Texting as a Channel for Personalized Youth Support: Participatory Design Research by City Youth and Teachers

Mica Pollock (University of California, San Diego) and Uche Amaechi (Harvard Graduate School of Education), with input from Maureen Robichaux, Ted O'Brien, and students of Full Circle/Next Wave, Somerville Public Schools

Most school districts are out to regulate and restrict student texting and fear student-teacher texting as particularly inappropriate. But might this youth-dominated channel in fact be a 21st century portal to personalized support for youth struggling in school? This article shares first findings from participatory design research on texting, conducted by youth and teachers in the diverse, immigrant-heavy city of Somerville, MA. In a design research project welcomed by Somerville district and school administration, teachers and students at the district's alternative high and middle school have been testing how one-to-one texting might support students, teachers, and mentors to communicate rapidly about students' personal and academic needs. Their work raises deep questions for city schools considering how to forge supportive student-teacher relationships in the digital age.

Key words: texting, student support, relationships, youth, teachers, personalization.

Many educators and researchers now believe that key to student support today is ongoing, individualized response to each student's needs -- what many researchers call "personalization" (Yonezawa, McClure and Jones 2012). But how are educators to attend individually to every young person in a context of limited time and dwindling resource?

Increasingly, schools pair computers with young people for rapid individualized response: "progress monitoring" technologies automatically tailor instruction to individual students' moment-to-moment mistakes, successes, and questions (Rose and Gravel 2012, 19-20). But the "personalization" efforts called for in schools today also require strengthening adult-youth *relationships*, typically assuming face-to-face contact and its attendant costs (Yonezawa, McClure and Jones 2012). Personalization reforms often carve up large schools or the school day to link individual students with adults they talk to more frequently. Research holds that so organizing relationships helps educators respond knowingly and quickly to students' individual needs and in turn increases students' engagement and achievement, especially for academically struggling youth (Bloom & Unterman, 2012; Martin & Dowson, 2009; Appleton, Christenson & Furlong, 2008; Davis, 2003). However, even well-funded "personalization" restructuring efforts have been shown to still offer too-limited amounts of the one-to-one support that struggling youth actually require, and shrinking budgets are further limiting such sustained, face-to-face and one-to-one contact with adult supporters (Yonezawa, McClure and Jones, 2012).

The situation begs a new question for schools serving young people in need. Could low-cost technology also help enable personalized student support relationships, by *flexibly* enabling *rapid*, *on demand* human response to students' individual needs? Could "always-on" channels that reach youth "anytime, anywhere" possibly help personalization occur on an as-needed basis, perhaps leaping over expensive reliance on prescheduled face-to-face contact alone?

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In 2009, young people in Somerville, Massachusetts, urged us to ask such questions regarding social media's most commonplace tool for rapid, individualized communication: texting. The texting project became a key component of the OneVille Project, a participatory design research effort engaging Somervillians of all ages in exploring how low-cost technologies might enable necessary communications between youth and supporters in a diverse community (http://wiki.oneville.org).

This article reports our initial group findings. Above all, students and teachers said that the private, rapid, and on-demand information-sharing and banter possible via one-to-one texting increased personalized student support by enabling, then strengthening, teacher-student relationships. While research has often emphasized the fully "social" (multiuser, public) or even "hypersocial" affordances of "social media," particularly as used outside of school (Ito et al 2009), one-to-one texting usefully allowed a simple "private, intimate, and always on" (Ito et al, 20) tube for rapid call and response between student and teacher, affording a unique "hyperpersonal" ability (Walther 1996) to talk and build relationship without the cacophony of school "social" life. Research suggests that affinity, commitment and attention—important components of strong relationships—tend to decrease over time unless "replenished" (Nardi 2005), and texting seemed to enable anytime replenishing in between face-to-face contacts (Amaechi, 2012), even prompting next communications in person. In our pilot, although all knew the texting record would be our (anonymized) research data and monitored for safety, teachers and students used their private-*feeling* channel to solidify youths' individual relationships both to teachers and to school itself.

As we show below, texting *enabled* personalized communications by affording anywhere, anytime, and two-way contact between student and teacher. Texting's typical informality *invited* personalized communications, by putting student and teacher "on the same level" to banter about issues both "personal" and "academic." Finally, texting as used here *deepened* personalized communications, as explicit statements of encouragement and a simple commitment to ongoing exchange encouraged communication partners to "care" more for the person on the other end of the line.

Ironically, the heightened personalization we saw afforded by texting is exactly what scares school personnel about the channel's use by teachers: teachers and students are not to "care" too much or get too "personal" (Pyle 2011). The pilot raised deep questions about fostering supportive student-teacher relationships in the digital age.

Conceptual Framework and Prior Research

Calls for "personalization" are now loud in the education literature: strategies include small, consistent advisories, small schools, mentor groups, and looping, in which teachers stay with groups of students over multiple years (see Yonezawa, McClure, and Jones 2012 for overall review). In such personalization efforts, time is rearranged so students build relationships with adult supporters who, through "dense" (frequent) communications (Daly 2010), can offer individualized feedback about students' progress (Hattie 2008), interests and experiences (Nieto 2004), and available resources, while building the trust and attachment central to successful mentoring (DuBois and Rhodes, 2006). In addition, teachers who engage "in practices of authentic care" by making an

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active "effort to find out who their students. . .[are]" as individuals tend to be more successful in building personalized relationships and consequently, in supporting youth (Shiller, 2009, p. 478).

Yet interestingly, research also suggests that we don't know exactly *which mechanisms* inside schools striving to "personalize" education for high-need youth actually do the job (Yonezawa, McClure, and Jones 2012), requiring more research on specific strategies for enabling information-sharing and relationship building with youth. We argue that more research also can examine the *channel* (Hymes 1972) through which "personalized" communications might be pursued. The OneVille Project in Somerville, MA (2009-12), of which the texting pilot was one of six sub-efforts, set forth to test low-cost *communication infrastructure* for enabling necessary communications in youth support (Pollock 2012; wiki.oneville.org). In the texting project, we particularly wanted to explore how free and low-cost technologies might enable rapid and routine support communication with youth. We came to pilot texting at young people's suggestion, after a failed test of an open source social network for enabling youth and supporters to communicate on demand. Broadly, prior research also had suggested that texting was a channel particularly likely to engage today's youth.

Pew Polls have found that 70% of teens use texting with one another to do "things related to school work," and a smaller but more dedicated 23% of teens use texting for school at least daily. Youth are using texting more for general school-related communications among peers than detailed discussions of homework: 30% of all students and 45% of poor students specifically report never texting about school assignments (Lenhart et al, 2010). Still, some recent research has examined uses of texting to express ethnic identity in school (Paris, 2010), to increase course related interaction (Orthober and Thomas, 2011), and to lower students' perceived barriers to help seeking (Joyce and Weibelzahl, 2011). In the last study, researchers found that students did not object to receiving texts from school personnel and that "proactive texting can have a beneficial value" in, among other things, prompting students to seek help.

Pew Polls also indicate that texting is a common denominator medium: three out of every four teens have a cell phone, and the percentage of teens using text messaging dramatically doubled between 2006 and 2010 (27% to 54%), with cell phone calls increasing only from 34-38% and the use of social networking sites from 21-25% (Lenhart et al, 2010). Moreover, cell phone usage is still more widespread than home internet use among people of color, who also are significantly more likely to use text messaging (70%) than white cell phone owners (50%) (Lenhart et al, 2010; Smith, 2010). Overall, texting is now youths' most commonly accessible technological tool for "dense," personal communications in everyday life – just typically not with teachers (Lenhart et al, 2010).

Students today text primarily with peers, not teachers, about school (Lenhart et al, 2010), but one recent poll by the Speak UP Project found that "61% [of youth surveyed] wanted reminders and alerts of upcoming activities" via mobile technologies and that more specifically, 46% of middle school students considering the ideal math class wanted "to be able to text my teacher with question" (Learning on the Go: Summit 2012, San Diego,

CA, Jan 13, 2012). Yet many district and school administrators and teachers view texting as a particularly inappropriate mode of communication between teachers and students (Pyle 2011). Do a Google search on texting in schools, and much of what you find is fear -- precisely because of the tool's potential for "personalization." Instead of just fearing texting, students, teachers, and university researchers in Somerville decided to explore together what texting might afford teacher-student communication.

Research Setting and Methods

Somerville, MA (population approx. 77,000), represents the diversity and typical divisions of a large city in terms of languages (42), racial-ethnic groups (with large Central American, Brazilian, and Haitian immigrant populations), and economic groups (with a long working class and college-student history, and recent explosion of young professionals and white middle class families). [1] In the OneVille Project, welcomed by Somerville district and school administration, local researchers worked with teachers, youth, and families to test low cost tech tools' potential for enabling collective youth support in a diverse community (wiki.oneville.org). Across the OneVille Project, including the texting pilot, we repeatedly asked design research questions about enabling "necessary communications" in youth support via free/low cost technologies (Pollock 2012):

To support young people, who in a diverse community needs to communicate which information to whom? What are the barriers to those communications, and how might those barriers be overcome? Which channels might support particular necessary communications between these people?

In participatory design research, researchers participate with community members in trying to design a solution to a problem, while studying the effort and its snags and redirecting/iterating accordingly (see, e.g., Penuel et al 2011, Nelson et al 2005, Joseph 2004); when conducted in the spirit of "action research," such research also seeks active community improvement (Foth and Axup 2006). In initial fieldwork, we found people who were motivated to improve a particular necessary communication and then shaped specific design projects around these desires. Members of an afterschool club and then, a summer school class explored whether a private social network might enable a personalized "support team" for every student to communicate on demand. The social network tool didn't "take": youth argued that computers were less accessible than phones and that empty social networks weren't compelling enough to use. Texting, they argued, was the communication tool most likely to reach both them and their supporters.

We turned to Full Circle/Next Wave (FC/NW), Somerville's alternative high and middle schools, where the principal had previously expressed interest in exploring ways of reaching youth and supporters on demand. All students at FC/NW have been asked or told to leave the city's mainstream schools and are vulnerable to dropout; many are

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[1] According to the state, 63% of all students in the broader SPS are members of "racial/ethnic minority" groups, and 68% receive free and reduced price lunch. http://profiles.doe.mass.edu/profiles/student.aspx?orgcode=02740000&orgtypecode=5&leftNavId=305&).

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absent regularly from school. Many are the children of immigrants, have families struggling financially, and are diagnosed as having special needs; the student body, and the sample in our study, reflects the lower-income population and overall ethnic diversity of Somerville.

Called teacher-counselors, each FC/NW teacher meets a subset of students in a co-counseling group twice a week. Still, youth needed more support with truancy, mental health, and motivation toward graduation: the principal particularly described struggles to reach many truant students and their supporters. In late fall 2010, two teachers, Ted O'Brien (high school) and Maureen Robichaux (middle school), decided to formally pilot the use of text messaging in everyday student support and invited their nearly 40 students into the pilot.

In January 2011, the authors, Mo, and Ted held an open meeting with all of both teachers' students to see who would be interested in piloting student-teacher texting as a method of supporting students toward "success." We simultaneously brainstormed ground rules, including the following:

- don't expect a text back before 8 a.m. and after 10 p.m.
- no inappropriate language.
- no sharing of anyone else's business.

Some students already texted teachers at the school, including Mo ("If I'm having problems at home I text Maureen" or two other staff, one student told us, rather than have her own parents "know [her] business"). Some had never texted teachers before and found the idea a bit weird, though interesting. All students present agreed to participate in the pilot and signed IRB-approved permissions forms indicating that we/the teachers would privately review the texts with names several times weekly, to see if conversations were useful to young people and to ensure that all were behaving safely. We promised to present all data anonymously in large group research meetings and publications. (Names here are used only to describe particularly active co-researchers, by permission.) Parent forms offered parents the right to refuse their children's participation in the study; no refusal forms were returned. We gave students the teachers' new GoogleVoice numbers (see below), invited students to share their numbers with teachers, and invited them all to text whenever they wanted.

We used Google Voice, a free web based phone and text-messaging service that provided a separate phone number each teacher could share with students and recorded all of the texts in teachers' Google inboxes. Teachers could also view and send texts from a computer without texting charges and take advantage of a computer's large screen and interface to view texts arranged by student or time. (Mo and Ted still mostly used their phones to send texts, and later got smartphones; students received texts on their phones). Finally, Google Voice allowed multiple people—teacher and university researchers— access to the same account for reviewing text communications, by agreement with students. This arrangement also provided a record that could be monitored for student safety.

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We convened regular meetings with Ted and Mo to discuss the texting experience and gradually, to review the texting record to label types of texting exchanges and pinpoint any effect on participants. We did not explicitly review students' recorded attendance or academic progress to try to correlate participants' "measurable" responses to texts over time; instead, we invited student and teacher reports on texting exchanges' consequences. Eight graduate students (in their 20s) and the authors (late and early 30s, respectively) conducted nearly weekly, snack-fueled focus groups and individual interviews with the youth participants to discuss their experiences and perspectives re. the texting communications; students were stipended as coresearchers for two Research Days (see below). A graduate student (and, the first author) was "assigned" to each group of students for regular interviews and to check in via texting as well. Over time, we positioned HGSE representatives as available college and career advisors, and students began texting them about those subjects informally. We audio recorded research team meetings, interviews and Research Day meetings and supplemented all exchanges with detailed field notes. The authors compiled this data on a privacy-protected wiki to which the teachers had access.

Data analysis

We analyzed the texting record during and after the pilot, using basic principles of grounded theory (Charmaz, 2006) and thematic coding (Lofland and Lofland 1995): we repeatedly asked participants to help us label types of texts and aspects of effects on participants, asking all to "pull out examples of texts that you find interesting," "label the 'type' of communication that occurred," and "provide any evidence of any text's effects on any student's achievement/motivation/relationship with [the teacher]." In two "Research Days," we invited all pilot participants to review anonymized transcripts of texting exchanges to analyze patterns in the content/tone of texts and the information exchanged, and to discuss the effects of exchanges on teacher-student interaction. The authors coded the full set of data in post-facto review and finally aggregated data into the three major patterns discussed below. Our participatory coding process thus was ongoing and iterative; we met consistently to share and test emerging understandings.

Data and Findings

As Noveck (2009) notes of web tools, any communication tool's design shapes participation in a conversation. As seen here, the specific affordances of one-to-one texting shaped particular communications out and then, in. Texting's two-way, on-demand contact *enabled* and then *invited* personalization as anytime information about "school" mixed with lighthearted communication about life events and student needs. Over time, the seemingly "light" call and response of texting could also *deepen* personalization: students and teachers pointed out that committing to text between teacher and student was evidence of teacher-student "caring" and that texting itself made the texters care more about one another.

Enabling Personalization: The affordances of an anywhere, anytime, two-way channel

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In a school with high absenteeism, texting most obviously enabled contact that otherwise would be impossible. One student without a house phone noted that "They might call my mom but she never picks up. If he (Ted) hadn't texted me (about the snow day), I wouldn't have woken up for school." One student looking at one of Mo's texting exchanges with an ill student noted, "She's making sure the kid doesn't get in trouble – she asks him to call his mom and stuff. She couldn't do this face to face b/c he wasn't in school":

> 8:15 pm Teacher: Worried about you!!
>
> 8:16 pm Student: im feeling much better now I will deff see u tmr (:
>
> 8:17 pmTeacher: Good we miss you!! Can mom right a note for the last 2 days
>
> 8:18 pm Student: she called [School admininstrator] today telling him I was out sick not truent
>
> 8:19 pm Me: Good..see you tomorrow..and glad your feeling better!!
>
> 8:24 pm Student: thanks

Responses to texts enabled contact that teachers said would otherwise take days. One absent student found out about his brother's truancy in several lunchtime minutes:

> 12:19 pm (STUDENT) Tell *** to bring homework for me
>
> 12:25pm (TEACHER) He's not in EITHER!
>
> 12:25 pm (STUDENT) Did he walk out?
>
> 12:28 pm (TEACHER) You only attended Monday, he took the whole week off
>
> 12:30pm (STUDENT) Ok I know this but you didn't answer my question did he walk out?
>
> 12:31 (TEACHER) He has not been to school all week
>
> 12:32 (STUDENT) Ok thank you for this information

As a two-way channel, texting also enabled youth response: unlike the typical one-way backpack handout, for example, students receiving information via text could write back. A classic response came from a student who "didn't like" Ted but later began to text and talk to him regularly:

> 9:05 AM Teacher: A reminder that tonight is Parent-Teacher night at NW/FC. Please notify your loved one at home that teachers are at school to meet them from 6:30-7:45pm.
>
> 9:10 AM Student: O please lol

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Some students replied with explicit gratitude about being reached via text. In February, Ted received last minute word that a ski trip was available to a new student he'd been helping with math. The "kid's voicemail was full," so Ted texted him to bring a signed permission slip the next day. Notable to Ted was the student's grateful response, and then, the ongoing exchange:

> 3:23 pm Teacher: Bring in your insurance info tomorrow, the company and your policy number, with 10 bucks, yor going skiing thursday!
>
> 4:12 pm Student: Thank you soo much ted! i will .. ill have it all tomarrow!
>
> 6:59 pm Teacher: Are you going to school tomorrow?
>
> 9:36 pm Student: Yea .. deffintly

Noting "lots of exclamation points, 'thank you,'" in the student's response, Ted added that there was now a "high level of communication" with the student; the exchange had "allowed us to make a strong connection right when he got to the school." Reading such examples, Ted and Mo expressed surprise and satisfaction with "the language that the kids are using to thank us…It's refreshing to know that they have that capability." Students too noted that they were quite polite to teachers via text, as here:

> 7:00 am Teacher: Like I said, you need to get it from him. Be on time for school today
>
> 7:00 am Teacher: You're doing great
>
> 7:01 am Student: I will and u woke me up .thanks
>
> 7:03 am Teacher: You're welcome

Categorizing texting exchanges after a few weeks of the texting pilot, Mo and Ted noted "wakeup texts," paperwork reminders, personal updates, health check-ins, and discussions of absence; Ted remarked that "(There's) a cluster about being on time. Another about dropout prevention, kids who haven't been to school in a long time, what can we do to transition you out of here easier. And, check-ins w/ students about miscellaneous—academics, work, home, if they're heading toward that dropout prevention category . . . Also snow days, field trips, some kids need to bring attire for electives . . .On being on time, staying a full day – if kids walk out I remind them about the day before. . . . And also, jobs. Kids that want jobs." Increasingly, students were "checking in" with teachers, too: "New electives, new teachers, new schedules – some confirmations on preparations for the next day – are we going skating, to boxing club tomorrow, to bring in the right clothes," Ted said. Students were also now texting Ted about academic issues like credits, the semester change, and their discipline records. And some were starting to check in on teachers' own well-being, as participants pointed out on Research Day:

> 9:43 pm Student: Hope your alright man.sorry that happened too u

9:47 pm Teacher: I'm cool, thanks tho, have a good weekend

11:22 pm Student: Alright man have a good n

Importantly, while many argue that technology supplants face-to-face relationships (Turkle 2011), students noted that texts often served as a portal to more face-to-face conversation. For example, Ted texted one student this:

7:03 pm Teacher: I heard you had a bad afternoon at school. Check in first thing tomorrow

and this:

10:12 am Teacher: You need to be in school way more my friend

10:13 am Student: Ok ?

10:14 am Teacher: Everything ok?

9:22 pm Teacher: You left early today, then I saw you down the street at dismissal. I'm quite concerned about your behaviors the past month, we should sit down and talk some time this week

Of course, enabling such contact required students to have phones and texting plans, and while basically all students who wanted to text had both, not all had consistent access – simply indicating that as with any communication infrastructure, ensuring access to communications requires ongoing vigilance (Pollock 2012). In March, Mo reported a range of student experiences that hindered texting contact: "Someone who lost their phone, someone who left it in a cousin's car, someone who got it taken away – some got shut off – [xx] owes $500 on his phone, so he doesn't have his phone any more. . .and they're always changing numbers." A student who had finished her plan's monthly 78 minutes said bluntly that she'd be out of contact for another week and a half. Still, students could access technologies unexpectedly: this student, who lived in public housing, later got a smart phone, and other students innovated their own solutions within economic limits (see also Ito et al, 2009). One student carried an unactivated iPhone (purchased from a friend for $120) to text for free at school over the school's wifi network. He also carried a prepaid phone for calls and texts. Thus, while not all students could access texts all the time, texting still proved to be a common denominator channel for reaching youth and so, initially enabling personalization.

Inviting Personalization: Banter + Serious Talk = Student Support

Reviewing examples, teachers and students also noted that texting exchanges invited student-teacher relationship, in part by temporarily putting teacher and student "on the same level" to talk – even as, Mo added later, "the relationship" could also then snap back almost like a "rubber band" to teacher-student hierarchy. Students pointed out exchanges like the following as examples of such informality mixed with student-teacher "respect":

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> 9:30 am Teacher: Everything ok?
>
> 10:39 am Student: Ted?
>
> 11:02 am Teacher: Yup
>
> 11:05 am Student: Everythings alright I guess im gonna b in tm .. Is there anything I can do to put my grade up for your class
>
> 11:06 am Teacher: Be on time tomorrow, we'll talk then.
>
> 11:09 am Student: Alright

In the same texting conversation, "personal" and "academic" support often went hand and hand -- a notion key to the very concept of "personalization" (Yonezawa, McClure, and Jones 2012). We also saw that as fundamental academic support ("you better be in tomorrow") mixed seamlessly with personal support ("did you have fun?"), greased by texting's classically light banter ("Lol"), small, lighthearted exchanges ("You better be in tomorrow!!! Lol") often facilitated what could have otherwise been awkwardly pushy check-ins. This next exchange between a senior and Ted went from a schedule update, to questions about stickers (Somerville "Villen" gear), and then, about school deadlines related to graduation:

> 7:09 pm Me: No school tomorrow
>
> 7:11 pm Student: -_- aww .... Hey do you have any villen stickers by any chance :) jw
>
> 7:12 pm Me: Haha, no
>
> 7:16 pm Student: Aww :(.... I wish there was school tommorrow .... Hey do you think the school will extend the add drop day .... Like give us another week for add drop
>
> 7:16 pm Student: r no...??? Jw
>
> 7:16 pm Me: Not sure
>
> 7:17 pm Student: Okaii well I hope you have a nice day or two off :)
>
> 7:19 pm Me: Thanks you too
>
> 7:20 pm Student: Ill try -_- ..... :)

Echoing prior researchers' findings that texting communications can afford "expressive control" of emotions (Reid and Reid 2007), students also noted that texting could give students and teachers a broader range of ways to share their feelings -- or hide feelings in order to talk, further inviting personalized communications. With texting, students said,

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you could even "be mad" and still "send a funny text." We noted how in one example, student and teacher bantered about the serious issue of school attendance:

> 7:47 am Student: I just left my house right now so I'm going to b late
>
> 7:48 am Teacher: And I need to know this?
>
> 7:49 am Teacher: Hurry up!
>
> 7:49 am Student: Because I don't want you to worry
>
> 7:51 am Teacher: You miss school regularly silly goose
>
> 7:54 am Student: I came in all this week and collected points
>
> 7:55 am Teacher: Get here, we can celebrate
>
> 7:58 am Student: Hahaha okk I'm on cross street now

Participants said that texting's mix of banter and serious talk also "strengthened relationship" by inviting more conversation, period. Ted noted in March that despite each text's typical brevity, texting's informal mingling of school business with "mindless" "chatting" could allow more "words" to be exchanged between student and teacher. While "one word answers [in person] with teenagers are more typical," he noted, students gave texting exchanges "even more [effort] than they know they are giving – it might seem mindless, just chatting, and next thing you're their friend!" Ted noted further in April that the students were more "receptive to positive talk" via text than they were in person. In person, he added, students didn't necessarily "stop and appreciate you in moments" the way they were doing with texting.

Analyzing such strengthened "relationships," both students and teachers began to argue overall that what was soon occurring via the tiny exchanges of texting was caring, in short bursts and over time. Both through active statements of mutual support and often simply through remaining responsive, students and teachers showed each other their mutual commitment to maintaining relationship and deepened the student-teacher "bond."

Deepening Personalization: Caring via Text

Wielding her highlighter in pointing out Ted's text to a student ("you need to be in school way more my friend"), Shelia explained that "I feel like it's genuine concern." "It shows connection," Obens agreed, adding, "It also shows courage." He pointed out that in addition to being kind, Ted was "taking time to text people about stuff – taking time to get a person to school on time. That shows courage on the part of the teacher. Also on the student, by replying back." Shelia agreed, adding, "It takes the courage to make that bond – from the teacher -- and also for the student to participate in the bond."

Combining a demonstrated effort to communicate with pointed motivational comments, the upshot of texting exchanges was a deepening personal "bond" between teacher and

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student – and so, a student that felt more valued and motivated to try. "When you're texting," Obens summed up, "you feel like you're closer to the teacher."

Explaining the "bonding" process, students argued that simply texting somebody back "shows you appreciate the person and you're thankful they helped you out." Mo noted that students "appreciate (Ted) taking time out of his own private life to send these texts," and Ted agreed that students' own texts to teachers could also "show a level of investment":

> Even if (the text is) not school related, the student is checking in, making that contact, when they don't have to.

Another student argued that by "put(ting) in the effort" and time to text back and forth with Ted about the school's start time ("I'm make it before 8:10"; "Nooooooo, 8!" "Ahhh jesus ted. Fine 8"), he demonstrated his motivation to arrive at school on time, as well, adding, "I made it before 8:10. It did help. I was used to coming in around 8:30."

Unpacking the "bonding" process, students also pointed out many examples of explicit "caring" via text. Mo's text "worried about you" or Ted's "You had a bad day yesterday" showed a student that a teacher "really cares." "You made 1 day last week" made a student feel, "I like the encouragement"; Ted's text "you're a smart kid" was "really nice because some kids might feel doubt and don't get many compliments from people." Mo explained that with one text, "I wanted to make [a student] feel good before she went to bed," and pointed out as a reverse example of "caring" that one student had asked Ted "how was your weekend."

Students pointed out longer examples with each teacher where the teacher-student "bond" was built both through explicitly kind exchanges and through ongoing texting, period, such as:

> 8:20 am Teacher (Mo): Hey is your mom coming in
>
> 8:21 am Student: Yah bro waiting for her that's y I ain't in school my G G=grandma lmao ur old
>
> 8:23 am Teacher: Not funny....lol
>
> 8:24 am Student: Ii hate the fact u don't apritiate my jokes
>
> 8:24 am Student: -_-
>
> 8:26 am Teacher: But I appreciate you:-)
>
> 8:31 am Student: Ahhh good made my morning
>
> 8:32 am Student: =)
>
> 8:32 am Student: Lol jk jk idc
>
> 8:33 am Me: Awwwww

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Mo had a major realization about texting in March: while we had been seeking examples of sudden student turnaround after specific texting exchanges, the strongest consequence of texting could be the texting relationship itself. Mo noted that some students she texted to wake up still came late, but that the same students were now using text to contact her privately with serious support needs, one even during a drug rehab placement. "Success for a depressed student in a sense is the engagement itself," she noted. "Even having this exchange." We noted that the student who had responded "O please lol" to Ted's first group text that winter had since built a relationship trusting enough that she could reveal serious personal struggles to Ted. And such "exchange" and "sharing" could in turn get students to "do stuff," as Shelia explained: "You need to know [teachers] care in order to do stuff. Otherwise what's the point in trying. If a person is 'I'm here for you' – you feel someone else cares, I should care too."

"Caring" – active "worrying" and often, simply being "here for you" -- occurred both in responses to high-need text exchanges and through seemingly mundane call and response over time. As Ted noted overall of texting, "In some ways, it comes down to someone paying attention to them."

Discusssion and Conclusion

In an era of slashed public school budgets, mechanisms for building personalized relationships with young people -- for "paying attention" to young people individually -- seem more important than ever yet harder to achieve. Texting's affordances for such personalization were both automatic and created in the nuances of use. Texting's private backchannel for anytime call and response enabled contact, particularly with regularly absent youth; the fluid movement between school and off-campus topics, the lighthearted banter, and the flexible emotion management invited personalization, even as "respect" remained; and the active "replenishing" of relationship through active kindness or simply "being there" deepened personalization, creating stronger "bonds" far beyond the more typical exchanges of school.

Still, this work raises core tensions for schools considering texting as "communication infrastructure" in personalized youth support (Pollock 2012) First, questions of time abound: Should teachers be expected to address students' personal needs after the school day? If the relationships made possible via out-of-school communications enable the true holy grail of successful relationships inside the classroom, is such communication in fact "extra" to the basic work of teaching? Teachers and students also agreed that future research should explore the limit of texting's capacity in more typical schools where teachers have larger student loads; as Ted put it in March, "if we had serious students who wanted help academically this could get out of control – multiple texts, multiple students, if students do their homework every night and want a question answered every night." Yet counterintuitively, we noted, the *speed* at which relationships were built or questions answered over this channel counteracted the "extra" time utilized to text: a text could deepen a relationship in seconds, and communication could occur only when needed. Ted indicated that the answer likely lay in figuring out the necessary balance of one-to-one and group communication: "maybe [a group chat] a couple days a week," he mused. Ted also pointed out that as with any student support strategy, you could just choose when to communicate as a texting teacher. For example, Ted wouldn't be trying

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Mo's "wakeup texts," explaining, "I'm trying to put more responsibility on the high school student – I'm shying away from the pre-school conversation."

Questions of safety and personalization also abound: What types of personal interactions should teachers have with their students, both inside and outside of the classroom? If successful "personalization" requires private conversation at times, how to enable such privacy while also monitoring communications for safety? Are youth more "at risk" if students are left seemingly "alone" with their teachers via tech, or are both students and teachers in fact more safe with all exchanges documented in a running record? In reality, the one-to-one privacy of texting is more imagined than fully accurate: under federal law, parents or school officials can request records of communications involving school employees. Additional privacy questions then arise: to support young people, which communications *should* be private, which shared? In several cases, Mo had shown texts with a depressed or self-destructive student to the principal, to catalyze student support in a moment of crisis; but many students had difficult relations with parents, prompting Ted to ask about "honor[ing] the kids' sense of privacy": "Which communications should go to parents? Which to kids? Which to both?" As one student said, she was now up for texting teachers but not for having her mom know her school related "business."

Rather than testing tech tools to clarify helpful uses, schools often preemptively outlaw technologies and the relationships possible via them. In this pilot project, two teachers and 40 students matter-of-factly explored how texting might support rapid, individualized communication with vulnerable youth. We found that text messaging could rapidly deepen student-teacher support relationships, with effects on student-teacher "bonding," "caring," and student motivation. We suggest that next city youth, teachers, and university partners explore the potential of such common-denominator technologies for personalizing supports for youth in need.

Notes on Contributors

Mica Pollock is Professor of Education Studies and Director of the Center for Research on Educational Equity, Assessment, and Teaching Excellence at the University of California, San Diego. She can be reached at micapollock@ucsd.edu.

Uche Amaechi is a doctoral student at the Harvard Graduate School of Education. He can be reached at amaechi@mac.com.

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