Disentangling the Roles of Civic Information, Self-Efficacy, and Religious Authority in Youth Political Participation:

Evidence from a WhatsApp-based Experiment in Zambia[*]

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Abstract

What kinds of civic education programs prompt young voters to participate in politics? Some scholars point to the importance of providing information; others have focused on cultivating non-cognitive skills and trust. We bring new evidence to this debate from a community-collaborative field experiment around Zambia's 2021 elections. We randomized young adults into different versions of a WhatsApp course and compare attitudes and behavior after exposure to no civic content, civic information only, and civic information accompanied by either religious or non-religious motivational messages encouraging self-efficacy and grit. Because Zambia is a religious country with high trust in religious authorities, we expected the religious course to have the largest effects. Instead, the non-religious non-cognitive skills course was the most effective, particularly among women. The study underscores the promise of non-cognitive skills-focused interventions and cautions against assuming religiously motivated courses will increase political participation, even in highly religious contexts where they abound.

Introduction

Recently, scholars have called for more evidence about the influence of civic education programs on political participation (Campbell, 2019; Kavadias, Nohemi Jocabeth and Hemmerechts, 2020; Kaumba, Kabombwe and Mwanza, 2020). Civic education programs are widespread and receive millions of dollars from donors around the world. Yet, debate persists about whether such programs actually increase political participation. Surprisingly few studies have investigated the influence of civic education programs in young, developing democracies (c.f, Finkel and Smith, 2011; Finkel and Lim, 2020; Muyambwa, 2018), and findings from democracies in Europe and North America are mixed (Gainous and Martens, 2012; Green et al., 2011; Campbell, Niemi et al., 2016; Neundorf, Niemi and Smets, 2016; Holbein and Hillygus, 2020). Understanding the potential impact of civic education programs is particularly urgent in developing countries where young voting-age adults vastly outnumber older cohorts (i.e., a "youth bulge") but where youth are significantly less likely to participate in democratic politics (YouthMap, 2014; Adebayo, 2018; Resnick and Casale, 2011; Berinsky et al., 2016). Whether and what types of civic education programs increase political participation among young voting-age adults remain open questions.

Debate over the impact of civic education persists for both empirical and theoretical reasons. Empirically, most existing studies rely on observational analysis, which is subject to selection bias.[1] Theoretically, scholars lack consensus on the relevant barriers to young adults' political participation. For instance, a long-standing literature identifies *informational barriers*: Because young adults are newer to the political system, it may not yet be legible to them. This literature suggests that civic education can increase political participation by providing information and explaining the value of democratic participation (Gill et al., 2020; Campbell, 2004; Finkel, Horowitz and Rojo-Mendoza, 2012). Any compensatory gains should be largest for those with the least knowledge about democratic politics *ex ante* (Campbell, Niemi et al., 2016; Neundorf, Niemi and Smets, 2016; Gainous and Martens, 2012; Finkel and Smith, 2011). A second, more recent literature emphasizes the significance of *non-cognitive and motivational barriers* over informational ones (Holbein and Hillygus, 2020; Bergan et al., 2021; Berinsky et al., 2016). Young adults' relative lack of experience with the political system may not mean that they lack

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[1]For discussion and review, see Campbell (2019).

information but rather that they lack experience overcoming obstacles to participation—i.e., experiences of their own political efficacy. This literature suggests that civic education will increase young adults' political participation if it cultivates non-cognitive skills, such as grit and self-efficacy (Holbein and Hillygus, 2020). Participants with lower initial levels of non-cognitive skills presumably stand to gain the most. Additionally, a third strand of literature identifies *trust barriers*: Young adults frequently harbor deep skepticism toward political and civic messaging (Berinsky et al., 2016; Munger, 2022); where this occurs, civic education may increase political participation only when delivered by sources that youth trust and perceive as legitimate and authoritative.[2] Because religious leaders and scripture are the most trusted authorities among young adults in many parts of the world and are viewed as experts on such topics as endurance, grit, and individual efficacy (Nielsen, 2020), civic education backed by relevant religious authorities or texts (which is common in many parts of the world) may most effectively increase political participation among religious youth. Finally, scholars have emphasized *structural barriers* to youth participation, which civic education cannot typically alter. If the main barriers to young adults' participation are institutional, e.g., hefty registration requirements (Juelich and Coll, 2020; Grumbach and Hill, 2022), then civic education may not meaningfully increase political participation, regardless of its content.

This study contributes new evidence to these debates. We conducted a pre-registered field experiment in the months leading up to the August 2021 elections in Zambia—a country with a significant youth bulge and where donor-funded religious and non-religious civic education programs are widespread. We recruited and randomly assigned 1,183 young voting-age adults (ages 18-35) into different versions of a civic education program, which allowed us to compare levels of political knowledge and participation across: (1) a *no-civic information* condition, (2) a *civic information-only* condition designed to address informational barriers to participation, (3) a *non-religious motivational* condition designed to address non-cognitive barriers to participation while also providing civic information, and (4) a *religious motivational* condition aimed at addressing non-cognitive and trust barriers to participation while also providing civic information. We measured reported political knowledge and intentions to participate over several

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[2]Emphasis on trusted sources resembles the inclusion of perceived social norms in behavior change models within social psychology and HIV-prevention science, as discussed below (Glasford, 2008).

weeks following the course and also collected measures of actual and reported participation in the lead-up to and following the general elections.

The study employed a community-collaborative approach. The Zambia-US coauthor team worked closely with Zambia's major religious coalitions to design a WhatsApp-based civic education intervention that reflected basic civic education curricula used in both religious and secular civic education programs in Zambia. This community-collaborative approach allowed us to ensure the relevance of our study to practitioners and to better approximate real-world civic education programs while also proceeding in a methodologically rigorous, culturally appropriate, non-partisan, and COVID-safe manner. The study was conducted entirely through remote means (WhatsApp and phone) due to COVID-19.

Because Zambia is a highly religious and overwhelmingly Christian country with a robust history of Christian-infused civic education programming and high levels of youth trust in religious authorities, we expected that the religious civics course would have the largest and most robust effects on political participation of the conditions tested. Instead, we found the non-religious course focused on non-cognitive skills to be the most effective. The non-cognitive, non-religious course increased intent to participate around the general elections, compared to other versions of the course, and it increased actual participation among young women, who exhibited lower levels of political engagement than men prior to the study. The magnitude of these effects were comparable to effects of many common get-out-the-vote strategies (Green and Gerber, 2019). Our findings bolster the focus of recent scholarship (Holbein and Hillygus, 2020; Berinsky et al., 2016; Glasford, 2008; Blaskó, da Costa and Vera-Toscano, 2019) on non-cognitive and motivational barriers to youth electoral participation and demonstrate the possible compensatory effects of this type of civic education.

By contrast, we found that the influences of the information-only and religious courses on participation were negligible. The information-only course did increase political knowledge, compared to receiving no civic information at all, but it did not bolster inclinations to participate in politics. The religious course also did very little to move political participation. In exploratory analyses, we find that the religious course led many participants, particularly those who did not occupy leaderships positions within their churches (e.g., as youth group leaders), to strengthen their expectations that *other* members of their churches would participate in politics in their

stead. Thus, by priming listeners to think about their religious identities and memberships in church communities, the religious course appears to have had an unintended free-riding effect, countering any non-cognitive skills gains from the course.

The paper makes several contributions. Campbell (2019) and Kavadias, Nohemi Jocabeth and Hemmerechts (2020) note that there are still relatively few experimental evaluations of civic education programs (c.f., Green et al., 2011; Holbein and Hillygus, 2020). There are also still relatively few studies of civic education in the Global South, even though civic education programs are prevalent and young voters are particularly numerous in both relative and absolute terms (c.f., Finkel and Smith, 2011; Finkel and Lim, 2020). We address these gaps in evidence by conducting a community-collaborative experimental study in Zambia. Ours is also among the first studies, to our knowledge, of the effects of a religious civic education program (c.f. Sperber, Kaaba and McClendon, Forthcoming),[3] even though much civic education around the world is designed and implemented by religious institutions. In particular, Christian churches are—and have been—*major* providers of civic education programming and pro-democracy mobilization in many highly religious democracies around the world (Gifford, 1995; Toft, Philpott and Shah, 2011; Smith, 2019). Nevertheless, little prior research has examined the potentially distinct consequences of religious civic education.

This paper also advances our understanding of youth political participation. In many places around the world, young voters participate at far lower rates than older voters (Adebayo, 2018; Berinsky et al., 2016; Holbein and Hillygus, 2020; YouthMap, 2014), and rates of participation are even lower for young women than for young men (Resnick and Casale, 2011). Some policymakers and activists argue that the future of democracy "depend[s] critically" on increasing younger citizens' "active political engagement" (Bratton, Dulani and Nkomo, 2017, 15-16). Although we do not assess factors that increase youth participation relative to the participation of older cohorts in this study, we do advance knowledge about which factors increase youth participation in absolute terms, and which factors reduce gender gaps in participation among youth. In particular, our findings underscore the role that civic education aimed at developing non-cognitive skills can play in increasing youth participation in general and young women's

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[3]Bryan, Choi and Karlan (2018) notably conduct an experiment evaluating the impact of a religious training course on economic outcomes, including on measures of "grit."

political participation in particular.

Finally, this study has implications for understanding the role of religion in political life. It cautions against assuming a large and universal influence of religious civic education on participation even in highly religious settings. Although religious ideas have enormous potential to inspire, affirm and mobilize (McClendon and Riedl, 2019; Djupe and Gilbert, 2008; Harris, 1999; Sperber, Kaaba and McClendon, 2021), they may also prime impulses toward deference and hierarchy (Marshall, 2009; McCauley, 2013), or remind people of communities off of which they might free-ride. These priming effects could, under some circumstances, have countervailing consequences for political participation. Future research might fruitfully investigate this aspect of religion and political participation, both among youth and older adults. As we discuss below, there is some evidence in our study that the consequences of the religious course were to increase the political participation of church leaders while not moving or depressing the political participation of non-leaders. These apparent heterogeneous effects further underscore how the content of civic education can influence the distribution of political involvement across groups.

Civic Education and Young Adult Political Participation

A long-standing literature has argued that civic education programs based on information and democratic values can both inform *and* mobilize (Nie, Junn and Stehlik-Barry, 1996; Gill et al., 2020).[4] This conventional wisdom often assumes that by giving people more information about how democracy works, and by defining democracy as a participatory mode of government, civic education programs intrinsically motivate participants to participate by instilling pro-democratic (i.e., pro-participatory) values and making the system more legible. Thus, increases in knowledge and increases in mobilization are said to go hand in hand. Although learning and mobilization effects may be stronger for those with less political knowledge to begin with, or those with less prior socialization into the importance of participation—a kind of "compensation effect" (Campbell, Niemi et al., 2016; Neundorf, Niemi and Smets, 2016; Finkel, Horowitz and Rojo-Mendoza, 2012; Gainous and Martens, 2012)—these studies suggest that civic information alone increases political participation. A tremendous amount of funding has been invested in civic

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[4]See also Campbell (2019) for a review.

education programs around the world based on these assumptions (Finkel and Lim, 2020).

Yet, a small set of recent experimental studies reject the idea that civic information alone, even coupled with normative endorsements of the importance of participation, is sufficient to increase political participation (Green et al., 2011; Corner et al., 2015; Berinsky et al., 2016). For example, Green et al. (2011) found that providing information was not sufficient to persuade young people that certain types of institutions and rights were normatively important (see also, Finkel and Lim, 2020; Berinsky et al., 2016). Additionally, scholars have argued that relying on information and normative arguments about the importance of participation may ignore other important barriers to political participation that are particularly relevant for youth. In research on youth turnout in the United States, Holbein and Hillygus (2020), Condon and Holleque (2013) and others point instead to social psychological factors, such as grit (resilience) and self-efficacy as essential for youth civic engagement (Duckworth and Quinn, 2009). Young adults, in particular, they argue, often lack experienced-based strategies to overcome barriers to participation, and may also lack a strong sense of political efficacy. Youth may be at a stage of social-psychological development in which follow-through is particularly challenging. A relative dearth of these non-cognitive resources may therefore result in lower levels of participation because individuals do not believe their actions will matter or because they give up in the face of common obstacles to participation (e.g., complicated registration processes, long voting lines, intimidation). Youth, the authors argue, often "want to participate [in politics] and intend to do so, but many fail to actually follow through on their political goals or ambitions" (2020: 71). By contrast, Holbein and Hillygus (2020)'s research suggests that incorporating grit-enhancing motivational messages into civic education programs can help promote programmatic impacts on political participation.[5]

Notably, however, research on youth political behavior also underscores *trust barriers* to youth participation. Across many countries today, young voting-age adults perceive a genera-

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[5]Interestingly, this emphasis on non-cognitive skills and motivation in political science resonates with theories of civic engagement in educational and social psychology. In these fields, scholars have synthesized insights from the theory of reasoned action (Fishbein and Ajzen, 1980), the theory of planned behavior (Ajzen, 1985; Fishbein and Ajzen, 2005)), and the more recent "Information-Motivation-Behavior" (IMB) model pioneered by HIV prevention scientists (Fisher et al., 1996; Fisher, Fisher and Shuper, 2014) to study how motivation, social norms, and non-cognitive skills (e.g., efficacy) relate to youth political participation in the US (Glasford, 2008) and Europe (Eckstein, Noack and Gniewosz, 2013; Blaskó, da Costa and Vera-Toscano, 2019). Most relevant for this paper is the shared contention in psychology research that information alone rarely causes individuals to adopt behavior change, especially if there are costs associated with the new behavior.

tional divide between themselves and older cohorts, and the older cohorts largely control political institutions (Munger, 2022; Adebayo, 2018; Phillips, 2010). Cynicism about the responsiveness of these institutions may be leading young voting-age adults to withdraw from the political arena and to express skepticism toward messages designed to inspire them to participate (Strama, 1998; Berinsky et al., 2016). As a result, civic education programs, even those designed to address informational and non-cognitive skills barriers to youth participation, may fall on deaf ears if not delivered from trusted, authoritative sources. Importantly, in many parts of the world, religious leaders are among the most trusted, if not the most trusted, authorities around (Blair et al., 2021; Bompani and Valois, 2017). In sub-Saharan Africa, religious authorities regularly outrank other political and social actors as trusted sources, among youth as well as among older cohorts.[6] In particular, in highly religious places, religious leaders and scripture enjoy expert status in the domain of "character" (Nielsen, 2020). That is, religious sources are sought out for guidance on how to comport oneself in difficult situations, how to make decisions and how to endure difficulties (Bryan, Choi and Karlan, 2018). On the subject of non-cognitive skills, such as persistence, grit and agency, religious sources are likely to be trusted, authoritative guides.

A body of research in political science has documented that exposure to religious motivational messages can have substantial consequences for individual-level political behavior, even in highly religious places where such messaging is ubiquitous (e.g., McClendon and Riedl, 2019, 2015; Sperber, Kaaba and McClendon, Forthcoming). One might suppose that in highly religious places religious ideas would be chronically available (Tesler, 2015) and that religious messaging may therefore have little effect on political behavior. Yet, studies have consistently found that religious priming, even when it is very subtle, influences religious individuals' beliefs and behavior (Gervais and Norenzayan, 2012; Norenzayan, 2013; McClendon and Riedl, 2019; Djupe and Smith, 2019). Religion is a *practice* (Luhrmann, 2012). People may have difficulty holding religious ideas in their heads, and can thus be primed and re-primed when they return to religious sources. In Kenya, McClendon and Riedl (2019) found that exposure to a "power of faith" message typical of Pentecostal preaching increased political participation among both Pentecostals

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[6]In the Afrobarometer in Zambia in 2014-2015, for instance, 68% of participants aged 18-35 say they trust religious leaders "a lot." The next most trusted authorities (59%) among this age group are traditional leaders. By contrast, the judiciary, president, electoral commission, parliament, police and local councils enjoy far less trust.

and other types of Christians. "Power of faith" messages were able to increase political participation among many different types of religious adherents and even among the most fervent practitioners. In other words, religious messages might be highly influential even in religiously saturated contexts. Regarding civic education programs, one might expect that, where trust in religious sources is high, religious civic education focused on boosting non-cognitive resources might be more effective at increasing political participation than non-religious equivalents.

This theoretical framework led us to pre-register the following expectations: (1) that motivated non-cognitive skills courses (either religious or non-religious) would increase youth participation over and above the information-only course, and (2) that a religiously motivated course would increase youth participation over and above its non-religious equivalent. We expected these patterns because the non-cognitive skills courses address barriers to youth participation beyond a lack of information alone and because, in a highly religious context, the religious course is likely to be trusted and authoritative on the subject of non-cognitive resources. Additionally, in light of prior studies that have found civic education courses to have compensatory effects (Campbell, Niemi et al., 2016; Neundorf, Niemi and Smets, 2016; Finkel and Smith, 2011), we pre-registered an expectation that both the non-religious and, especially, the religious courses would exert a greater impact on women. That is, prior studies have found that youth who, before the course, exhibited the lowest levels of political participation and who face the highest barriers to participation are likely to see the largest effects of the course on their political participation, thus closing participation gaps among those enrolled in the course. It is well documented that, in many parts of the world, women participate in politics at lower rates than men, often also exhibiting lower levels of political knowledge and weaker senses of political efficacy.[7] Women also tend to be more religious than men and thus are likely to be find religious messaging appealing (Trzebiatowska and Bruce, 2012). For these reasons, we expected that the non-cognitive courses, and in particular the religious non-cognitive course, would have larger and more robust effects on women's participation than on men's. We anticipated that the information-only course would have less of an effect on political participation, because it does not address other barriers to youth participation.

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[7]Worldwide, it is common for men to be included in political socialization and formal education more often than women, or even for women to be formally excluded from the political sphere (Logan and Bratton, 2006; Fraile and Gomez, 2017; Verba, Burns and Schlozman, 1997; Dolan and Hansen, 2020; Teele, 2018; Pereira, 2019).

As noted above, some authors have argued that the most important barriers to youth participation have nothing to do with information, skills, or trust, and are instead institutional and structural. For instance, registration requirements are substantial in many countries and present significant hurdles for new participants, regardless of how much information about registration requirements those participants are exposed to (Grumbach and Hill, 2022; Harris, Kamindo and Van der Windt, 2021). Participation could be prohibitively costly, because of these formal requirements, or because of other structural barriers in society or the economy. At the extreme, this argument implies that civic education courses will not significantly impact youth registration or turnout because they cannot alter structural hurdles. This extreme version of a structural argument provides us with the null hypothesis that no version of the civic course will significantly increase political participation, even if the course increases youth knowledge about politics.

It is also important to note that, apart from conveying authority, religious messages can prime a bundle of other considerations (McClendon and Beatty Riedl, 2021). A course infused with religious sources can convey expertise and compel trust (Nielsen, 2020; McClendon and Riedl, 2019; Norenzayan, 2013), but it may also prime other associations. For instance, it might remind people about religious organizations and communities. Such organizations and communities are often hierarchical (McCauley, 2013) and, even if not hierarchical, they are subject to collective action dilemmas. It is therefore possible that these priming effects might counteract any positive effects related to religious authorities helping to overcome trust barriers to youth participation. To be clear, these are not consequences that we anticipated *ex ante*. We return to them in our exploration and discussion of unanticipated results.

To summarize, our main *ex ante* expectations were: (1) that the information-only course would increase political knowledge, relative to exposure no civic content; (2) that the religiously motivated non-cognitive course would increase political participation compared to both the information-only course and the non-religious, non-cognitive course; (3) that the religious and non-religious motivated non-cognitive courses would increase political participation primarily by increasing self-efficacy and grit; and (4) that the effects of the non-cognitive skills courses would be larger among women than men.

The Zambian Context

We conducted a community-collaborative field experiment in Zambia to test our *ex ante* expectations. Zambia was an analytically appropriate site for the study for several reasons. First, Zambia has a significant youth bulge and lower turnout among youth than other cohorts. Of all world regions, sub-Saharan Africa has the largest share of youth (United Nations, 2018).[8] And among sub-Saharan African states, Zambia has one of the most youth-skewed and fastest growing populations (Ibid). Additionally, Zambia experienced a troubling decline in turnout in the decade prior to 2021, when we conducted our experiment. Although comprehensive data on *youth* turnout was not available, Afrobarometer data indicated that Zambian youth—especially young women—voted at significantly lower rates than older cohorts. Hence, civic organizations, including our local partner organizations, viewed the education and mobilization of young and informed voters as critical to Zambia's political future.

Second, faith-based programming is central to civic education and political mobilization in Zambia, where major faith based organizations provide civic education opportunities alongside of secular organizations in all Zambian provinces and nearly all districts. Indeed, Zambia's major churches played leading roles in the promotion of democracy and civic engagement, including in Zambia's transition to multipartism (Toft, Philpott and Shah, 2011; Gifford, 1998). In more recent decades, the Catholic and Mainline Protestant churches, especially, have continued to promote accountable democratic governance (Cheyeka, 2020; Sperber, 2017). In 2015, Zambia's major religious coalitions united to establish the Christian Churches Monitoring Group (CCMG), Zambia's most prominent domestic election observation and civic education organization. CCMG (a community partner organization on this study) includes Catholic, Mainline Protestant, Evangelical and Pentecostal churches. Among young Zambians, religious authorities are also the most trusted political authorities.[9] Thus, Zambia was an appropriate site in which to investigate whether religious civic education could appeal to youth who might otherwise be skeptical of civics messaging.

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[8]By 2040, sub-Saharan Africa is expected to have "almost three times the youth of the United States and Europe combined" (Goldstone, 2019). Here, youth is defined to include ages 15–24; projections are from UN Population Division (2018).

[9]In the 2014-2015 Afrobarometer, 68% of Zambians 18-35 trusted religious authorities a lot; the next most trust authority enjoyed such support from 59% of participants.

Third, Zambians are highly religious and overwhelmingly Christian,[10] and religion was not correlated strictly with ethnic[11] or partisan identities. This allowed us to implement the study without introducing foreign, intrusive, or divisive material. According to Afrobarometer data (2018), ninety-three percent of Zambians report that religion is "very important" in their lives, the vast majority report attending church frequently, and only about 1% of participants in that survey reported belonging to a religion other than Christianity. Additionally, the ubiquity of Christian messages in public life means that participants are routinely exposed to the content of different Christian denominations, incidentally or purposefully. Furthermore, although religion and ethnicity correlated in some parts of Zambia historically, this association is now weaker, especially among urban youth, who are the focus of our study.[12] Recent survey evidence reveals no generalizable correlation between the strength of ethnic identification (as opposed to national identification) and denominational affiliation (e.g., as a Catholic, Protestant or Pentecostal). Prior to this election season, there were also no clear, durable associations between particular denominations and political parties, due largely to Zambia's weak and volatile party system (Riedl, 2014). To the extent that a political party appeared to ally with a religious group at a given point in time (Sperber and Hern, 2018; Cheyeka, 2020), this association often did not withstand shifts in the ruling party.

Finally, Zambia was a site with an upcoming, competitive election in which we could ethically study political behavior during an election cycle. (We discuss ethical considerations below.) The 12 August 2021 general elections centered around competition between the incumbent Patriotic Front (PF), with President Edgar Lungu running for a second term, and the opposition United Party for National Development (UPND), with Hakainde Hichilema as its presidential candidate.[13] Ultimately, Hichilema won the Presidency with 59% of the vote. The UPND also

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[10]Zambia mirrors regional demographic trends: The Catholic Church is the largest single denomination, with other Christians typically identifying as mainline Protestant, Evangelical, Pentecostal, African Independent or Seventh Day Adventist.

[11]We define ethnicity in terms of characteristics commonly perceived as hereditary – namely, tribe, "race," and native language.

[12]As in other countries, Christian missionaries in Zambia settled among particular ethnic groups (Posner, 2005). Yet, several factors have scrambled associations between denomination and ethnicity, especially since the 1960s. For instance, major Protestant denominations with different ethnic "bases" merged in 1965 to form the United Church of Zambia. The Catholic Church also drastically expanded its membership across Zambia since the 1960s, confounding the historic correlation of Catholicism and certain ethno-regional identities. And, as urbanization and migration increased opportunities for African Independent and Pentecostal churches to spread rapidly in Zambia, religious identity has become evermore likely to cross-cut ethnic identity.

[13]We were barred from asking participants about their partisan preferences by the UNZA research ethics

won 46% of the parliamentary seats and became the largest party parliament.The transition of power was largely peaceful. In 2016, Lungu (PF) defeated Hichilema in an extremely close contest, marred by documented incidents of electoral violence and widespread allegations of electoral fraud. But the 2021 elections proved relatively peaceful.[14]

Community-Collaborative Approach

Defining features of a community-collaborative approach include an enduring commitment to work cooperatively with community partners as equals throughout the process of research design and implementation; and the pursuit of *mutual* benefits for community partners and researchers.[15] As researchers, we were interested in abstract questions about the causal impact of messages. Our partners sought actionable feedback on civic education programming strategies to reach youth.

Our study stemmed originally from Sperber's conversations with Zambian religious and community leaders while conducting fieldwork on religion and politics in Zambia between 2011 and 2018. After joining together as a research team in 2018, Sperber, Kaaba and McClendon worked with Caritas Zambia and the Protestant Council of Churches in Zambia (CCZ) to design studies and course content together to answer questions of interest both to the researchers and to the partner organizations. Additionally, we invited the Evangelical Fellowship of Zambia (EFZ) and the Christian Churches Monitoring Group (CCMG) to work with us. Subsequently, these organizations provided useful consultation, support and guidance as well.[16] We refer collectively to these organizations as "partner organizations." IRB approval for this project was granted by the research ethics review committee at the University of Zambia and the IRBs of the two affiliated US Universities.

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committee.

[14]It is widely believed that Lungu's clear loss at the polls helped prevent violence.

[15]For useful overviews see Binet et al. (2019); Nyström et al. (2018); Pasick et al. (2010).

[16]Overall, we had a harder time connecting with EFZ under pandemic conditions. CCMG—which includes EFZ as a member organization – remained a supporter of the study.

Ethical Considerations

As noted, Zambia is an overwhelmingly Christian country. Wide-ranging Christian messages are ubiquitous in public and daily life. Hence, it is unlikely that religious communication in the civics course exposed participants to foreign, new or potentially jarring ideas; rather, their inclusion helps us understand the consequences of exposure to messages that were and are prominent in public discourse (Cheyeka, 2008). We thus follow the guidance of Nielsen (2015) for designing ethical studies of religious stimuli. The curricula drew on civic education programs already conducted in Zambia. Our partner organizations and local principal investigator viewed them as contextually appropriate and unlikely to introduce participants to anything above minimal risks. All information provided in the curricula was accurate to our knowledge and provided in a non-partisan fashion. Ex ante, we did not expect that any of the course content would depress political knowledge or participation but only that some versions of the course content might increase political knowledge and participation more than others. Participation in all parts of the study was voluntary and informed, and we did not ask any highly sensitive questions in any of our surveys. Similarly, we did not offer participants the opportunity to engage in high-risk activities. Data collection, storage and transmission were carefully designed to protect participants privacy.[17] Although the study took place just before a general election and was composed of interventions aimed at increasing youth participation in that election, the content was nonpartisan and our sample was too small and too dispersed to influence aggregate election outcomes.

Research Design

We enrolled 1,183 young voting-age adults in a WhatsApp-based field experiment in the lead-up to the 2021 Zambian general elections. Because it took place during the COVID-19 pandemic, the study included *no* face-to-face contact between researchers and participants, or among participants. All research design decisions were made in collaboration with our community partners with the shared goal of protecting community health by omitting all face-to-face contact. The

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[17]For instance, names and numbers were collected only with the consent of participants and were retained only until data collection was complete. Data were subsequently de-identified before being analyzed or stored. Surveys were conducted one-one.

ideas and networks that our partners contributed were critical in the context of the unprecedented health crisis. The use of remote technologies also had the benefit of focusing our study on virtual civic education programs, which our partners viewed as scalable, likely to be used in the future, and likely to be particularly appealing to youth.

Recruitment and Study Overview

Figure 1 illustrates the overall study design. The study began with remote recruitment from the target population (adults ages 18 to 35). We employed four main approaches to remote recruitment, including: (1) posting brief recruitment messages on the social media pages of Zambian groups that advertised organizing members in our target age range (18–35 y.o.) or included "youth" in the group's title; (2) sending the recruitment message to large pre-existing WhatsApp networks organized either by non-partisan groups at universities or by our partner organizations (e.g., lists used to disseminate information to all member churches' youth groups); (3) presenting the recruitment message at Zoom meetings held for Christian youth group representatives; (4) inviting lay church leaders on the WhatsApp networks to read the recruitment message at their church's Sunday services.[18] Everyone contacted during recruitment was informed that study participants would receive money for the data bundles required for participation in the course, so there would be no financial constraints to participating other than having access to a phone with WhatsApp. We also made clear that participation in the course did not require an affiliation with any church and encouraged youth coordinators to share the course information widely. These recruitment strategies mean that our study is able to look at the effect of civic education program *on young adults interested in signing up for civic education programs.* Although such individuals may be more interested in politics than the average person, most real-world adult civic education courses rely on self-selection through recruitment practices like the ones enlisted in this study.[19] We are thus estimating the effect of civic education programs within a sample that is, at least to some extent, likely to mirror the populations that actually enroll in adult civic courses.

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[18]Sunday services were held online or in-person depending on local COVID restrictions and congregation practices.

[19]By contrast, civic education for minors might happen in a mandatory way in public schools and rely less on self-selection.

We targeted recruitment to urban and peri-urban areas of Copperbelt, Lusaka, and Southern Provinces for three reasons. First, these provinces have relatively reliable cellular service provision, which our COVID-safe design required. Second, the combination of these provinces was expected to yield ethnically diverse populations, which we accommodated by translating study materials into Zambia's four main languages (Bemba, English, Nyanja and Tonga). Third, these provinces were likely to yield a diverse sample in terms of partisanship, as Southern Province was an opposition stronghold in 2016, while urban areas in Lusaka and Copperbelt were more competitive. Unfortunately, the University of Zambia's Research Ethics Committee did not permit us to ask for party affiliation, so we used this geographic targeting strategy to increase the likelihood of partisan diversity within our sample and to ensure that the course would be perceived as non-partisan.

Again, this recruitment strategy, which was initially necessitated by the COVID pandemic, means that our sample—like typical enrollees in an adult online course—is largely urban and internet-networked. Sub-Saharan Africa is urbanizing at a very rapid rate (Nathan, 2019), such that knowledge about the political behavior of urban youth is key to understand the trajectory of African politics. Yet, we are careful not to claim generalizability of these findings to rural populations.

The recruitment script invited individuals to register their interest in the study by going to a link to a short survey, hosted by our nonpartisan "YouthKnow" Program. The short survey asked interested participants to confirm their age, location and access to WhatsApp in order to confirm their eligibility for the study.[20] Participants who met the inclusion criteria were contacted by professional enumerators who administered informed consent and a baseline survey by phone. Of the 1,228 participants who signed up for the study through the survey link, 1,183 individuals completed the baseline phone survey. After the baseline survey, these participants were then randomized into one of three conditions, which we referred to as "tracks," within the civic education course, stratified by gender and church denomination. Section B in the Appendix shows the full timeline with the dates of the study.

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[20]We also asked for denomination and education levels so that we could diversify the sample as much as possible via different recruitment strategies.

Treatments

The WhatsApp course involved receipt of four automated lessons over the course of two weeks: two lessons, spaced a couple of days apart, took place each week. Each lesson was a combination of text and infographics, followed by homework questions, which were a combination of multiple choice and open-ended questions and which participants could answer directly within WhatsApp. Participants received data bundles to cover the costs of receiving and responding to the course. Participants also received 10 extra kwacha in talktime for completing each of the four lesson's homeworks. To protect privacy and confidentiality and to create an online environment that was conducive to learning and digesting, all messages were sent individually to each participant, rather than as part of a WhatsApp group.[21] Figure C.1 in the Appendix shows an example of a homework question as it appeared in the automated WhatsApp course. If participants had questions or trouble with the course, they could call the research team on the phone with individual questions and speak to a person.

As depicted in Figure 1, the three versions of the course included: a civic information-only course (Track A); a non-religious motivated course (Track B); and religious motivated course (Track C). All three conditions included identical non-partisan civic information and varied only in terms of their motivational messages (Tracks B and C), or lack thereof (Track A). We did not have the resources to include a fully separate "pure control" group (i.e., youth *not*enrolled in a civics course). However, we were able to assess whether exposure to civic information alone altered political knowledge and inclinations to participate (relative to no exposure to that civic information) by *delaying* the provision of civic information in the civic-information-only course by one lesson. Specifically, in the first lesson only, we implemented a *no*-civics-information condition for participants assigned to Track A and a civic information-only condition for those assigned to Tracks B and C. In this first lesson, participants in Track A saw only logistical information about the course rather than civic information. By contrast, participants in Tracks B and C saw logistical information *and* civic information in Lesson 1. We use WhatsApp homework questions sent after lesson one to assess differences in political knowledge and inclinations to

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[21]Our partners expressed concern that, if the course were to take place in WhatsApp groups, more reserved participants might be hesitant to express their views, and that many participants might be wary about who else was in the group.

participate after a no-civics condition and an information-only condition. In Lessons 2 through 4, Track A participants saw civic information with no motivational messages, whereas Tracks B and C participants saw civic information with non-cognitive skills-focused motivational messages. By the study's end, participants across tracks were exposed to identical informational content.

Figure 1: Research Design
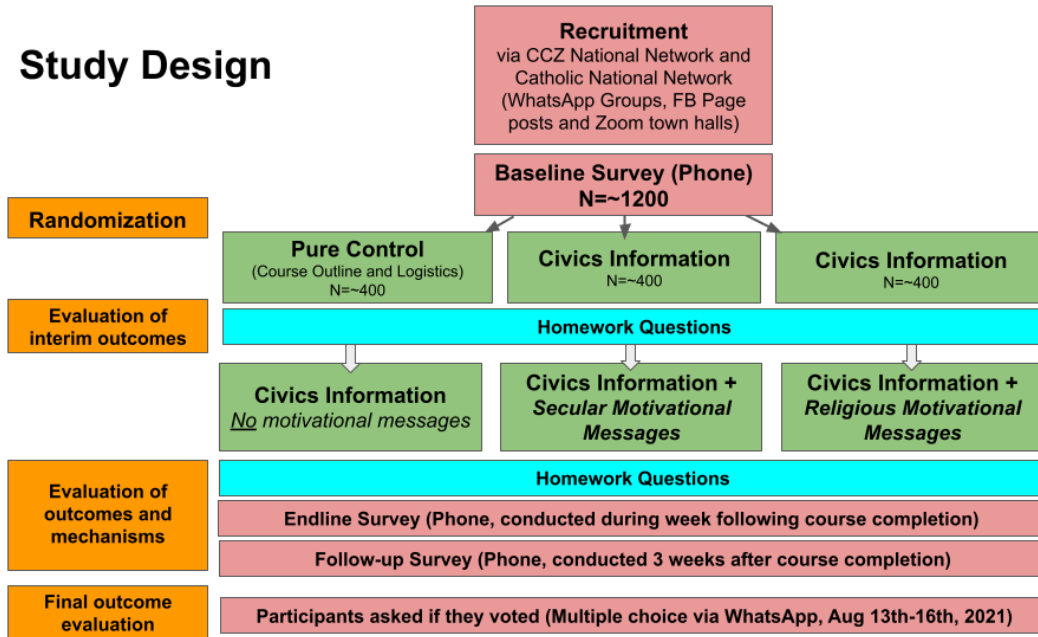
Figure 2 shows infographics sent via WhatsApp to all participants in Lesson 1. The pure control (no civic information) group received only logistical information about the course in the first lesson. By contrast, Figure 3 shows the civics infographics that other participants received alongside information concerning course logistics in Lesson 1. Importantly, these same infographics about Zambia's political system and democracy were subsequently sent to the "pure control" group in Lesson 2, effectively catching them up on this information and transforming the track into an information-only condition.

Figure 4 shows the examples of motivational messages sent in Lessons 2-4 to Tracks B and C, respectively. The figure specifically shows motivational messages sent in Lesson 4, which aimed to boost endurance and grit through either general or religious appeals. The information-only group (Track A) received no such motivational messages.

We based the content in the study on existing civic education already being delivered in Zambia, particularly on the public civic education curricula of CCZ and Caritas. All political

Figure 2: Pure Control Infographics in Lesson 1

Figure 3: Information-Only Infographics in Lesson 1

Figure 4: Examples of Non-Religious Grit and Religious Grit Messages from Lesson 4

issues discussed were topics that appeared in the civic curricula of these organizations already. Our partner organizations consulted on the choice of topics, the presentation of lessons, and their order to ensure that content was clearly non-partisan and contextually appropriate. The researchers devised the strategy to separate content into tracks to facilitate comparisons of theoretical and practical interest.

The religious motivational messages come from Christian preaching focused on the "power of

faith" (Sperber, Kaaba and McClendon, Forthcoming). Such Christian messages, which center on the efficacy of faithful and persistent action in creating change, are typical of many churches in sub-Saharan Africa and throughout the Global South (McClendon and Riedl, 2019, 2015). Often associated with Pentecostal preaching, power of faith messages are also increasingly delivered in Catholic and Mainline Protestant churches (Haynes, 2017; Marshall, 2009; McClendon and Riedl, 2019; Hern, 2018). Our partners, who represent the major umbrella Christian churches in Zambia, approved of the religious course content and thought it likely to appeal to a range of Christians, focusing their attention (in a religiously-sourced way) on the same types of non-cognitive skills (self-efficacy, grit) that the non-religiously motivate course did. In a small in-person study conducted in Lusaka in early 2020 (before the spread of COVID-19), we found that the power of faith message appealed to participants from all denominations and was more effective in increasing political participation than other common types of religious messages, such as one emphasizing obligations to contribute to the common good (Sperber, Kaaba and McClendon, Forthcoming), though in that small study we did not compare the power of faith message's influence to that of non-religious messages.

Outcomes and Mechanisms

We measured outcomes and mechanisms at several points: through homework questions after each lesson, through two phone surveys (one a week after the course finished, another one two weeks after that), and through a WhatsApp survey after the election took place. We also measured actual political participation via social media observation, by partnering with CCMG to measure volunteering during the election cycle and by giving participants an opportunity to donate to election monitoring efforts.

Survey questions

Homework questions asked about intent to participate, political knowledge, self-efficacy, identity and grit. All homework questions are listed in Appendix section F.1. The first and second phone surveys also asked about intent to participate and political knowledge, as well as about a range of possible mechanisms. All endline and follow-up questions are provided in Appendix section F.2. To reduce potential attrition, before the follow-up survey (three weeks after the end of

the course), participants received a text message reminding them that they would soon be contacted for a follow-up survey. They were also told in that text message that they would receive more compensation for the follow-up survey than they had for baseline and endline surveys. Participants received 20 kwacha for completing each of the endline and baseline surveys, and 40 kwacha for completing the follow-up survey.

Behavioral measures

In addition to survey questions about willingness to participate, we incorporated ways for participants to report actual participation and to demonstrate their commitment to participate in politics in more costly ways.

Volunteering: In one of the homework questions, we asked participants if they wanted to sign up for a listserv that would distribute opportunities for volunteering to promote free and fair elections in the weeks leading up to the election.[22] About 55% of study participants signed up for this volunteer listserv. After the completion of the endline and follow-up surveys, participants who signed up for the listserv were contacted by a liaison at CCMG about specific opportunities to volunteer. These included (1) a chance to train to participate in CCMG's parallel vote tally, and (2) a chance to help with data compilation on election day. The first opportunity was open across provinces, whereas the second opportunity was limited to residents of Lusaka. The liaison volunteer was blind to treatment condition and reported to our research team which study participants responded positively to each of the volunteer opportunities.[23] In the main analyses, we consider signing up for the CCMG volunteer listserv as one behavioral measure of participation. We can also examine positive responses to the parallel vote tabulation and data compilation opportunities, although these are conditional on having signed up for the listserv in the first place.

Social Media: The final homework invited participants to share their social media handles for the YouthKnow Program to follow. About 29% of study participants shared this information.

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[22]Our partner organization, the Christian Churches Monitoring Group (CCMG), held trainings for volunteers to help monitor polling stations and encourage peaceful electoral participation.

[23]To protect confidentiality, the liaison did not share any additional information about study participants (e.g., their resident polling station location) with us, because Zambia's Research Ethics Board approval required that we refrain from collecting any potentially identifiable information after all phone numbers and names were deleted from the dataset upon study completion.

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Willingness to share social media handles can perhaps be considered an indicator of willingness to engage in public political action. Additionally, we analyzed all Twitter posts from June through August 12 by participants who shared Twitter handles with us. We tried to do the same for the Facebook posts of participants who shared Facebhook handles, but encountered multiple barriers to working with CrowdTangle. Instead, with the consent of study participants to follow their posts, we hand-coded all shared Facebook accounts noting whether, between June and August 12, they used popular election hashtags in Zambia (#YouthVote2021, #ZambiaDecides, #CanYouRemember), or mentioned voting or other political actions. We treat this indicator as another behavioral measure of political participation for anyone who shared their Twitter or Facebook handles.[24]

Donations: Participants were also given an opportunity to donate some of their 40 kwacha compensation for the follow-up survey to efforts to promote free and fair elections. Participants received double the typical compensation for the follow-up survey. Participants could donate *up to* 20 kwacha, thus treating the other 20 kwacha in compensation as a guaranteed amount (and ensuring that their compensation for each survey never dipped below the typical amount). The modal donation was 10 kwacha. Eighty-eight percent of participants donated.[25]

Verified voting and retrospective questions: Finally, course participants received seven follow-up questions via WhatsApp after the 12 August election asking about their political behavior. They were asked whether they voted (with a verification question about the color of the lid for the ballot box for Presidential votes), helped others to vote, attended a political rally, volunteered to promote free and fair elections, and how often they discussed the election with others during the election period. Appendix section F.3 contains these questions. Participants responded by typing numbers corresponding to multiple choice answers in WhatsApp. They received 10 extra kwacha in talktime if they completed this post-election survey. To reduce attrition, we sent a reminder message to anyone who did not respond the first time.

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[24]In the reminder text for the follow-up survey (sent a few days before the follow-up survey for each wave, we invited participants to use a special hashtag associated with the civics course (called "YouthKnow"), if they wished: #YouthKnowGoVote!. Unfortunately, this measure largely failed. Only 17 users employed the hashtag on Facebook or Twitter during our period of interest, which precludes testing for meaningful differences across conditions. The hashtag may have been too close to another one that emerged during this period (#YouthVote2021), may have gotten lost in the reminder text message, or may not have been an appealing action.

[25]This rate was higher than in a smaller study we conducted in early 2020, when roughly 50% donated.

Sample Characteristics

Figure C.3 in the Appendix maps the geographic distribution of participants. As noted above, we limited the study to Lusaka, Copperbelt and Southern Provinces. Just under 10% of the sample comes from Southern, 25% from Copperbelt, and about 65% from Lusaka. The over-representation of Lusaka among the three provinces reflects the urban nature of our sample. Table 1 shows additional characteristics of participants who completed the baseline survey. The average participant in the full sample, and across conditions, is an unmarried twenty-four year old woman with no children and at least some post-secondary education, whose mother who completed secondary education. The typical participant speaks English and at least one other local language (typically Bemba or Nyanja), lives in Lusaka province, and attends church at least once a week. Table D.2 in the Appendix shows evidence of balance on most observables across course types. There is evidence of slight imbalances on a few variables (e.g., education levels), so as per our pre-registration, we present results in the main paper with covariates. The Appendix includes regression results without covariates and the results in those tables are consistent with the results shown in the main paper.

The baseline survey confirmed an *ex ante* gender gap in participation, as depicted in Figure 5. Women were less likely to report having contacted a government official (diff 4 percentage points, p=0.01), having participated in a peaceful protest (diff 5 pp, p=0.003), and having volunteered recently (diff 6 pp, p=0.02), as well as fewer reported volunteer days in the last month (diff 1.3 days, p=0.00), compared to men. Women also reported lower initial levels of grit. All starred differences are statistically significant.

Attrition

Despite the fact that this was an online study that took place over many weeks, we generally had very little attrition. Attrition from the baseline survey to the first phone survey after course-completion was only 3.8% and was not detectably different across experimental conditions. Attrition from baseline to the follow-up (second) phone survey was 5.9% and was again not detectably different across experimental conditions. Our power analyses had assumed a 25% attrition from baseline through to completion of the end of the study (Appendix section A).

Table 1: Sample Characteristics

	Full Sample	Info-Only	Non-Religiously Motivated	Religiously Motivated
Male	0.43	0.44	0.44	0.42
	(0.50)	(0.50)	(0.50)	(0.49)
Age	24.4	24.4	24.7	24.3
	(4.05)	(3.87)	(4.12)	(4.24)
Post-Secondary Education	0.46	0.52	0.45	0.44
	(0.50)	(0.50)	(0.50)	(0.50)
Mother Secondary Education	0.60	0.59	0.61	0.60
	(0.49)	(0.49)	(0.49)	(0.49)
Never Married	0.87	0.87	0.89	0.84
	(0.34)	(0.33)	(0.31)	(0.36)
Has Any Children	0.17	0.15	0.17	0.18
	(0.37)	(0.36)	(0.38)	(0.39)
Lusaka Province	0.67	0.69	0.67	0.64
	(0.47)	(0.46)	(0.47)	(0.48)
Copperbelt Province	0.24	0.23	0.23	0.28
	(0.43)	(0.42)	(0.42)	(0.45)
Southern Province	0.09	0.08	0.11	0.09
	(0.29)	(0.27)	(0.31)	(0.29)
English	0.65	0.61	0.67	0.68
	(0.48)	(0.49)	(0.47)	(0.46)
Bemba	0.55	0.51	0.55	0.59
	(0.50)	(0.50)	(0.50)	(0.49)
Nyanja	0.59	0.59	0.62	0.56
	(0.49)	(0.49)	(0.49)	(0.50)
Tonga	0.15	0.16	0.15	0.13
	(0.36)	(0.37)	(0.36)	(0.34)
Church Leader	0.36	0.37	0.35	0.37
	(0.48)	(0.48)	(0.48)	(0.48)
Attends Church Daily	0.01	0.01	0.01	0.02
	(0.11)	(0.10)	(0.07)	(0.13)
Attends Church 2-3 Times Weekly	0.41	0.43	0.45	0.38
	(0.49)	(0.50)	(0.50)	(0.49)
Attends Church Once a Week	0.46	0.46	0.42	0.47
	(0.50)	(0.50)	(0.49)	(0.50)
Pentecostal	0.46	0.45	0.44	0.49
	(0.50)	(0.50)	(0.50)	(0.50)
Number of participants	1183	380	395	408

Note: Means with standard deviations in parentheses. All variables are binary except for age, which ranges from 18 to 35.

Figure 5: Baseline Rates of Participation and Knowledge, by Gender
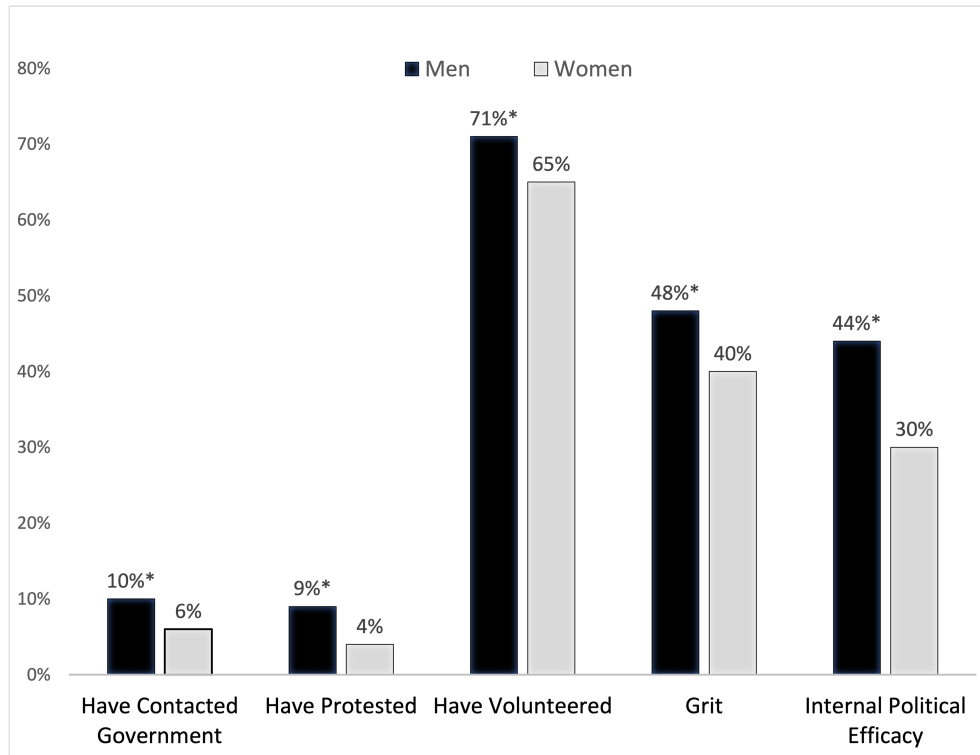
The research team attributed the low actual levels of attrition to frequent reminder messages, follow-up calls, and level of compensation for each stage of the study.[26]

Participation in the WhatsApp course was also high and consistent across experimental conditions. We could track participants' engagement with each lesson's infographics and homework question thanks to the structure of automated WhatsApp surveys, which require participants to respond "yes" before viewing text and infographics, and before moving on to related homework questions. As Figure C.2 in the Appendix shows, compliance with the course was universally high. Eighty-six to 88% of participants completed all four lessons, depending on the experimental condition. All participants completed at least one lesson, and almost every single participant completed two or more of the four lessons. This means that virtually all participants assigned to the motivated courses actually saw the motivational messages. There were no differences in lesson completion across treatment conditions.

Attrition from baseline to the post-election WhatsApp survey was higher than from baseline through the follow-up survey, which is not surprising given that a couple of months lapsed in the

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[26]The IPA team manager conducted multiple quality checks during each survey.

Figure 6: Attrition from Baseline to Phone Surveys
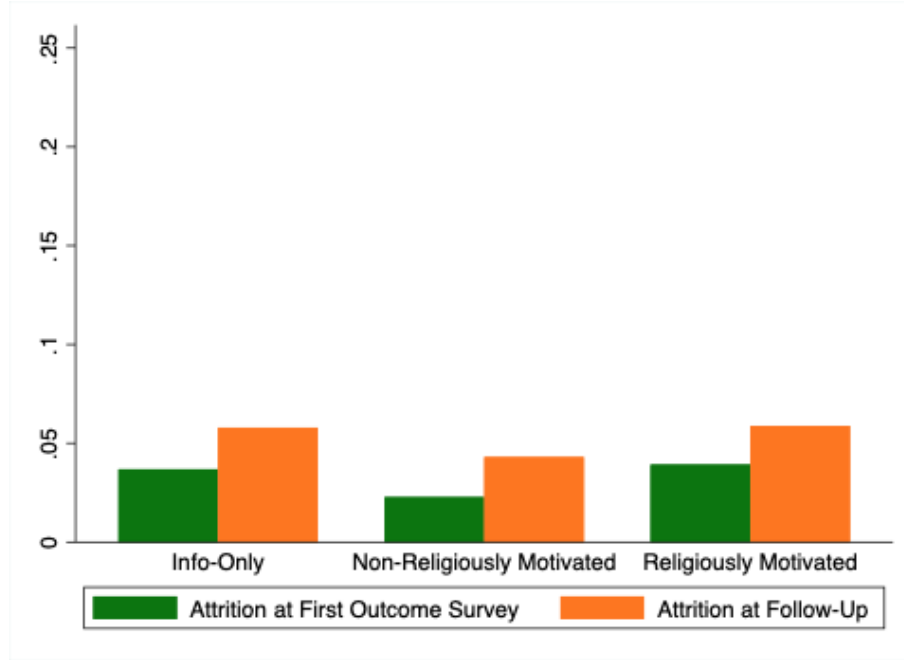
interim. Between baseline and the post-election survey, 11.7% of the sample attrited—a rate still well below our anticipated 25%. However, attrition rates in the post-election survey diverged across treatment conditions. As pre-registered, we therefore assessed the demographic correlates of overall attrition in the post-election survey, as well as demographic correlates of differential attrition across experimental conditions in the post-election survey. Women exhibited very low attrition and no detectable differential attrition rates across conditions. By contrast, men exhibited higher attrition and drove the differential attrition across conditions. Specifically, men attrited at higher rates from the motivated courses than from the information-only courses, in the post-election survey. Table 2 shows differential attrition patterns among men and women separately, as well as heterogeneous treatment effects on attrition from the post-election survey by gender.

In the rest of the paper, when analyzing treatment effects on survey and behavioral measures collected prior to the election, we do not account for attrition because study attrition did not vary across treatment conditions up to that point in the study. However, when analyzing answers to the post-election survey (where we do see differential rates of attrition), we show results separately for women (among whom there was no detectable differential attrition across

Table 2: Attrition from Baseline to Post-Election WhatsApp Survey, by Treatment Condition and Gender

	Attrited from Post-Election Survey (Men)	Attrited from Post-Election Survey (Women)	Attrited from Post-Election Survey (All)
Non-Religiously Motivated Course	0.090*** (0.034)	0.020 (0.025)	0.025 (0.025)
Religiously Motivated Course	0.094*** (0.034)	0.012 (0.024)	0.012 (0.024)
Male	–	–	0.003 (0.025)
Non-Religious x Male	–	–	0.065* (0.040)
Religious x Male	–	–	0.082** (0.041)
No. participants	498	646	1144

conditions) and also use bounding strategies to estimate a conservative range of treatment directions and magnitudes within the full sample.

Results

Main Treatment Effects

Table 3 shows differences in political knowledge and inclinations to participate measured after Lesson 1. Recall, in this lesson Track A participants received no civic information (only logistical information about the course), while Tracks B and C received civic information about the Zambian political system and Zambia's democracy ratings. As expected, civic information alone did increase political knowledge, raising correct response rates to around 90%.[27] However, civic information alone did not significantly alter participants' inclinations to participate in politics.

If the civic information course alone did not increase inclinations to participate in politics, did

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[27]We confirm that treatment effects were similar when comparing just Track B to Track A or just Track C to Track A, such that we pool the two civic information conditions in Table 3.

Table 3: Influence of Information Only, Relative to No Information (First Lessons)

	Question 1 Correct (Pol Knowledge)	Question 2 Correct (Pol Knowledge)	Believe Can Make Positive Change	Inaction Not Justified
Civic Information	0.113*** (0.027)	0.069*** (0.025)	0.025 (0.032)	0.017 (0.031)
Mean in Control	0.76	0.81	0.72	0.76
Number of participants	1063	1074	1057	1037
Demographic Controls?	Yes	Yes	Yes	Yes

Note: * p<.1, ** p<.05, *** p<0.01. Factual question 1 was: "Which of the following are NOT going to be chosen through elections this August?" with the answer coded as correct if they chose "Provincial Ministers." Factual question 2 asked, "To your knowledge, has Zambia's national debt gone up or down in recent years?" with the answer coded as correct if they chose "It has gone up recently." The Believe Can Make Positive Change question read, "In your view, do believe that regular Zambian people can help make positive change in this country by voting in national elections," which was coded as 1 if a respondent said "Yes" and zero otherwise. The Inaction Not Justified question read, "Imagine you have a friend who is very busy and has many demands in his life. He tells you he doesn't vote because he doesn't have the time. Do you think his decision is totally justified, somewhat justified or not at all justified?," which was coded 1 if a respondent said "not at all justified" and zero otherwise. All questions in Appendix. Demographic controls include gender, age, post-secondary education, mother's post-secondary education, never married, has children, province, survey language, church leader, frequent church attendance, and Pentecostal affiliation. Full results, with coefficients for each covariate, in Appendix Table E.1.

the two motivated courses—both focused on cultivating the non-cognitive skills of self-efficacy and grit—increase political participation compared to the information-only course? Table 4 shows the estimated effects of being assigned to either the non-religiously motivated or the religiously motivated course, rather than the information-only course, on an index of the political knowledge questions (from the homework and endline survey),[28] an index of the attitudinal questions about inclinations to participate (from the endline survey),[29] and indices of behavioral

[28]The knowledge index comes from four questions asked after Lesson 4 in the homework and in the endline survey: "On which day will the general elections take place?" with answers coded as correct if the respondent indicated "12 August 2021," "How often are elections for choosing the President, Members of Parliament and local Ward Councillors held?" with answers coded as correct if the respondent chose every 5 years, "What has decreased in Zambia due to climate change?" with answers coded as correct if the respondent indicated "rainfall," and "True or false: You have to have registered to vote in 2020 in order to vote in the 2021 elections" with answers coded as correct if the respondent indicated "true." All of this information was covered in the civics course.

[29]The attitudinal index comes from six items in the endline survey: (1) "There are various actions that people sometimes take as citizens. We are interested in whether you have done these things recently or would do these things if offered the opportunity in the near future. For instance, if elections were held tomorrow, would you vote? (Or if you are not registered but had the opportunity to register tomorrow, would you register?) (2) "Would you attend a peaceful protest or demonstration march?" (3) "Would you contact a government official to ask for help with a problem or to raise an issue?" (4) "Would you attend a protest where violence by political cadres was likely to break out" (reverse coded), (5) "Please imagine you have a friend who refuses an opportunity to learn more about politics and political participation because they believe 'all politicians are corrupt.' Do you think that refusing to learn more about or engage in politics makes this friend a bad citizen?" (coded as 1 if a respondent answered yes and zero otherwise) and (6) "Some people volunteer regularly or from time to time. This means doing unpaid work in the community . . . Have you volunteered at any point in the last five years?" Results are robust whether or not the violent protest question is reverse coded or not. Results are also robust to dropping

measures (from the follow-up survey, post-election survey and outside survey observations of social media and volunteering). The latter consisted of the decision to sign up for CCMG volunteer opportunities, the decision to share social media handles, the decision to donate, and answers to the post-election survey. All indices range from 0 to 1 and represent the share of total opportunities for participation that a participant took or endorsed, or the share of knowledge questions answered correctly in the case of the knowledge index.

Table 4: Main Treatment Effects

	Knowledge Index (Homeworks/ Endline)	Attitudinal Index (Endline)	Behavioral Index (Follow-up/ Post-Election)
Non-Religiously	-0.016	0.024**	-0.001
Motivated Course	(0.011)	(0.012)	(0.014)
Religiously	-0.010	-0.007	-0.023*
Motivated Course	(0.011)	(0.012)	(0.014)
Number participants	1026	936	864
Demographic Controls	Yes	Yes	Yes
Wave FE	Yes	Yes	Yes
Mean in Info-Only	0.90	0.65	0.49
Non-Rel Tr=Rel Tr (p-value)	0.58	0.01	0.08

Note: * p<.1, ** p<.05, *** p<0.01. Demographic controls include gender, age, post-secondary education, mother's post-secondary education, never married, has children, province, survey language, church leader, frequent church attendance, and Pentecostal affiliation. Actions in the behavioral index include donating (or not), signing up for the volunteer opportunity listserv (or not), sharing social media information (or not) and indicators for "yes" to each of the six action questions in the post-election survey. Full results, with coefficients for each covariate, in Appendix Table E.3.

Table 4 shows that, although the motivated courses did not alter levels of political *knowledge* (column 1) relative to the information-only course, the non-religious course did have detectable effects on inclinations to participate. (As we show below, the non-religious motivated course also affected actual participation among women.) However, surprisingly, the two motivated courses appear to have had different degrees and directions of influence (columns 2 and 3). The non-religiously motivated course increased inclinations to participate, as measured through attitudinal questions in the endline survey (column 2). The religiously motivated course, by

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the volunteer question, which asks about a past time period rather than future inclinations.

contrast, had no detectable effects on inclinations to participate measured in the endline (column 2) and, if anything, appears actually to have decreased behavioral measures of participation (column 3).

The results in the last column of Table 4 are complicated by the fact that there was differential attrition in the post-election survey among men. Specifically, men in the two motivated courses were less likely to complete the post-election survey, compared to men in the information-only course. How this pattern affected the results depends on whether men who attrited from the three different courses actually participated in electoral politics or not. If male participants who were very active during the election were the ones who attrited from the motivated courses,[30] then the estimated effects of the motivated courses on actual participation in Table 4 column 3 are too low. On the other hand, if instead the *less* motivated men found these motivated versions of the course unappealing and thus dropped out of the survey, then the estimated effects of the motivated courses on actual participation are too high.

Table 5 first shows results just among women, who exhibit no detectable differential attrition across conditions (column 1). It then shows adjusted results for the full sample in three hypothetical scenarios: Column 2 of Table 5 shows the estimated treatment effects if we assume that all men who attrited from the motivated courses *did* participate in all election activities (a score of 1 on the index, indicating all activities were undertaken) and that all men who attrited from the info-only course did not participate in any election activities (a score of 0 on the index). Column 3 then shows the estimated treatment effects if we assume that all men who attrited from the motivated courses did *not* participate in any election activities (a score of 0) while all the men who attrited from the info-only course did participate (a score of 1). Finally, column 4 shows the estimated treatment effects if we assign all men who attrited from the motivated courses the 25th percentile score on the behavioral index (that they did only one third of the actions), while assigning all men who attrited from the information-only courses the 75th percentile score on the behavioral index (that they did 55% of the actions).[31]

No matter which column we consider, the religiously motivated course clearly did not increase

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[30]Perhaps they felt they did not need the motivation or were so motivated that they were too busy to answer the survey.

[31]We undertake this exercise because no one in the full sample achieved a score of 1 on the behavioral index and so the scenarios in columns 1 and 2 may be unrealistic.

behavioral political participation. It either had no effect (nil and statistically insignificant in columns 1 and 2) or in fact reduced behavioral participation relative to the information-only condition (columns 3 and 4). The religious course did not have a positive effect and certainly did not have a *more* positive effect than the other versions of the course, contrary to our expectations.

By contrast, the non-religious motivated course clearly increased actual behavioral political participation among women, compared to both the information-only course and the religiously-motivated course. The increase of 3.2 percentage points among women (a 7% increase over the mean in the information-only condition) is well within the range of estimated effects of door-to-door canvassing get-out-the-vote strategies Green and Gerber (2019).[32] In the full sample, the non-religious, motivated course either increased or decreased the participation, depending on which scenario we think more likely: that men who dropped out of the motivated courses were likely to have participated or not to have participated during the election. Table E.9 in the Appendix suggests that the fourth column is the most likely scenario. Attrition from the information-only course correlates positively with pre-treatment measures of inclinations to vote; attrition from the religiously motivated course correlates negatively with pre-treatment inclinations to vote. This scenario is approximated best in the fourth columns of Table 5, suggesting that the effect of the non-religiously motivated course in the full sample was nil, because the effect was positive on women but possibly negative on men. Overall, this means that the non-religious motivated course narrowed the gender gap in participation.

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[32]See, for instance, the meta-analysis estimate of average door-to-door canvassing strategies on p.188 of Green and Gerber (2019).

Table 5: Estimates Among Women, and Re-estimates After Inputting for Male Attriters from Motivated and Info-Only Courses

	Behavioral Index (Follow-up/ Post-Election) (Women)	Behavioral Index (Follow-up/ Post-Election) (Upper Bound)	Behavioral Index (Follow-up/ Post-Election) (Lower Bound)	Behavioral Index (Follow-up/ Post-Election) (Intermediate Estimate)
Non-Religiously Motivated Course	0.032** (0.016)	0.022* (0.014)	-0.030** (0.014)	-0.004 (0.013)
Religiously Motivated Course	-0.006 (0.018)	-0.001 (0.014)	-0.051*** (0.014)	-0.025* (0.13)
No. participants	438	801	919	834
Wave FE	Yes	Yes	Yes	Yes
Demographic Controls	Yes	Yes	Yes	Yes
Mean in Info-Only	0.45	0.48	0.50	0.51
Assumption	No Differential Attrition	Missing Men Assigned to Motivated Courses Did Participate	Missing Men Assigned to Motivated Courses Did Not Participate	Missing Men Assigned to Motivated Courses Participated Less
Non-Rel Tr=Rel Tr (p-value)	0.02	0.09	0.15	0.10

Note: * p<.1, ** p<.05, *** p<0.01. Demographic controls include gender, age, post-secondary education, mother's post-secondary education, never married, has children, province, survey language, church leader, frequent church attendance, and Pentecostal affiliation. Actions in the endline/followup behavioral index include donating (or not), signing up for the volunteer opportunity listserv (or not), and sharing social media information (or not). Actions in the full behavioral index include those same measures plus indicators for "yes" to each of the six action questions in the post-election survey. Full results, with coefficients for each covariate, in Appendix Table E.5.

Table 6: Compensatory Treatment Effects, by Gender

	Attitudinal Index (Endline)	Behavioral Index (Follow-up/ Homework)	Behavioral Index (Follow-up/ Post-Election) (Lower Bound)	Behavioral Index (Follow-up/ Post-Election) (Upper Bound)
Non-Religiously Motivated Course	0.039** (0.016)	-0.004 (0.028)	0.034** (0.017)	0.036** (0.017)
Male	0.043*** (0.016)	0.075** (0.03)	0.106*** (0.019)	0.083*** (0.020)
Non-Religious Course x Male	-0.027 (0.023)	-0.052 (0.042)	-0.137*** (0.028)	-0.029 (0.027)
Religiously Motivated Course	0.019 (0.016)	-0.003 (0.028)	-0.005 (0.017)	-0.003 (0.017)
Religious Course x Male	-0.045** (0.023)	-0.058 (0.042)	-0.097*** (0.028)	0.007 (0.028)
Number participants	936	901	801	801
Demographic Controls?	Yes	Yes	Yes	Yes
Wave FE	Yes	Yes	Yes	Yes

Note: The behavioral index from just the follow-up survey and homeworks (without the post-election measures) is made up of indicators for: donating, signing up for the CCMG volunteer opportunities listserv, and providing a social media account. These measures did not exhibit differential attrition. The behavioral index used in the last two columns adds answers to the survey questions asked after the election. The fourth column reports regression estimates after male participants in the motivated courses who dropped out after the election are coded as zeros (not participating) on all questions in the post-election survey while male participants in the information-only course who dropped out after the elections are coded as ones (participating) on all questions in the post-election survey. Full results, with coefficients for each covariate, in Appendix Table E.7.

Figure 7 shows the estimated treatment effects of the non-religious motivated course among women on individual actions in the behavioral index. The positive effect of the non-religious motivated course, compared to the information-only course, on women's behavioral participation is driven by: a boost in posting on social media about political actions, a boost in voting, a boost in volunteering during the election, and a boost in discussing politics with others during the election.[33]

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[33]We also pre-registered heterogeneous treatment effects by Pentecostal affiliation, age, and education. However, we did not find evidence of heterogeneous treatment effects along these cleavages. We also examined heterogeneous treatment effects by language and province but found no evidence of heterogeneity along those lines (Table E.11 in the Appendix).

Figure 7: Effect of the Non-Religious Motivated Course on Specific Actions, Among Women
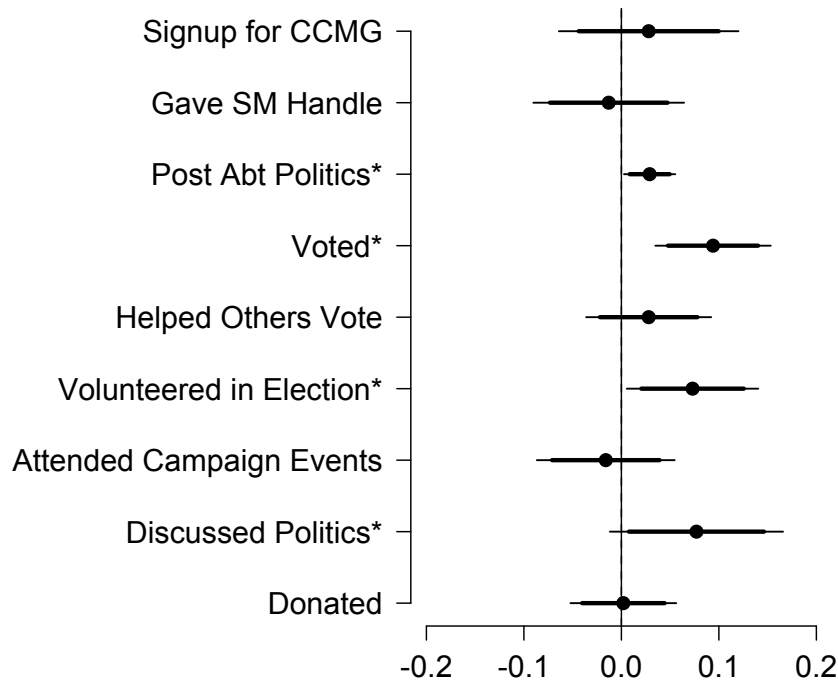
Note: Tabular results presented in Tables E.14 and E.15 in the Appendix. Point estimates are of the effect of the non-religious motivated course relative to the information-only course. Bars around point estimates show 90% (thick line) and 95% confidence intervals (thin line).

Mechanisms Underlying the Positive Effects of the Non-Religious Motivated Course

We expected that the non-religious motivational course would increase political participation specifically because it would increase political efficacy and grit, thus developing the non-cognitive skills that others have identified as key to the political participation of young voters (e.g., Holbein and Hillygus, 2020). We find evidence that the course did exactly that. Table 7 shows the estimated effects of the non-religious and religious courses on measures of political efficacy, self-efficacy, and grit, compared to the information-only course. The measure of political efficacy comes from answers to a question about internal political efficacy (Niemi, Craig and Mattei, 1991); it takes a value of one if participants disagree or strongly disagree with the statement, "Sometimes politics and government seem too complicated that a person like me cannot really understand what is going on." The efficacy index comes from a battery of six items that assess internal and external political efficacy, as well as self-efficacy (e.g., agreement that "I believe I can succeed at most any endeavor to which I set my mind."). In the third column, we show treatment

effects on a question about endurance and willingness to overcome obstacles: "Sometimes waiting in line to vote takes a really long time. About how long (in hours) would you be willing to wait in line to vote?" The other measure of grit is an index that comes from a battery of eight items assessing persistence and endurance (e.g., agreement that "I finish whatever I begin."). The non-religious motivated course increased every single one of these measures. It increased internal political efficacy by 9 percentage points, which is a 27% increase over levels of internal political efficacy in the information-only course. Participants were generally willing to wait several hours to vote, and the non-religious motivated course increased the time they are willing to wait by more than an hour.[34]

Table 7: Treatment Effects on Political Efficacy and Grit

	Internal Pol Efficacy	Efficacy Index	Hours Would Wait to Vote	Grit Index
Non-Religiously Motivated Course	0.089** (0.038)	0.023** (0.009)	1.05** (0.45)	0.016** 0.007
Religiously Motivated Course	0.075** (0.037)	0.011 (0.009)	0.864* (0.488)	0.005 (0.008)
No. participants	995	995	922	995
Wave FE	Yes	Yes	Yes	Yes
Demographic Controls	Yes	Yes	Yes	Yes
Mean in Control	0.33	0.86	5.89	0.82
Tr Non-Religious=Tr Religious?	Yes	Yes	Yes	Yes
(p-value)	0.71	0.16	0.72	0.13

Note: * p<.1, ** p<.05, *** p<0.01. Demographic controls include gender, age, post-secondary education, mother's post-secondary education, never married, has children, province, survey language, church leader, frequent church attendance, and Pentecostal affiliation. Full results, with coefficients for each covariate, in Appendix Table E.10.

Table E.16 in the Appendix further shows that these interim outcomes (especially internal political efficacy and grit) are also associated with all of the final outcomes of interest: increased inclinations to participate and increased behavioral participation. The non-religious motivational course therefore increased non-cognitive factors that correlate with increased political participation. There is also some evidence in Table E.18 in the Appendix that the positive effect

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[34]This increase in time willing to wait is a 17.8% increase over the time in the information-only condition. In Holbein and Hillygus (2020), the effect of their cognitive skills treatment was a similar 15.7% increase in time willing to wait, over a much lower baseline.

of the non-religiously motivated course on internal political efficacy and willingness to wait to vote is among women specifically, rather than among men. That the non-religious motivated course was most effective in increasing political efficacy and grit among women may help to account for the more robust treatment effects of that course on women's political participation than among men.

We ruled out other potential mechanisms for the positive effect of the non-religious course on participation either because the mechanism measures were *not* associated with participation outcomes or because the mechanism measures were not affected by treatment. Participants' perceptions of the quality of democracy and their expectations of other youth participating are not correlated with the final outcomes of interest (Appendix Table E.16). Agreement that one's friends are likely to participate in politics during the elections is strongly associated with outcomes but is not moved by any of the treatments (see Appendix Table E.17). The treatments also did not effect expectations that various actors (religious leaders, parents, and friends) would pressure the participants to participate in politics, so we also rule out social pressure as a mechanism (see Appendix Table E.24). In general, the evidence suggests that increases in political efficacy, self-efficacy, and grit are the most likely mechanisms underlying the effect of the non-religious motivated course on political participation, because the course increases those factors *and* the factors are also positively associated with political participation.

However, as Table 7 makes clear, the religiously motivated course also increased internal political efficacy and the length of time study participants were willing to wait to vote to some extent. It increased internal political efficacy by an estimated 7 percentage points (a 22% increase over the level in the information-only course); it increased the time participants were willing to wait to vote by almost an hour. The religious course does appear to have had little effect on the grit index, although the differences between the effects of the non-religious course and the religious course on the efficacy index and the grit index are not quite statistically significant. As far as we can detect, the two courses had similar consequences for non-cognitive skills.

Exploring the Unanticipated Consequences of the Religious Course

Why then did the religious course have more muted effects on political participation? To be clear, we were surprised by the muted results of the religious course compared to the other

course versions. We therefore use this section to explore possible explanations, in light of the data we have, and suggest avenues for future research.

One possibility is that the religious course primed other aspects of religion, apart from trust in the source of the message. As we noted at the start of the paper, religion is a bundle of things (authority, theology, organization, practice, social connections), and religious messages could prime multiple elements of that bundle (McClendon and Beatty Riedl, 2021). Thus, a course infused with religious sources could convey expertise and compel trust (Nielsen, 2020; McClendon and Riedl, 2019; Norenzayan, 2013), increasing the impact of the ideas conveyed in the message, as we anticipated; but that same religious course may also prime other associations that could counteract these effects, ultimately undermining the impact of the course on political participation. For instance, our religious course might have reminded people about church organizations and communities. Such organizations and communities are often hierarchical (McCauley, 2013) or, even if not hierarchical, like any group, subject to collective action problems. It is possible that the religious course increased political efficacy and grit, authoritatively conveying messages around these non-cognitive skills, but at the same time primed deference to hierarchies within the church or primed incentives to free-ride off of one's religious community, thereby undermining political participation.[35]

If the religious course primed church communities or hierarchy, we might expect to observe that the religious course had different effects on people with leadership positions within the church compared to people without such leadership positions. Non-leaders might have been primed to defer to church leaders. So we might expect a negative or null effect of the course on the political participation among non-church leaders and a more positive effects of the religious course on church leaders. In our sample, roughly one third of participants (36%) reported occupying a leadership position within their congregations. Given the age of our participants, these leadership positions were typically youth group leader, or junior pastor, or Sunday school teacher. Both men (44% of men) and women (30% of women) reported church leadership

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[35]In another context, where religious leaders are giving explicit directives to their followers that those followers *must* do the work of participating in politics, these same associations with hierarchy and community might have *amplified* the course's positive influence on participation. We do not believe these explicit delegation directions are widespread in our study context. Our results do not preclude the possibility that religious courses might positively impact political participation in some contexts; they do indicated that religious courses should not be assumed to positively influence political participation under all circumstances.

Figure 8: Effect of Religious Course on Behavioral Index, by Leadership Status
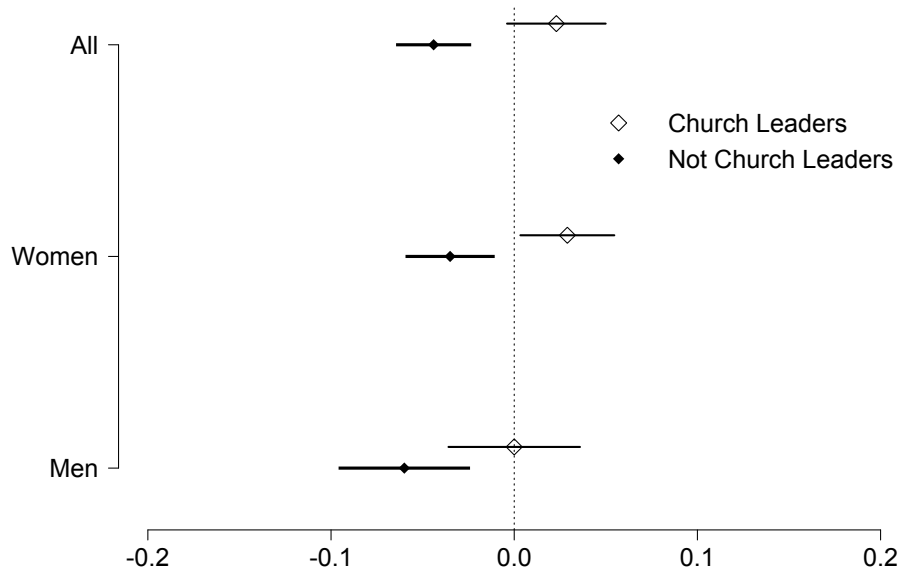
Note: The behavioral index can be interpreted as the share of the following actions the respondent engaged in: donating, signing up for the volunteer opportunity listserv, sharing social media information, posting on social media about political actions, reported voting, reported helping others to vote, reported volunteering, reported attendance at campaign events, reported campaigning, and reported discussion of politics. Table with full results in Appendix E.13.

positions.

Figure 8 shows the effect of the religious course, compared to the information-only course, on the behavioral index of participation. The religious course appears to have led to a retreat by non-church leaders from political participation. The effect of the course among church leaders, by contrast, is somewhat positive or null (keeping in mind that the sample sizes are smaller for the leaders subgroup). The results are clearest among women. The religious course is estimated to have decreased participation by about 5 percentage points on the behavioral index among non-church leaders and to have increased it about the same distance among church leaders. Scores on the behavioral index can be interpreted as the share of total political activities observed that the respondent participated in, so these results mean that non-church leaders in the religious course participated in about 5 percentage points fewer political activities than non-church leaders in the information-only course. The reaction among non-church leaders to the religious course appears to be one of the factors reducing the overall estimated effect of the course on political participation.

In order to explore further whether the retreat of non-church leaders in response to the religious course was due to deference to hierarchies and/or free-riding, we examined answers to an endline survey question about expectations of other church members' participation. That question asked, "How likely to you think it is that people from your church community will participate (vote or volunteer or campaign) during the upcoming 12 August elections?" Table 8 shows the effects of the two motivated courses, conditional on church leadership status, on the belief that it is very likely that other members of the church will participate in elections. The table shows that the religiously motivated course *increased* non-church leaders' expectations that other church members would participate in the elections, while simultaneously decreasing church leaders' expectations that other church members would participate.[36] The non-religious motivated course had no such effects on expectations of other church members' participation, and no heterogeneous effects on that outcome by church leader status. In other words, we see a pattern consistent with non-church leaders' retreating from behavioral political participation because the religious course primed them to expect that *other* church members would do the participating instead. Meanwhile, church leaders step up (relatively speaking) because the religious course led them to lower their expectations about other church members' political participation. These patterns are consistent with a deference or free-riding effect: most participants in the religious course, despite increased grit and efficacy, were primed to defer to the political actions of church leaders.

We also explored other possible explanations for the religious course's more muted effects on political participation but found those accounts unsatisfying, based on the data we have. One such possibility was that the religious course was simply less interesting to study participants, or less interesting particularly to non-church leaders. To assess this possibility, we examined engagement with the open-ended questions in the course homework assignments. We focused on open-ended questions, because we observed no differences in "attendance" at any of the lessons. Men, women, church leaders and non-church leaders all clicked through the four lessons and responded to the multiple choice homework questions at similar rates, and there were no differences in attendance rates across course types. So we looked at the word counts of responses to open-ended questions in the homework, as an indicator of level of engagement with the course.

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[36]Free-riding in this way may also have led to a less robust gain in political knowledge (Table E.13).

Table 8: Expectations of Other Church Members' Participation

	Think Very Likely that Other Members of the Church Will Participate in Elections
Non-Religiously Motivated Course	0.056 (0.036)
Church Leader	0.065 (0.046)
Non-Religious x Church Leader	0.017 (0.068)
Religiously Motivated Course	0.082** (0.036)
Religiously x Church Leader	-0.136** (0.062)
Number of Observations	1144
Mean in Info-Only	0.18
Wave FE	Yes
Demographic Covariates	Yes

Note: * p<.1, ** p<.05, *** p<0.01. Demographic controls include gender, age, post-secondary education, mother's post-secondary education, never married, has children, province, survey language, church leader, frequent church attendance, and Pentecostal affiliation. Full results, with coefficients for each covariate, in Appendix Table E.20.

Answered ranged from very short (6 words) to much longer (128 to 231 words), depending on the question. Table E.25 in the Appendix shows that, with the exception of slightly longer lengths of responses to the non-religiously motivated course on one question, there are no detectable differences in lengths of responses across treatment conditions or by key attributes (gender, church leadership status). Overall, study participants of all types engaged with all versions of course to similar degrees.

We also explored the possibility that study participants did not, in fact, perceive the religious course as religious. Most people in Zambia are highly religious and attend worship services often. Perhaps the religious course was too similar to ubiquitous messaging in Zambia and thus failed to resonate, act authoritatively, or activate religious identity. Alternatively, perhaps the non-religious motivated course, with its focus on what becomes possible with belief in oneself, actually appeared *more* religious than other versions of the course. This is unlikely since, as we show above, only the religious course shifted expectations about the participation of other church members. Yet, to assess this possibility further, we examined open-ended responses to homework questions about identity. Specifically, study participants were asked, "When asked to identify themselves, people describe themselves in many different ways, for instance in terms of their ethnic group, their religion, gender, age, occupation and so on. Reply with one or two words describing the parts of your identity that are most important to you, especially when you think about politics?" Independent coders read the open-ended responses and coded whether each response mentioned anything related to religious identity ("Christian," "religious," "Born-again," "God-fearing," etc.) and whether they mentioned anything related to identifying as young ("youth," "young person," etc.). Table 9 shows the effects of the motivated courses on these responses. Neither motivated course detectably affected youth identity in this open-ended question. As expected, however, the religious course significantly increased religious identification, and the non-religious course did not. Therefore, we reject these this possible explanation for our surprising findings; only the religious course primed religious identity.

A third possibility we explored was that young people, despite their high levels of religiosity, found moralizing language or religious sources unappealing. If this were the case, the religious course might not have boosted political participation because it bothered its audience or depressed their moods relative to other versions of the course. To explore this, we analyzed affective

Table 9: Treatment Effects on Identity

	Youth Identity (Open)	Religious Identity (Open)
Non-Religiously Motivated Course	0.042 (0.031)	0.011 (0.028)
Religiously Motivated Course	0.043 (0.030)	0.059** (0.030)
No. participants	995	995
Wave FE	Yes	Yes
Demographic Controls	Yes	Yes
Mean in Control	0.16	0.14
Tr Non-Religious=Tr Religious?	Yes	No
(p-value)	0.97	0.10

Note: * p<.1, ** p<.05, *** p<0.01. Demographic controls include gender, age, post-secondary education, mother's post-secondary education, never married, has children, province, survey language, church leader, frequent church attendance, and Pentecostal affiliation. Full results, with coefficients for each covariate, in Appendix Table E.21.

reactions to the course. Appendix Table E.23 shows, however, that there were no negative treatment effects on participants' affect from either the non-religious or religious motivated courses. Most people (73% in the information-only course, 70% in the non-religious course, and 77% in the religious course) reported finding the course interesting. Almost no one reported finding the course boring. Other common emotions reported after the course included feeling inspired, excited, and happy—emotional states which did not vary significantly across course types.

Additionally, we explored a fourth possibile explanation concerning events in the lead up to the election. Incumbent President Lungu initiated a 50 million kwacha "Church Empowerment Fund" during the election season, effectively increasing the politicization of church-state relations. The fund was ostensibly created to support churches affected by COVID-19 mandated closures. However, powerful Mainline Protestant church leaders and Catholic bishops publicly condemned and declined the funds because (as they publicly explained), they viewed the President's action as an undemocratic attempt to co-opt churches into mobilizing their congregations to vote for Lungu's PF party.[37] Conversely, Pentecostal church leaders publicly thanked the

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[37]See "Bishops in Zambia Decline Government's "Church Empowerment Fund", Give Reasons" in *Acia Africa*: https://tinyurl.com/4ukazp2x.

administration for the funds.[38]

We evaluated whether this government effort to fund churches might have made participant weary of the religious course. Perhaps this crossing of state-church boundaries led participants to resist the religious framing of the civic education course as politically inappropriate. Given the nature of the controversy, however, we should have seen different reactions to the religious course from Catholics and Mainline Protestants (whose leaders reacted negatively to the Fund) on the one hand and from Pentecostals (whose leaders embraced the fund) on the other, if the Church Empowerment Fund were the explanation for the muted effects of the religious course.[39] Thus, we looked for heterogeneous effects of the course across Christian denominations. Table E.26 in the Appendix shows the effects of the religious course, relative to information-only, by Catholic affiliation, Seventh Day Adventist affiliation (the affiliation of the opposition Presidential candidate), and by Pentecostal affiliation (the affiliation of the incumbent). We find no evidence that members of these denominations reacted differently to the religious course, which suggests to us that the muted effects of the religious course likely have little to do with the Empowerment Fund controversy.

Overall, the evidence we have is most consistent with the religious course's priming of church hierarchies or expectations that others will take the lead in participating. Because the above analyses are exploratory, we cannot rule out that there may be additional explanations we cannot test. We thus suggest the free-riding explanation as one worthy of future research on religious political messaging.

Conclusion

This study responds to calls for more evidence on the consequences of civic education on youth political participation, especially in developing countries. To our knowledge, it is among the first experimental studies of the political consequences of religious civic education.[40] We drew

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[38]See "Religious Minister encourages Churches to apply for the COVID-19 empowerment fund" in the *Lusaka Times*: https://tinyurl.com/ykk9yfbe.

[39]Unfortunately, the introduction of the fund occurred before participants received the WhatsApp course; if it had occurred during the intervention or endline/follow-up surveys, we might have exploited the timing to look at whether participants treated and surveyed before the fund reacted differently to the religious course than participants treated and surveyed after the fund. This is not a possibility.

[40]With the exception of a small pilot study we ran and describe in Sperber, Kaaba and McClendon (Forthcoming).

on literature on civic education, social-psychological approaches to youth participation (emphasizing non-cognitive resources), religious influences on political behavior (e.g., Nie, Junn and Stehlik-Barry, 1996; Holbein and Hillygus, 2020; McClendon and Riedl, 2019), and community engaged methods to conduct an experiment in collaboration with major churches and civil society organizations in Zambia. In addition to supporting youth civic education, the study allowed us to compare and contrast the attitudinal and behavioral consequences of exposure to different types of civic programming prior to Zambia's general elections. The study aimed to provide useful information to local civic organizations and to advance scholarly understanding of youth political participation and civic education.

We found that the *content* of civic education has consequences not just for aggregate levels of political participation but also for gaps in political participation. In particular, the non-religiously motivated course increased efficacy and grit and led to increases in aggregate inclinations to participate, while also reducing the gender gap in political participation by boosting actual participation among young women. However, despite the highly religious context in which the study took place, the religiously motivated course did not have the same positive impacts on political participation as the non-religiously motivated course, even though it did increase efficacy, grit, and the salience of religious identity. In fact, it appears that the religious course may have exacerbated pre-existing inequalities in political participation, particularly between church leaders and non-church leaders. Exploratory investigation of possible explanations for this surprising finding indicated that non-church leaders may have been reminded of the hierarchy or the number of active members in their church community and that this may have led them to free-ride off of others' actions; the opposite priming effect appears to have occurred among church leaders.

Despite its widespread prevalence—especially in developing countries—this study demonstrates that we should not assume that religious civic education will have large positive and compensatory effects on political participation, even in highly religious contexts. Neither we nor our partners anticipated the nil, and sometimes negative, effects of the religious course on political participation here. Yet, churches and other religious associations are often hierarchical and using religious messages in the context of civic education may prime those hierarchies and lead to reinforcement of pre-existing participation gaps. We do not claim that religious courses

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will *always* have these consequences. Indeed, in contexts where religious leaders are regularly giving explicit directives to their followers to participate in politics, delegating to them the responsibility to join in, priming church hierarchies may even amplify the positive influences of religious civic education on participation. What our study makes clear, however, is that these effects cannot be taken for granted and must instead be further examined for scope.

Our results are unlikely to be unique to Zambia. Many highly religious countries exhibit prevalent religious civic education programs, as well as youth bulges and relatively low youth political participation around elections. It is also quite common in Sub-Saharan Africa and other parts of the world for churches to have no official ties to political parties (Bratton, 1989) and to occupy a largely non-partisan role in politics, encouraging peaceful elections but not engaging in explicit political directives or in partisan campaigning (Sperber and Hern, 2018; McClendon and Riedl, 2019). In such contexts, religious civic education may not always have large positive and compensatory effects on political participation.

Our findings about the consequences of the non-religiously motivated course, meanwhile, are in keeping with a growing body of literature that underscores the importance of non-cognitive resources (efficacy, grit) in increasing political participation among youth. Holbein and Hillygus (2020) offer a recent example of these arguments among youth in the United States. Here, we show that the impact of these non-cognitive-resource courses extends to young voting-age adult outside of the United States. Further, we show that these skills can be compensatory, not only raising inclinations to participate overall, but also reducing gender inequalities in participation. This is an actionable insight that may be used to reduce gender disparities in democratic participation.

Finally, this study shows that civic education interventions can be implemented online with less attrition and more engagement than one might expect and with significant consequences for youth political participation. COVID-19 necessitated the use of remote methods in this study, but the use of remote technology also had various analytic advantages. Our partners were also eager to test both the logistics and the efficacy of WhatsApp courses, because these types of courses have the potential to reach more individuals than in-person civics courses alone and may be particularly popular among youth. Because sub-Saharan Africa is already substantially urban and is further urbanizing at an incredibly rapid rate (Nathan, 2019), it is incredibly important

to understand the behavior of young urban residents, many of whom regularly use WhatsApp and social media. Scholars also may, for a variety of reasons, want to conduct studies using smart phone technology. We hope that this study's design can aid in those efforts.

Future research should push the findings of this study further. As noted, our results may not be generalizable to rural areas, to settings in which civic education is mandatory, or to individuals who lack access to cell phones or WhatsApp. WhatsApp is the top social messenger application in Zambia, and 83% of Zambians have mobile subscriptions, but only 39% have mobile internet and usage is concentrated in urban areas.[41] Thus, future studies should explore whether our findings generalize to study populations recruited through face-to-face methods that are more inclusive of extremely poor and/or rural residents. Additionally, although this study did not seek to compare the effects of courses on youth to the effects of the courses on older adults, future studies could engage in this kind of comparison to advance understanding of how to increase youth turnout *and* how to reduce age gaps in turnout. Lastly, our findings about the effects of the religious course were unexpected. This paper invites further research on the mechanisms undergirding this finding, as well as its generalizability to other contexts, religious traditions and election cycles.

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[41]See statistics from Hootsuite's annual summary of internet and social media usage worldwide: `https://tinyurl.com/pf4zhc`.

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A   Power Calculations

We aimed for an overall sample size of 1200, with one third of the sample (roughly 400 people) assigned to each "track." We based this overall sample size both on what our partners estimated would be feasible and on the statistical power we would need to detect minimal treatment effect sizes. Specifically, we used treatment effect sizes of 0.04 and 0.075 on a binary outcome variable as the benchmark minimum treatment effect sizes of the non-religiously-motivated and religiously-motivated treatment arms (relative to civic information only), because these were some of the smaller treatment effect sizes of the "power of faith" treatment in an earlier study in Lusaka, Zambia (Sperber, Kaaba and McClendon, Forthcoming). We assume a mean of 0.8 and standard deviation of 0.15 on a binary outcome variable, because these were typical means and standard deviations of binary measures of willingness to participate in politics (e.g., to participate in protest) in that earlier study. Based on these assumptions, we estimated that we would need between 900 and 1000 participants to not only be able to reject the null hypothesis that responses in any one track are the same on average as responses in any one other track (e.g., comparing answers in Track C to Track A, for instance) but also to be able to reject the null hypothesis that the treatment effect of e.g. Track C (relative to Track A) is the same size as the treatment effect of e.g. Track B (relative to Track A), with statistical power at a conventional level of 0.8 and an alpha of 0.1. Figure A.1 shows these results.
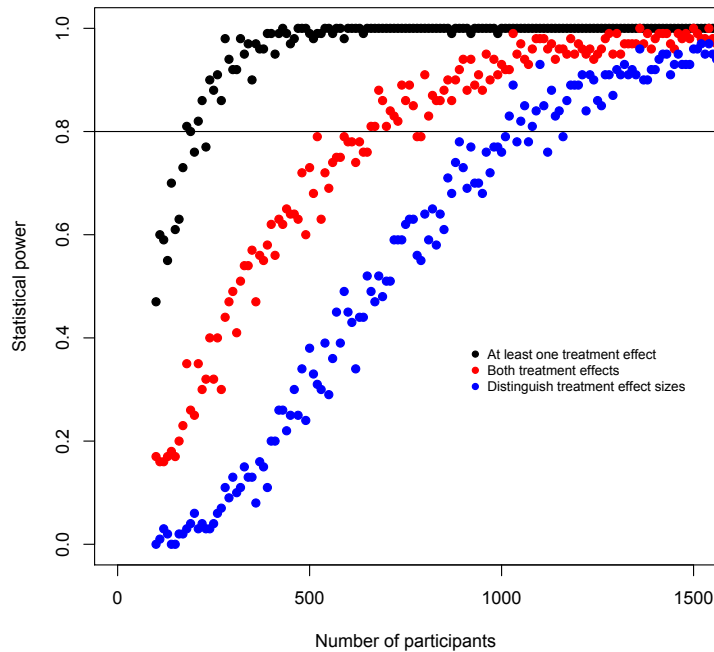
Figure A.1: Power calculations for the full design, treatment effect sizes of 0.04 and 0.075 on binary variables

We judged that having sufficient statistical power for the latter test denoted in blue in Figure A.1 would allow us to draw inferences about whether the religiously-motivated civic education version of the course was more or less effective, relative to the information-alone version of the course, than the non-religiously-motivated civic education version of the course. Assuming some

attrition from recruitment/baseline to the endline survey, we aimed for an overall sample size of 1200, divided equally across the experimental conditions. In the earlier study (Sperber, Kaaba and McClendon, Forthcoming), we experienced an attrition rate of 27% from endline to the follow-up phone survey (which, due to an implementation error, was often a month or more from the endline survey).[42] Assuming that same rate of attrition, we would end up with 876 in the endline survey for this study. We had no attrition between baseline and endline survey in the earlier study because both were conducted at the workshops. Here we hoped to have very little attrition from baseline to the homework measures (which occur during the course) and less attrition than we did from endline to follow-up in the earlier study because of the tighter timeline. In the end, attrition rates were far lower than we anticipated in advance.

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[42]An implementation error led to an unplanned delay in a follow-up phone survey in the earlier study, such that although the plan was for the follow-up to happen a week to two weeks after the workshops, most follow-up surveys were conducted one to two months later.

B   Study timeline

Because we did not have a big enough team to recruit and survey all 1200 participants simultaneously, we recruited in waves over the course of three weeks. Each week's "wave" included roughly 400 participants. Recruitment began on May 2, 2021 and ended on May 24th, with the first and third waves of baseline surveys starting on May 11 and May 24, respectively. Delivery of course content began the week after baseline surveys were administered for a given wave and proceeded for two weeks. Endline surveys were administered by phone during the week after a wave concluded its coursework. The follow-up phone survey began two weeks after the endline survey for each wave. All analyses in the paper include wave fixed effects. Figure B.1 presents a detailed timeline.

Figure B.1: Study Timeline
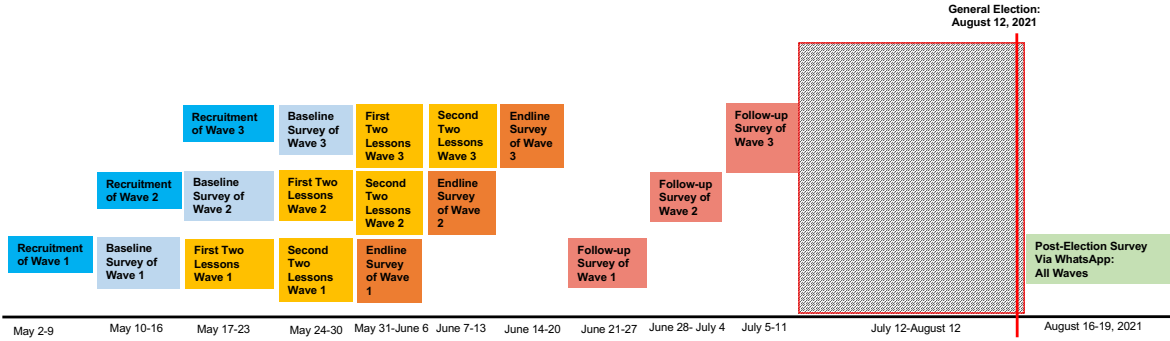
We did not deliver any course content or conduct any surveys during the month preceding the election. Because WhatsApp was disabled during the day of the election and a couple of surrounding days, we waited until August 16 to begin the WhatsApp-based post-election survey.

C   Additional Research Design Details

Figure C.1 displays an example of a homework question as it would have appeared to participants on WhatsApp. Participants responded to multiple choice questions by typing the number corresponding to their answer. For open-ended questions, participants simply typed their answers into WhatsApp, or typed "skip" to skip the question and go onto the next one.

Figure C.2 shows the number of participants who completed zero, one, two, three or four lessons across experimental conditions. Almost all participants in each condition completed all four lessons. No participants, in any condition, skipped all four lessons.

Figure C.3 includes both the total number of participants and the percent of the study sample recruited in each province (in italics), as well as the percent of the three provinces' total population that each province actually holds (underlined). The percent recruited from Southern Province (9%) roughly approximates the share that Southern makes up of the total population of the three provinces.

55

Figure C.1: Screenshot of WhatsApp Homework Questions After Lesson 1
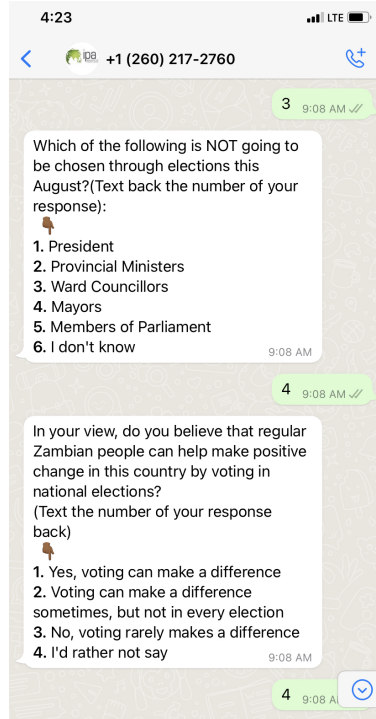
Figure C.2: Number of Lessons Completed, by Treatment Condition
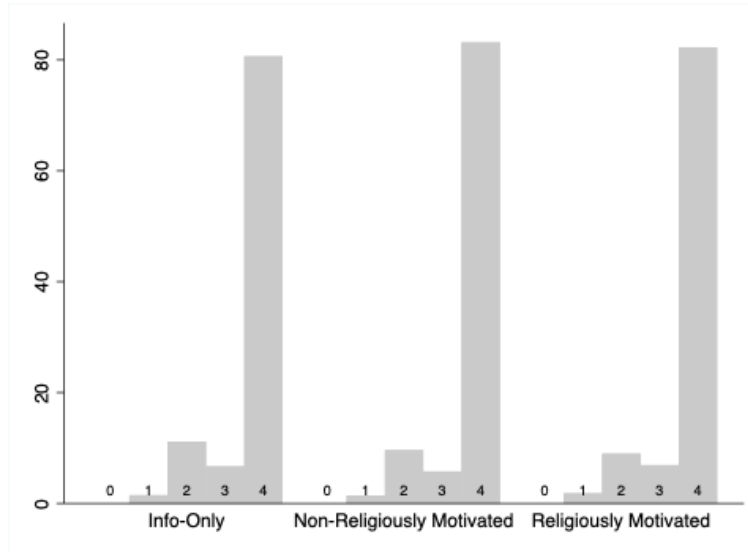
D   Additional Analysis of Baseline Survey

Table D.1 shows the rates of pre-treatment political participation and pre-treatment levels of political knowledge across various subgroups. In bold are the categories that exhibit statistically significant differences across subgroups. As mentioned in the main paper, men display higher levels of political participation than women, pre-treatmentt. Church leaders also display higher levels of political participation than non-church leaders, such that by differentially af-

Figure C.3: Location of Participants Across Provinces
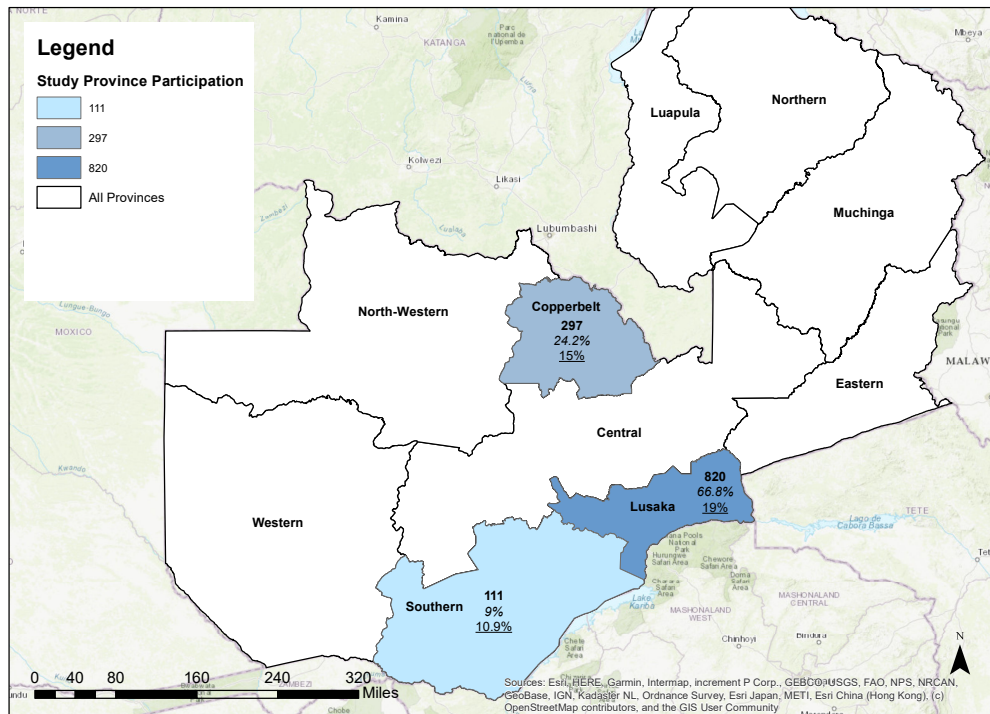
fecting church and non-church leaders the religious course appears to have exacerbated gaps in participation across these two subgroups.

Table D.2 shows that on most observable attributes, there are no differences across treatment conditions. Exceptions include a slight imbalance in age and marital status. Thus, as pre-registered, all analyses in the main body of the paper include covariates. Analyses in the Appendix show that results hold without covariates.

Because there was some differential attrition across experimental conditions in the post-election survey (in contrast to no such patterns earlier in the study), we followed our pre-registered plan to examine demographic correlates of attrition, as shown in Table D.3. The attribute most strongly associated with increased attrition was gender: men were more likely to attrit from the post-election survey than women, and as shown in the main body of the paper, only men exhibited differential attrition across experimental conditions (specifically attriting from the motivated courses more often than from the information-only course). Other positive correlates of attrition from the post-election survey included living in a town rather than city and attending church less frequently. However, these attributes did not predict differential attrition.

Table D.1: Baseline Levels of Knowledge and Intent to Participate Across Groups

	Men	Women	Church Leaders	Non-Church Leaders	Post-Secondary	Up to Secondary
Have Contacted Gov't	0.10	0.06	0.10	0.06	0.07	0.06
	(0.29)	(0.23)	(0.30)	(0.23)	(0.25)	(0.24)
Have Protested	0.04	0.02	0.04	0.02	0.03	0.02
	(0.20)	(0.13)	(0.20)	(0.14)	(0.17)	(0.15)
Would Vote	0.94	0.93	0.93	0.94	0.94	0.93
	(0.23)	(0.24)	(0.25)	(0.23)	(0.23)	(0.25)
Have Volunteered	0.71	0.65	0.74	0.64	0.75	0.61
	(0.45)	(0.48)	(0.45)	(0.48)	(0.43)	(0.49)
Days Volunteer (month)	4.23	2.91	4.50	2.90	4.23	2.51
	(8.14)	(7.27)	(8.50)	(7.11)	(8.21)	(6.57)
Correct Election Yrs	0.99	0.98	0.99	0.99	0.99	0.98
	(0.08)	(0.06)	(0.10)	(0.10)	(0.08)	(0.12)
Correct Climate Change	0.82	0.76	0.78	0.79	0.83	0.74
	(0.39)	(0.43)	(0.41)	(0.41)	(0.37)	(0.44)
Number participants	532	696	446	782	533	628

Table D.2: Balance Tests

	Diff Between Info-Only and Non-Religious T-test (p-value)	Diff Between Info-Only and Religious T-test (p-value)	Association w/ Info-Only (Ref: Religious) Mlogit (SE)	Association w/ Non-Religious (ref: Religious) Mlogit (SE)
Male	0.003	-.016	0.17	0.04
	(0.93)	(0.65)	(0.16)	(0.16)
Age	0.23	-0.10	-0.02	0.06*
	(0.44)	(0.74)	(0.03)	(0.16)
Post-Secondary	-0.07	-0.08	0.39**	-0.21
	(0.06)	(0.03)	(0.19)	(0.19)
Mother Secondary Ed	0.017	0.002	0.04	0.02
	(0.65)	(0.95)	(0.17)	(0.17)
Never Married	0.017	-0.03	-0.15	0.64**
	(0.47)	(0.24)	(0.30)	(0.32)
Has Children	0.02	0.04	-0.14	-0.10
	(0.45)	(0.19)	(0.28)	(0.27)
Lusaka	-0.03	0.06	0.14	0.29
	(0.41)	(0.07)	(0.20)	(0.20)
Southern	0.03	0.01	0.02	0.47
	(0.16)	(0.52)	(0.34)	(0.34)
English	0.07	0.07	-0.35	0.04
	(0.06)	(0.03)	(0.17)	(0.17)
Church Leader	-0.017	-0.004	-0.15	-0.18
	(0.64)	(0.90)	(0.17)	(0.17)
Attends Church 2-3 times	0.013	-0.05	0.54**	0.40
	(0.70)	(0.17)	(0.26)	(0.25)
Pentecostal	-0.013	0.039	-0.22	-0.25
	(0.72)	(0.29)	(0.16)	(0.16)
Log-likelihood-ratio (Unconstrained)				47.93 (p=0.03)

Table D.3: Correlates of Attrition

	Attrited Post-Election
Male	0.036*
	(0.021)
Under 24	0.023
	(0.029)
Mother	-0.022
Secondary Ed	(0.021)
Pentecostal	-0.017
	(0.019)
Attend Church	-0.038**
Once a Week	(0.019)
Never Married	0.005
	(0.036)
Has Children	0.027
	(0.036)
City Dweller	-0.037*
	(0.022)
Post Secondary	-0.008
	(0.024)
English	0.007
	(0.022)
Nyanja	-0.004
	(0.021)
Bemba	-0.010
	(0.021)
Tonga	0.017
	(0.017)
Copperbelt	0.011
	(0.026)
Southern	-0.053
	(0.033)
No. participants	1069

E   Additional Hypothesis Testing

E.1   Main Tests With Full Results and Without Controls

In the following tests, we show full results from regressions that do and do not include covariates. Results are consistent with and without covariates.

Table E.1: Influence of Information Only, Relative to No Information (First Lesson), Full Results

	Question 1 Correct (Pol Knowledge)	Question 2 Correct (Pol Knowledge)	Believe Can Make Positive Change	Inaction Not Justified
Civic Info	0.113***	0.069***	0.025	0.017
	(0.027)	(0.025)	(0.032)	(0.031)
Male	0.076***	0.011	0.029	-0.024
	(0.024)	(0.024)	(0.031)	(0.030)
Age	0.013***	-0.001	-0.000	0.003
	(0.004)	(0.004)	(0.005)	(0.005)
Post-Secondary	0.001	0.050*	0.011	0.058
	(0.028)	(0.028)	(0.035)	(0.036)
Mother Secondary Ed	0.017	0.008	0.019	0.012
	(0.025)	(0.024)	(0.032)	(0.031)
Never Married	0.003	-0.083**	-0.112**	0.043
	(0.043)	(0.040)	(0.054)	(0.055)
Num. Children	-0.088**	-0.043	-0.005	0.070
	(0.040)	(0.040)	(0.052)	(0.048)
Lusaka	0.032	0.045	-0.033	-0.003
	(0.029)	(0.028)	(0.035)	(0.034)
Southern	0.063	0.047	-0.007	-0.037
	(0.045)	(0.044)	(0.058)	(0.056)
English	0.049*	0.029	0.067**	-0.000
	(0.026)	(0.026)	(0.033)	(0.031)
Church Leader	0.042*	0.025	-0.046	0.049
	(0.024)	(0.024)	(0.033)	(0.031)
Church 2 x week	-0.018	-0.029	0.046	-0.005
	(0.025)	(0.024)	(0.032)	(0.031)
Pentecostal	-0.012	0.015	0.012	-0.042
	(0.024)	(0.023)	(0.030)	(0.028)
Wave 2	0.043	0.035	00.012	-0.028
	(0.028)	(0.027)	(0.036)	(0.034)
Wave 3	-0.015	-0.035	-0.043	-0.056
	(0.031)	(0.030)	(0.037)	(0.036)
Mean in Control	0.76	0.81	0.72	0.76

Note: * p<.1, ** p<.05, *** p<0.01.

Table E.2: Influence of Information Only, Relative to Control (First Lesson), Without Controls

	Question 1 Correct	Question 2 Correct	Believe Can Make Positive Change	Inaction Not Justified
Civic Information	0.124*** (0.026)	0.075*** (0.024)	0.030 (0.030)	0.009 (0.029)
Mean in Control	0.76	0.81	0.72	0.76
Number of participants	1063	1074	1057	1037

Table E.3: Main Treatment Effects, Full Results

	Knowledge Index (Homeworks/ Endline)	Attitudinal Index (Endline)	Behavioral Index (Follow-up/ Post-Election)
Non-Religiously Motivated Course	-0.016 (0.011)	0.024** (0.012)	-0.001 (0.014)
Religiously Motivated Course	-0.010 (0.011)	-0.007 (0.012)	-0.023* (0.014)
Male	0.015* (0.009)	0.020** (0.010)	0.060*** (0.012)
Age	0.002 (0.002)	-0.001 (0.002)	0.003 (0.002)
Post-secondary	0.011 (0.011)	0.021* (0.012)	0.013 (0.013)
Mother Secondary	0.032*** (0.010)	0.010 (0.010)	-0.008 (0.011)
Never Married	-0.013 (0.020)	-0.001 (0.017)	0.006 (0.021)
Num Children	-0.040** (0.020)	0.021 (0.016)	0.027 (0.020)
Lusaka	-0.002 (0.011)	0.021 (0.011)	-0.017 (0.014)
Southern	-0.011 (0.018)	0.037* (0.020)	0.002 (0.021)
English	0.034*** (0.010)	0.006 (0.010)	-0.006 (0.012)
Church Leader	0.013 (0.010)	0.045*** (0.011)	0.018 (0.012)
Church 2 x week	-0.005 (0.010)	0.005 (0.010)	0.022* (0.012)
Pentecostal	-0.022** (0.010)	-0.008 (0.010)	-0.011 (0.011)
Wave 2	-0.005 (0.011)	-0.012 (0.011)	0.002 (0.014)
Wave 3	-0.005 (0.011)	0.005 (0.012)	-0.006 (0.015)
Number participants	1026	936	864
Mean in Info-Only	0.90	0.65	0.49
Non-Rel Tr=Rel Tr (p-value)	0.58	0.01	0.08

Note: * p<.1, ** p<.05, *** p<0.01.

Table E.4: Main Treatment Effects, Without Controls

	Knowledge Index (Homeworks/ Endline)	Attitudinal Index (Endline)	Behavioral Index (Endline/ Follow-up)	Behavioral Index (Follow-up/ Post-Election)
Non-Religiously Motivated Course	-0.010 (0.011)	0.020* (0.011)	-0.027 (0.020)	-0.002 (0.014)
Religiously Motivated Course	-0.007 (0.011)	-0.013 (0.011)	-0.043** (0.020)	-0.027** (0.014)
Number participants	1026	1015	1037	760
Demographic Controls	No	No	No	Yes
Wave FE	Yes	Yes	Yes	Yes
Mean in Track A	0.90	0.65	0.61	0.49

Table E.5: Re-estimates After Inputting for Male Attriters from Motivated and Info-Only Courses, and Estimates Among Women, Full Results

	Behavioral Index (Follow-up/ Post-Election) (Women)	Behavioral Index (Follow-up/ Post-Election) (Upper Bound)	Behavioral Index (Follow-up/ Post-Election) (Lower Bound)	Behavioral Index (Follow-up/ Post-Election) (Intermediate Estimate)
Non-Religiously	0.032**	0.022*	-0.030**	-0.004
Motivated Course	(0.016)	(0.014)	(0.014)	(0.013)
Religiously	-0.006	-0.001	-0.051***	-0.025*
Motivated Course	(0.018)	(0.014)	(0.014)	(0.13)
Male	–	0.076***	0.028**	0.048***
		(0.012)	(0.012)	(0.011)
Age	0.004*	0.002	0.004*	0.004*
	(0.003)	(0.002)	(0.002)	(0.002)
Post-Secondary	-0.011	0.013	0.008	0.013
	(0.017)	(0.013)	(0.014)	(0.013)
Mother Secondary Ed	-0.009	-0.006	-0.014	-0.003
	(0.014)	(0.011)	(0.012)	(0.011)
Never Married	0.006	0.003	0.012	-0.002
	(0.029)	(0.021)	(0.023)	(0.021)
Num Chiildren	0.038	0.030	0.017	0.018
	(0.025)	(0.019)	(0.021)	(0.019)
Lusaka	-0.012	-0.016	-0.018	-0.010
	(0.017)	(0.014)	(0.014)	(0.013)
Southern	-0.005	-0.005	0.005	0.007
	(0.026)	(0.021)	(0.023)	(0.013)
English	0.010	-0.006	-0.010	-0.008
	(0.016)	(0.012)	(0.013)	(0.012)
Church Leader	0.014	0.020*	0.011	0.015
	(0.016)	(0.012)	(0.013)	(0.012)
Church 2 x week	0.033**	0.015	0.032**	0.025**
	(0.014)	(0.012)	(0.012)	(0.011)
Pentecostal	-0.023*	-0.021*	0.001	-0.010
	(0.014)	(0.011)	(0.012)	(0.011)
Wave 2	-0.003	0.003	-0.000	0.001
	(0.017)	(0.014)	(0.014)	(0.013)
Wave 3	0.004	0.007	-0.022	-0.010
	(0.018)	(0.015)	(0.015)	(0.014)
No. participants	438	801	919	834
Mean in Info-Only	0.45	0.48	0.50	0.51
Assumption	No Differential Attrition	Missing Men Assigned to Motivated Courses Did Participate	Missing Men Assigned to Motivated Courses Did Not Participate	Missing Men Assigned to Motivated Courses Participated Less
Non-Rel Tr=Rel Tr (p-value)	0.02	0.09	0.15	0.10

Note: * p<.1, ** p<.05, *** p<0.01. Actions in the endline/followup behavioral index include donating (or not), signing up for the volunteer opportunity listserv (or not), and sharing social media information (or not). Actions in the full behavioral index include those same measures plus indicators for "yes" to each of the six action questions in the post-election survey.

Table E.6: Re-estimates After Inputting for Male Attriters from Motivated and Info-Only Courses, No Controls

	Behavioral Index (Follow-up/ Post-Election)	Behavioral Index (Follow-up/ Post-Election)
Non-Religiously Motivated Course	0.028** (0.013)	-0.030** (0.013)
Religiously Motivated Course	-0.001 (0.013)	-0.060*** (0.013)
No. participants	919	919
Wave FE	Yes	Yes
Demographic Controls	No	No
Mean in Info-Only	0.48	0.50
Assumption	Men in Motivated Courses Would Have Participated	Men in Motivated Courses Would Not Have Participated

Table E.7: Compensatory Treatment Effects, by Gender, Full Results

	Attitudinal Index (Endline)	Behavioral Index (Follow-up/ Homework)	Behavioral Index (Follow-up/ Post-Election) (Lower Bound)	Behavioral Index (Follow-up/ Post-Election) (Upper Bound)
Non-Religiously Motivated Course	0.039** (0.016)	-0.004 (0.028)	0.034** (0.017)	0.036** (0.017)
Male	0.043*** (0.016)	0.075** (0.03)	0.106*** (0.019)	0.083*** (0.020)
Non-Religious Course x Male	-0.027 (0.023)	-0.052 (0.042)	-0.137*** (0.028)	-0.029 (0.027)
Religiously Motivated Course	0.019 (0.016)	-0.003 (0.028)	-0.005 (0.017)	-0.003 (0.017)
Religious Course x Male	-0.045** (0.023)	-0.058 (0.042)	-0.097*** (0.028)	0.007 (0.028)
Age	-0.001 (0.002)	0.006** (0.003)	0.004* (0.002)	0.002 (0.002)
Post-Secondary	0.021* (0.012)	0.031 (0.021)	0.008 (0.014)	0.013 (0.013)
Mother Secondary Ed	0.009 (0.010)	-0.018 (0.018)	-0.013 (0.012)	-0.006 (0.011)
Never Married	0.000 (0.017)	-0.001 (0.034)	0.013 (0.023)	0.003 (0.021)
Num Children	0.021 (0.016)	0.019 (0.029)	0.017 (0.021)	0.031* (0.019)
Lusaka	0.021* (0.011)	-0.013 (0.019)	-0.018 (0.014)	-0.016 (0.014)
Southern	0.037* (0.019)	-0.004 (0.032)	0.004 (0.022)	-0.005 (0.021)
English	0.005 (0.010)	-0.005 (0.018)	-0.010 (0.013)	-0.005 (0.012)
Church Leader	0.044*** (0.011)	-0.002 (0.020)	0.010 (0.013)	0.020 (0.012)
Church 2 x week	0.005 (0.010)	0.045** (0.019)	0.033 (0.012)	0.015 (0.012)
Pentecostal	-0.009 (0.010)	-0.001 (0.017)	-0.003 (0.012)	-0.021* (0.011)
Wave 2	-0.012 (0.012)	-0.028 (0.021)	0.003 (0.013)	0.003 (0.014)
Wave 3	0.005 (0.012)	-0.020 (0.022)	-0.020 (0.015)	0.007 (0.015)
Number participants	936	901	801	801

Note: The behavioral index from just the follow-up survey and homeworks (without the post-election measures) is made up of indicators for: donating, signing up for the CCMG volunteer opportunities listserv, and providing a social media account. These measures did not exhibit differential attrition. The behavioral index used in the last two columns adds answers to the survey questions asked after the election. The fourth column reports regression estimates after male participants in the motivated courses who dropped out after the election are coded as zeros (not participating) on all questions in the post-election survey while male participants in the information-only course who dropped out after the elections are coded as ones (participating) on all questions in the post-election survey.

Table E.8: Compensatory Treatment Effects, by Gender, Without Controls

	Knowledge Index (Homeworks/ Endline)	Attitudinal Index (Endline)	Behavioral Index (Follow-up/ Homework)	Behavioral Index (Follow-up/ Post-Election) (Lower Bound)	Behavioral Index (Follow-up/ Post-Election) (Upper Bound)
Non-Religiously Motivated Course	-0.023 (0.015)	0.031** (0.015)	-0.016 (0.026)	0.027* (0.015)	0.027* (0.016)
Male	-0.006 (0.015)	0.040*** (0.028)	0.071** (0.015)	0.112*** (0.017)	0.100*** (0.018)
Non-Religious Course x Male	0.004 (0.021)	-0.024 (0.022)	-0.022 (0.039)	-0.121*** (0.028)	-0.021 (0.025)
Religiously Motivated Course	-0.026* (0.014)	0.003 (0.016)	-0.036 (0.027)	-0.016 (0.016)	-0.015 (0.016)
Religious Course x Male	0.045** (0.021)	-0.038* (0.022)	-0.010 (0.040)	-0.093*** (0.026)	0.009 (0.025)
Number participants	1026	1015	1037	919	919

Note: The behavioral index from just the follow-up survey and homeworks (without the post-election measures) is made up of indicators for: donating, signing up for the CCMG volunteer opportunities listserv, and providing a social media account. These measures did not exhibit differential attrition. The behavioral index used in the last two columns adds answers to the five survey questions asked after the election. The fourth column reports regression estimates after male participants in the motivated courses who dropped out after the election are coded as zeros (not participating) on all questions in the post-election survey while male participants in the information-only course who dropped out after the elections are coded as ones (participating) on all questions in the post-election survey.

Table E.9 shows the relationship between pre-treatment measures of willingness to participate (vote) and differential attrition from the two motivated courses. It appears that people (men) who were inclined to vote pre-treatment were more likely to drop out of the post-election survey after the information-only course but less likely to drop out of the post-election survey following the religious course. This pattern suggests that estimates of the effect of the religious course on men's behavioral participation may be inflated without adjusting for attrition.

Table E.9: Interactions of Treatment with Pre-treatment Measures of Inclinations to Participate to Explain Attrition

	Attrited Post-Election
Non-Religiously Motivated Course	0.123 (0.132)
Religiously Motivated Course	0.230* (0.125)
Would Vote (Baseline)	0.067*** (0.0156)
Wld Vote x Non-Religious Course	-0.150 (0.094)
Wld Vote x Religious Course	-0.194** (0.081)
No. participants	1099

Note: Also included pre-treatment indicators for would not participate in violent protest, would participate in peaceful protest, have volunteered, and have contacted a government official, and their interactions with treatment. All coefficients are in the same direction as for would vote (in Track A willingness to participate is positively correlated with attrition, in the motivated courses willingness to participate is negatively correlated with attrition) but are not statistically significant.

E.2 Additional Heterogeneous Treatment Effects

We pre-registered that the effects of the motivated courses (especially the religious course) on political participation would be larger and more robust among participants who had lower levels of education (and thus had perhaps had less exposure to civic education in schools) and among Pentecostals (for whom the Empowerment Fund controversy should not have soured religious messages and to whom the "power of faith" message might have been particularly familiar and appealing). We found some evidence of heterogeneous effects by education level on political knowledge (Table E.11) but not on political participation. We also found no evidence of heterogenous effects by Pentecostal affiliation (see Table E.12).

Table E.13 shows the same heterogeneous treatment effects by church leader status shown in the main paper but this time from regressions without controls. Table E.13 also shows that there is some evidence of heterogeneous effects by leadership status on political knowledge as well (column 1).

Tables E.14 and E.15 show estimated treatment effects of the two motivated courses, relative to information-only, one each component of the indices (the attitudinal index in Table E.14

Table E.10: Treatment Effects on Political Efficacy and Grit, Full Results

	Internal Pol Efficacy	Efficacy Index	Hours Would Wait to Vote	Grit Index
Non-Religiously Motivated Course	0.089**	0.023**	1.05**	0.016**
	(0.038)	(0.009)	(0.45)	(0.007)
Religiously Motivated Course	0.075**	0.011	0.864*	0.005
	(0.037)	(0.009)	(0.488)	(0.008)
Male	0.158***	0.016**	0.662	-0.002
	(0.032)	(0.008)	(0.432)	(0.007)
Age	0.002	-0.003**	-0.023	0.001
	(0.005)	(0.001)	(0.065)	(0.001)
Post-Secondary	0.052	0.023***	1.24***	0.009
	(0.036)	(0.009)	(0.450)	(0.008)
Mother Secondary Ed	0.064**	0.002	-0.375	0.000
	(0.031)	(0.008)	(0.459)	(0.007)
Never Married	-0.036	0.005	-0.294	0.010
	(0.059)	(0.014)	(0.928)	(0.012)
Num Children	-0.097*	0.015	0.027	-0.000
	(0.050)	(0.013)	(0.716)	(0.010)
Lusaka	-0.014	0.020**	0.887**	0.007
	(0.037)	(0.009)	(0.442)	(0.008)
Southern	-0.042	-0.011	0.836	0.015
	(0.061)	(0.016)	(0.780)	(0.012)
English	0.048	0.010	0.427	0.014*
	(0.034)	(0.008)	(0.433)	(0.007)
Church Leader	-0.020	0.000	-0.268	-0.013*
	(0.034)	(0.009)	(0.479)	(0.007)
Church 2x week	0.022	0.010	0.244	0.016**
	(0.033)	(0.008)	(0.466)	(0.007)
Pentecostal	-0.012	-0.000	-0.369	0.005
	(0.031)	(0.007)	(0.416)	(0.006)
Wave 2	-0.054	-0.003	0.221	-0.041***
	(0.039)	(0.009)	(0.569)	(0.008)
Wave 3	-0.088	-0.004	0.036	-0.009
	(0.039)	(0.009)	(0.462)	(0.007)
No. participants	995	995	922	995
Mean in Control	0.33	0.86	5.89	0.82
Tr Non-Religious=Tr Religious?	Yes	Yes	Yes	Yes
(p-value)	0.71	0.16	0.72	0.13

Note: * p<.1, ** p<.05, *** p<0.01.

Table E.11: Treatment Effects, by Education Level, Controlling for Age and Gender

	Knowledge Index (Homeworks/ Endline)	Attitudinal Index (Endline)	Behavioral Index (Followup/ Post-Election)
Non-Religiously Motivated Course	-0.013 (0.014)	0.022 (0.016)	0.007 (0.017)
Less Education	-0.031** (0.016)	-0.015 (0.017)	0.010 (0.019)
Non-Religious Course x Less Education	0.006 (0.022)	-0.009 (0.023)	-0.014 (0.026)
Religiously Motivated Course	-0.028* (0.022)	-0.006 (0.017)	-0.007 (0.018)
Religious Course x Less Education	0.037* (0.022)	-0.010 (0.023)	-0.037 (0.026)
Number participants	965	965	815

Table E.12: Treatment Effects, by Pentecostal Affiliation, Controlling for Age and Gender

	Knowledge Index (Homeworks/ Endline)	Attitudinal Index (Endline)	Behavioral Index (Followup/ Post-Election)
Non-Religiously Motivated Course	-0.005 (0.015)	0.039* (0.023)	-0.006 (0.017)
Pentecostal (self-id)	-0.008 (0.015)	-0.036 (0.025)	-0.017 (0.021)
Non-Religious Course x Pentecostal	-0.028 (0.023)	0.029 (0.034)	-0.005 (0.028)
Religiously Motivated Course	-0.003 (0.014)	-0.005 (0.025)	-0.028 (0.018)
Religious Course x Pentecostal	-0.018 (0.021)	0.023 (0.035)	0.003 (0.028)
Number participants	892	803	760

and the behavioral index in Table E.15). Table E.15 also shows the results separately for all

Table E.13: Treatment Effects, by Church Leader Status, Controlling for Gender Without Other Controls

	Knowledge Index (Homeworks/ Endline)	Attitudinal Index (Endline)	Behavioral Index (Followup/ Homework)	Behavioral Index (Followup/ Post-Election)
Non-Religiously Motivated Course	-0.021 (0.013)	0.015 (0.014)	-0.032 (0.025)	0.012 (0.019)
Church Leader	-0.020 (0.016)	0.032** (0.016)	0.026 (0.029)	-0.007 (0.025)
Non-Religious Course x Church Leader	0.028 (0.022)	0.020 (0.023)	0.018 (0.040)	0.045 (0.034)
Religiously Motivated Course	-0.022* (0.014)	-0.021 (0.015)	-0.048 (0.025)	-0.035* (0.019)
Religious Course x Church Leader	0.044** (0.021)	0.022 (0.022)	0.019 (0.041)	0.064* (0.034)
Number participants	1026	1015	1037	494

participants in the sample and then just for women (among whom we do not have concerns about differential attrition). The positive effects of the non-religious motivated course on attitudinal and behavioral participation are driven by willingness to protest, judging citizens who do not participate, voting, volunteering and posting on social media.

Table E.14: Effects of Motivated Courses on Individual Measures

	Very Interested in Politics (Endline)	Would Not Violent Protest (Endline)	Have Participated Peaceful Protest (Endline)	Would Vote (Endline)	Would Contact Govt (Endline)	Hypothetical Bad Citizen (Endline)	Signed Up CCMG (Homework)	Gave SM Handle (Homework)	Donated (Follow-up)
Non-Religiously Motivated Course	0.015 (0.034)	-0.011 (0.017)	0.044** (0.017)	0.017 (0.013)	0.022 (0.020)	0.094** (0.039)	-0.017 (0.040)	-0.035 (0.036)	-0.024 (0.025)
Religiously Motivated Course	0.003 (0.033)	-0.015 (0.017)	0.034* (0.018)	-0.005 (0.015)	-0.057** (0.023)	0.070* (0.039)	-0.060 (0.039)	-0.019 (0.036)	-0.014 (0.025)
Baseline Level	0.507*** (0.025)	0.292*** (0.055)	0.292*** (0.061)	0.385*** (0.059)	0.489*** (0.061)	–	–	–	–
No. participants	995	995	995	995	995	995	918	995	975
Mean in Info-Only	0.46	0.96	0.05	0.96	0.92	0.39	0.62	0.32	0.90
Covariates	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Table E.15: Effects of Motivated Courses on Individuals Measures (All Participants and Women Alone)

	Voted	Voted	Helped Vote	Helped Vote	Volunteered in Election	Volunteered in Election	Attended Rally	Attended Rally	Discussed Politics	Discussed Politics	Posted Abt Politics	Posted Abt Politics
Non-Religiously Motivated Course	0.045 (0.032)	0.094** (0.046)	0.012 (0.027)	0.028 (0.039)	0.016 (0.033)	0.073* (0.041)	-0.021 (0.037)	-0.016 (0.043)	0.042 (0.040)	0.077 (0.054)	-0.005 (0.018)	0.029* (0.016)
Religiously Motivated Course	0.004 (0.033)	0.029 (0.046)	-0.011 (0.028)	-0.017 (0.042)	-0.036 (0.035)	0.020 (0.039)	-0.032 (0.035)	-0.045 (0.041)	-0.003 (0.039)	0.004 (0.053)	0.013 (0.019)	0.019 (0.015)
No. participants	893	519	870	508	872	507	874	512	879	510	995	571
Mean in Info-Only	0.80	0.76	0.87	0.84	0.23	0.13	0.26	0.19	0.65	0.62	0.06	0.024
Covariates	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sub-Sample	All	Women	All	Women	All	Women	All	Women	All	Women	All	Women

Table E.16 shows that grit, self-efficacy, internal political efficacy, and expectations that friends will participate are consistently related to political knowledge, inclinations to participate and actual participation. As we explain in the body of the paper, because the first three (grit, self-efficacy, and internal political efficacy) are also moved by the non-religious motivated course, we find these to be plausible mechanisms for that effect.

Table E.16: Associations between Mechanism Measures and Outcome Indices

	Knowledge Index (Endline)	Attitudinal Index (Endline)	Behavioral Index (Followup/HW)	Behavioral Index (Followup/Election) (Women)
Internal Pol Efficacy	0.001 (0.009)	0.015 (0.010)	0.029* (0.017)	0.029** (0.013)
Self-Efficacy Index	0.042 (0.038)	0.117*** (0.042)	0.069 (0.075)	0.058 (0.058)
Hours Wait (Grit)	0.002 (0.001)	0.000 (0.001)	0.002* (0.001)	0.003*** (0.001)
Grit Index	0.111** (0.046)	0.167*** (0.048)	0.061 (0.083)	0.074 (0.066)
Youth ID	-0.001 (0.011)	0.012 (0.012)	0.006 (0.021)	0.020 (0.015)
Religious ID	0.003 (0.011)	0.011 (0.013)	0.027 (0.023)	0.027 (0.018)
Democracy Worse	-0.003 (0.009)	0.002 (0.010)	-0.010 (0.019)	0.022 (0.014)
Other Youth Will Particip	-0.029** 0.012	0.005 (0.016)	-0.002 (0.026)	0.017 (0.019)
Friends Will Particip	0.033** (0.013)	0.064*** (0.016)	0.039 (0.025)	0.057*** (0.020)
Expect Church Financial Help	-0.001 (0.009)	0.009 (0.010)	-0.008 (0.018)	0.008 (0.014)
Expect Church Legal Help	-0.016* (0.010)	0.000 (0.010)	0.036** (0.018)	0.016 (0.014)
No. participants	1000	921	1011	479

Table E.18 shows that there are no detectable heterogeneous effects by gender of the mo-

Table E.17: Treatment Effects on Democracy Perceptions, Expectations of Others, and Expectations of Church (Unanticipated Results)

	Democracy Worse	Other Youth Will Participate	Other Friends Will Participate	Church Financial Very Likely	Church Legal Very Likely
Non-Religiously Motivated Course	0.066* (0.034)	0.052* (0.027)	0.034 (0.025)	0.082** (0.036)	0.059* (0.036)
Religiously Motivated Course	0.066* (0.033)	0.033 (0.028)	0.003 (0.026)	0.096*** (0.036)	0.032 (0.036)
No. participants	1144	1144	1044	1131	1125
Mean in Control	0.66	0.81	0.84	0.36	0.38

tivated courses on the mechanism measures. Notably, men scored higher on pre-treatment measures of these factors than women, so pre-treatment men may have already reached a necessary threshold on internal political efficacy, grit and self-efficacy such that the effect of the course was to increase women's behavioral participation but not men's, even though it affected their senses of internal political efficacy, grit and self-efficacy similarly.

Table E.18: Treatment Effects on Political Efficacy, Grit and Identity, by Gender, No Controls

	Internal Pol Efficacy	Self-Efficacy Index	Hours Would Wait to Vote	Grit Index	Youth ID (Open)	Rel ID (Open)
Non-Religiously Motivated Course	0.129*** (0.049)	0.011 (0.012)	1.48** (0.661)	-0.013 (0.0101)	0.076* (0.042)	-0.008 (0.035)
Religiously Motivated Course	0.039 (0.043)	0.012 (0.011)	0.796 (0.659)	-0.009 (0.011)	0.071* (0.040)	0.068* (0.038)
Male	0.182*** (0.052)	0.007 (0.013)	0.821 (0.581)	0.005 (0.011)	0.014 (0.042)	0.031 (0.042)
Non-Religious x Male	-0.092 (0.075)	0.028 (0.018)	-0.841 (0.883)	0.021 (0.015)	-0.079 (0.061)	0.040 (0.060)
Religious x Male	0.027 (0.075)	-0.004 (0.017)	0.226 (1.05)	-0.000 (0.016)	-0.069 (0.060)	-0.023 (0.062)
No. participants	995	995	922	995	995	1144
Mean in Control	0.33	0.86	5.89	0.82	0.16	0.14

Table E.19 shows all tests of heterogeneous treatment effects of the motivated courses by church leadership status.

Table E.19: Compensatory and Exacerbating Treatment Effects, by Church Leader Status

	Knowledge (1st Lesson)	Inaction Not Justified (1st Lesson)	Knowledge Index (Homeworks/ Endline)	Attitudinal Index (Endline)	Behavioral Index (Follow-up/ Homework)	Behavioral Index (Follow-up/ Post-Election) (Lower Bound)	Behavioral Index (Follow-up/ Post-Election) (Upper Bound)
Non-Religiously Motivated Course	0.17*** (0.04)	0.094** (0.045)	-0.023 (0.014)	0.016 (0.015)	-0.039 (0.027)	-0.043** (0.017)	0.008 (0.018)
Church Leader	0.06 (0.05)	0.136*** (0.051)	-0.003 (0.015)	0.032* (0.017)	-0.018 (0.03)	0.106*** (0.019)	-0.011 (0.020)
Non-Religious Course x Church Leader	-0.099* (0.06)	-0.167** (0.070)	0.018 (0.022)	-0.020 (0.024)	0.029 (0.044)	0.032 (0.029)	0.036 (0.028)
Religiously Motivated Course	0.083** (0.042)	0.033 (0.047)	-0.022 (0.014)	0.013 (0.016)	-0.038 (0.018)	-0.071*** (0.017)	-0.023 (0.018)
Religious Course x Church Leader	0.034 (0.06)	-0.085 (0.069)	0.032 (0.022)	0.016 (0.024)	0.023 (0.043)	0.053** (0.025)	0.058** (0.027)
Number participants	923	900	892	936	901	801	801
Demographic Controls?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Wave FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Note: The behavioral index from just the follow-up survey and homeworks (without the post-election measures) is made up of indicators for: donating, signing up for the CCMG volunteer opportunities listserv, and providing a social media account. These measures did not exhibit differential attrition. The behavioral index used in the last two columns adds answers to the survey questions asked after the election. The fourth column reports regression estimates after male participants in the motivated courses who dropped out after the election are coded as zeros (not participating) on all questions in the post-election survey while male participants in the information-only course who dropped out after the elections are coded as ones (participating) on all questions in the post-election survey.

Table E.20: Expectations of Other Church Members' Participation, Full Results

	Think Very Likely that Other Members of the Church Will Participate in Elections
Non-Religiously Motivated Course	0.056
	(0.036)
Church Leader	0.065
	(0.046)
Non-Religious x Church Leader	0.017
	(0.068)
Religiously Motivated Course	0.082**
	(0.036)
Religiously x Church Leader	-0.136**
	(0.062)
Male	0.053**
	(0.027)
Age	0.001
	(0.005)
Post-Secondary	0.030
	(0.031)
Mother Secondary Ed	0.040
	(0.026)
Never Married	0.006
	(0.051)
Num Children	0.046
	(0.046)
Lusaka	-0.055*
	(0.031)
Southern	-0.101**
	(0.049)
English	0.010
	(0.027)
Church 2x week	0.079***
	(0.028)
Pentecostal	0.010
	(0.026)
Wave 2	-0.043
	(0.033)
Wave 3	-0.031
	(0.033)
Number of Observations	1144
Mean in Info-Only	0.18

Note: * p<.1, ** p<.05, *** p<0.01.

Table E.21: Treatment Effects on Identity, Full Results

	Youth Identity (Open)	Religious Identity (Open)
Non-Religiously Motivated Course	0.042 (0.031)	0.011 (0.028)
Religiously Motivated Course	0.043 (0.030)	0.059** (0.030)
Male	-0.034 (0.027)	0.037 (0.026)
Age	-0.002 (0.005)	0.006 (0.004)
Post-Secondary	0.010 (0.031)	0.000 (0.030)
Mother Secondary Ed	0.074*** (0.026)	-0.027 (0.026)
Never Married	0.078 (0.052)	-0.041 (0.047)
Num Children	0.022 (0.045)	-0.100** (0.040)
Lusaka	0.030 (0.030)	0.003 (0.029)
Southern	0.007 (0.047)	0.005 (0.048)
English	0.007 (0.027)	0.030 (0.026)
Church Leader	0.034 (0.028)	0.042 (0.028)
Church 2x week	-0.005 (0.026)	0.027 (0.026)
Pentecostal	-0.026 (0.025)	0.014 (0.025)
Wave 2	-0.051 (0.031)	-0.010 (0.029)
Wave 3	0.031 (0.033)	0.030 (0.032)
No. participants	995	995
Mean in Control	0.16	0.14
Tr Non-Religious=Tr Religious?	Yes	No
(p-value)	0.97	0.10

Note: * p<.1, ** p<.05, *** p<0.01.

Table E.22: Treatment Effects on Democracy Perceptions, Expectations of Others, and Expectations of Church, by Gender

	Democracy Worse	Other Youth Will Participate	Other Friends Will Participate	Church Financial Very Likely	Church Legal Very Likely
Non-Religiously Motivated Course	0.085* (0.048)	0.044 (0.046)	0.021 (0.036)	0.111** (0.051)	0.054 (0.056)
Religiously Motivated Course	0.121** (0.047)	0.051 (0.037)	-0.011 (0.037)	0.132*** (0.050)	0.096* (0.050)
Male	0.040 (0.053)	-0.049 (0.046)	-0.041 (0.042)	0.006 (0.054)	0.054 (0.056)
Non-Religious x Male	-0.055 (0.072)	0.029 (0.059)	0.028 (0.056)	-0.025 (0.077)	0.041 (0.078)
Religious x Male	-0.107 (0.072)	-0.068 (0.063)	-0.015 (0.059)	-0.028 (0.077)	-0.110 (0.077)
No. participants	995	995	995	983	976
Mean in Control	0.66	0.81	0.84	0.36	0.38

Tables E.23 and E.24 show that the different courses had no detectable effects on participants' affect after the courses or on their beliefs about social pressure to participate coming from religious leaders, parents and friends.

Table E.23: Affect Mechanisms (H12)

	Interested	Bored	Inspired	Excited	Angry	Frustrated	Happy	Tired	Sad
Non-Religiously	-0.026	-0.001	0.004	0.005	0.010	-0.000	0.025	-0.006	0.002
Motivated Course	(0.033)	(0.008)	(0.035)	(0.035)	(0.005)	(0.004)	(0.031)	(0.004)	(0.006)
Religiously	0.039	-0.006	-0.054	-0.030	0.000	0.002	-0.024	-0.003	-0.000
Motivated Course	(0.031)	(0.007)	(0.034)	(0.035)	(0.000)	(0.005)	(0.030)	(0.005)	(0.005)
No. participants	1144	1144	1144	1144	1144	1144	1144	1144	1144
Wave FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mean in Info-Only	0.73	0.01	0.38	0.41	0.00	0.00	0.24	0.01	0.01

Table E.24: Social Pressure Mechanisms (H16)

	Religious Leaders Will Pressure	Parents Will Pressure	Friends Will Pressure
Non Religiously Motivated Course	0.011 (0.033)	0.009 (0.032)	0.024 (0.029)
Religiously Motivated Course	0.011 (0.033)	-0.038 (0.033)	0.032 (0.029)
No. participants	1144	1144	1144
Wave FE	Yes	Yes	Yes
Mean in Info-Only	0.70	0.72	0.79

Table E.25 shows that the religious course did not lead to higher levels of engagement, compared to control, for women, men, church leaders or non-church-leaders.

Table E.26 shows that Catholics, Seventh Day Adventists and Pentecostals did not react differently to the religiously motivated course, despite their leaders' differing reactions to the Church Empowerment Fund.

Table E.25: Engagement with Open-Ended Questions

	Get Involved Open Question (Word Count)	Can Make Change Open Question (Word Count)	Get Involved Open Question (Word Count)	Can Make Change Open Question (Word Count)
Non-Religious Course	1.43	-1.88	2.68*	-0.86
	(1.34)	(1.33)	(1.53)	(1.33)
Male	0.77	0.54		
	(1.47)	(1.42)		
Non-Religious x Male	2.12	3.35		
	(2.30)	(2.09)		
Religious Course	0.052	-1.45	0.86	0.45
	(1.22)	(1.37)	(1.37)	(1.92)
Religious x Male	2.90	-0.106		
	(2.57)	(1.99)		
Church Leader			-1.52	-1.83
			(1.43)	(1.43)
Non-religious x Church Leader			-0.93	1.24
			(2.15)	(2.07)
Religious x Church Leader			1.11	1.93
			(2.59)	(2.12)
Number participants	1144	1144	1144	1144
Wave FE	Yes	Yes	Yes	Yes
Mean in Info-only	17	16	17	16

Table E.26: Effects of the Religious Course on the Behavioral Index, by Denomination

	Behavioral Index (Follow-up/ Post-Election)	Behavioral Index (Follow-up/ Post-Election	Behavioral Index (Follow-up/ Post-Election)
Religious Course	-0.023	-0.000	-0.026
	(0.015)	(0.020)	(0.018)
Catholic	-0.014	–	–
	(0.025)		
Catholic x Religious	0.004	–	–
	(0.038)		
Seventh Day	–	0.030	–
		(0.026)	
SDA x Religious	–	-0.030	
		(0.040)	
Pentecostal	–	–	-0.018
			(0.020)
Pentecostal x Religious	–	–	0.012
			(0.027)

Multiple Comparison Corrections

Following our registered pre-analysis plan, we corrected p-values using a false discovery rate (FDR) correction to control the Type-1 error rate (Benjamini and Hochberg 1995) at level 0.05. We prespecified families of hypotheses, grouping hypothesis tests (both tests for main effects and tests for heterogeneous treatment effects) by index or, in the case of mechanisms, by outcomes related to the same registered theoretical hypothesis. These results can be considered fairly conservative robustness tests.

The results that survive corrections for multiple comparisons are those that have behavioral measures as the outcomes. See Table E.27. In particular, the following results survive at the 0.05 level: (1) that the non-religiously motivated course increased behavioral measures of political participation among women and generally (even corrected for attrition, if we take the lower bound), and (2) that the religiously motivated track decreased behavioral measures of political participation (and especially among men if we take the lower bound of the estimate correcting for attrition) survive at the 0.05 level. The finding (3) that the religiously motivated course increased behavioral measures of political participation among *women church leaders* and the finding (4) that the religiously motivated course decreased behavioral measures of political participation among *women without church leadership positions* are also extremely close to (though just miss) the cut-off at the 0.05 level and do survive at a 0.1 level. The results for the attitudinal index, the knowledge index and the expectations of others' participation (among the mechanisms) do not survive corrections for multiple comparisons at either level, but again we view these corrections as quite conservative and also view the analysis of the expectations of others' participation as exploratory. Other pre-specified mechanism tests (for treatment effects on efficacy, grit, identity) do survive the multiple comparison corrections because they are not grouped into large pre-specified families.

Table E.27: Multiple Comparison Corrections

Family	Test	Result	P-Value	Survive BH at 0.05?	Survive BH at 0.1?
Knowledge Index	Religious x Male	Positive	0.031	No	No
Knowledge Index	Religious x Church Leader	Positive	0.04	No	No
Knowledge Index	Religious Main Effect	Negative	0.071	No	No
Knowledge Index	Non-Religious x Church Leader	Null	0.196	No	No
Knowledge Index	Non-Religious Main Effect	Null	0.312	No	No
Knowledge Index	Non-Religious x Male	Null	0.835	No	No
Attitudinal Index	Non-Religious Main Effect	Positive	0.043	No	No
Attitudinal Index	Religious x Male	Negative	0.089	No	No
Attitudinal Index	Religious Main Effect	Null	0.155	No	No
Attitudinal Index	Non-Religious x Male	Null	0.277	No	No
Attitudinal Index	Religious x Church Leader	Null	0.314	No	No
Attitudinal Index	Non-Religious x Church Leader	Null	0.371	No	No
Behavioral Index	Non-Religious x Male (lower bound)	Negative	0.000	Yes	Yes
Behavioral Index	Religious x Male (lower bound)	Negative	0.000	Yes	Yes
Behavioral Index	Religious Main Effect	Negative	0.005	Yes	Yes
Behavioral Index	Religious x Church Leader (Women)	Positive	0.065	No	Yes
Behavioral Index	Religious Main Effect (Women)	Negative	0.068	No	Yes
Behavioral Index	Non-Religious Main Effect (lower bound)	Positive	0.086	No	Yes
Behavioral Index	Non-Religious x Church Leader	Positive	0.099	No	Yes
Expectations of Others	Non-Religious Main Effect (youth)	Positive	0.056	No	No
Expectations of Others	Non-Religious Main Effect (friends	Null	0.18	No	No
Expectations of Others	Religious Main Effect (youth)	Null	0.232	No	No
Expectations of Others	Non-Religious x Church Leader (youth)	Null	0.632	No	No
Expectations of Others	Religious x Church Leader (friends)	Null	0.787	No	No
Expectations of Others	Non-Religious x Church Leader (friends)	Null	0.886	No	No
Expectations of Others	Religious Main Effect (friends)	Null	0.915	No	No
Expectations of Others	Religious x Church Leader (youth)	Null	0.998	No	No

F   Survey Questions and Outcome Measures

F.1   Homework Questions

HW1 Imagine you have a friend who is very busy and has many demands in his life. He tells you he doesn't vote because he doesn't have the time. Do you think his decision is: 1. totally justified, 2. somewhat justified, 3. not at all justified? (after Lesson 1)

HW2 Do you think his failure to vote makes him a bad citizen? (after Lesson 1)

HW3 Which of the following are NOT going to be chosen through elections this August? 1. President, 2. Provincial Ministers, 3. Ward Councillors, 4. Members of Parliament (after Lesson 1)

HW4 In your view, do you believe that regular Zambian people can help make positive change in this country by voting in national elections? 1. Yes, voting can make a difference, 2. Voting can make a difference sometimes, but not in every election, 3. No, voting rarely makes a difference. (after Lesson 1)

HW5 To your knowledge, has Zambia's national debt gone up or down in recent years? 1. It has gone down recently, 2. It has gone up recently, 3. I don't know.

HW6 Should Zambian people get involved in politics? Why or why not? You can type your short answer here: (after Lesson 1)

HW7 There are various actions that some people take as citizens. For instance, some people attend peaceful demonstrations and peaceful marches. Other people do not. What about you? Would you attend a peaceful demonstration or a peaceful march? 1. Yes I would definitely do this, 2. I would probably do this. 3. I might do this. 4. I would probably not do this. 3. No, I would definitely not do this (after Lesson 2)

HW8 In your view, how important is it for Zambian youth to engage specifically with local government issues? 1. It is very important. 2. It is somewhat important. 3. It is not very important. 4. it is not important (after Lesson 2)

HW9 When asked to identify themselves, people describe themselves in many different ways, for instance in terms of their ethnic group, their religion, gender, age, occupation and so on. Reply with one or two words describing the parts of your identity that are most important to you, especially when you think about politics? [open-ended] (after Lesson 2)

HW10 Can someone like you make change through peaceful politics? Why or why not? You can type your short answer here:[open-ended] (after Lesson 2)

HW11 There are various actions that some people take as citizens. For instance, some people post political opinions on social media or otherwise make their political views known to lots of people. Other people do not. What about you? Would you post political opinions on social media or otherwise make your political views known to lots of people? 1. Yes I would definitely do this 2. I would probably do this. 3. I might do this. 4. I would probably not do this. 5. No, I would definitely not do this (after Lesson 3)

HW12 Do you agree or disagree with this statement: "I don't see much point in trying to get involved in politics." 1. Strongly agree, 2. Agree, 3. Disagree , 4. strongly disagree (after Lesson 3)

HW13 Which of the following is an issue you think youth like yourself should prioritize for the government to address? 1. Climate change, 2. Media and misinformation, 3. National debt, 4. Women in politics, 5. Local government accountability (after Lesson 3)

HW14 Describe one thing from this course you've learned so far that you had not known before. You can use short phrases, full sentences or paragraphs, as you like. You can type your short answer here:[open-ended] (after Lesson 3)

HW15 Sometimes waiting in line to vote takes a really long time. About how long (in hours) would you be willing to wait in line to vote? You can text the number of hours here: (after Lesson 4)

HW16 On which day will the general elections take place? 1. 21 August 2021, 2. 15 August 2021, 3. 12 August 2021, 4. 25 August 2021, 5. 1 January 2022 (after Lesson 4)

HW17 Describe some challenges you would expect to meet when going to your polling station to cast your ballot. How would you face those challenges? In answering, you can use short phrases, full sentences or paragraphs, as you like. [open-ended] (after Lesson 4)

HW18 YouthKnow works closely with Zambian Civil Society organizations, such as church mother bodies and the Christian Churches Monitoring Group, a coalition to promote free and inclusive elections. We understand that people are very busy and may not be interested in or have time to volunteer. However, if you're interested in learning more about opportunities to volunteer with these groups, they can reach out to you in coming weeks. Would you be interested in learning more about these opportunities? Please note that these are unpaid opportunities. You are under no pressure or obligation to volunteer; please select the option that truly reflects your preferences. 1. I'm interested but I'm not sure if I will volunteer quite yet, 2. Yes, I am eager to volunteer ASAP, please send me the information, 3. No, I'm not interested at this time; (if selected 1 or 2) Would you like to be contacted by email about these opportunities, instead of by WhatsApp? (If yes:) Please enter your email address where we can reach you here: (after Lesson 4)

HW19 Would you like to share your social media information (Twitter handle, Facebook page name, Instagram name) with YouthKnow so that the educators and researchers at IPA can follow you? 1. Yes, 2. No; If Yes, please text information about your social media handles (examples) here: (after Lesson 4)

F.2 Endline and Follow-up Questions

E1 How interested would you say you are in politics?*

E2 How important would you say being a youth is to your identity?

E3 How important would you say being a Christian is to your identity?

E4 How would you describe how you felt when taking the WhatsApp course?

E5 Grit scale:[43]

- Setbacks don't discourage me.
- New ideas sometimes distract me from previous ones.
- I am a hard worker.
- I have been obsessed with a certain idea or project of a short time but later lost interest.
- I often set a goal but later choose to pursue a different one.
- I have difficulty maintaining my focus on projects that take more than a few months to complete.
- I finish whatever I begin.
- I address my obligations with care and attention to detail.

E6 If you were facing financial difficulties, how likely would you be to get help from your church?

E7 If you were facing legal difficulties, how likely would you be to get help from your church?

E8 Based on what you know, is the quality of democracy in Zambia today much better, better, the same, worse or much worse than it was ten years ago?*

E9 Please tell me, in general, how willing or unwilling are you to take risks in your life?

E10 Efficacy scale:

- I don't see much point in trying to get involved in politics.
- Sometimes politics and government seem so complicated that a person like me cannot really understand what is going on.
- I don't think public officials care much what people like me think.
- I believe I can succeed at most any endeavor to which I set my mind.
- I will be able to successfully overcome many challenges.
- Even when things are tough I can perform quite well.

E11 Political Knowledge:*

- How often are elections for choosing the President, Members of Parliament and local Ward Councillors held?*
- What has decreased in Zambia, due to climate change?*
- True or false: You have to have registered to vote in 2020 in order to vote in the 2021 elections.*

E12 There are various actions that people sometimes take as citizens. We are interested in whether you have done these things recently or would do these things if offered the opportunity in the near future. For instance, if elections were held tomorrow, would you vote? (Or if you are not registered but had the opportunity to register tomorrow, would you register?)*

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[43]For detailed discussion of the conceptualization and measurement of grit, see Duckworth et al. (2007); Duckworth and Quinn (2009); Holbein and Hillygus (2020). We carefully reviewed these measures with our local PI and professional Zambian survey researchers to ensure its appropriateness and accessibility.

E13 Would you attend a protest where violence by political cadres was likely to break out?*

E14 Would you attend a peaceful protest or demonstration march?*

E15 Would you contact a government official to ask for help with a problem or to raise an issue?*

E16 Some people volunteer regularly or from time to time. This means doing unpaid work in the community. For example, this might involve helping children or the elderly through education or home-based care programs. Typically, volunteering occurs through engagement with a civil society organization, such as a school, clinic, church or NGO. Have you volunteered at any point in the last five years?*

E17 If yes to the previous question, roughly how many days in the last month would you estimate that you engaged in volunteer activities?*

E18 If yes to the volunteer question, have you ever volunteered to promote democracy or fair elections? Some examples might include helping to register people to vote, educating people about democracy or voting, serving as an election observer with an organization like the Christian Churches Monitoring Group. Have you done this kind of volunteer work recently?*

E19 How likely do you think it is that other youth will participate (vote or volunteer or campaign) during the upcoming 12 August elections?

E20 How likely do you think it is that your friends will participate (vote or volunteer or campaign) during the upcoming 12 August elections?

E21 How likely do you think it is that people from your neighborhood will participate (vote or volunteer or campaign) during the upcoming 12 August elections?

E22 How likely do you think it is that people from your church community will participate (vote or volunteer or campaign) during the upcoming 12 August elections?

E23 Now, please imagine you have a friend who refuses an opportunity to learn more about politics and political participation because they believe "all politicians are corrupt." Is this friend's refusal to engage: totally justified, somewhat justified or not at all justified?*

E24 Do you think that refusing to learn more about or engage in politics makes this friend a bad citizen?

E25 How much do you agree or disagree with the following statement? My parents expect me to participate in politics.

E26 How much do you agree or disagree with the following statement? My friends expect me to participate in politics.

E27 How much do you agree or disagree with the following statement? Religious leaders expect me to participate in politics.

E28 / BEH7 At this point, we want to offer you a confidential opportunity to donate some or all of this compensation to support the work of Zambia's leading civil society coalition promoting accountable elections: The Christian Churches Monitoring Group, also known

as CCMG. There is no pressure on you or expectation that you will donate: We know that some people simply not have the luxury of donating today, depending on their financial situation. Please just choose the answer that is right for you from the following options and we will deduct whatever you select from your next compensation gift, which will be sent as phone credit.**

Questions above with an asterisk were also asked in the follow-up survey. The question with two asterisks were asked only in the follow-up survey. That question gave participants an opportunity to donate any portion of their survey compensation (up to 40 Kwacha) to the promotion of free and fair elections, which would actually be donated to CCMG's activities toward this end (and not to any other purpose).

F.3 Post-Election WhatsApp Questions

PE1 We know that a lot of people were not able to vote because they were sick, because they just didn't have time, or for some other reason. Which of the following statements best describes you?

- I thought about voting in the recent national elections, but was not able to do so for personal reasons.
- I did not vote in the recent national elections because I was not registered or did not have a valid NRC.
- I tried to vote in the recent national elections, but was prevented from casting my ballot due to intimidation, violence, excessively long lines, or some other procedural issue.
- I voted in the recent national elections.
- I'd rather not say.

PE2 What colour was the lid of the ballot box for Presidential Candidates? [added after pre-analysis plan registered]

- Blue
- White
- Orange (correct answer)
- Red
- I voted but I don't remember
- I prefer not to answer
- I didn't vote

PE3 Regardless of whether you personally voted or not, did you help any one else to register or get to the polls to vote?

- Yes

- No
- Prefer not to answer

PE4 During the election season, did you attend any legal political gatherings, such as motorcades, door to door campaigning, marches or protests? We are not asking for which parties, only if you volunteered with any political campaigns. [revised after registering the pre-analysis plan to include "legal political gatherings" after some in-person rallies were banned due to COVID-19]

- Yes
- No
- Prefer not to answer

PE5 During the election season, did you volunteer with any political campaigns? We are not asking for which parties, only if you volunteered with any political campaigns.

- Yes
- No
- Prefer not to answer

PE6 During the election season, did you volunteer with any efforts to promote free and fair elections?

- Yes
- No
- Prefer not to answer

PE7 During the election season, how frequently did you discuss the elections with others?

- Yes
- No
- Prefer not to answer