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Community service, educational performance and social responsibility in Northwest China

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Community service, educational performance and social responsibility in Northwest China

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The main goal of this paper is to analyse the effect of high school scholarships tied to community service on the development of secondary school students in Northwest China. Using data from three rounds of surveys of thousands of students in 298 classes in 75 high schools in Shaanxi province, the paper documents the implementation of the Compassionate Heart Scholars Program and evaluates the effect of the programme on the educational performance, self-esteem, self-efficacy and social responsibility of the participants. We present evidence that part of the protocol of the programme (which includes the nomination and election of programme participants) improves the academic performance and self-esteem of those involved in the programme. The community service part of the programme is shown to raise the self-efficacy and the sense of social responsibility of the programme participants. One striking result is that the test scores of the community service participants do not appear to be adversely affected, even though they spend considerable time doing community service. The findings of this study, therefore, suggest that adding extra-curricular community service to school curricula may be a win–win–win strategy, for the students, for schools and for the local communities served.

Introduction

In China's competitive education system students spend their days—and their evenings—studying and doing homework (Peng, 2006). Weekends are often devoted to extra-curricular activities, which range from participating in the maths Olympics to Chinese essay writing competitions. Little time is devoted to setting up community service activities or teaching students about social responsibility (Qiu, 2002; Zhang, 2003). It is no wonder that some scholars and critics, including journalists, political

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leaders and even Communist Party members, question whether the creation of civil society in China has been sacrificed in the pursuit of economic growth (Qiu, 2002; Zhang, 2003; Zhou, 2006).

One of the key problems in trying to introduce ideas of social responsibility may be that there is a misperception about the trade off between educational performance and the time spent in community service activities outside an individual's everyday school-time activities. In other countries there are well-established traditions of encouraging students to learn about social responsibility by providing them with opportunities to engage in community service projects and other activities that promote a sense of social responsibility (Rutter & Newmann, 1989; Youniss & Yates, 1997; Patro, 1999; Pugh, 1999; McGuire & Gamble, 2006). The idea behind such activities is that teaching students about social responsibility is not only part of the education process that is needed in a modern society, it is also thought to build self-esteem and self-efficacy (Thoits & Hewitt, 2001). Educators also largely agree (e.g. Gerber, 1996; Brown & Theobald, 1998; Cooper *et al.*, 1999; John, 2005) that there is little trade off between the time spent doing community service activities and educational performance. Students who engage themselves in community activities also tend to have higher grades.

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Researchers have laid the basis internationally for studying empirically the impact of community service on social responsibility (and other competence domain outcomes). For example, a number of papers have argued that there is a direct link between the community service and the development of social responsibility (Hursh & Borzak, 1979; Hamilton & Fenzel, 1988; Flanagan & Gallay, 1995; Yates & Youniss, 1996, 1999; Janoski *et al.*, 1998; Flanagan *et al.*, 1999; Brunelle, 2001). Building on these insights, empirical research has documented improvements in social responsibility among service participants (Hursh & Borzak, 1979; Calabrese & Schumer, 1986; Hamilton & Fenzel, 1988; Flanagan & Gallay, 1995; Yates & Youniss, 1996, 1999; Janoski *et al.*, 1998; Flanagan *et al.*, 1999; Swen, 2000; Brunelle, 2001). Part of this literature also shows that if there is training, advising and supervising of the participants, the impact of community services on social responsibility can be enhanced. Finally, empirical research has also identified the effect of community service through school- and community-based organisations on academic and social competencies (e.g. feelings of higher self-esteem and self-efficacy).

If the facts are so clear, why is it that there is still a reluctance to promote community service inside or alongside China's schools? Part of the reason may simply be that there is a lack of research inside China on these questions in the context of China's school system. Indeed, to the best of our knowledge there are no empirical papers that seek to measure the costs and benefits of the time and effort spent by students in China when they engage in community service activities.

In addition, even given the literature outside of China (from which educators inside China could learn), there are very few efforts to try to deal with the tricky issues of statistically unravelling the directions of causality between community service activities, good grades and a sense of social responsibility. There are many confounding factors that are difficult to measure: for example, the cultural background of students, their innate ability and the incentives embedded in the educational system (including encouraging high performance in both grades and community activities) may all affect both educational

performance and participation in community service activities. If this is the case, then the measured relationship between community service activities and educational performance could (at least in part) be a statistical artefact and if one were to introduce community service activities exogenously into a system (e.g. China's junior high or high school educational system), there may not necessarily be a positive effect on grades.

The overall goal of this paper is to try to understand the trade off between community service and educational performance in the context of China's middle school education system. In addition, we seek to understand some of the other effects of participation in community service activities. When students participate in community service, does their self-esteem and/or self-efficacy rise? Finally, we also want to know if participation in community service activities will increase the sense of social responsibility of students.

Because the nature of this question is so broad, we must necessarily reduce the scope of the paper.[1] To do so, we study a community service programme funded and run by a private US foundation in 592 junior high and high school classes in two counties in Shaanxi, a province in Northwest China, which is the home of Xi'an, China's ancient capital and the cradle of China's civilisation. While we understand that there are many institutional and pedagogical issues that will affect the relationship among community service, grades, self-esteem/self-efficacy and a sense of social responsibility, we will focus our efforts on empirically evaluating the linkages. We also recognise that by focusing on the activities of an NGO in a single part of China, many of the findings will be affected by the context of the programme. At the very least this paper provides statistically-based evidence from a case study that allows us to observe and measure the relationship between community service and grades (and self-esteem/sense of social responsibility).

The rest of the paper is organised as follows: in the next two sections we introduce the particulars of the community service programme that we will be studying and the way that we are evaluating the programme, including a description of the data and analytical approach. The final two sections discuss the results and draw conclusions.

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The Compassionate Heart Scholars Program

Cyrus Tang walked out of China in 1952 with almost nothing. Over the next 50 plus years he built an industrial enterprise that spanned the globe. He returned to China in 1995, deciding that he wanted to give back some of what he made. He created the Cyrus Tang Foundation and set up a foundation office inside China. Although he had many plans for the Foundation (that would result in a wide range of activities and programmes that are being implemented today), one thing that struck Mr Tang when he was travelling around China trying to decide how to position his Foundation was that there was a distinct lack of awareness about the importance of programmes that would help China in its pursuit of creating a civil society. He found that few people understood the importance of promoting community service among children during their school days. He believed that if students participated in community service it would be an important step in trying to promote a sense of social responsibility among

students. Unfortunately, he found there was little interest in community service or social responsibility. Therefore, in 2006 he decided to do something to change this.

The Foundation subsequently launched a pilot programme in Shaanxi Province, the Compassionate Heart Scholars Program. In setting up the programme, the Tang Foundation decided to work with its partners to create an environment in which junior and senior high school students could discover that community service was not a burden. The programme team believed that community service would not be detrimental to grades, but instead a way to build self-esteem, self-efficacy and a sense of social responsibility.

With these goals set, the Compassionate Heart Scholars Program was launched by bringing together students in each of 592 junior and senior high school classes in two counties in Shaanxi to participate.[2] The effort to promote community service and social responsibility would be undertaken through a two-part programme. The first part of the programme included the *election* of the Compassionate Heart Scholars. The election process begins when the students in each class nominate three of their classmates to become a Compassionate Heart nominee. The student voters are only told the programme's values (or criteria for selection)—孝顺父母 *xiaoshun fumu* [devotion to parents], 尊敬师长 *zunjing shizhang* [respect for teachers and elders], 关心他人 *guanxin taren* [care for others], 助人为乐 *zhuren weile* [willingness to help], 刻苦勤俭 *keku qinjian* [diligence and hard work] and 成绩优良 *chengji youliang* [good grades]. After a period of open discussion, students then vote for one student from the list of three nominees through a secret ballot vote. The winner becomes the Compassionate Heart Scholar. In a typical school, there are about 30 Compassionate Heart Scholars who become exclusive members of the Compassionate Heart Club. Each junior high (senior high school) scholar is awarded a 400 (800) yuan 'scholarship'.

The rewards for and duties of the scholar and his/her community go beyond the modest financial stipend. When the election is over, the community service part of the programme begins. A teacher in each school, who is trained by programme coordinators and supported by mentors from Xi'an Jiaotong University, Northwest University and other universities located in nearby Xi'an, organises a number of community service activities during the year that the Compassionate Heart Scholars carry out. Wedged between busy school activities during the week and strategically scheduled on Saturday and Sunday mornings, the community service activities are supposed to teach the Compassionate Heart Scholars the joys, challenges and rewards of giving back to their school and community. The students do community service activities ranging from beautifying their campuses to visiting nursing homes to volunteering at hospitals.

Objectives of the Compassionate Heart Program

What are the ultimate objectives of the programme? The Foundation believes that when students give back to their community that has given them so much it will create an awareness of the importance of social responsibility. This awareness, according to the Foundation literature on the Compassionate Heart Program, is a critical ingredient for China's transformation into a modern nation: one that will not only enrich

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the country economically, but will also enable communities to solve their own problems and give residents a sense of pride (Cyrus Tang Foundation, 2007). Creating this sense of social responsibility is a process that starts with each individual. Far from being a burden, the Foundation's Compassionate Heart Scholar management teams believe that the programme will raise self-esteem and self-efficacy and generate a sense of responsibility. Programme coordinators believe it may even lead to higher grades. Ultimately, the Foundation hopes, these students can become role models for their peers, demonstrating what can be accomplished when community service becomes a part of China's basic curriculum and a part of everyday civic life in China.

Approach to evaluating the project and collecting the data

Despite the claims of the Foundation about the success of their programme, there was really no empirical basis on which these claims could be validated. Because of this, we were asked by the Foundation to evaluate the impact of the Compassionate Heart Program. We agreed, but it is important to note that this evaluation was conducted independently. The entire process of the evaluation was undertaken by the evaluation team with no help or assistance from the Foundation.[3] Our interest in carrying out the evaluation was to use this as a case study to examine the linkages among community service, educational performance, self-esteem/self-efficacy and social responsibility.

The main focus of the evaluation was threefold. First, we were interested in documenting exactly how the programme was carried out. Second, we wanted to understand how the community service part of the programme affected the outcome variables of interest—grades, self-esteem, self-efficacy and a sense of social responsibility. However, since the entire programme consisted of two distinct parts, third and finally, we also wanted to understand how the election process itself affected the outcome variables of interest. One of the ultimate goals of the evaluation was to determine whether or not community service, if it became a part of the regular curriculum of all students, would affect grades, affect self-esteem/self-efficacy and/or build a sense of social responsibility.

Evaluation challenges and approach

One of the main concerns of the evaluation of this particular programme was in trying to isolate and identify the impact of community service on grades, self-esteem/self-efficacy and the sense of responsibility. The problem is that students were not randomly assigned to be Compassionate Heart Scholars. Instead, there was the two-stage nomination/election process. Therefore, the Compassionate Heart Scholars may already have had high grades and may already have had a sense of social responsibility before the programme started.

To address this challenge, we needed to design the survey and the evaluation approach in a way that would allow us to isolate (to the greatest degree possible) the pure effect of the programme on the outcome variables. Therefore, our evaluation strategy was to collect information in three parts. The first part of our data collection effort was conducted before the programme had commenced. This means we

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collected information about the students before the nomination of candidates or election of the Compassionate Heart Scholar and before the community service was performed. Because we collected information on all of the students in the school (in all classes) before the programme was even announced, we were able to have baseline levels of standardised test scores (for Chinese, maths and English), levels of self-esteem, levels of self-efficacy and levels of each student's sense of social responsibility (see below for a description of the tests and other data). In total there were six testing areas. Henceforth, we call this the *Round 1 Survey* or the Baseline Survey.

After the Round 1 Survey, the Compassionate Heart Program was allowed to commence. It was at this time that the protocol of nominating candidates and the election of the Compassionate Heart Scholar took place. Because it is possible that these activities, quite independent from the community service activities (which the scholars would eventually participate in), could affect our outcome variables of interest (test scores, self-esteem/self-efficacy, sense of social responsibility), we needed to undertake a mid-programme evaluation survey. Therefore, after the nomination/election, but *before* the participation of the Compassionate Heart Scholars in any community service projects, we executed the first of two evaluation surveys. In order to be comparable to the baseline survey, we re-tested the students for their performance on standardised tests of Chinese, maths and English, self-esteem and self-efficacy and sense of social responsibility. In other words, we retested them on the same six testing areas. In the rest of the paper this will be called the *Round 2 Survey* (or the first evaluation survey).

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Because at the time of the Round 2 Survey we already knew who had been nominated and who had won the election to become a Compassionate Heart Scholar, we were able to reduce the number of survey respondents without loss of power to generalisation. In fact, the Round 2 Survey was mainly targeted at the nominees—the two that were nominated and failed to be elected (henceforth, we call these nominees) and the one that was nominated and successfully elected (henceforth, we call this person the Compassionate Heart Scholar). These two groups of respondents are important because, in some real way, they should be quite similar in observed and unobserved characteristics.[4] It is true that the Compassionate Heart Scholar may have something 'extra', which made them the top choice of the class. However, the nominees were the two most similar people in the class (since they made it to the final round of the nomination/election process). Because of these 'revealed similarities', in the analysis we will use the differences between the scholar and the nominees as a way to evaluate the effect of the two stages of the programme (the election and the community service components) on the outcome variables of interest. In order to see the differences between the scholars plus nominees and the rest of the students in the class (henceforth, normal students), in the Round 2 Survey, we also gave the tests to five randomly selected students per class (who were neither scholars nor nominees).

We also conducted a *Round 3 Survey*. This evaluation survey was conducted after the community service part of the programme. The testing and data in the Round 3 Survey were the same as the Round 2 survey. The students that took the test were also the same—the scholar, the two nominees and five randomly selected non-scholar, non-nominee students.

We did not survey all classes in all grades of the programme schools. Students in the programme schools elect the Compassionate Heart Scholars once a year. In the second year of the programme, students in Grade 8 (age 12 to 16) and 11 (age 15 to 19) were electing the Compassionate Heart Scholars for the second time (since they had entered junior high/high school). Hence, in Grade 8 and Grade 11 classes it was possible that some of the Compassionate Heart Scholars would be re-elected (and, as a result, would have been less affected by the programme). It is possible that some of the non-scholars/non-nominees in Grade 8 and Grade 11 had been scholars the previous year (and their grades, self-esteem, self-efficacy and sense of responsibility may have already been influenced by their previous participation in the programme). Thus, in order to estimate the effect of introducing the Compassionate Heart Scholars and avoid picking up any effects of the election/nomination from the year before, we only surveyed students in Grade 7 (age 11 to 15) and 10 (age 14 to 18). In sum, we conducted the Round 3 Survey in 298 Grade 7 and 10 classes in sample counties.

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Data and testing

The data collection for the evaluation of the Compassionate Heart project was divided into three survey efforts. Round 1 Survey was given to all students in Grade 7 and 10 in all of the junior high and high schools in the two study counties. In total, we surveyed more than 11,635 students. The students were from 298 classes in 197 junior high schools and 101 high schools.

The survey efforts covered fewer students in the Round 2 and Round 3 Surveys. Because we only surveyed the scholar (one observation), the nominees (two observations) and five randomly selected regular students (five observations), on average, there were only eight students surveyed in each class. During the second and third rounds in the 298 programme classes we surveyed 2284 students (approximately 298 × 8).

The survey materials in all three rounds were essentially the same. In total we gave six tests: three standardised tests to measure the academic skills of students (Chinese, maths and English), two tests on social competencies (one on self-esteem and one on self-efficacy) and one test on the degree of social responsibility. In addition to the testing, we also collected simple information on the students and their families, including each student's grade, age, gender and the value of their house (a proxy for income).

Testing material

The testing material came from several different sources. Whenever possible, we tried to use tests that had been developed and used in previous studies (in order to provide both comparability and credibility). However, in all cases we had to make sure that the test questions were relevant for the junior high school and high school students in the two study counties.

We relied on a local teaching board in two sample counties to develop the standardised exams for Chinese, maths and English. The exams were developed slightly differently for the two counties since their curricula for the year differed somewhat.

In each case, however, the exams were standardised across all students in the county and were graded by a county-wide teaching board.

For the test of self-esteem, we used the best known measuring tool for self-esteem—The Rosenberg Self-Esteem Test (Rosenberg, 1965).[5] The scale is a 10-item Likert scale exam with each question answered on a four-point scale, from 'strongly agree' to 'strongly disagree' (total score between 10 and 40). The scale can be used to assess global self-esteem and it is one of the most widely used self-esteem tests among psychologists and sociologists.

The construct of perceived self-efficacy reflects an optimistic self-belief (Schwarzer, 1992), so we use a self-efficacy scale to test the student's perception of his or her ability to plan and take action to reach a particular goal. More specifically, to test the student's self-efficacy, we used the General Self-Efficacy (GSE) scale (Schwarzer & Jerusalem, 1995), which was created to predict coping with daily hassles as well as adaptation after experiencing various kinds of stressful life events.[6] Responses are made on a four-point scale and responses to all 10 items are summed to yield the final composite score with a range from 10 to 40.

To measure the social responsibility of students we used a test based on the Moral-Social Responsibility Questionnaire developed by Gibbs, Basinger and Fuller (1992).[7] The test uses two types of questions: 'What do you believe?' followed by 'Why did you answer the way you did?' In total there are 11 questions and the score ranges from 11 to 44. Some of the survey instruments (the self-esteem and self-efficacy tests) are included in Appendix 1 and 2. The rest of the surveys are available from the authors on request—in English and Chinese.

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Results

In this section we examine the results of the empirical analysis. In order to show why we need to have a baseline survey before the election (as well as to identify the determinants of who is being elected a Compassionate Heart Scholar), we first analyse the data collected during Round 1 Survey in the first sub-section. In the second sub-section, we analyse the differences between Round 1 and 2 Surveys in order to examine the impact of the first stage of the programme—the election phase. Finally, in the third sub-section we analyse the differences between Round 2 and 3 Surveys in order to examine the impact of community service.

Who has a compassionate heart? (Results of Baseline—Round 1 Survey)

According to our data, we have found that students in China have a remarkable ability to choose representatives that are outstanding in a number of dimensions. The students who would soon be elected Compassionate Heart Scholars (but, at the time of the survey did not even know about the programme) scored better than the class average on their standardised exam in almost all subjects—Chinese, maths and English (Figure 1, Panel A). When examining all students in all of the classes across the entire sample, the scores on the standardised test are higher (and statistically

significant at the 1% level) for the soon-to-be scholarship winners (Figure 1, Panel A). When dividing the sample by county and by grade level, we find that the differences are even greater for certain classes. For example, in high schools of one county in the sample, the average maths scores in Grade 10 are more than 10 points higher for the scholarship winners. The Compassionate Heart Scholars were, on average, scoring nearly 80 points on their maths tests; the rest of the class did not reach 73 points. The young women and men that ultimately were elected as Compassionate Heart Scholars were indeed scholars in the academic sense of the term.

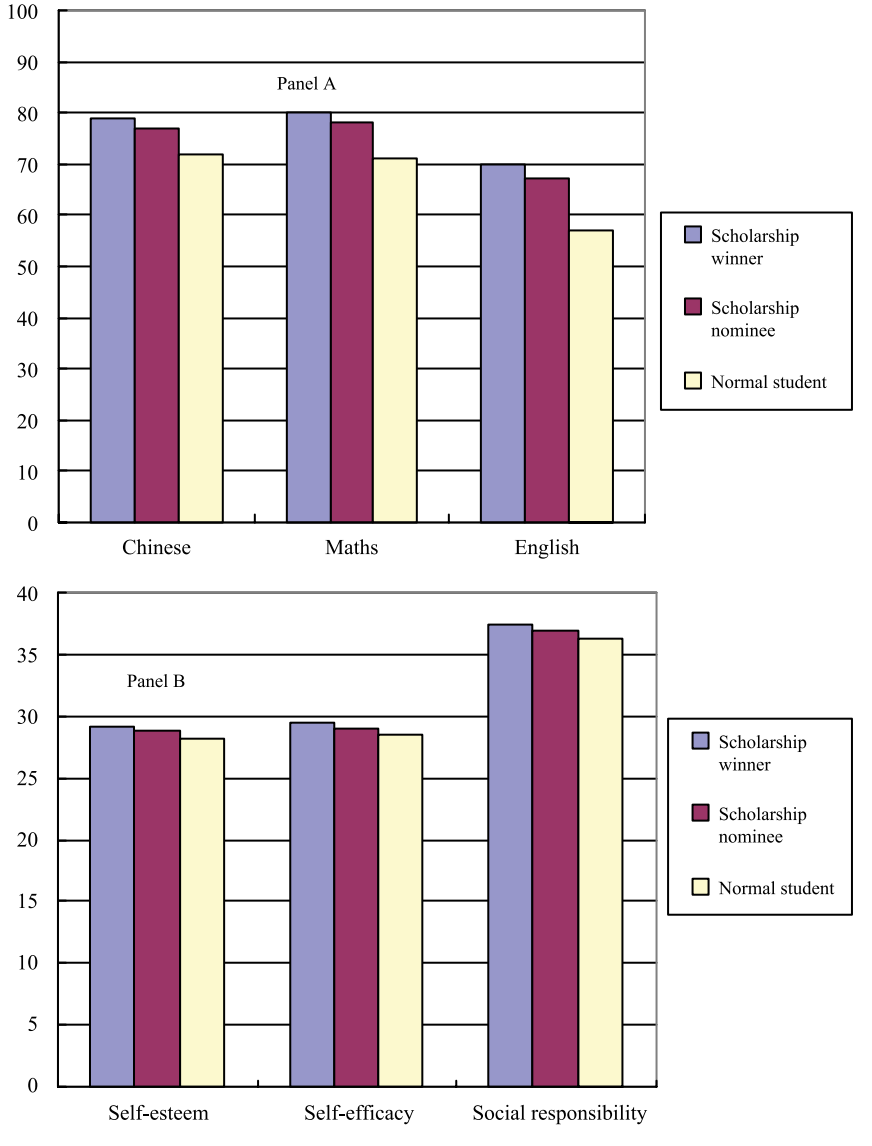

Figure 1. Standardised test score between scholarship winners and normal students before election (Round 1 Survey)

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Interestingly, the differences between the Compassionate Heart Scholars and the nominees are much smaller. For example, the difference in maths scores between the soon-to-be elected Compassionate Heart Scholars and the soon-to-be nominated nominees (but not elected) was only two points and not statistically significant at the 10% level. This is important because it shows that when students were nominating candidates, they were choosing students that all had higher scores. Therefore, if we ultimately find differences between the Compassionate Heart Scholars and the nominees we will have a firmer basis on which to state that the observed difference was due to the programme (and not due to the process by which the Compassionate Heart Scholars were elected).

On average, the chosen Compassionate Heart Scholars also had higher self-esteem and self-efficacy than all other students (Figure 1, Panel B). Before the launching of the programme, the authors' survey team administered a self-esteem test to all of the more than 10,000 students in the study. After scoring the test using the standard scoring scale, we found that the soon-to-be Compassionate Heart Scholars were not only smarter, they also had higher self-esteem. The raw scores of the scholarship winners were higher (statistically significant at the 10% level) than the class average of those that were nominated and did not win as well as those that were not nominated at all. More than one-third of the future Compassionate Heart Scholars scored above 30, a score thought to mean that the test taker had extremely high self-esteem. Only around one-quarter of those that did not win a scholarship scored above 30. The differences also are statistically significant at the 10% level in self-efficacy between the soon-to-be elected Compassionate Heart Scholars and other students (the soon-to-be nominated nominees but not elected and normal students).

As before, however, this difference disappears when comparing the self-esteem test scores and the self-efficacy scores between Compassionate Heart Scholars and nominees (Figure 1, Panel B). The difference in self-esteem scores between the soon-to-be elected Compassionate Heart Scholars and the soon-to-be nominated nominees (but not elected) was only 0.3 points. And there is no difference in the test score of self-efficacy between Compassionate Heart Scholars and nominees statistically.

Perhaps most importantly, given the ultimate objective of the programme, the students in the Cyrus Tang Foundation's Scholarship Program elected Compassionate Heart Scholars who scored higher on our baseline test that sought to measure the student's commitment to living a 'socially responsible life with high morals'. Out of a total score of 44, the winners of the Compassionate Heart Scholars scored 37.4 points, a level that was higher (statistically significant at the 10% level) than the students in the rest of the class. This finding strengthens the expectation that the programme will have very good role models. Even before the programme (either the election or the participation in the Compassionate Heart projects), Compassionate Heart Scholars were more socially responsible. The difference between the Compassionate Heart Scholars and nominees, however, was not statistically significant (Figure 1, Panel B).

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Determinants of who was elected to be a Compassionate Heart Scholar

Using multivariate analysis, we also discovered that these results hold up (Table 1). According to our analysis, other things held constant, the students that had higher grades, higher self-esteem, more self-efficacy and were already more socially responsible were the exact ones that were being elected. They were also the ones being nominated.

Interestingly, however, despite the fact that the scholars were outstanding young individuals in many different respects, students also tended to elect those students who were somewhat poorer.[8] More than 20% of the scholarship winners were from families so poor that they did not have a house or their house was worth less than 5000 yuan (certainly a house made out of mud and straw). In contrast, fewer than 10% of those with houses worth more than 50,000 yuan were selected by their peers, which is similar to the findings of multivariate analysis in Table 1.

Table 1. The relationship between student characteristics and scholarship election (Round 1 Survey)

Dependent variables	Whether or not the student is a scholarship winner (0 = no, 1 = yes)					
	(1)	(2)	(3)	(4)	(5)	(6)
Chinese test score	0.002 (8.84)***					
Maths test score		0.002 (10.47) ***				
English test score			0.001 (8.89) ***			
Self-esteem score				0.004 (4.76) ***		
Self-efficacy score					0.001 (1.88)*	
Social responsibility score						0.005 (5.66) ***
Gender (0 = male, 1 = female)	−0.012 (−2.16) **	−0.000 (−0.05)	−0.011 (−1.95)*	−0.005 (−1.00)	−0.004 (−0.74)	−0.009 (−1.66)*
House valued above 10,000 yuan RMB (0 = no,1 = yes)	−0.013	−0.015	−0.014	−0.015	−0.010	−0.009
Grade 10 dummy (0 = no,1 = yes)	−0.015 (−1.95)* (−2.41) **	−0.009 (−1.25) (−2.75) ***	−0.005 (−0.62) (−2.46) **	−0.004 (−0.61) (−2.84) ***	−0.001 (−0.16) (−1.81)*	−0.002 (−0.33) (−1.79)*
Constant	−0.102 (–5.88) ***	−0.089 (–6.57) ***	−0.033 (–3.64) ***	−0.059 (–2.62) ***	0.016 (1.00)	–0.125 (−4.11)***
Observations	11635	11635	11635	11635	11635	11635
R-squared	0.05	0.06	0.07	0.05	0.04	0.05

Notes: ***$p < 0.01$, **$p < 0.05$, *$p < 0.1$; t statistics in parentheses; for grade dummy, the base is Grade 7

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Hence, the results of the baseline surveys—before the programme was even launched—provide good news. The Tang Foundation programme officers should be heartened in that the students in their programme schools are nominating and electing students who are outstanding and have the characteristics of students that they should want as a role model.

However, these results also raise a cautionary flag for those interested in trying to isolate the relationship among community service, social responsibility and grades. It also makes the evaluation of the project more complicated. If the purpose of the programme is to improve grades, bolster self-esteem, raise self-efficacy and teach social responsibility, it is possible that the way that the students are elected is actually making the job more difficult (or perhaps redundant). If the students already have high grades, high self-esteem, high self-efficacy and are relatively socially responsible, can any programme make them better? This is why in the next sections of the analysis we need to look at *differences* over time (between Round 1 and Round 2 and between Round 2 and Round 3) rather than across student groups. It is also the reason that we need to compare the results of the changes of the Compassionate Heart Scholars and the nominees. It is not enough to find that the grades, self-esteem, self-efficacy and sense of social responsibility are high after the implementation of the programme, since those that participated in the programme already excelled in all of those areas. The main metric, then, will be if the Compassionate Heart Scholars improve over time more than the rest of the students (and more especially if they improve more than the nominees).

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Do elections matter? (Results of Round 2)

To evaluate the impact of the first part of the Compassionate Heart Program—that is, after the nomination and election of the Compassionate Heart Scholars, but before the community service began—we collected data during the Round 2 Survey (or our first evaluation survey). After collecting the Round 2 Survey data, we then calculated the differences in the outcome variables for three types of students—Compassionate Heart Scholars, nominees and normal students. In all cases, we calibrate and report the differences relative to the normal students (as a control group).

According to the first round of our evaluation surveys, the election process—both the nomination and the election—appears to have a positive effect on standardised test scores. As Table 2 shows, both the Compassionate Heart Scholars and Compassionate Heart nominees improved their test scores more than the rest of the students (Table 2, Rows 1 to 3). The students who were ultimately elected to be the Compassionate Heart Scholars improved their scores in Chinese, maths and English by about 10 points more than the rest of the students, which was statistically significant at the 1% level. Interestingly, the evaluation survey supports the assertions of the Tang Foundation leadership who have been quoted as saying that they believed their programme improved the grades of students. What may be surprising, however, is that the improvement in the standardised test scores occurred as a result of the process of being elected itself—even before there were any community service activities.

Table 2. Changes in standardised test scores, self-esteem/self-efficacy test scores and scores from the test of social responsibility of scholars, nominees and regular students from before to after the Compassionate Heart Scholar's election (Round 1 Survey versus Round 2 Survey test scores)

Test type	Normal student	Difference between scholarship winner and normal student	Difference between scholarship nominee and normal student	Difference between scholarship winner and nominee
Chinese	0	8.7 (0.00)***	7.1 (0.00) ***	1.6 (0.09)*
Maths	0	15.8 (0.00) ***	12.2 (0.00) ***	3.6 (0.05)*
English	0	15.0 (0.00) ***	12.3 (0.00) ***	2.7 (0.07)*
Self-esteem	0	1.03 (0.03)**	0.77 (0.04)**	0.26 (0.62)
Self-efficacy	0	0.08 (0.89)	0.24 (0.64)	−0.16 (0.82)
Social responsibility	0	0.14 (0.73)	0.36 (0.39)	0.22 (0.61)

Notes: p-values in parentheses: ***$p < 0.01$, **$p < 0.05$, *$p < 0.1$

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One explanation was discovered during interviews of the students (undertaken after the surveys were completed): students told us that after they were nominated/elected they felt that they must work extra hard to prove to their classmates that they were deserving of their classmates' support. For example, one student from the junior high programme told us, 'When I found out about the election result, I could not believe that I had been elected. I felt so proud of myself. I decided right then that I would try as hard as I could to live up to the qualifications of Compassionate Heart Scholars.' A high school student explained, 'They trusted me so they elected me as the Compassionate Heart Scholar. After that I decided that I had to study harder, be honest and try my best to help others.'

Importantly, the test scores of the Compassionate Heart Scholars also rose more than the scores of the nominees. This difference is statistically significant at the 10% level. This means that the election itself appears to have contributed to part of the rise. The fact that the nominees also scored significantly higher than normal students may mean that the fact that they were nominated gave them additional incentive to work harder. Alternatively, it could be that the students who were nominated (and elected) would have improved even without the election.

Grades may also have risen due to a rise in the self-esteem of Compassionate Heart Scholars and nominees (Table 2, Row 4). According to our analysis, after the election (and before the community service phase of the programme), the scores on the self-esteem test rose more for scholars and nominees than the rest of the students and this is statistically significant at the 5% level. Because we are examining differences, we find that the election apparently had the effect of increasing self-esteem. The self-esteem scores of Compassionate Heart Scholars (nominees) were not only higher to start with (see discussion above), they rose by 1 point (0.8 points) more than those of the rest of the students. The election part of the Tang Foundation Program clearly is an important component of the overall process.

Significantly, however, self-efficacy and the sense of social responsibility were not affected by the elections (Table 2, Rows 5 to 6). And, in fact, this might be what we should expect. Since the only programmatic activity that occurred between the baseline (Round 1) and the first evaluation survey (Round 2) was the election, there is no reason to believe that self-efficacy should rise. Self-efficacy is often thought to be built up by experience in overcoming challenges. Since students did not have the opportunity to design, organise and implement their own community service projects, there may have been no opportunity to build self-efficacy. The same is true with their sense of social responsibility. In short, the election part of the Tang Foundation Compassionate Heart Scholars Program is important, but only for performance on cognitive scores and self-esteem—self-efficacy and social responsibility were not affected.

Impact of community service (Results of Round 3)

The results of the Round 3 Survey (or the second evaluation survey—which was used to compare the changes in the outcome variables before and after the community service component of the Compassionate Heart Scholars Program) demonstrate that community service is complementary to the election phase of the programme. Whereas the elections did not affect self-efficacy and social responsibility, our results clearly show that community service does. According to Table 3 (Row 5), between the Round 2 and 3 surveys, the self-efficacy of Compassionate Heart Scholars (those who were the core members of the Compassionate Heart Clubs which helped design, organise and implement community service programmes) rose relative to both nominees and the rest of the students (and this is statistically significant at the 10% level).

Likewise, Table 3 (Row 6) also shows that the sense of social responsibility of Compassionate Heart Scholars rose 0.7 points more than nominees and the rest of the students (which is statistically significant at the 10% level). Clearly,

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Table 3. Changes in standardised test scores, self-esteem/self-efficacy test scores and scores from the test of social responsibility of scholars, nominees and normal students from before to after the Compassionate Heart Scholars community service activities (Round 2 Survey versus Round 3 Survey test scores)

Test type	Normal student	Difference between scholarship winner and normal student	Difference between scholarship nominee and normal student	Difference between scholarship winner and nominee
Chinese	0	0.3 (0.83)	−1.3 (0.23)	1.6(0.22)
Maths	0	−0.6(0.71)	−0.7(0.55)	−0.1(0.93)
English	0	−0.5(0.65)	−0.4(0.70)	−0.1(0.95)
Self-esteem	0	−0.2(0.56)	−0.1(0.77)	−0.1(0.74)
Self-efficacy	0	0.7(1.65)*	0.3(0.84)	0.4(1.11)
Social responsibility	0	0.6(0.06)*	−0.2(0.39)	0.8(0.01)**

Notes: *p*-values in parentheses: $^{**}p < 0.05$, $^{*}p < 0.1$

one interpretation of our findings is that when students go out into society and do projects that help their communities (activities such as taking poor children to museums, visiting the elderly in nursing homes and cleaning up school yards, hospital grounds and other community spaces), their self-efficacy and sense of responsibility appear to grow.

While this increase in self-efficacy and social responsibility is heartening, policymakers (and parents and educators) are also worried about the cost of this social education. Does the time and effort spent in implementing community service projects negatively affect grades? Table 3 (Rows 1 to 3) shows that there is little difference between the test scores of Compassionate Heart Scholars, who spent on average 10 days performing community service, and the rest of the students, who did not participate in community service projects. It is important to note that the small difference that appears in the Table is not statistically significant. In other words, according to the Round 2 and 3 surveys, there is no perceptible fall in the test scores of those students that participated in community service.

Perhaps the more relevant question is: What is the overall academic impact, if any, experienced by the scholarship winners? To answer this question we compare the standardised test scores of Round 1 and 3 Surveys—before the programme and after *both* parts of the Compassionate Heart Program—the election *and* the community service parts (Table 4). The Compassionate Heart Scholars not only showed a dramatic and statistically significant increase in their standardised test scores over the programme period, but the increase in their scores also outpaced those of both the nominees and the rest of the students. Of course, as we know from the discussion above, this gain is almost all from the election part of the programme and not community service *per se*.

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Discussion and conclusion

Through our evaluation of the Tang Foundation's innovative Compassionate Heart Program, we have been able to demonstrate several key points. China's junior high school and high school students are apparently aware enough of their peers that when asked (through their nominations and votes), they are able to identify outstanding colleagues who are above average in many different dimensions. The evaluation also shows that when implemented in full—both the election part and the community service part of the Compassionate Heart Program—the Compassionate Heart Scholars improve their academic performance, self-esteem, self-efficacy and sense of social responsibility. Given that they improve more than even the nominees (who should be fairly similar in characteristics to those who ultimately won the election), the measured differences may actually be due to the programme (and not some unobserved ability of the students). Perhaps most importantly, while community service is shown to raise self-efficacy and social responsibility, even though students spend considerable time on these projects, it did not appear to lower test scores. These results hold up to both descriptive analysis and more rigorous multivariate analysis.

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Table 4. The effect of scholarship on performance of students (Round 1 and Round 3 Surveys)

	Improvement on Chinese test score	Improvement on maths test score	Improvement on English test score	Improvement on test score on self-esteem	Improvement on test score on self-efficacy	Improvement on test score on social responsibility
Scholarship winner dummy (0 = no, 1 = yes)	8.16 (4.37)***	13.98 (6.20)***	10.56 (3.64)***	1.07 (2.19)**	0.84 (1.69)*	0.65 (1.94)*
Scholarship nominee dummy (0 = no, 1 = yes)	4.13 (2.84)***	10.96 (6.24)***	9.15 (4.08)***	0.84 (2.21)**	0.29 (0.75)	−0.06 (−0.24)
Gender dummy (0 = male, 1 = female)	−2.05 (−1.67)*	3.60 (2.43)**	−3.76 (−1.97)**	0.09 (0.28)	0.18 (0.53)	0.20 (0.91)
House valued above 10,000 yuan RMB (0 = no, 1 = yes)	1.46 (1.15)	0.31 (0.21)	2.34 (1.20)	0.56 (1.69)*	0.19 (0.55)	0.22 (0.96)
Grade 10 dummy (0 = no, 1 = yes)	−10.56 (−7.76)***	−11.28 (−6.76)***	−19.12 (−9.16)***	−0.30 (−0.88)	−0.04 (−0.11)	−0.59 (−2.40)**
Constant	−12.17 (−10.19)***	−17.34 (−12.11)***	−4.89 (−2.59)***	1.30 (4.17)***	−1.30 (−3.98)***	0.46 (2.10)**
Observations	2284	2284	2284	2284	2284	2284
R-squared	0.10	0.13	0.14	0.01	0.01	0.02

Notes: *t*-statistics in parentheses; ***$p < 0.01$, **$p < 0.05$, *$p < 0.1$; for grade dummy, the base is Grade 7.

Therefore, if the call for introducing more community service into the curriculum is sincere, this study provides evidence that suggests that educators should go forward with community-service-oriented curricula and extra-curricular projects. The independent evaluation that we carried out shows community service appears to be win–win–win: win for the character of the student, win for their academic performance and win for the community.

Caution, however, needs to be exercised. Despite the strong findings in this evaluation, the results are only for two counties in one province of China. Moreover, the evaluation did not unambiguously identify the effects of the programme. The effects of the programme on measured outcomes (on standardised test scores, self-esteem, self-efficacy and social responsibility) were found for the Compassionate Heart Scholars, who were elected by their peers—at least partially on the basis of these very characteristics. If the improvement in these outcomes is associated with their beginning levels, the programme might have less of an impact. It is for this reason that in the future the Tang Foundation and other groups that are serious about understanding the true effects of community service programmes should make even more rigorous attempts to design and implement their programmes and have an even more powerful evaluation component built in.

As discussed above, it is important to remember that our results have to be interpreted with caution. The findings in this paper show that community service does have an effect on an individual's sense of social responsibility without compromising the individual's grades. However, the finding is really only valid in the context of the project in which it was evaluated—which focused on the students with special qualities (the Compassionate Heart Scholars and the nominees) in the class. The students that participated in the community service were those who had been nominated and elected by their peers. The stated criteria for choosing the Compassionate Heart Scholars included good grades and a sense of social responsibility. This means that students who participated in the community service projects were already academically good students who were interested in community service. In measuring the impacts we did compare the Compassionate Heart Scholars to the nominees. The point here, however, is that even if we had succeeded in isolating the effects (and absence of effects) of community service for the students with special qualities, there is no guarantee that once the programme is applied to ordinary students it will have similar impacts. We are also interested in the effect of community service on grades, self-esteem, self-efficacy and a sense of social responsibility for the ordinary student since we know it is difficult to promote the idea of community service for all students in all schools. Clearly, this paper's findings can be considered as a call for more research in this area.

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Notes

1. We necessarily limit the scope of this paper to only one facet of the development of civil society. One type of action that members of a community undertake in the expression of civil society is community service. This is the focus of our paper. There are other actions that members of a community might take, but we are not looking at these other actions. One of the forces of the emergence of civil society is the sharing of values. One such value is the value of taking on responsibility for the social problems one sees around oneself, known as social responsibility. In this paper we focus on the emergence of social responsibility, but we recognise that there are other forces that we do not look at.
2. Around China, the Tang Foundation was sponsoring 10 Compassionate Heart Programs in nine different provinces. One of the programmes is in Shaanxi Province. Since the authors are involved in a lot of other work on education in Shaanxi, we chose to evaluate the Shaanxi programme. In comparison to other programme sites, the Shaanxi site is relatively poor and more remote. This may mean that ideas of community service and social responsibility are even less prominent than other more developed regions in China. This may or may not affect the findings of the study.
3. Our enumerators—all 30 of them who spent up to a month in sample counties—were from the Chinese Academy of Sciences, Tsinghua University, Northwest University and Xian Jiaotong University.
4. When trying to measure the relationship between an explanatory variable of interest (in our case participation in community service as a Compassionate Heart Scholar) and one of the outcome variables (e.g. Chinese test scores etc.), it is important to control for all variables that both (1) have an effect on the outcome variable and (2) are correlated with the explanatory variable of interest. If these variables (e.g. a child's gender etc.) can be measured, they are considered *observables*, and their effect can be controlled for in our analysis by including the variables in a regression equation, allowing us to isolate the effect of the explanatory variable of interest. However, some factors (e.g. a child's behaviour in class, a child's ability, a child's IQ) cannot be measured (either it is too expensive to do so or the factor is impossible/extremely difficult to measure). These factors are considered *unobservables*. In our analysis, if we believe the unobservables of scholars and nominees are similar (since they are the three students in class that made it to the final round of the nomination/election process), then the regression analysis using a sample of scholars and nominees which examines the impact of community service on outcome variables while controlling for observables (that is by including variables that measure observable factors in the regressions as control variables) can produce unbiased estimates of community service on our outcome variables.
5. The Rosenberg Self-Esteem Test has been translated and used in China many times in the past (e.g. Cheng & Page, 1989; Farruggia *et al.*, 2004; Schmitt & Allik, 2005; Song *et al.*, in press). According to the authors, the internal reliability and factor structure of the test is psychometrically sound across many languages (including Mandarin). Because of this, we used the Chinese version of the Rosenberg Self-Esteem Test in the sample schools.
6. According to Scholz *et al.* (2002), the factor structure of the general self-efficacy scale has similar single-factor structure and psychometric properties for different populations in various nations (including Mandarin). Because of this, we used a Chinese version of the

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general self-efficacy scale in our sample schools. It also has been used by others (e.g. Wang *et al.*, 2001).

7. According to Kou (2002), the Moral-Social Responsibility test has high test-retest reliability and internal consistency. It is suitable for use in testing the moral development of Chinese adolescents. Because of this, we used a Chinese version of this test in our sample schools.
8. It should be noted that the students in the class were aware that the winner would receive a financial reward.

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Appendix 1. The Rosenberg Self-Esteem Scale

*Instructions: Below is a list of statements dealing with your general feelings about yourself. If you strongly agree, circle **SA**. If you agree with the statement, circle **A**. If you disagree, circle **D**. If you strongly disagree, circle **SD**.*

1. On the whole, I am satisfied with myself.
   SA -A -D -SD ⋆
2. At times, I think I am no good at all.
3. I feel that I have a number of good qualities.
4. I am able to do things as well as most other people.
5. I feel I do not have much to be proud of.
6. I certainly feel useless at times.
7. I feel that I'm a person of worth, at least on an equal plane with others.
8. I wish I could have more respect for myself.
9. All in all, I am inclined to feel that I am a failure.
10. I take a positive attitude toward myself.

⋆ *These options were listed for all 10 test items in the survey form.*

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Appendix 2. General Self-Efficacy Scale

Instructions: Below is a list of statements dealing with your general feelings about yourself. If you strongly agree, circle d). If you agree with the statement, circle c). If you disagree, circle b). If you strongly disagree, circle a).

1. I can always manage to solve difficult problems if I try hard enough.
   a) Not at all true b) Hardly true c) Moderately true d) Exactly true ⋆
2. If someone opposes me, I can find the means and ways to get what I want.
3. It is easy for me to stick to my aims and accomplish my goals.
4. I am confident that I could deal efficiently with unexpected events.
5. Thanks to my resourcefulness, I know how to handle unforeseen situations.
6. I can solve most problems if I invest the necessary effort.
7. I can remain calm when facing difficulties because I can rely on my coping abilities.
8. When I am confronted with a problem, I can usually find several solutions.
9. If I am in trouble, I can usually think of a solution.
10. I can usually handle whatever comes my way.

⋆ *These options were listed for all 10 test items in the survey form.*