mention that they failed to prevent an action a third of the time, leaving the prevention category to have a helpful, though imperfect, efficacy rate.

**DISCUSSION**

Diving into a deeper analysis of the implications of these findings, we now turn to the discussion. Recapping the research question—do third-party certifications and memberships affect decision-making pertaining to environmental practices at HEIs? It appears that they do. As we just discussed, their efficacy rates are imperfect, but still significant enough to be of note. So what are the practical implications of this discovery for HEIs, like Messiah College, that are looking to both care for the natural world around them while also being fiscally responsible?
Let us take some help from Ostrom and understand how an appropriator’s community both influences and motivates their decision-making. Her work largely deals with small communities in which the appropriators are the individual people. They hold each other accountable to sustainable stewardship of the CPR through face-to-face relationship, as they also compete for its usage. On a large scale, though, the appropriators are the HEIs, and face-to-face relational accountability is obsolete—instiutions cannot interact with each other like living, breathing people, so how are they held accountable and how do they compete with each other when, say, Penn State does not compete with Princeton for the same five acres of woodland, and Messiah doesn’t share UC Berkeley’s proximity to the ocean?

I assert that, on a large scale, when whole HEIs are the appropriators, financial capital, not the CPR, becomes the focus. In addition to the various offices and departments of a university competing with and challenging one another to greater sustainability efforts, HEIs also compete amongst each other for publicity, as those with the most positive publicity garner the most students, donors, and therefore financial capital. Now this info may seem demoralizing and derogatory toward HEIs, asserting that they are often more motivated by revenue than ecological responsibility, but let me explain how this ethic is actually beneficial to all interests involved. Money goes where the public’s values are, and in a time when environmental stewardship is becoming more important, even trendy, to a greater proportion of society, the chain reaction is thus: institutions use certifications and memberships to vie for publicity. Publicity garners more applications and prospective students, as the survey revealed that the vast majority of responders use their certifications and memberships for publicity often, and most of their advertising of them is directed at prospective students. With third-party certification and membership status, the
institution increases their revenue as their student body grows, simultaneously practicing a greater degree of environmental stewardship along the way.

In sum, third-party certifications and memberships can meaningfully influence the decisions of HEIs pertaining to environmental practices in a way that is financially beneficial to the institution and ecologically beneficial to its surrounding environment. A bridge fuel of sorts enabling us to address environmental, social, and economic sustainability en route to a more ecologically responsible campus culture.

No study can cover everything, though, and a potential subject of further research would be to analyze the effects, or lack thereof, on an HEIs culture if they had a certain certification or membership for a long period of time. Further, depending on the party responsible for completing the survey at the HEI, the limitations of personal experience and singular perspective could influence their perceptions and opinions. Therefore, in future studies of similar topics, the researchers could request that the survey be given to persons in a particular position at the HEI. Additionally, we received a number of surveys which were only partially completed. In the future, the researchers should change the settings on the Qualtrics research platform to only allow the responder to advance through the survey if they answer all the questions.

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REFERENCES


