Locquiao, J. (2023). An experiment on texting to nudge the moral reasoning development of preservice teachers. *Educational Research: Theory and Practice, 34*(3), 17-47.

An Experiment on Texting to Nudge the Moral Reasoning Development of Preservice Teachers

Jed Locquiao

Minnesota State University, Moorhead
University of Nevada, Reno

Author Notes

Jed Locquaio is now at State University of New York Oswego.

The author wishes to thank Dr. Tammy Abernathy for their mentorship and Lindsey Batavia for coordinating the preservice teacher program. The author also wishes to thank the anonymous reviewers and editor for their insights and recommendations to improve this manuscript.

Jed Locquiao https://orcid.org/0000-0002-1369-9610

Abstract: *This experiment tested the use of a nudge-based texting intervention on the moral reasoning development of preservice teachers. The intervention sent cellphone text messages of moral scenarios in one of two forms over the course of 42 days (6 weeks). Results showed no significant interaction between group assignment and time across all four indices of moral reasoning development. Findings present initial evidence that nudge-based text messages do not affect moral reasoning development of preservice teachers. Discussion reviews implications with design and use of a nudge-based approach to support moral reasoning development among teachers.*

Keywords: Moral reasoning development, nudge theory, teacher preparation, intervention, randomized experiment

An innate moral dimension imbues the moments, places, and relationships of teaching (Campbell, 2008; Hansen, 1998, 2001; Jackson, et al., 1993; Sockett, 1993; Tom, 1984). Every activity in teaching tasks the practitioner to decide what is good*, what ought to be*, and then coordinate students and resources towards that good—be it performing certain skills, understanding certain ideas, or meeting certain conditions (Fenstermacher, 1990; Hansen, 1998; Strike, 1990). How do practitioners know good over bad? The psychological process of identifying and justifying what is good over bad, specifically good action over bad action, is called moral reasoning (Locquiao & Abernathy, 2022).

The cognitive developmental model of moral reasoning describes how individuals evaluate moral claims and actions to different levels of moral knowledge based on increasingly comprehensive notions of justice and sociomoral perspective (Kohlberg, 1969, 1976, 1978; Rest et

Correspondence concerning this article should be addressed to Jed Locquiao, E-mail: jed.locquiao@oswego.edu

al., 1999a, 2000). Development through those different levels—where a person acquires and uses increasingly complex patterns of moral knowledge—stems from individuals revisiting, adjusting, or affirming their current moral knowledge to dissimilar/contrarian moral claims and events. As exemplified in the work of Kohlberg (1969), the first level of moral reasoning development is pre-conventional. Moral thinking at this level considers value and legitimacy to moral claim and actions according to external sources like material consequences (e.g., financial benefit) or the preference of immediate peers (e.g., parents and friends). The second level of moral reasoning is conventional. Moral thinking at this level evaluates moral claims and actions to the extent they support or align with the moral preferences of broad social structures/organizations (e.g., religious custom, professional code, public law). The third level of moral reasoning development is post-conventional moral reasoning, otherwise known as principled moral reasoning. It refers to moral thinking that evaluates moral claims and action beyond personal/group interest and beyond social structures like traditions, roles, and laws. Post-conventional moral reasoning entails *a priori* thinking in that it does not only consider what is good given oneself, given one's family, or given one's country, it asks "what is good?" independent of personal gain or group membership. It seeks to identify underlying moral claims that are good in of themselves. Post-conventional moral reasoning cites self-chosen principles that have been vetted to standards of logical coherency, open scrutiny, and consensus.

MORAL REASONING AMONG TEACHERS

Despite the moral quality of teaching, ample empirical scholarship points to: (a) how preservice and inservice teachers seldom activate post-conventional moral reasoning and (b) how teacher preparation programs graduate candidates who over their coursework, report little to no change in moral development (Cummings et al., 2001, 2007, 2010; Diessner, 1991; Griffore & Lewis, 1978; Lampe, 1994; McNeel, 1994; Yeazell & Johnson, 1988). Surveys which used the Defining Issues Test, a scale measure of moral reasoning, have reported preservice and inservice teachers activate post-conventional moral reasoning between 26% to 40% of the time. Additionally, research has found that in contrast to students enrolled in other degree programs, students enrolled in teacher education programs stagnate or even decrease in principled moral thinking as they complete coursework (Cummings et al., 2003; Davison, 1979; Johnson & Reiman, 2007; McNeel, 1994; Yeazell & Jonhson, 1988).

The above trend has been suggested to stem from over-emphasis on rote coursework that tasks students to choose and use methods, but ignores examination of the principles that imbue and implications that follow use of procedural methods (Ben-Peretz, 1995; Bergem, 1992; Beyer, 1991; Campbell, 1997; Cummings et al., 2003; Goodlad, 1994; Johnson, 2008; Mahoney, 2009; Oser, 1994; Sirotnik, 1990). Teacher preparation programs have also been faulted for presenting the moral/ethical responsibilities of teaching in a single piecemeal lesson (at best) or omitting moral/ethical content entirely (at worst) (Campbell, 1997, 2003, 2008; Decker et al., 2021; Jones et al., 1999; Maxwell et al., 2016; Sileo et al., 2008; Sockett & LePage, 2002). The situation is exacerbated by how teacher programs do not have a body of vetted practices to guide such moral/ethical instruction. Because empirical research has given sparse attention to testing interventions to support teachers' moral development. The few empirical studies that do exist often used small sample sizes, lacked randomized assignment, and/or used multiple interventions in tandem—all of which impede inferences to utility (Bell & Liu, 2015; Cummings et al., 2010; Glassberg & Sprinthall, 1980; O'Flaherty & Mcgarr, 2014; Özçinar, 2015; Reiman & Peace 2002; Shafer, 1978; Yost, 1997).

Moral Reasoning and Equitable Education

Low use of post-conventional moral reasoning is a problem because greater use of post-conventional moral thinking has been linked with student-centered instruction. Teachers who tend to use post-conventional moral reasoning have been observed to design and implement lessons that accommodate diverse forms of student engagement (Johnston, 1985); seek democratic consensus rather than exercise authoritarian mandate to manage classroom behaviors (Johnston & Lubomudrov, 1987; Maccallum, 1993); and modify instruction just-in-time to adapt to varying student characteristics (Johnston, 1989).

Lower rates of post-conventional moral reasoning also suggests that teachers struggle to resolve—let alone make sense of—the many situations where moral action demands teachers to act against their personal benefit, peer approval, or even the law. History presents many moments where moral action challenged the above items: Rosa Parks refused to yield her bus seat despite great personal risk in legal sanctions, social censure, and violent retribution. We must prepare teachers who think and act to coherent and consistent obligations/principles. Without this capacity, education efforts to correct inequities in the access, process, and outcomes of learning would diminish in purpose and practice.

The link between moral reasoning and equitable education is exemplified in the example of special education in the United States. Not long ago, most Americans held a stubborn moral claim: that a swath of people did not warrant basic human dignity and rights (Osgood, 2008). This claim motivated systematic injustice and harm against individuals with disabilities in the access, process, and outcomes of public education—among other life domains. But many Americans reconsidered that claim as disability affected more of their families, friends, and neighbors. And they gradually recognized that their own communities' norms and laws were wrong. In turn, they acted to change those norms and laws despite widespread ambivalence or strident opposition.

Teachers with lower rates of post-conventional moral reasoning cannot be expected to understand nor stick with the work of equitable education when resistance emerges. This concern is not unfounded. Johnston (1989) found that teachers who used lower rates of post-conventional moral reasoning expressed ambivalence towards individualized instruction. Movement towards more equitable education presumes that practitioners at minimum acknowledge the diversity of claims to an education even if they hinder or oppose personal, group, or societal interest. If a teacher does not understand nor appreciate claims to equity, how can they act upon claims to equity? Further yet, how can they persevere to act upon such claims despite nonexistent benefit or negative consequence?

Nudges to Induce Moral Reasoning Development

Moral reasoning development among teachers is crucial. But empirical research has yet to corroborate how to best induce moral reasoning development among teachers. Inspiration can be found from other disciplines to guide interventions. One of the most prominent ideas to emerge from behavioral economics is nudge theory which refers to changing the environments (e.g., material, mental, social) that surround a choice in subtle ways to encourage certain behaviors without restricting other behaviors (Hansen, 2016; Thaler & Sunstein, 2008). Nudges are planned design elements to "choice architecture that alter people's behaviors in a [cheap] predictable way without forbidding any options or significantly changing their economic incentives" (Thaler & Sunstein, 2008, pg. 6). Nudges refer to deliberate environmental modifications to influence a person's judgement, choice, or action towards a judgement, choice, or action which supports their self-interest. An example of a nudge would place unhealthy foods like potato chips in the backmost trays to a school cafeteria which would reduce consumption of unhealthy foods because students

would defer exerting more effort to reach them. Nudge as a quality falls in a continuum rather than as an either/or condition where the incorporation of more or less nudge premises and elements (e.g., simplification) mark greater or lesser *nudgeiness* behind an intervention. Outright banning potato chips garners less nudgeiness than placing an apple in a child's hand which in turn invites less *nudgeiness* than placing potato chips out of reach.

Use of nudges has gained traction in general education research to address a variety of issues ranging from enrolling low-income high school graduates in college on time; encouraging parents to monitor their child's academic coursework; motivating teachers to meet performance benchmarks; and bolstering students' identity as learners (Bergman & Rogers, 2017; Castleman & Page, 2015; Damgaard & Nielsen, 2018; Fryer et al., 2012; Lin-Siegler et al., 2016; Thaler & Sunstein, 2008). Notably, Rogers et al. (2017) mailed postcards to parents/guardians in a large urban school district which presented their child's attendance patterns, the consequences for missing many days of schools, and how parents/guardians can support attendance. They reported that this cheap and simple act (which amounted to simplified disclosures) yielded a significant drop in absenteeism among children in the experimental group.

However, nudges have yet to be fully explored in the context of inducing overall moral development or moral reasoning. To date, there exists just a handful of theoretical commentary and empirical research (Desai & Kouchaki, 2017; Engelen et al., 2018; Heinzelmann et al., 2012). The gap is unfortunate because there exists a theoretical fit in using nudge principles to design and implement an intervention to activate and spur moral reasoning. Within the cognitive developmental model, moral dilemma discussions, Just Communities, and formal ethics coursework endure as established interventions to induce moral reasoning development (Blatt & Kohlberg, 1975; Colby et al., 1977; Schlaefli et al., 1985; Snarey & Samuelson, 2008; Walker, 1983). At their core, both interventions expose and challenge participants to comprehend and discuss different moral claims across different social situations. But both interventions invite physical, organizational, and psychosocial barriers that impact the frequency and quality of such activities. Both interventions place a burden of coordinating times and physical space among multiple participants. Both interventions task organizations to divert limited resources to run the interventions. In the context of a teacher preparation program, both interventions shift the number of minutes/credit hours and personnel that could be dedicated to mandatory coursework or other urgent learning objectives. Both interventions also invite psychosocial barriers where after having gathered participants, there exists no guarantee that different forms of moral reasoning will be presented over the course of the discussion.

A nudge-based intervention can preserve several conceptual features of traditional interventions while reducing their costs and barriers. A nudge-based intervention could involve using the platform of cellphone text messages to deliver moral dilemmas to participants. Because the form and function of cellphone text messages lends itself to using nudge principles to induce behavioral changes. In terms of physical considerations, the ubiquity of cellphones affords a platform that follows participants for most anywhere of their day-to-day. Cellphone texting is also asynchronous in that participants do not receive target content at a single point of time and without possibility to review content at their own schedule. In terms of organizational logistics for teacher preparation programs, phone text messages do not significantly shift or disrupt coursework priorities, personnel resources, or day-to-day operations. In terms of psychosocial considerations, cellphone texts can be written to present a wide variety of moral situations with different resolutions justified by different moral schemata. Doing so fits the nudge principle of *salience* by disclosing otherwise unknown moral claims(Sunstein, 2014b; Thaler & Sunstein, 2008). And doing so fits the nudge principles of *simplification* by making the language behind the claims and reasoning more

relatable. Texts can be automatically sent in regular intervals which fit the nudge principles of reminders to structure habits. Reading texts at regular intervals over a stretch of time works against cognitive inertia by repeatedly activating moral schemata.

Ample public health literature corroborated the use of cellphone text messages to induce behavioral/habit change: sending regular text messages has nudged individuals towards behaviors like quitting cigarette-smoking, diabetes management, treatment fidelity, and engaging in physical activity (Hall et al., 2015; Muench & Baumel, 2017; Thakkar et al., 2016). Tofighi et al. (2017) reported that sending regular text messages (which amounted to reminders and disclosures) to individuals with substance dependence increased not only medication adherence and involvement with peer support groups, but also reduced consumption. Glasner et al. (2020) confirmed that it is both feasible and effective to embed cognitively-loaded prompts over text messages. They found that embedding the language of cognitive behavioral therapy (e.g., reminders to personal goals) in text messages increased rates of drug treatment adherence and lowered rates of alcohol consumption. The platform of cellphone text messages may project ease and simplicity (which align with nudge premises), but it can spur dramatic shifts to exceedingly stubborn behaviors/habits. One infers that between reading cellphone texts and shifts in behaviors/habits, an underlying mechanism—*namely, a change in thinking*—triggered to start and sustain them. Therefore, if sending text messages can stir intractable health thinking, sending text messages may stir intractable moral thinking as well.

Purpose of Study and Research Questions

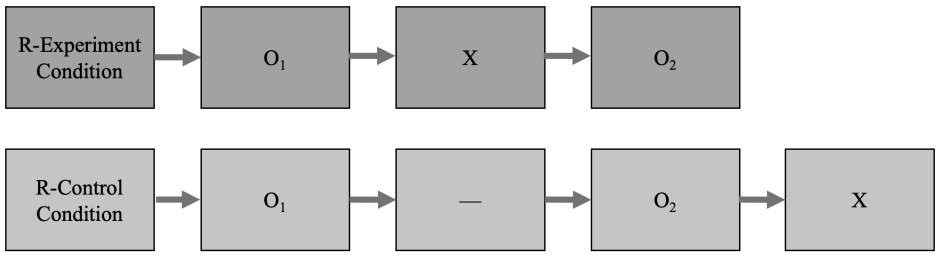
This study sought to add to empirical literature by addressing two gaps from the review. The first gap stems from how teaching entails moral work and consequence, yet ample scholarship points to low rates of post-conventional moral thinking among teachers, inconsistent attention from teacher preparation programs, and limited intervention research. The second gap refers to how nudges have gained traction in guiding answers to issues in education, but have not been used to guide answers in supporting moral reasoning development of teachers. To address both gaps, the present study tested the use of a nudge-based texting intervention to induce the moral reasoning development of preservice teachers enrolled in a teacher preparation program. In turn, the study asked the following research questions to evaluate the intervention:

- To what extent does participation in a nudge-based texting intervention interact with time to affect (a) pre-conventional moral reasoning, (b) conventional moral reasoning, (c) post-conventional moral reasoning, and (d) the ratio of higher-order to lower-order moral reasoning among preservice teachers?

Method

The study used a pretest-posttest randomized experiment design, also known as randomized control trial, to test the effects of an intervention (see Figure 1). Pretest-posttest refers to how baseline data on the dependent variable was collected prior to intervention and how data on the dependent variable was again collected after intervention (Bryman, 2012; Creswell & Creswell, 2018; Shadish et al., 2002). Randomized experiment refers to how study participants were randomly assigned to one of two groups, experimental and control, which determined if they participated or did not participate in the primary round of intervention.

Figure 1
Pretest posttest experiment design



Pre-test Post-test Experiment (Two Waves)
R=Randomization
O_1=Pre-test
O_2=Post-test
X=Intervention

SAMPLE CHARACTERISTICS AND RATIONALE

Table 1 presents participant characteristics in gender, age, race/ethnicity, and college standing at pretest and posttest. Participants comprised preservice teachers enrolled in a teacher preparation program at a public university in the United States. Program admission was selective where preservice teachers must have been recommended by a licensed practicing teacher of record in addition to meeting academic criteria. At the time of this study, the preservice teachers started onsite field experiences. There were two reasons for selecting preservice teachers enrolled in field experiences. First, field experience introduces preservice teachers to their first foray in rendering professional judgement in situations with competing claims and constraints. Second, focusing on the time of embarking upon field experiences meant preservice teachers shared a more comparable baseline level of developmental maturity by virtue of nearing the end point of the program. The alternative of selecting preservice teachers at any point of the program (e.g., first semester coursework) was expected to yield markedly different levels of developmental maturity which could confound effects from just the intervention.

The author's university IRB approved the study protocol to secure participants' informed consent and ensure voluntary participation and withdrawal at any time. Participants were randomly assigned to receive or not receive the texting intervention in the initial round of intervention. Participants submitted a pretest prior to the initial round of intervention period; and submitted a posttest at the end of the intervention period. A financial incentive ($30 USD gift card) accompanied posttest submission. Use of a financial incentive was justified by survey research which has pointed to financial reimbursement as an effective practice to support participant response at posttest and reduce participant attrition over the course of an intervention (Cobanoglu & Cobanoglu, 2003; Halpern et al., 2004; Halpern et al., 2002; Singer & Bossarte, 2006; Yu et al., 2017).

Table 1
Sample characteristics

	Pretest n_1=60	**Posttest** n_2=46
Group Assignment		
Experimental	29	23
Control	31	23
Gender		
Female	56	44
Male	4	2
Age		
18-20	14	9
21-23	36	28
24-26	6	6
27-29	4	3
College Standing		
Junior	39	26
Senior	21	20
Race/Ethnicity		
Asian/Pacific Islander	1	1
Hispanic	10	9
White	46	34
Other or Undisclosed	3	2

Initially, 60 preservice teachers submitted the pretest and passed Defining Issues Test Version 2 (DIT-2) validity checks (Bebeau & Thoma, 2003). The final analytic sample size comprised 46 preservice teachers who submitted the posttest and passed DIT-2 validity checks. Post hoc power analysis using G*Power concluded that the final analytic sample size yielded power level (β)=0.917 set at alpha level (α)=0.05 (Faul et al., 2007). This met education research conventions for two-way mixed ANOVA that detects moderate effect sizes starting at η^2_p =0.06 (corresponding to Cohen's *d*=0.5) and accounts for attrition pegged at 10% (Ellis, 2010; Kraft 2019; Weunsch, 2015). Essentially, any significant moderate effects reported from inferential testing would reflect true moderate effects 91.7% of the time.

The final analytic sample size corresponded to a 23% attrition rate overall, with 21% attrition in the experimental group and 26% in the control group which amounts to a 5% differential attrition rate. Attrition rate is crucial for randomized experiments because high attrition rates (>30% attrition in education interventions) threaten baseline equivalency of participant characteristics between the experimental and control groups (Cook et al., 2015; Gersten et al., 2005; Song & Herman, 2010; Valentine & McHugh, 2007; U.S. Department of Education, 2020). Imbalanced groups may over- or under-represent certain characteristics which confound causal inferences to just the intervention.

The researcher identified η^2_p =0.06 (corresponding to Cohen's *d*=0.50) as appropriate for two reasons. Meta-analyses by Schlaefli et al. (1985) and Power et al. (1989) reported that established interventions of moral dilemma discussions and Just Communities overall yielded low-moderate effect size changes (Cohen's *d*=0.40) in moral reasoning development. And Mertens et al.'s (2022) meta-analysis reported that nudge-based interventions overall yielded similar low-

moderate effect size changes (Cohen's d=0.43) across myriad psychological domains as well. For a nudge-based intervention to serve as a viable alternative, it can and should demonstrate a comparable moderate effect on moral reasoning development as well.

MEASURE

The dependent variable was the construct of moral reasoning as measured by the empirically validated Defining Issues Test Version 2 (DIT-2) (Bebeau & Thoma, 2003; Rest, 1979; Rest et al., 1999b; Thoma, 2014). The DIT-2 tasks individuals to recognize and rank the moral importance of pre-written statements—which correspond to different moral thinking—to several moral dilemmas. Participants submitted the DIT-2 pretest before the primary round of intervention (before field experiences started) and then submitted the DIT-2 posttest at the end of the primary round of intervention (during field experiences). The DIT-2 calculates several index scores from participant responses (Bebeau & Thoma, 2003; Thoma, 2014).

The first index score is the Personal Interest Schema Score which measures the proportion of statements selected that prioritize personal benefit or immediate group interest (corresponding to pre-conventional moral reasoning). The second index is the Maintaining Norms Schema Score which measures the proportion of statements selected that prioritize stable society, status quo, and established procedures/roles (corresponding to conventional moral reasoning). The third index Post-conventional Schema Score measures the proportion of statements that prioritize consensus-building, non-negotiable rights, and universal ideals (corresponding to post-conventional moral reasoning).

The fourth index N2 Score measures the ratio between preference for Post-conventional statements over Personal Interest statements. The ratio score supports inferences on genuine preference for post-conventional reasoning because greater preference for contract-based and ideal-based moral reasoning ought to coincide with greater rejection of interest-based and custom-based moral reasoning. The researcher submitted completed tests to the Center for the Study of Ethical Development for calculation. Reliability between the DIT-2 and the original DIT reported Cronbach alpha at 0.79 (Rest et al., 1999b). Construct validity for the original DIT has been vetted to multiple criteria across numerous studies. Notably, DIT scores have been linked to coincide with other developmental constructs like moral comprehension; have been positively related to prosocial behaviors; and have been shown to change in response to moral education intervention.

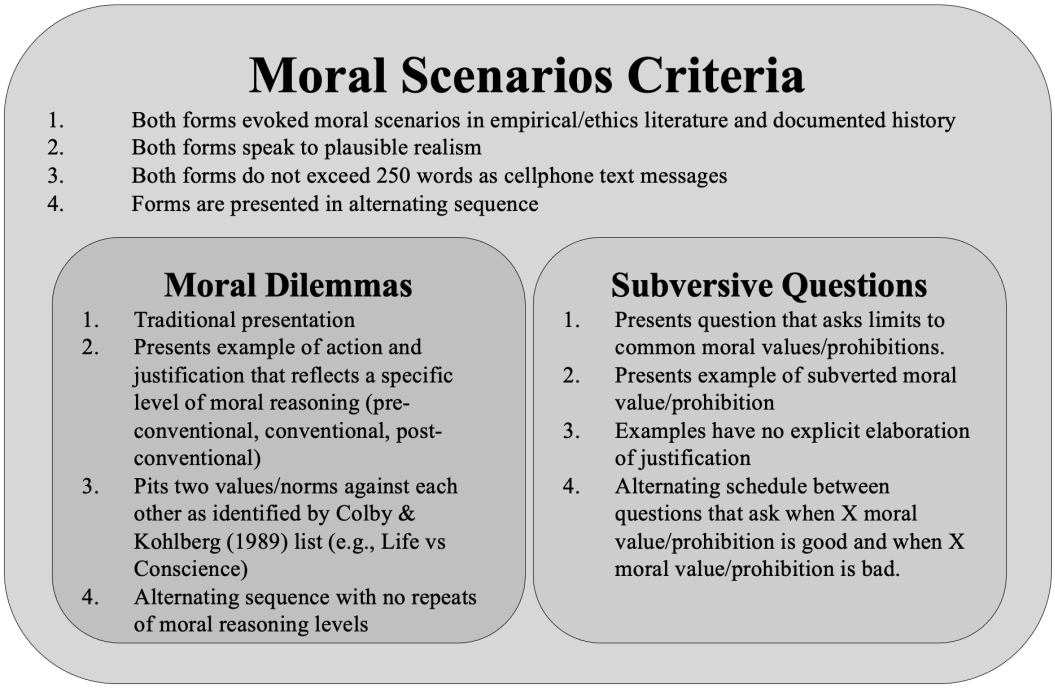
INTERVENTION CRITERIA

The independent variable was participating or not participating in the nudge-based texting intervention. The intervention sent cellphone text messages to participants in the experimental condition. The text messages presented a moral scenario in one of two forms that alternated over the course of intervention (see Appendix A for scenario examples). The first form presented a moral dilemma in the traditional manner (e.g., Heinz Dilemma) with one type of justified action to that moral dilemma. The second form asked a subversive question on the limits (if any) to common moral values/norms alongside a related situation. The second form did not present justifications to actions taken in each situation. Participants in the experimental condition were not instructed nor expected to interact with text messages in a formal manner (e.g., type a response) beyond review as doing so would have diminished its nudge quality by adding a task demand on participants.

Several criteria guided development of both scenario forms (see Figure 2). The first criterion was that both forms present text messages that evoked common moral scenarios described in empirical research, ethics literature, or historical events (e.g., internment of Japanese Americans during World War II) (Cohen, 2003; Colby & Kohlberg, 1987; Galbraith and Jones,

1976; Grassian, 1992; Greene et al., 2001; Levinson & Fay, 2016; Scarlet & Arthur, 2014). The choice to not present just scenarios specific to education/school settings was justified by how above scholarship has often posed general situations (e.g., trolley problem) rather than specific domain/work situations. In contrast, besides O'Flaherty and McGarr's (2014) use of in-depth school cases, there exists limited empirical precedence that presentation of moral scenarios based on domain/work situations rather than general situations more readily activates moral reasoning. This choice was further justified by Hren et al.'s (2011) observation that onsite pre-professionals often defer to expert/established thinking and judgement as right, correct, or acceptable. Therefore, presenting general scenarios beyond just education/school contexts was expected to shift preservice teachers to consider scenarios away from a preoccupation of *getting the right answer* to instead *making sense of a right answer*.

Figure 2
Moral scenarios criteria



The second criterion was that both forms present plausible situations which present probable rather than fantastical elements (e.g., superheroes, alternate history, magic). The third criterion was that the text messages do not exceed 250 words. This maximum word count threshold strived to balance between preserving both nudge and cognitive developmental principles. With respect to nudge, the maximum threshold sought to uphold *simplification*, *disclosure,* and *ease of cost/accessibility* (Sunstein, 2014b; Thaler & Sunstein, 2008). Because the message length was understood to: (a) present just enough detail in each scenario to comprehend its basic moral conflict; (b) convey just one sort of prescriptive judgement—rather than as many possible prescriptive judgements—to each scenario as not disclosing even a single prescriptive judgement would have imperiled the point of exposure to different levels of moral thinking; and (c) ease and support participant engagement by capping the word density of each scenario. The last item

recognized that text messaging as a medium presumes non-standard writing conventions, *textisms*, like economy of expression where text messages strive for small word counts and acronyms (Berger & Coch, 2010; Kemp, 2010; Lyddy et al., 2013). Additionally, industry research on email message length (a comparable medium because its content is often reviewed on smartphones) identified that going past 200-300 words accelerates the chance for participant non-response in viewing and sticking with messages (Moore, 2016; Ruggiero, 2020).

The maximum word count threshold also sought to support the cognitive developmental premise that more rather than less exposure to multifaceted social situations and moral claims ought to engender cognitive dissonance as a person activates their moral schema to consider such situations and claims. Longer-than-typical text message length was expected to more often activate moral schema in contrast with presenting scenarios to a typical text message length like "You are on a boat. Who do you save?". Because such texts disclosed more details and prescriptive judgements to comprehend and then evaluate. Furthermore, typical text message lengths invited the risk of reinforcing moral schema to an echo-chamber rather than inciting cognitive dissonance because participants may project scenario details which match rather than challenge their moral thinking. Beyond both models, the upper limit also reflects part artful judgement as this intervention not only serves as the first of its kind to blend nudge theory and cognitive developmental principles; but because despite the widespread use of text messages in social interventions, there does not yet exist a robust body of empirical research which corroborates best practices on their ideal form like text message length (Hall et al., 2015). The fourth criterion was that both scenarios would be presented in an alternating sequence of moral dilemma, subversive question, moral dilemma, etc.

The first form had additional criteria. The first criterion was that each moral scenario pit—at minimum—two moral values/norms against each other as identified in Colby and Kohlberg's (1987) list like Contracts vs Authority, Life vs Conscience, Truth vs Property, Affiliation vs Conscience, etc. The second criterion was that justified actions represent one form of moral reasoning (e.g., pre-conventional, conventional, and post-conventional). And that forms of moral reasoning were presented in an alternating sequence as well: intervention days presented conventional, post-conventional, pre-conventional, etc. justified actions.

The second form also had additional criteria. First, the text messages alternated between questions that asked when is X moral value/norm good and when is X moral value/norm bad. Second, the text messages presented each moral value/norm in the context of subversion, of limits to application: when is it good to steal, when is it bad to help, etc. Third, the text messages gave no justification behind actions taken in a situation.

Intervention Randomization and Schedule

Each participant was assigned a four-digit number (e.g., 1060) to serve as a case identifier. This was done to safeguard against selection bias and experimenter bias in both choosing and scoring specific participants for the intervention or control group (Gersten et al., 2005). Randomized assignment of each case identifier was conducted via Haahr's (2022) True Random Number Service platform to ensure that participants had equal chance of being placed in the experimental or control condition (Altman & Bland, 1999; Bryman, 2012; Lachin et al., 1988; Thach & Berger, 2005).

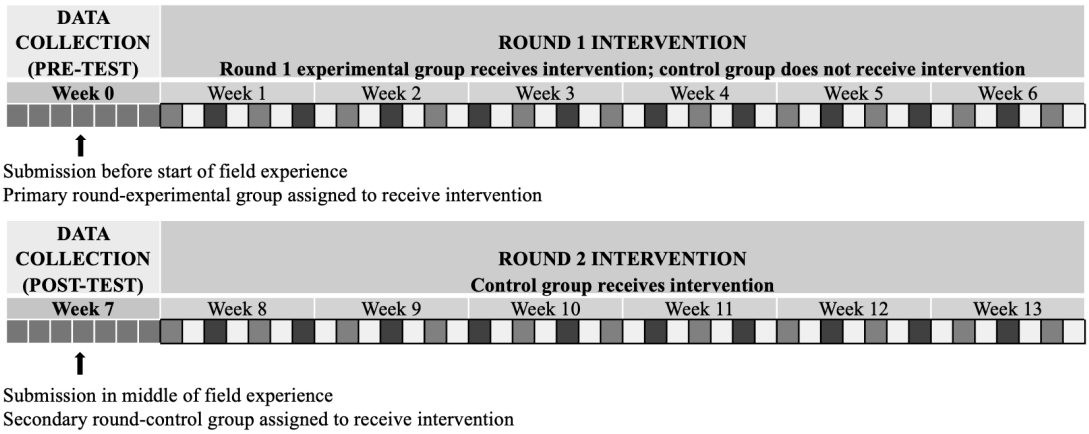
The intervention was delivered in two consecutive academic semesters with two rounds per semester (see Figure 3). The primary round had the experimental group participate in the intervention followed by a secondary round where the control group participated in the intervention after posttest. This was done to meet ethical responsibility that any positive effects from the

intervention would be shared with all participants. The intervention followed the same delivery pattern for all rounds. The intervention was implemented over six consecutive weeks (42 days) with alternating days of delivery: Day 1 sent a text message; Day 3 sent a text message; Day 5 sent a text message; etc. The rationale behind 6 consecutive weeks (42 days) recognized how previous research on moral dilemma discussions showed that greatest increases in moral reasoning development came from interventions that lasted between 4-12 weeks (Schlaefli et al., 1985).

The rationale behind sending texts every other day was guided by research in the health information sciences which found that sending reminders every day can engender *reminder fatigue* to the point where participants ignore reminders (Muench & Baumel, 2017). The text messages alternated between the first and second forms as mentioned in the previous section. The researcher sent individual text messages to each participant's cellphone number. The messages were sent evening hours between the times of 7:00 pm-9:00 pm. The two-hour gap gave the researcher time to resolve issues that might have risen like text messages errors or unreliable phone service. After the first round of intervention was completed, a week for posttest collection followed. Secondary round of intervention then started for control groups after the posttest period.

Figure 3

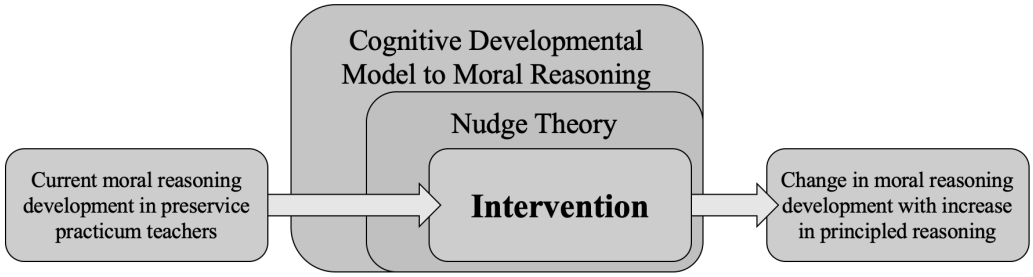
Data collection and intervention schedule



INTERVENTION THEORY OF CHANGE

The target intervention assumed a theory of change guided by both the Cognitive Developmental Model of Moral Reasoning and Nudge Theory (see Figure 4) (Weiss, 1998). First, exposure to varying moral scenarios with distinct actions that reflect changing levels of moral reasoning was hypothesized to induce moral reasoning development in the experimental group. Regular exposure over time was expected to provide participants with more opportunities to reflect upon moral claims and in turn spur moral disequilibrium.

Figure 4
Intervention theory of change

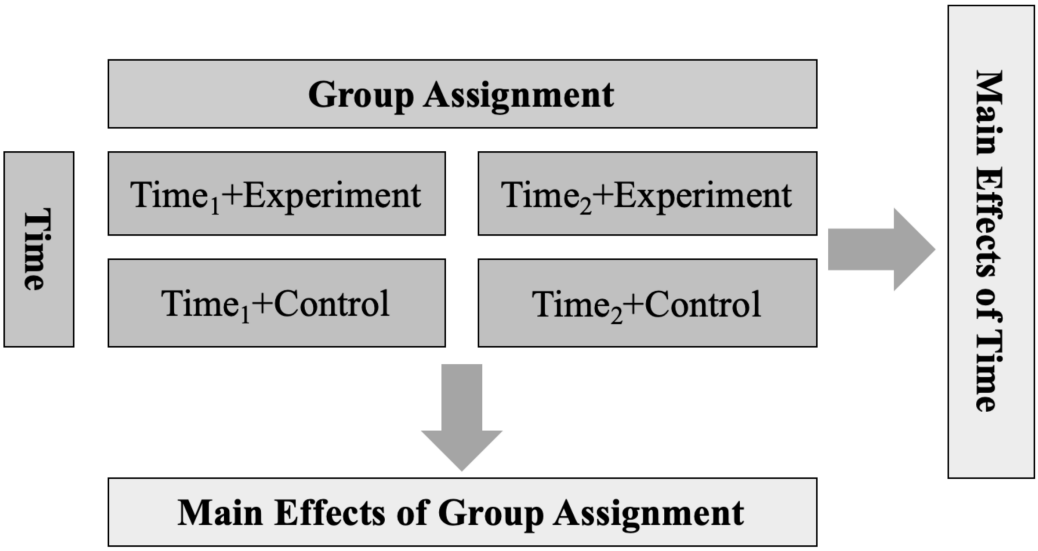


Second, presenting different moral scenarios as text messages was expected to serve as purposeful structural change to the *day-by-day choice architecture* of participants in the experimental condition. Text messages served as structured opportunities embedded in participants' lives to reflect on moral claims. More opportunities to reflect was anticipated to heighten the likelihood of cognitive disequilibrium which in turn would induce moral reasoning development. Presenting moral scenarios as text messages met multiple nudge elements: ease of access and cost, disclosure and simplification, and regular reminder (Sunstein, 2014b; Thaler & Sunstein, 2008). In terms of easing accessibility and cost, cellphone text messages removed the need for a classroom, in-the-moment physical interaction, and commitment of hours in a day. In terms of disclosure and simplification, text messages were designed to present accessible moral dilemmas and rationales that may otherwise never be experienced or come up in day-to-day conversation. Furthermore, because moral scenarios were written to highlight different forms of moral reasoning, participants have more opportunities to comprehend contrarian claims and resolve cognitive disequilibrium. Finally, because the text messages delivered moral scenarios on a regular schedule, they served as reminders to activate participants' moral schemata which over repeated reflection and consideration would advance moral reasoning development.

DATA ANALYSIS

To answer the research questions, the study used two-way mixed ANOVA for inferential testing (see Figure 5). Two-way refers to how the analytic sample was measured to two factors split by two levels; and mixed refers to how the analytic sample was measured by both between-group and within-group factors (Cohen, 2013; Field, 2017). Specifically, the study distinguished between (a) group assignment (experimental and control) and (b) passage of time (pretest and posttest). The two-way mixed ANOVA reported F-statistics which highlight the extent that variance due to group assignment, passage of time, and their interaction are significant. The two-way mixed ANOVA also reported partial eta-squared denoted by η^2_p which referred to effect size—the magnitude of association—from group assignment, passage of time, and their interaction (Cohen, 2013; Cohen, 1988; Levine & Hullett, 2010; Richardson, 2011).

Figure 5
Two-way mixed design ANOVA



RESULTS

Descriptive and inferential statistics on each index are presented in Tables 2-5. ANOVA assumptions of normal distribution and homogeneity of variances were met; and one outlier case was included in analysis due to robustness of ANOVAs (Cohen, 2013; Field, 2017). Several patterns emerged from the results. First, preservice teachers assigned in the control and experimental group reported pretest Personal Interest Schema scores of $\bar{x}$=22.95 (13.40) and $\bar{x}$=23.56 (11.66) respectively; and they reported posttest scores of $\bar{x}$=28.26 (15.99) and $\bar{x}$=24.08 (11.43). Personal Interest Schema scores increased over time for both groups, with the control group showing a greater gain of 5.31 points. However, there was no significant interaction effect between group assignment and passage of time on Personal Interest Score, $F(1, 44) = 1.305$, $p > 0.05$, partial $\eta^2 = 0.029$. Main effects of group assignment and time yielded nonsignificant differences.

Table 2
Descriptive and ANOVA statistics on Personal Interest Schema Scores

		M_1 (SD)		M_2 (SD)		
Control		22.95 (13.40)		28.26 (15.99)		
Experiment		23.56 (11.66)		24.08 (11.43)		
	SS	*df*	MS	*F*	*P*	η^2_p
Group	73.087	1	73.087	0.292	0.592	0.007
Error	11009.565	44	250.217			
Time	195.174	1	195.174	1.936	0.171	0.042
Group x Time	131.522	1	131.522	1.305	0.260	0.029
Error	4435.304	44	100.802			

*p<.05

Table 3

Descriptive and ANOVA statistics on Maintaining Norms Schema Scores

		M_1 (SD)		M_2 (SD)		
Control		33.82 (14.88)		31.91 (12.14)		
Experiment		27.39 (12.58)		30.69 (11.62)		
	SS	*df*	MS	*F*	*p*	η^2_p
Group	336.696	1	336.696	1.352	0.251	0.030
Error	10955.130	44	248.980			
Time	11.130	1	11.130	0.135	0.715	0.003
Group x Time	156.522	1	156.522	1.904	0.175	0.041
Error	3616.348	44	82.190			

*p<.05

Table 4

Descriptive and ANOVA statistics on Post-conventional Schema Scores

		M_1 (SD)		M_2 (SD)		
Control		37.04 (13.52)		33.65 (14.71)		
Experiment		41.91 (16.40)		39.82 (13.21)		
	SS	*df*	MS	*F*	*p*	η^2_p
Group	701.261	1	701.261	1.970	0.167	0.043
Error	15663.652	44	355.992			
Time	172.565	1	172.565	2.629	0.112	0.056
Group x Time	9.783	1	9.783	0.149	0.701	0.003
Error	2887.652	44	65.628			

*p<.05

Table 5

Descriptive and ANOVA statistics on N2 Scores

		M_1 (SD)		M_2 (SD)		
Control		37.03 (13.78)		35.54 (13.61)		
Experiment		36.07 (15.68)		37.75 (14.32)		
	SS	*df*	MS	*F*	*p*	η^2_p
Group	8.849	1	8.849	0.025	0.876	0.001
Error	15829.470	44	359.761			
Time	0.192	1	0.192	0.004	0.953	0.000
Group x Time	57.663	1	57.663	1.077	0.305	0.024
Error	2355.711	44	53.539			

*p<.05

Second, preservice teachers assigned in the control and experimental group reported pretest Maintaining Norms Schema scores of $\bar{x}$=33.82 (14.88) and $\bar{x}$=27.39 (12.58) respectively; and they

reported posttest scores of $\bar{x}$=31.91 (12.14) and $\bar{x}$=30.69 (11.62). Maintaining Norms Schema scores decreased for the control group but increased for the experimental group. Yet there existed no significant interaction between group assignment and time on Maintaining Norms Schema Score, $F(1, 44) = 1.904$, $p>0.05$, $\eta^2_p= 0.041$. Main effects of group assignment and time yielded nonsignificant differences as well.

Third, preservice teachers assigned in the control and experimental group reported pretest Post-conventional Schema scores of $\bar{x}$=37.04 (13.52) and $\bar{x}$=41.91 (16.40) respectively; and they reported posttest scores of $\bar{x}$=33.65 (14.71) and $\bar{x}$=39.82 (13.21). Post-conventional Schema scores decreased for both the control group and experimental group. But there existed no significant interaction between group assignment and time on Post-conventional Schema Score, $F(1, 44) =0.149$, $p >0.05$, $\eta^2_p=0.003$. Main effects of group assignment and time yielded nonsignificant differences.

Fourth, preservice teachers assigned in the control and experimental group reported pretest N2 scores (the ratio between preference for post-conventional statements over personal interest statements) of $\bar{x}$=37.03 (13.78) and $\bar{x}$=36.07 (15.68) respectively; and they reported posttest scores of $\bar{x}$=35.54 (13.61) and $\bar{x}$=37.75 (14.32). N2 scores decreased for both the control group and experimental group. Still, there existed no significant interaction between group assignment and time on N2 Score, $F(1, 44) = 1.077$, $p >0.05$, $\eta^2_p=0.024$. As with the other indices above, main effects of group assignment and time yielded nonsignificant differences.

DISCUSSION

Using a nudge-based texting intervention does not appear to affect the moral reasoning development of preservice teachers. The results show that on all four indices of moral reasoning development, the preservice teacher who received nudge-based text messages did not significantly differ from the preservice teacher who received zero text-messages. In addition to lack of significance, the experimental group reported a drop in post-conventional moral reasoning. This occurrence was unexpected because participation in an intervention that sought to increase the use of post-conventional thinking should—at minimum—not have yielded *even lesser use* of post-conventional thinking.

One possible explanation for the broad lack of change and the conspicuous drop in post-conventional thinking, which draws from Hren et al.'s (2011) research on clinical experiences, may be attributed to the moderating influence of field experiences where principles (and attendant idealism) were dampened as pre-conventional and conventional demands (e.g., student performance, supervisory evaluation, peer collaboration, parent scrutiny, academic standards, legal mandates, etc.) preoccupied their thinking. That the control group preservice teachers reported a parallel drop in post-conventional thinking corroborates this inference because they participated in the same field experience.

Another possible explanation is that the nudge-based texting intervention embedded many but not all cognitive-developmental intervention premises in its design. One of those omitted premises is the idea of transactive discussions which refer to the dialogue between individuals as they build, dismantle, and transform moral claims through back-and-forth exchange (Berkowitz, 1980, 1985; Berkowitz & Gibbs, 1983). As described above, a major premise of the cognitive developmental model is that moral development coincides with transformation of a person's reasoning structures because of active conflict and accommodation to contrarian moral positions. Certain types of social interactions, *transacts*, yield more opportunities for such conflict and accommodation. Some transacts are operational whereby a person alters or integrates a peer's

moral claim over the course of deliberation. Operational transacts are marked by seeking to refine, extend, contradict, or synthesize a peer's moral claim. And some transacts are representational whereby a person merely summarizes/reiterates a peer's moral claim. Operational transacts have been found to induce the strongest upward changes in moral reasoning development. Because operational transacts prompt peers to elaborate, qualify, and connect which invites iterative conflict and coordination between one's moral thinking and another's moral thinking. Established interventions like moral dilemma discussions facilitate moral reasoning development in part because their design permits more opportunities to engage in operational transacts.

In contrast, the nudge-based texting intervention afforded just representational transacts. Participants were not tasked to respond to the text messages; and participants did not receive texts or calls back that tasked them to elaborate, qualify, or justify their thinking. At the most then, each discrete text message initiated a representational exchange by sharing a given case and one kind of action in that give case. There existed no sustained back-and-forth operational discourse that acted on participant thinking. Therefore, conflict and accommodation hinged entirely upon a participant's internal monologue without the moderating influence of another peer's thinking. Omitting transactive discussions then may have hindered moral development then by placing conflict and accommodation upon intra-individual rather than inter-individual deliberation. However, as a caveat, including a component of transactive discussions would have compromised the nudge quality to the intervention by placing more cognitive and logistical demands in expecting participants to engage to in sustained discourse with other peers.

And another possible explanation is that the intervention may have not changed the environment in such a way as to encourage rather than discourage target behaviors (Sunstein, 2014a; Thaler & Sunstein, 2008). The text messages may not have necessarily reduced physical, mental, or social barriers to engage with the intervention and subsequently activate moral thinking. Text message length—despite purposeful design towards balance in conceptual concision and density as mentioned above—may have diminished engagement with moral scenarios by magnifying attentional and processing demands. The intervention also presumed an optimal time of access when preservice teachers would regularly use their phones every other evening. This assumption did not accommodate the possibility that participants tackle other pressing obligations (e.g., working night shifts) which would invariably affect the frequency, duration, and quality of deliberation with each text message.

Study results do not support the use of a nudge-based texting intervention to induce moral reasoning development. What then may teacher preparation programs learn and apply from this? Rather than outright shut down the feasibility of blending both theories to guide moral reasoning interventions, above points suggest that a nudge-based texting intervention can be further revised to facilitate more operational interactions with peers. Teacher preparation programs may wish to present moral scenarios as group-based text messages and prompt participants to engage in iterative discussions where they state, clarify, and challenge moral claims. However, doing so invites conceptual and logistic challenges where such an intervention moves away rather than towards *nudgeiness*. Because the teacher preparation program must then determine the number of participants per group; monitor the quality of discussions; present sufficiently different moral perspectives, etc. But these questions justify future research that identifies the optimal ratio in *what and how much* to blend from both theories.

Study results also affirm that moral reasoning development proves remarkably stubborn. Effective moral programming appears to warrant an umbrella of related interventions rather than stand-alone efforts. A major premise of nudge is to work with rather than against a person's ingrained thinking and behaviors. The current intervention may have presumed a threshold of moral

readiness in background knowledge, perspective-taking, reflective experience, transactive discussions, etc. that participants did not have nor habituate *just enough*. A nudge can only work with what exists. Use of traditional approaches like moral dilemma discussions, Just Communities, formal ethics coursework, etc.—on top of a nudge-based texting intervention—may build that prerequisite background knowledge, perspective-taking, reflective experience, transactive discussions, etc. Consequently, in terms of practice, teacher preparation programs that opt to use a nudge-based texting intervention ought to apply it as part of rather than the sole endeavor to support moral reasoning development.

Having said so, study results cannot definitively comment on the possibility that the nudge-based texting intervention influenced other domains of moral life. The nudge-based intervention as designed may not have necessarily primed the conditions for moral reasoning development. But over the course of exposure to scenarios, the nudge-based texting intervention may have stimulated other moral functions like moral awareness (recognition that situations present moral questions/claims) or moral identity (extent that a person considers/defines themselves to a moral dimension) (Aquino & Reed, 2002; Rest, 1979). Furthermore, nudges may have induced changes as understood through other moral perspectives like ethics of care (Noddings 1984). Sending text message moral scenarios may have activated and reinforced participants' commitment to care for their family, friends, and community. Subsequent research on a nudge-based texting intervention may examine the extent that other expressions of moral life can be nudged. In terms of practice, the results advise caution where teacher preparation programs consider that moral programming (nudge-based or otherwise) which does not induce change as intended, does not bar the possibility of other worthwhile growth.

Finally, study results corroborate why teacher preparation programs should continue to address teachers' moral reasoning. Preservice teachers continue to use principled moral reasoning less than half the time. Given a situation that pits different stakeholder claims, a teacher will process and proceed with a judgement motivated by personal advantage, group interest, or adherence to formal social laws and bodies. The purpose and practice of equitable education is sustained by practitioners who appreciate and challenge moral stakes beyond self and society, towards *what is good in principle*. Focusing preparation on graduating teachers who know student characteristics, who meet legal mandates, who wield high-leverage instructional practices, but lack moral reasoning imperils equitable education. Because it ushers graduating cohorts of teachers who know the parts of instruction but miss its moral point to correct and to safeguard against injustice and harm.

REFERENCES

Altman D. G. & Bland J. M. (1999). How to randomise. *BMJ, 319*(7211), 703-704. https://doi.org/10.1136/bmj.319.7211.703

Aquino, K., & Reed, A. (2002). The self-importance of moral identity. *Journal of Personality and Social Psychology, 83*(6), 1423–1440. https://doi.org/10.1037/0022-3514.83.6.1423

Bebeau, M. J. & Thoma, S. J. (2003). *Guide for DIT-2: A guide for using the Defining Issues Test Version 2 and the scoring service of the Center for the Study of Ethical Development.* Center for the Study of Ethical Development-University of Alabama.

Bell, P. E., & Liu, L. (2015). Social justice reasoning of education undergraduates: Effects of instruction in moral development theory and dilemma discussion in the asynchronous online classroom. *International Journal of Technology in Teaching and Learning, 11*(1), 60-75.

Ben-Peretz, M. (1995). Curriculum of teacher education programs. In M. J. Dunkin (Ed.), *International encyclopedia of teacher education* (pp. 543-547). Pergamon.

Bergem, T. (1992). Teaching the art of living: Lessons learned from a study of teacher education. In F. K. Oser, J.-L.Patry, & A. Dick (Eds.), E*ffective and responsible teaching: The new synthesis* (pp. 349–364). Jossey-Bass.

Berger, N. I., & Coch, D. (2010). Do u txt? Event-related potentials to semantic anomalies in standard and texted English. *Brain and Language*, *113*(3), 135–148. https://doi.org/10.1016/j.bandl.2010.02.002

Bergman, P. & Rogers, T. (2017). The impact of defaults on technology adoption, and its underappreciation by policymakers. *CESifo Working Paper Series No. 6721*. https://ssrn.com/abstract=3098299

Berkowitz, M.W. (1980). The role of transactive discussion in moral development: The history of a six-year program of research: Part I and part II. *Moral Education Forum, 5*, 13-26.

Berkowitz, M. W. (1985). "The role of discussion in moral education". In M.W. Berkowitz & F. Oser (Eds.) *Moral education: theory and application* (pp. 197–218). Lawrence Erlbaum.

Berkowitz, M. W., & Gibbs, J. C. (1983). Measuring the developmental features of moral discussion. *Merrill-Palmer Quarterly, 29*(4), 399-410.

Beyer, L. E. (1991). Schooling, moral commitment, and the preparation of teachers. *Journal of Teacher Education*, *42*(3), 205–215. https://doi.org/10.1177/002248719104200306

Blatt, M. & Kohlberg, L. (1975). The effects of classroom moral discussion upon children's level of moral judgement. *Journal of Moral Education, 4*(2), 129-161. https://doi.org/10.1080/0305724750040207

Bryman, A. (2012). *Social research methods* (4th ed.). Oxford University Press.

Campbell, E. (1997). Connecting the ethics of teaching and moral education. *Journal of Teacher Education, 48*(4), 255-263. https://doi.org/10.1177/0022487197048004003

Campbell, E. (2003). *The ethical teacher.* Open University Press McGraw-Hill.

Campbell, E. (2008). Review of the literature: The ethics of teaching as a moral profession. *Curriculum Inquiry, 38,* 357–385. https://doi.org/10.1111/j.1467-873X.2008.00414.x

Castleman, B. L., & Page, L. C. (2015). Summer nudging: Can personalized text messages and peer mentor outreach increase college going among low-income high school graduates? *Journal of Economic Behavior and Organization, 115*, 144-160. https://doi.org/10.1016/j.jebo.2014.12.008

Cobanoglu, C., & Cobanoglu, N. (2003). The effect of incentives in web surveys: application and ethical considerations. *International Journal of Market Research, 45*(4), 475–13. https://doi.org/10.1177/147078530304500406

Cohen, B. H. (2013). *Explaining psychological statistics* (4th ed.). Wiley.

Cohen, J. (1988). *Statistical power analysis for the behavioral* sciences (2nd ed.). L. Erlbaum Associates.

Cohen, M. (2003). *101 ethical dilemmas* (2nd ed.). Routledge.

Colby, A., Kohlberg, L., Fenton, E., Speicher-Dubin, B., & Liberman, M. E. L. (1977) Secondary school moral discussion by social studies teachers. *Journal of Moral Education*, *6*(2), 90-111. https://doi.org/10.1080/0305724770060203

Colby, A., & Kohlberg, L. (1987). *The measurement of moral judgment: Theoretical foundations and research validation*. Cambridge University Press.

Cook, B. G., Buysse, V., Klingner, J., Landrum, T. J., McWilliam, R. A., Tankersley, M., & Test, D. W. (2015). CEC's standards for classifying the evidence base of practices in special

education. *Remedial and Special Education, 36*(4), 220-234. https://doi.org/10.1177/0741932514557271

Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). Sage Publications, Inc.

Cummings, R., Dyas, L., Maddux, C. D., & Kochman, A. (2001). Principled moral reasoning and behavior of preservice teacher education students. *American Educational Research Journal, 38*(1), 143-158. https://doi.org/10.3102/00028312038001143

Cummings, R., Harlow, S., & Maddux, C. D. (2007). Moral reasoning of in-service and pre-service teachers: A review of the research. *Journal of Moral Education, 36*(1), 67-78. https://doi.org/10.1080/03057240601185471

Cummings, R., Maddux, C. D., Richmond, A., & Cladianos, A. (2010). Moral reasoning of education students: The effects of direct instruction in moral development theory and participation in moral dilemma discussion. *Teachers College Record, 112*(3), 621.

Cummings, R., Wiest, L., Lamitina, D. & Maddux, C. (2003). Teacher education curricula and moral reasoning, *Academic Exchange Quarterly, 7*(1), 163–168.

Damgaard, M. T., & Nielsen, H. S. (2018). Nudging in education. *Economics of Education Review, 64*, 313-342. https://doi.org/10.1016/j.econedurev.2018.03.008

Davison, M. L. (1979). The internal structure and the psychometric properties of the Defining Issues Test. In J. Rest (Ed.), *Development in judging moral issues* (pp. 223-245). University of Minnesota.

Desai S.D., & Kouchaki M. (2017). Moral symbols: A necklace of garlic against unethical requests. *Academy of Management Journal, 60*(1), 7-28. https://doi.org/10.5465/amj.2015.0008

Diessner, R. (1991, November). *Teacher education for democratic classrooms: Moral reasoning and ideology critique* [Paper presentation]. Annual meeting for the Association for Moral Education, Athens, GA.

Engelen, B., Thomas, A., Archer, A., & van de Ven, N. (2018). Exemplars and nudges: Combining two strategies for moral education. *Journal of Moral Education, 47*(3), 346-365. https://doi.org/10.1080/03057240.2017.1396966

Ellis, P. D. (2010). *The essential guide to effect sizes: Statistical power, meta-analysis, and the interpretation of research results.* Cambridge University Press. https://doi.org/10.1017/CBO9780511761676

Enright, R. D., Lapsley, D. K., Harris, D. J., & Shawver, D. J. (1983). Moral development interventions in early adolescence. *Theory into Practice, 22*(2), 134–144. https://doi.org/10.1080/00405848309543051

Faul, F., Erdfelder, E., Lang, A., & Buchner, A. (2007). GPower 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods, 39*(2), 175-191. https://doi.org/10.3758/BF03193146

Field, A. (2017). *Discovering statistics using IBM SPSS statistics* (5th ed.). Sage Publications.

Fenstermacher, G. (1990). Some moral considerations on teaching as a profession. In J. Goodlad, R. Soder, & K. Sirotnik, *The moral dimensions of teaching* (pp. 130-151). Jossey-Bass Publishers.

Fryer, R. G. J., Levitt, S. D., List, J., & Sadoff, S. (2012). *Enhancing the efficacy of teacher incentives through loss aversion: A field experiment*. National Bureau of Economic Research. https://doi.org/10.3386/w18237

Galbraith, R. E., & Jones, T. M. (1976). *Moral reasoning: A teaching handbook for adapting Kohlberg to the classroom*. Greenhaven Press.

Gersten, R., Fuchs, L. S., Compton, D., Coyne, M., Greenwood, C., & Innocenti, M. S. (2005). Quality indicators for group experimental and quasi-experimental research in special education. *Exceptional Children, 71*(2), 149-164. https://doi.org/10.1177/001440290507100202

Glasner, S., Chokron Garneau, H., Ang, A., Ray, L., Venegas, A., Rawson, R., & Kalichman, S. (2020). Preliminary efficacy of a cognitive behavioral therapy text messaging intervention targeting alcohol use and antiretroviral therapy adherence: A randomized clinical trial. *PloS One, 15*(3), e0229557–e0229557. https://doi.org/10.1371/journal.pone.0229557

Glassberg, S., & Sprinthall, N. A. (1980). Student teaching: A developmental approach. *Journal of Teacher Education, 31*(2), 31-38. https://doi.org/10.1177/002248718003100208

Goodlad, J., Soder, R., & Sirotnik, K. (1990). *The moral dimensions of teaching* (1st ed.). Jossey-Bass Publishers.

Grassian, V. (1992). *Moral reasoning: Ethical theory and some contemporary moral problems*. Prentice Hall.

Greene, J. D., Sommerville, R. B., Nystrom, L. E., Darley, J. M., & Cohen, J. D. (2001). An fMRI investigation of emotional engagement in moral judgment. *Science, 293*(5537), 2105-2108.

Griffore R.J & Lewis, J. (1978). Characteristics of teachers' moral judgement. *Educational Research Quarterly, 3*(3), 20-30.

Hall, A. K., Cole-Lewis, H., & Bernhardt, J. M. (2015). Mobile text messaging for health: A systematic review of reviews. *Annual Review of Public Health, 36*(1), 393-415. https://doi.org/10.1146/annurev-publhealth-031914-122855

Halpern, S. D., Karlawish, J. H. T., Casarett, D., Berlin, J. A., & Asch, D. A. (2004). Empirical assessment of whether moderate payments are undue or unjust inducements for participation in clinical trials. *Archives of Internal Medicine, 164*(7), 801–803. https://doi.org/10.1001/archinte.164.7.801

Halpern, S. D., Ubel, P. A., & Asch, D. A. (2007). Harnessing the power of default options to improve health care. *The New England Journal of Medicine, 357*(13), 1340–1344. https://doi.org/10.1056/NEJMsb071595

Hansen, D. T. (1998). The moral is in the practice. *Teaching and Teacher Education, 14*(6), 643-655. https://doi.org/10.1016/S0742-051X(98)00014-6

Hansen, P.G. (2016). The definition of nudge and libertarian paternalism: Does the hand fit the glove? *European Journal of Risk Regulation, 7*(1), 155-174. https://doi.org/10.1017/S1867299X00005468

Heinzelmann N., Ugazio G., Tobler P.N. (2012). Practical implications of empirically studying moral decision-making. *Frontiers in Neuroscience, 6*, 1-14. https://doi.org/10.3389/fnins.2012.00094

Higgins, A. (1980). Research and measurement issues in moral education interventions. In R. Mosher (Ed.), *Moral education: A first generation of research and development.* Praeger Publishers.

Higgins, A. (1991) The just community approach to moral education: Evolution of the idea and recent findings. In W. M. Kurtines & J. L. Gewirtz (Eds.), *Handbook of moral behavior and development: Application.* Lawrence Erlbaum Associates, Inc.

Haahr, M. (2022, October 6). RANDOM.ORG: True random number service. https://www.random.org/media

Hren, D., Marušić, M., & Marušić, A. (2011). Regression of moral reasoning during medical education: combined design study to evaluate the effect of clinical study years. *PloS One*, *6*(3), e17406–e17406. https://doi.org/10.1371/journal.pone.0017406

Hurt, B. L.& Sprinthall, N. A. (1977). Psychological and moral development for teacher education. *Journal of Moral Education, 6*(2),112-120. https://doi.org/10.1080/0305724770060204

Jackson, P. W., Boostrom, R. E., & Hansen, D. T. (1993). *The moral life of schools* (1st ed.). Jossey-Bass.

Johnson, L. E. (2008). Teacher candidate disposition: Moral judgement or regurgitation? *Journal of Moral Education, 37*(4), 429-444. https://doi.org/10.1080/03057240802405678

Johnson, L. E., & Reiman, A. J. (2007). Beginning teacher disposition: Examining the moral/ethical domain. *Teaching and Teacher Education, 23*(5), 676-687.https://doi.org/10.1016/j.tate.2006.12.006

Johnston, M., & Lubomudrov, C. (1987). Teachers' level of moral reasoning and their understanding of classroom rules. *The Elementary School Journal, 88*, 64-77. doi: https://doi.org/10.1086/461524

Johnston, M. (1985). How elementary teachers understand the concept of "on-task": A developmental critique. *The Journal of Classroom Interaction, 21*(1), 15-24.

Johnston, M. (1989). Moral reasoning and teachers' understanding of individualized instruction. *Journal of Moral Education, 18,* 45–59. https://doi.org/10.1080/0305724890180105

Jones, E. N., Ryan, K., & Bohlin, K. (1999). Character education and teacher education: How are prospective teachers being prepared to foster good character in students? *Action in Teacher Education, 20,* 11-28. https://doi.org/10.1080/01626620.1999.10462931

Kemp, N. (2010). Texting vs. txtng: Reading and writing text messages, and links with other linguistic skills. *Writing Systems Research, 2,* 53-71. https://doi.org/10.1093/wsr/wsq002

Kohlberg, L. (1969) Stage and sequence: The cognitive-developmental approach to socialization In D. A. Goslin (Ed.), *Handbook of socialization theory* (pp. 347-380). Rand McNally.

Kohlberg, L. (1976). Moral stages and moralization: The cognitive-developmental approach. In Lickona, T. (Ed.), *Moral development and behavior: Theory, research, and social issues* (pp. 31-53). Holt, Rinehart & Winston.

Kohlberg, L. (1978) Justice as reversibility: The claim to moral adequacy of a highest stage of moral judgement. In L. Kohlberg (Ed.), *Essays on moral development. Volume one: The philosophy of moral development* (pp. 190-226). Harper & Row.

Kraft, M. (2019). Interpreting effect sizes of education interventions. EdWorkingPaper: 19-10. Annenberg Institute at Brown University. http://www.edworkingpapers.com/ai19-10

Lachin, J.M., Matts, J.P., & Wei, L. (1988). Randomization in clinical trials: conclusions and recommendations. *Controlled Clinical Trials, 9 4*, 365-374. https://doi.org/10.1016/0197-2456(88)90049-9

Lampe, J. R. (1994). *Teacher education students' moral development and ethical reasoning processes.* [Paper presentation]. Annual meeting of the American Educational Research Association, New Orleans, LA.

Levine, T. & Hullett, C. (2010). Partial eta-squared. In N. J. Salkind (Ed.), *Encyclopedia of research design* (pp. 1007-1009). Sage Publications, Inc.

Levinson, M. & Fay, J. (2016). *Dilemmas of educational ethics: Cases and commentaries.* Harvard Education Press.

Lin-Siegler, X., Ahn, J. N., Chen, J., Fang, F. F. A., & Luna-Lucero, M. (2016). Even Einstein struggled: Effects of learning about great scientists' struggles on high school students' motivation to learn science. *Journal of Educational Psychology, 108*(3), 314-328. https://doi.org/10.1037/edu0000092

Locquiao, J. & Abernathy, T. (May-2022). Moral reasoning. In R.A.R Gurung & A.S. Richmond (Eds.) *Encyclopedia of psychology in the real world: Education*. London: Routledge. https://doi.org/10.4324/9780367198459-REPRW32-1

Lyddy, F., Farina, F., Hanney, J., Farrell, L., & Kelly O'Neill, N. (2014). An analysis of language in university students' text messages. *Journal of Computer-Mediated Communication*, *19*(3), 546–561. https://doi.org/10.1111/jcc4.12045

Maccallum, J. A. (1993). Teacher reasoning and moral judgement in the context of student discipline situations. *Journal of Moral Education*, *22*(1), 3-17. https://doi.org/10.1080/0305724930220101

Mahoney, P. (2009). Should 'ought' be taught? *Teaching and Teacher Education, 25,* 983–989. https://doi.org/10.1016/j.tate.2009.04.006

Maxwell, B., Tremblay-Laprise, A., Filion, M., Boon, H., Daly, C., van den Hoven, M. A., Heilbronn, R., Lenselink, M., & Walters, S. (2016). A five-country survey on ethics education in preservice teaching programs. *Journal of Teacher Education, 67*(2), 135-151. https://doi.org/10.1177/0022487115624490

McNeel, S. P. (1994). College teaching and student moral development. In J. R. Rest & D. Narvaez (Eds.), *Moral development in the professions: Psychology and applied ethics* (pp. 27–49). Erlbaum.

Mertens, Herberz, M., Hahnel, U. J. J., & Brosch, T. (2022). The effectiveness of nudging: A meta-analysis of choice architecture interventions across behavioral domains. Proceedings of the National Academy of Sciences - PNAS, *119*(1), 1–10. https://doi.org/10.1073/pnas.2107346118

Moore, A.M (2016, February 12). *Seven tips for getting more responses to your emails (with data).* Boomerang. https://blog.boomerangapp.com/2016/02/7-tips-for-getting-more-responses-to-your-emails-with-data/

Muench, F., & Baumel, A. (2017). More than a text message: Dismantling digital triggers to curate behavior change in patient-centered health interventions. *Journal of Medical Internet Research, 19*(5), 147-147. https://doi.org/10.2196/jmir.7463

Mosher, R. L., Kenny, R. A., Jr., & Garrod, K. (1994). *Preparing for citizenship*: Teaching youth to live democratically. Praeger Publishers.

Noddings, N. (1984). *Caring: A feminine approach to ethics & moral education.* Berkeley, CA: University of California Press.

O'Flaherty, J., & McGarr, O. (2014). The use of case-based learning in the development of student teachers' levels of moral reasoning. *European Journal of Teacher Education,37*(3), 312-330. https://doi.org/10.1080/02619768.2013.870992

Oja, S. & Sprinthall, N. A. (1978) Psychological and moral development of teachers, in: N. A. Sprinthall & R. L. Mosher (Eds.) V*alue development as the aim of education.* (pp. 218-225). Character Research Press.

Oser, F. K. (1994). Chapter 2: Moral perspectives on teaching. *Review of Research in Education, 20*(1), 57–127. https://doi.org/10.3102/0091732X020001057

Osgood, R. L. (2008). *The history of special education: A struggle for equality in American public schools*. Praeger Publishers.

Özçinar, H. (2015). Scaffolding computer-mediated discussion to enhance moral reasoning and argumentation quality in pre-service teachers. *Journal of Moral Education, 44*(2), 232-251. https://doi.org/10.1080/03057240.2015.1043875

Power, C., Higgins, A., & Kohlberg, L. (1989). *Lawrence Kohlberg's approach to moral education.* Columbia University Press.

Price, P.C., Jhangiani, R. S., Chiang, I-C. A., Leighton, C., & Cuttler, C. (2017). *Research methods in psychology* (3rd ed.). PB Pressbooks.

Reiman, A. & Peace, S. D. (2002) Promoting teachers' moral reasoning and collaborative inquiry performance: a developmental role-taking and guided inquiry study. *Journal of Moral Education, 31*(1), 51–66. https://doi.org/10.1080/03057240120111436

Rest, J. (1979). *Development in judging moral issues.* University of Minnesota Press.

Rest, J. (1986). *Moral development: Advances in research and theory*. Praeger Publishers.

Rest, J., Narvaez, D., Bebeau, M. J., & Thoma, S. J. (1999a) *Postconventional moral thinking: A Neo-kohlbergian approach.* Lawrence Erlbaum Associates Publishers. https://doi.org/10.4324/9781410603913

Rest, J., Narvaez, D., Thoma, S.J., & Bebeau, M.J. (1999b). DIT2: Devising and testing a revised instrument of moral judgement. *Journal of Educational Psychology, 91*(4), 644-659. https://doi.org/10.1037/0022-0663.91.4.644

Rest, J., Narvaez, D., Thoma, S.J., & Bebeau, M.J. (2000). A neo-Kohlbergian approach to morality research. *Journal of Moral Education, 29*(4), 381-395. https://doi.org/10.1080/713679390

Rest, J., Turiel, E., & Kohlberg, L. (1969). Level of moral development as a determinant of preference and comprehension of moral judgments made by others. *Journal of Personality, 37*(2), 225. https://doi.org/10.1111/j.1467-6494.1969.tb01742.x

Richardson, J. T. E. (2011). Eta squared and partial eta squared as measures of effect size in educational research. *Educational Research Review, 6*(2), 135-147. https://doi.org/10.1016/j.edurev.2010.12.001147.

Rogers, T., Duncan, T., Wolford, T., Ternovski, J., Subramanyam, S., & Reitano, A. (2017). *A randomized experiment using absenteeism information to "nudge" attendance.* Regional Educational Laboratory Mid-Atlantic.

Ruggiero, M. (2020, July 27). *What's the best email length for sales outreach?*. Overloop. https://overloop.com/blog/whats-the-best-email-length-for-sales-outreach/

Scarlet, S., & Arthur, J. (2014). *Morality and moral controversies: Readings in moral, social, and political philosophy*. Pearson.

Schlaefli, A., Rest, J., & Thoma, S. (1985). Does moral education improve moral judgment? A meta-analysis of intervention studies using the defining issues test. *Review of Educational Research, 55*(3), 319-352. https://doi.org/10.3102/00346543055003319

Shadish, W. R., Cook, T. D., & Campbell, D. T. (2002). *Experimental and quasi-experimental designs for generalized causal inference* (2nd ed.). Cenage Learning.

Shafer, J. (1978). *The effect of Kohlberg dilemmas on moral reasoning, attitudes, thinking, locus of control, self-concept, and perceptions of elementary science methods students* [Unpublished dissertation]. University of Northern Colorado.

Sileo, N. M., Sileo, T. W., & Pierce, T. B. (2008). Ethical issues in general and special education teacher preparation: An interface with rural education. *Rural Special Education Quarterly*, *27*(1–2), 43–54. https://doi.org/10.1177/8756870508027001-208

Singer, E., & Bossarte, R. M. (2006). Incentives for survey participation when are they "coercive"? *American Journal of Preventive Medicine, 31*(5), 411–418. https://doi.org/10.1016/j.amepre.2006.07.013

Sirotnik, Kenneth A. (1990). Society, schooling, teaching, and preparing to teach. In J. Goodlad, R. Soder & K.A. Sirotnik (Eds.), *The Moral Dimensions of Teaching* (pp. 296-327). Jossey-Bass Publishers.

Snarey, J. & P. Samuelson. (2008). Moral education in the cognitive developmental tradition: Lawrence Kohlberg's revolutionary ideas. In L. Nucci & D. Narvaez (Eds.) *Handbook of Moral and character education* (2nd ed.) (pp. 61-83). Routledge.

Sockett, H. (1993). *The moral base for teacher professionalism*. Teachers College Press.

Sockett, H., & LePage, P. (2002). The missing language of the classroom. *Teaching and Teacher Education, 18*(2), 159-171. https://doi.org/10.1016/S0742-051X(01)00061-0

Song, M., & Herman, R. (2010). Critical issues and common pitfalls in designing and conducting impact studies in education: Lessons learned from the What Works Clearinghouse (Phase I). *Educational Evaluation and Policy Analysis, 32,* 351–371. https://doi.org/10.3102/0162373710373389

Strike, K. (1990). The legal and moral responsibility of teachers. In J. Goodlad, R. Soder, & K. Sirotnik, *The moral dimensions of teaching* (1st ed.) (pp. 188-223). Jossey-Bass Publishers.

Sunstein, C. R. (2014a). *Why nudge?: The politics of libertarian paternalism*. Yale University Press.

Sunstein, C. R. (2014b). Nudging: A very short guide. *Journal of Consumer Policy, 37*(4), 583-588. https://doi.org/10.1007/s10603-014-9273-1

Thach, C. & Berger, V. W. (2005). Simple random assignment. In Everitt, B. S., Howell, D. C. (Eds.), *Encyclopedia of statistics in behavioral science* (Vol. 4, pp. 1838–1840). Wiley & Sons. https://doi.org/10.1002/0470013192.bsa618

Thakkar, J., Kurup, R., Laba, T., Santo, K., Thiagalingam, A., Rodgers, A., Woodward, M., Redfern, J., & Chow, C. K. (2016). Mobile telephone text messaging for medication adherence in chronic disease: A meta-analysis. *JAMA Internal Medicine, 176*(3), 340-349.https://doi.org/10.1001/jamainternmed.2015.7667

Thaler, R. H., & Sunstein, C. R. (2008). *Nudge: Improving decisions using the architecture of choice*. Yale University Press.

Thoma, S. J. (2014). Measuring moral thinking from a neo-Kohlbergian perspective. *Theory and Research in Education, 12*(3), 347-365. https://doi.org/10.1177/1477878514545208

Tom, A. R. (1984). *Teaching as a moral craft*. New York: Longman.

Tofighi, B., Nicholson, J. M., McNeely, J., Muench, F., & Lee, J. D. (2017). Mobile phone messaging for illicit drug and alcohol dependence: A systematic review of the literature. *Drug and Alcohol Review, 36*(4), 477–491. https://doi.org/10.1111/dar.12535

Valentine, J. C., & McHugh, C. M. (2007). The effects of attrition on baseline comparability in randomized experiments in education: A meta-analysis. *Psychological Methods, 12*(3), 268-282. https://doi.org/10.1037/1082-989X.12.3.268

Walker, L. J. (1983). Sources of cognitive conflict for stage transition in moral development. *Developmental Psychology, 19*(1), 103-110. https://doi.org/10.1037/0012-1649.19.1.103

Weiss, C. H. (1998). *Evaluation: Methods for studying programs and policies*. Prentice Hall.

Weunsch, K. (2015). *Cohen's conventions for small, medium, and large effects.* http://core.ecu.edu/psyc/wuenschk/docs30/EffectSizeConventions.pdf

U.S. Department of Education (2020). *What works clearinghouse standards handbook- version 4.1.* Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, What Works Clearing House. https://ies.ed.gov/ncee/wwc/Docs/referenceresources/WWC-Standards-Handbook-v4-1-508.pdf

Yeazell, M. I. & Johnson, S. F. (1988) Levels of moral judgment of faculty and students in a teacher education program: a micro study of an institution. *Teacher Education Quarterly, 15*(1), 61–70.

Yost, D. S. (1997) The moral dimensions of teaching and preservice teachers: can moral dispositions be influenced? *Journal of Teacher Education, 48*(4), 281–292. https://doi.org/10.1177/0022487197048004006

Yu, S., Alper, H. E., Nguyen, A.-M., Brackbill, R. M., Turner, L., Walker, D. J., Maslow, C. B., & Zweig, K. C. (2017). The effectiveness of a monetary incentive offer on survey response rates and response completeness in a longitudinal study. BMC Medical Research Methodology, 17(1), 77–77. https://doi.org/10.1186/s12874-017-0353-1

APPENDIX A. TEXT MESSAGE MORAL REASONING SCENARIOS

Day One (Ethical Dilemma) Conventional. Property vs Affiliation.

A pharmacy created a wonder drug that cures all forms of cancer. The drug, in pill form, starts working within the same day of application. The pharmacy decided to charge $100,000 for one pill which is about 200 times more than what it cost to make. There is a person named Ethan whose wife has been diagnosed with aggressive cancer and is not expected to live for one more week. Ethan can't afford the pill. He begged to pay by installments; sold his possessions; took out as many loans as possible but could not produce the money. Ethan chose to break into the pharmacy and steal the drug. His justification is the pharmacist is not meeting their responsibility to serve all members of society, not just the richest ones.

Day Two (Moral Value/Norm)

When is it bad to be compassionate?

A surprise storm capsized a cruise ship filled with people who were on vacation. A group of people managed to get onto one of a few life boats. They have been stranded for about two days in open ocean. The boat seems to have a small leak that requires attention every hour. One person cups the water and throws it overboard. At the start of the next day, they see three human bodies floating on wreckage from the same cruise ship. As the life boat approaches the bodies, it is clear that they are breathing—but just barely. The people in the lifeboat choose to pick up the three onto the boat. The new weight accelerates the leak and threatens to sink the boat.

Day Three (Ethical Dilemma) Post-conventional. Contract vs Authority.

Ellen is a 16-year-old girl who wanted to go camping one weekend with her friends. Her father agreed that if she worked to save up money, she'd be excused from chores for that weekend to go camping. Ellen worked hard over the next month doing errands for people and not spending on anything to save up money. She eventually saved $400 to cover the entire trip. At the day of the trip, Ellen's father told her to not go on the trip because her cousin and family are arriving to celebrate the cousin's birthday. Furthermore, the father told Ellen to give half of her savings as a birthday gift. Ellen decides to go anyway on the trip. Her justification is that there was an agreement—a deal between her dad and herself—that she upheld for a month while her father ignored as if her concerns did not matter.

Day Four (Moral Value/Norm)

When is it good to steal?

There is a librarian named Thomas. Thomas was typing on a laptop within earshot of several college students who organized a small study group for what sounds like a difficult final exam. Thomas overheard one of the students mention that they acquired the exam questions and answers from another friend who took the final two days ago in another course section. Thomas then saw the same student place a paper copy of the supposed exam questions and answers on the table. The other group members looked relieved and insisted on buying the student lunch as thanks. The group left their belongings on the table as they walked away. Thomas walked over; snagged the paper copy; and shredded it.

Day Five (Ethical Dilemma) Pre-conventional. Punishment vs Personal Conscience.

There's a squad of Army soldiers retreating from gunfire by enemy combatants. They crossed a bridge to escape; but the enemy combatants can cross it too. The bridge could be destroyed by setting and detonating explosives. It would halt the enemy combatants and give the squad enough time to retreat. But Michael knows that whoever stays to detonate the bridge would be killed. The squad captain, Michael, thinks about who should stay. The squad could draw lots. But Michael considers how the retreat started because another soldier, Tim, defied orders to stay in camouflage. Instead, Tim charged forth which alerted the enemy combatants to the squad's position. Several of squad members died in the ensuing firefight. Tim is a glory-seeker who has repeatedly defied orders before which has caused serious injuries. This is the first time his behavior led to squadmate deaths. Michael decides to have Tim stay to detonate the bridge and lies to him that the squad will be there to extract him. His justification is that the command will punish Tim for his squadmates' deaths and prevent more deaths because of his brashness.

Day Six (Moral Value/Norm)

When is it bad to have free choice?

There are two parents with a 16 year old teenager named Noah. Both parents believe in having a democratic parenting style where they talk and explain Noah's choices but never prevent him from making choices. They hope that doing so "guides" rather than "forces" Noah to appropriate behaviors. A month ago, Noah decided to eat only ice cream, gummy bears, and peanut brittle for every single meal for one whole week. Noah has stuck to the diet for an entire month now. The parents have tried to explain and talk with Noah about the harm of the diet to no success. Noah started encouraging his much younger cousins to eat only sweets too. The parents decided to not forbid sweets for the younger cousins either. But the parents try to counteract Noah's influence by explaining the harm of the diet to the younger cousins.

Day Seven (Ethical Dilemma) Conventional. Property vs Life.

A police chief in a poor remote nation must choose sending her team between two sides of the country, north and south, to make an arrest. Earlier that day, two fugitives needed money to escape legal trouble. The first fugitive robbed several family-owned stores and made off with about $35,000 worth of cash. The second fugitive went to a beloved philanthropist. The second fugitive lied to the philanthropist explaining that he represented a charity that was looking to stock a food pantry. The philanthropist produced $300 in cash and then got murdered by the second fugitive. Both fugitives drove to separate airports to buy a flight ticket. The police chief has enough time and personnel to make one arrest before both fugitives fly to unfriendly neighboring countries. The police chief decides to arrest the first fugitive because losing so much money for so many small shops would destabilize the local economy and cause social unrest.

Day Eight (Moral Value/Norm)
When is it good to kill?

There is a doctor supervising patients within a single hospital ward. One patient is a 7-year-old child whose liver has failed and has been struggling to find a donor replacement. If the child does not get a replacement within the day, the child will die. Another patient is an 87-year-old woman who has a late stage terminal disease and is not expected to live within the next couple weeks. The doctor learned that the older individual has a perfect organ match with the child. And the doctor learned from the nurses that the older individual gave implied consent, a "thumbs up", to donate their organs to the child. As the doctor approached to get formal written consent from the 87-year-old, a complete power outage occurred. Over the chaos, the doctor ran to check in on the patient and saw that the older patient fell into a coma during the outage and that their life support has turned off. The doctor holds the pen in the older patient's hands and scrawls a forged signature onto the consent form. The power resumed at this point. The doctor then walked away without turning the life support system back on.

Day Nine (Ethical Dilemma) Post-conventional. Consent vs Authority.

There is an IT worker, Mary, who works for a major company. Mary is the one person responsible for monitoring "flagged" texts that circulate around the company's communications network. Workers have sometimes used company texts for personal correspondence to family or friends. The cost of paying for wasted data usage alarmed the company to set up an official monitor. So, Mary screens texts that are frivolous; deletes them; and then sends warnings to workers. Texts are strictly confidential per company policy, so Mary cannot speak about the contents of the texts to anyone else. One day, Mary opens a flagged text. It was sent from her boss to a worker in a higher floor who happens to be married to Mary's coworker sitting a cubicle behind her. The flagged text read as a plan to meet and resume an extramarital affair. Mary does not interact much with her coworker. Mary decides to break confidentiality and inform her cubicle coworker about the extramarital affair. Her justification is that company policy in this case hinders a person's right to know that their relationships are based on trust.

Day Ten (Moral Value/Norm)
When is it bad to have consent?

There is a young man named Max from a faraway country whose current form of democratic government has worked uninterrupted for hundreds of years. Citizens of the country say their democracy works so well because every year, every single person votes in a referendum whether to keep or change the principles of their constitution. The constitution principles have not changed for hundreds of years. It states, among other principles, that a society has a fundamental right to euthanize individuals who get too sick or too old. Very sick and very old citizens vote in these referendums too. Max has a close relationship with his older sister who has gotten extremely sick over the past year. The older sister, as a law-abiding patriot, asked Max to kill her per custom. Max refused. Instead, he later drugged her unconscious and kidnapped her to bring her across the border into a neighboring country for asylum.

Day Eleven (Ethical Dilemma) Pre-conventional. Truth vs Property.

Eleanor is a superintendent to a rural school district where all the children qualify for free lunch and where the region slumped to economic depression as families lost their jobs when factories relocated. Eleanor has been seeking donations from private citizens to support upkeep of buildings; repairing equipment; buying instructional materials; and feeding/clothing students. A

day ago, Eleanor met one-on-one with a billionaire magnate who agreed to donate $100,000 dollars to the school district. The meeting was off-the-record where no documentation was taken. The following day, the billionaire magnate meets with Eleanor carrying the signed check but wrote $1,000,000 instead. The billionaire magnate also has gauze wrapped around their head. An assistant to the billionaire magnate explains the magnate hit their head yesterday causing bruises and short-term memory loss. Eleanor decides to accept the check. Her justification is that such a big donation will help her school; and the billionaire magnate will not be harmed because they have no past memory of agreeing otherwise.

Day Twelve (Moral Value/Norm)

When is it good to lie?

There is a 14-year-old named Paul who goes to an elite boarding school. Paul has been a victim to longstanding cyberbullying by a group of upperclassmen led by an 18-year-old named John. The most recent cyberbullying incident circulated pictures of Paul walking around parts of campus with gun crosshairs over his head and the caption "Loser in the Wild". School teachers and administrators long suspected that John has been terrorizing Paul and several other students, but cannot act because there is no clear evidence. One day, Paul walked into an empty cooking classroom and saw that John left his smartphone, knives, and backpack unattended. Paul wrapped cloth around his hands. Paul placed one of the knives into a pocket in the backpack. And then Paul used John's smartphone to take a picture of knife in the backpack and posted the picture onto John's social media accounts with a brief caption of "Time to Hunt." In a few hours, police officers arrived; handcuffed John; and escorted him away from the school grounds.

Day Thirteen (Ethical Dilemma) Conventional. Affiliation vs Life.

There is a father, Lee, and his child who have been imprisoned in a grueling civilian war camp. Prisoners work 20 hours straight everyday doing exhausting physical labor like pulling carts and digging ditches. Prisoners have the 4 remaining hours to sleep, eat, and take care of toileting. People who don't work 20 hours get executed. People who do work 20 hours often die from exhaustion or disease from the conditions. Lee has kept up with the camp schedule; but his child is getting weaker. One day, the camp warden calls for Lee. The warden commends him for working every day without issue. The warden offers to designate Lee as a model prisoner which means that Lee and his child will work for just 8 hours every day; sleep inside a tent; eat fresh bread; and use an outhouse. The warden asks however for a proof of friendship where Lee must pick one other parent and their child in the camp to execute. The warden explains that Lee wouldn't have to fire the gun. Lee decides to accept the offer of the warden and identifies another parent and child. His justification is that he is doing what any parent would do in their situation.

Day Fourteen (Moral Value/Norm)

When is it bad to be loyal?

Abbey is considered an exemplary high school senior. She is in the running for class valedictorian with a spotless GPA. She tutors her classmates in geometry and trig after school hours. She also presides the school computer coding club. She feels supported around school. Her mother is the calculus teacher. And her boyfriend Nick, another 4th year student, pushes Abbey to try her best. He has a hard background where his parents left him so his grandma takes care of him. Nick and his grandma do not have much; Abbey's family has cooked meals for them during leaner months. Nick has excelled academically. Nick is also in the running for valedictorian. He has a full-ride scholarship to college. One day, Nick asked Abbey to drop off his smartphone because

he left it after one of the meals. While Abbey had it, several text messages came through (some numbers from her own friends) asking Nick if the calculus teacher, Abbey's mom, gave him the answers yet for the midterm and final exams. The texts show that Abbey's mom has been revealing exam questions and answers before the test date; and that Nick has been sharing them with friends. Abbey returns the phone and does not ask about the texts to Nick or her Mom.

Day 15 (Ethical Dilemma) Post-conventional. Punishment vs Civil Rights.

There is a woman named Sarah. She recently wed her husband, Dan, after years of planning and saving money. The marriage was blissful with the newlyweds checking off goals as the months passed: they got a house; raised a puppy; and earned promotion at work; etc. The next on their to-do was refurbishing the house to make it more kid-friendly for their soon-to-be baby. One day a phone call came informing Sarah that Dan was killed in a shooting. The shooting happened at a business park which included Dan's office. The perpetrator was a disgruntled employee in one of the other offices. Dan was one of 30 fatalities. Sarah grieved in the passing months. Death penalty was filed against the perpetrator. Sarah learned during the proceedings that the perpetrator had a history of documented mental illness; and was constantly turned away from mental health services due to cost. She later learned that the police tampered with protocol in not disclosing the perpetrator's mental health history. Media interviewed victims' loved ones for what outcome they wished to see. They pressed for death penalty. Sarah was interviewed too. Sarah expressed disagreement with the death penalty. Her justification is that despite the pain she has endured, the perpetrator has a history of mental health issues which has long gone untreated, so punishing the perpetrator would not meet the death penalty intent in addressing deliberate calculated harm, but instead serves as a way for society to indulge revenge and shift responsibility.

Day 16 (Moral Value/Norm)

When is it good to harm?

Louis is a 20-year-old who is the first of his family to attend college. He is also the youngest in the family. His then-pregnant mother and two older siblings came from a foreign country wracked with poverty. They settled into their host country after giving up their money and possessions to get smuggled past border security. His mother and older siblings never acquired citizenship; but Louis was born inside the host country and has citizenship. It has been two decades since they settled. In that time, his mother and siblings started and has run a business that employs people in their hometown; pay their taxes; and donate 10% of their earnings to local charities. His mother and siblings also set aside money for Louis to attend college one day, an opportunity that eluded the rest of the family. One day a speaker was invited to speak at Louis' college. The speaker is a media personality who has publicly called for the deportation and "mysterious disappearance" of undocumented persons. The speaker always ends events by reading a list that names undocumented persons, their home/work addresses, and their phone numbers. Louis learned from a friend that a group of students discovered the hotel number where the speaker will stay the night before the event. The group plans to break in the hotel overnight and assault him. Louis asks about joining them.

Day 17 (Ethical Dilemma) Pre-conventional. Reparations. Affiliation vs Property.

There is a man named Henry who has lived in the same house where he grew up. One of his neighbors were racial minorities. The neighbor's kid was his friend. It was a peaceful neighborhood. One day, his friend and their family abruptly left their home. Henry learned from his dad that their country declared war against the country from which his neighbors emigrated.

The government relocated his neighbors to a faraway site packed with people from that country. Two decades dragged until the war ended. In that time, Henry's dad moved their fence further into their old neighbors' property, until the fence enclosed all of it. Henry inherited the expanded property when his dad died. Post-war, neighborhood land values increased. He learned that selling the expanded property meant never working for the rest of his life. While starting bids, Henry heard his former friend was back in town seeking documents to reclaim their home. Henry decides to sell the property. His justification is that Henry's dad understandably moved the property lines long ago given that no one was there to use or enjoy it. Furthermore, selling the property benefits Henry; whereas his former friend has no certain benefit without supporting documents.

Day 18 (Moral Value/Norm)

When is it bad to follow the law?

Jessica is a medical doctor working in a foreign country convulsing with civil war, power outages, food/water shortages, and closed public services. The civil war started from a wealthy minority calling for the assault and enslavement of a poor and populous group of undesirables considered the lowest social class within that country. The government organization she works with is immune from ground conditions because they operate from a large ship far from shore. The organization takes small boat trips to deliver medical treatment to people affected by the civil war. The organization hails from a home country with laws that forbid non-citizens boarding government boats for any reason. One day, the civil war led to an increase in violence where once-ignored children of the undesirables now served as targets of slavery. Jessica and her immediate team planned to save some of the children. In one of the regular trips ashore, Jessica, her team members, and other sympathetic ship personnel smuggled children of the families they treated onboard the ship. They let the children secretly stay in cabins even after the ship started a return journey to their home country.

Day 19 (Ethical Dilemma) Conventional. Erotic love vs. Law.

Matthew is a decorated police officer. For several years, he has lived in a house with three other individuals as secret polygamists. They have referred to the arrangement as being roommates in public and in legal statements. The laws of their country forbid polygamous relationships. The fines and prison time can bankrupt a person and waste away decades. Despite the anxiety that comes from breaking the law and being a law enforcer, Matthew overall appreciates his polygamous relationships as positive and fulfilling. Recently, Matthew has been yearning to raise a child. He and one of the female polygamists agreed to enter the legal process for adoption. The laws of that country prohibit adoption by single individuals. The laws presume that monogamous parenting rears civic-minded children. Near the end of the process, the child adoption officer tells Matthew to prepare to swear on record his romantic relationships. Matthew decides to halt the adoption. His justification is that proceeding with the adoption would exploit a loophole in the adoption process which will make him further undermine the law because of a want versus a need.

Day 20 (Moral Value/Norm)

When is it good to cheat?

Aubrey is a veteran math teacher at a selective private high school where its graduates go on to elite colleges. Tuition starts at several thousands of dollars per semester. Parents are happy to pay it given the school's success. The tuition supports the salaries of the teachers who make much more than their public-school counterparts. This last point fuels resentment among teachers who note that grade inflation has picked up because of parental pressure to accept subpar or

adequate student work as exceptional "A" work. Parents have expressed in emails, phone calls, and in face-to-face meetings that they pay for a certain sort of education which includes high grades. Aubrey teaches a small class of students on a pilot scholarship program. The scholarship supports students with low-income backgrounds, who otherwise could not afford tuition. Aubrey is one of few teachers who refuses to change grades for parents. After the first year of the scholarship, many parents complained that Aubrey's class contaminates the exceptional culture of the school because of their lower grades. School leadership proposed to end the scholarship if no improvement occurs. Aubrey still refused to change C grades to A grades; but for the rest of the year, Aubrey quietly permitted her class to use unauthorized electronic devices; refer to crib notes; and ask for peer help during formal projects and tests.

Day 21 (Ethical Dilemma) Post-conventional. Property vs Personal Conscience.

There is a college student named Emily preparing a party for a beloved cousin who is celebrating her 18th birthday. A year ago before the target date, Emily asked her cousin how she would like to celebrate her birthday. Emily noted all the activities like going to an amusement park; watching movies; dressing up for a classy evening dinner; and taking a two-week trip to a far-off country. Emily promised to set up the festivities. She told her cousin and mutual friends to save the date. Emily insisted that she would cover all the expenses. Close to a full year later, Emily worked to save up just enough money for the entire birthday bash. The day before the birthday, Emily learned that a massive earthquake wracked the country next to their intended destination. The earthquake destroyed most of that adjacent country's infrastructure. The few fragmented news reports and social media that trickled in show throngs of people without shelter, food, water, or telecommunication. Humanitarian agencies lamented that the lack of attention and aid after the disaster is another tragedy. Emily decided to send all the money she saved for the birthday to one of the deployed humanitarian agencies. Her justification is that the kind of person all people should strive to act as would not let another person suffer when their own basic needs are met.