ANNENBERG
BROWN UNIVERSITY

EdWorkingPaper No. 23-846

The Importance of a Helping Hand in Education and in Life

Francisco Gallego
Pontificia Universidad Catolica de Chile and J-PAL

Philip Oreopoulos
University of Toronto, NBER, and J-PAL

Noah Spencer
University of Toronto

This paper discusses the importance of incorporating personal assistance into interventions aimed at improving long-term education and labor market success. While existing research demonstrates the cost-effectiveness of low-touch behavioral nudges, this paper argues that the dynamic nature of human capital accumulation requires sustained habits over time. To foster better habits, social connections are critical for encouraging enduring effort and intrinsic motivation. The paper showcases examples from various stages of human capital accumulation, including early childhood, adolescence, and adulthood, in which interventions that incorporate personal assistance substantially out-perform less intensive nudges. We underscore the importance of interactive support, guidance, and motivation in facilitating significant progress and explore the challenges associated with implementing cost-effective policies to provide such assistance.

VERSION: September 2023

Suggested citation: Gallego, Francisco, Philip Oreopoulos, and Noah Spencer. (2023). The Importance of a Helping Hand in Education and in Life. (EdWorkingPaper: 23-846). Retrieved from Annenberg Institute at Brown University: https://doi.org/10.26300/ct5k-am45

The Importance of a Helping Hand in Education and in Life

Francisco Gallego
Pontificia Universidad Catolica de Chile and J-PAL
fgallego@uc.cl

Philip Oreopoulos
University of Toronto, NBER, and J-PAL
philip.oreopoulos@utoronto.ca

Noah Spencer
University of Toronto
noah.spencer@mail.utoronto.ca

Abstract: This paper discusses the importance of incorporating personal assistance into interventions aimed at improving long-term education and labor market success. While existing research demonstrates the cost-effectiveness of low-touch behavioral nudges, this paper argues that the dynamic nature of human capital accumulation requires sustained habits over time. To foster better habits, social connections are critical for encouraging enduring effort and intrinsic motivation. The paper showcases examples from various stages of human capital accumulation, including early childhood, adolescence, and adulthood, in which interventions that incorporate personal assistance substantially out-perform less intensive nudges. We underscore the importance of interactive support, guidance, and motivation in facilitating significant progress and explore the challenges associated with implementing cost-effective policies to provide such assistance.

Keywords: behavioral biases, social connections, personal assistance, nudging, education policy.

This paper came about in part from a presentation for the David and Cecilia Ting BMO lecture series at Simon Fraser University. We received very helpful feedback from participants at the CIRANO workshop on Behavioral and Experimental Economics for Innovative Policy Making in memory of Claude Montmarquette. We also thank Marigen Narea, Gonzalo Gallardo and Maria Paz Monge for their helpful feedback, and funding from FONDECYT Regular, grant number 1220044.

1 – Introduction

Numerous market frictions and behavioral biases (e.g., asymmetric information, present bias, routine bias) often present significant challenges to individuals striving to achieve their long-term goals. Entrenched in cognitive, psychological, and social factors, these biases often impede individuals from making decisions in their own long-run best interests. In response to these obstacles, changing an individual's choice architecture—the environment in which they make decisions—has become a common strategy to help. Efforts like changing default decisions, sending electronic messages or mail, and running information campaigns are examples of 'nudges' that increase the likelihood of program take-up or other perceived positive choices.

Nudges are often cost-effective, not because effects are large but because costs are small. An evaluation of 126 randomized controlled trials conducted by policy 'Nudge Units,' for example (DellaVigna and Linos, 2022), found that nudges increased individuals' take-up of vaccinations, bill payments, scheduled home nursing visits, and other target behaviors by only 1.4 percentage points, on average. While nudges generally rely on external cues and target one-time or short-term actions, they fail to address the deeper motivational and social factors that underpin day-to-day actions and routine behavior. Without greater take-up or sustained positive behavior, these efforts are not likely to have large aggregate long-term benefits.

Meanwhile, several recent studies have found that more intensive interventions that emphasize personal and social connection have generated impressive results. High school and college support programs, for example, that provide students with proactive regular advising, tutoring, and group activities consistently generate very large increases in academic performance, education attainment, and adult earnings (Cook et al., 2014, Scrivener et al., 2015, van der Steeg et al., 2015,

Oreopoulos et al., 2017, Lavecchia et al., 2020, Resnjanskij et al., 2023). These interactive programs 'move the dial' in terms of improving students' overall well-being at scale. Whereas behavioral nudges typically target one-time or short-term actions, personal assistance interventions more effectively address the deeper motivational and social factors that underpin day-to-day actions and routine behavior. This distinction is crucial considering the dynamic nature of human capital accumulation, where skill begets skill, and where both risk and uncertainty play significant roles. To meaningfully change life trajectories, interventions should target motivation, habits, and identity by leveraging the power of social connections and personal assistance.

Examples of the importance of personal assistance abound in human development. Consider a child learning the violin. Even if she has the potential to be the next Mozart, she will not pursue this activity on her own. Young children, whose brains are not yet fully developed, often struggle to consider the long-term benefits of immediate actions. To truly reap the cumulative benefits of learning the violin, daily practice needs to become a routine part of the child's life. She needs a helping hand—daily encouragement, advice, and instruction. As she matures, her need for support will not dissipate. Even with a more developed brain capable of controlling impulses, she is still subject to internal and external distractions. Present preferences and distractions can prevent her from realizing her long-term goals. While reminders, information, schedules, incentives, and punishments may help, they do not necessarily cultivate a child's long-term intrinsic motivation to practice or equip her to handle emerging challenges and obstacles as her skills evolve. She needs someone to nurture the development of this intrinsic motivation, teach her good practice habits, offer her targeted instruction based on her level of ability, and exert a long-term influence that extends beyond the moments when they are actively interacting.

In this paper, we argue that, while low-touch nudges may be cost-effective, interventions with personal assistance are often critical to successfully implementing public policy. We position these two types of interventions as complements rather than substitutes, with lower-cost, lighter-touch nudges being useful for addressing specific actions and more intensive personal assistance for meaningful longer-term change.

The remainder of the paper proceeds as follows: in Section 2, we define personal assistance relative to nudging and then outline the conceptual benefits of incorporating personal assistance into interventions. In Section 3, we highlight several examples of recent papers in which impacts are substantially boosted with the incorporation of personal assistance. We conclude in Section 4 with a discussion of implications for policy and for future research.

2 – Conceptual framework

2.1 – Definitions

Before discussing the potential importance of personal assistance, it helps to define what we mean by it, and frame the concept relative to the behavioral literature of nudges and shoves.

Nudges are subtle adjustments to an individual's environment that steer a person toward a more desirable outcome while not meaningfully altering options or costs (Oreopoulos, 2020, similar to Thaler and Sunstein, 2008). The underlying principle of nudging is to make it easy for someone to complete an action. Common examples of nudges include setting the preferred default option; providing information through messages or videos; using visual prompts; sending text-message reminders; simplifying choices; and gamifying unpleasant or boring tasks.

An alternative approach to nudging is shoving. Unlike a nudge, a shove restricts an individual's set of options to steer the person towards more desirable outcomes. Requiring someone who is unemployed to participate in a government job search program in order to receive benefits is a type of shove because no opt-out option exists. Requiring students to attend school is a shove. Shoves can also occur more indirectly by, for example, structuring an individual's schedule—especially a child's schedule. Other types of indirect shoves include forbidding the use of phones in school and setting the school curriculum. Teachers who decide what and how to teach also restrict how students spend their time.

Personal assistance involves a nudge or shove that includes social interaction. One individual (the "personal assistant") provides interactive guidance, support, or motivation to another (the "client" or "subject"). This interaction may range from brief encounters, such as a single phone call, to more extended and regular sessions, like weekly tutoring or coaching. Ideally, personal assistance involves trust and expertise. Individuals are more likely to respond well when interacting with someone they trust or with someone they believe has the experience and knowledge to guide them towards decisions that will make them better off.

Compared to using only impersonal signage, texts, or emails, someone trying to steer another person towards a particular action (during a meeting to help a client complete a form, for example) can express empathy, respond to questions, and use body language or facial expressions. A person can even *be* the intervention by providing guidance or advice (as a coach, caseworker, or parent, for example). Personal assistance can take the form of a nudge, where the client still has the option to avoid or ignore the assistance. Shoves with personal assistance involve social interactions that cannot be avoided. Requiring students to meet with a guidance counselor is an example of a shove with personal assistance.

Researchers sometimes distinguish 'high-touch' and 'low-touch' behavioral interventions based on cost. The distinction also usually involves comparing whether an intervention employs personal assistance or not. Thus, we will sometimes refer to behavioral interventions with personal assistance as 'high-touch' nudges or shoves. Not all researchers would consider personal assistance a kind of behavioral intervention, though we believe it is helpful to view it as such for comparison because all nudges and shoves aim to lower behavioral barriers and influence individuals towards more desirable behavior. In any case, the need to treat personal assistance as only a nudge or shove is not critical for this essay—the emphasis on the importance of social interaction in policy interventions to meaningfully improve long-run outcomes is what matters most to this discussion.

2.2 – Conceptual benefits of personal assistance relative to nudging

Human capital development involves immediate costs and long-term, uncertain benefits. Benefits accrue incrementally, especially from time spent learning. The process may involve critical and sensitive periods, irreversible path-dependence, hysteresis, and other phenomena (Heckman and Mosso, 2014). Such complexities suggest that human capital accumulation trajectories hinge on decision sequences across various periods and are influenced by information, expectations, and constraints that individuals encounter. It is easy to justify an hour less of studying as an isolated activity that is not likely, on its own, to matter in the long run. But a persistent attitude of this nature can lead to significant long-term implications. These decisions require discipline and habits, which can be challenging to develop.

Both high-touch and low-touch behavioral interventions can help address human capital development. However, whereas low-touch interventions are appropriate and cost-effective for helping to encourage one-time actions like remembering to attend a tutorial or completing a college

financial aid application, there are several reasons why high-touch interventions that use personal assistance are better suited for facilitating long-run behavioral change.

First, personal assistance interventions are more able to obtain detailed information about clients' needs and are more able to tailor advice to those needs. Personal assistants often acquire rich data on the people they are assisting. By contrast, low-touch nudges and shoves typically obtain little, if any, information about subjects. Having more information allows personal assistants to appropriately tailor their advice or instruction to their clients' needs or ability level. The importance of proper tailoring is stressed in the literature that emphasizes "scaffolding" as a tool to improve a child's learning experience (Vygotsky and Cole, 1978; Heckman and Mosso, 2014). The scaffolding approach keeps a child in a "zone of proximal development," which refers to the distance between the level of actual development and the level of potential development, and ensures they are sufficiently challenged by new material without being overwhelmed by it.

Appropriate tailoring is crucial for an intervention's long-term success, given the dynamic nature of human capital formation; therefore, the nature and type of support must evolve as time passes. Whereas personal assistants are easily able to adjust to their client's changing needs, low-touch interventions are often designed as one-time or short-term treatments that have little capacity for evolution. Finally, experienced personal assistants are particularly helpful when clients must navigate a complex process, as informational nudges can typically offer only generic advice for the most common challenges that arise during such a process. These arguments underscore the complementary nature of nudges and personal assistance. Specifically, (i) a personal assistant can tailor the most suitable low-touch nudge or shove based on the client's needs at a given moment,

and (ii) a nudge or shove can serve as an initial touchpoint, establishing a relationship between a client and a personal assistant.

Second, personal assistance, with its capacity for initiating and sustaining interactions, is better positioned to deliver proactive support. Personal assistants often have the latitude to proactively assist clients; in contrast, nudging interventions like text-messaging campaigns commonly just provide nudges at regularly scheduled intervals. By proactively engaging with clients, personal assistants can identify and address potential problems before they escalate. Many people, especially students, are reluctant to seek help for fear of being a burden or being perceived as incapable. Proactive assistance mitigates this fear and ensures subjects get the help they need before it is too late. By anticipating challenges and providing support ahead of time, the personal assistant can prevent deeper issues from arising in the first place, which allows them to have a greater long-term impact than a non-proactive nudging intervention. Furthermore, receiving proactive assistance makes a person feel valued, seen, and supported. This positive relationship can boost engagement and motivation while reducing stress and anxiety. These are key ingredients for lasting success.

Third, personal assistance interventions provide socio-emotional support for clients, whereas low-touch interventions typically do not. Intensive personal assistance interventions can foster a positive, long-term social connection that nudge interventions cannot replicate. This relationship can serve as a source of socio-emotional support, contributing to improved mental well-being. When individuals feel emotionally supported, they are better equipped to manage stress, anxiety, and other emotional challenges, allowing them to focus on their personal growth. Personal assistance also provides individuals with someone to whom they can be accountable, further

enhancing their commitment to skill development. People struggling with a negative identity can have a positive identity made more salient to them by a personal assistant who serves as a role model. Even less-intensive personal assistance interventions provide short-term socio-emotional benefits that translate into better outcomes. Specifically, tasks that are frustrating, stressful, or boring are made less unpleasant by the presence of a friendly personal assistant; this kind of help can reduce the effects of present bias by lowering the up-front "costs" of investing in human capital.

Note that a personal assistant may continue to influence a client long after they stop meeting. Research from developmental psychology suggests that people who have had significant personal interactions retain these experiences in their minds for the future. These images and memories can significantly affect human capital formation and life decisions later on (Bronfenbrenner, 1979). A piece of advice or motivation provided by a mentor or tutor in the past can resurface in the future as individuals make decisions. Grossman and Tierney (1998) argue that this concept is part of the motivation behind the design of the Big Brothers Big Sisters Program.

3 – Personal assistance in action

In this section, we attempt to demonstrate by example the conceptual advantages of personal assistance. We highlight several examples of interventions whose effects are boosted when a personal assistance aspect is incorporated. We trace these examples through developmental stages, from early childhood to adolescence to adulthood. The examples presented compare personalized assistance directly to low-touch nudges that do not employ in-person help.

3.1 – Parenting young children

Personal assistance has the power to improve early cognitive skills. List et al (2021) test two interventions aimed at shifting parental beliefs about the importance of early parental investments. In their first experiment, the researchers showed parents of newborns a short educational video at each of four pediatrician visits. These videos emphasized the benefits of increased parental interaction with very young children and offered practical tips for increasing and improving the quality of interaction. In the second experiment, parents of toddlers received twelve home visits from professionals. At each home visit, the home visitor would "first show parents a video that covered a specific development topic (e.g., linguistic interactions, encouragement, incorporation of math into everyday routines) and would then do an activity with the caregiver to demonstrate how to put the concepts covered in the video into practice." Then, based on recordings of the child's home environment, the home visitor would provide feedback for the parent on what to improve.

The researchers find that both programs affected parental beliefs, but only the home visiting experiment had lasting effects on child outcomes. The second experiment improved children's vocabulary, math, and socio-emotional skills, whereas the first experiment did not. The researchers also find that the quality of parent-child interactions improved more from the home visiting experiment than from the informational video experiment. They conclude that "simple educational policies may not be sufficient to induce robust behavioral changes and child outcome improvements."

The researchers do not attempt to isolate *why* their second experiment was more effective than their first. However, the first conceptual benefit of personal assistance we discussed in Section 2 may be particularly relevant. Home visitors had a far greater ability to tailor information and advice to the parent they were working with relative to the video treatment, which did not uncover any information about parents and simply presented the same information to every parent, regardless of individual relevance.

3.2 Moving children to better neighborhoods

While early childhood is a critical developmental stage, interventions targeting older children can also have long-run effects. For example, moving pre-adolescent children to lower-poverty neighborhoods has been found to increase college attendance and adult earnings (Chetty et al, 2016). Despite this fact, many families do not take full advantage of government housing choice vouchers, which make relocation to high-opportunity areas easier, when offered. Bergman et al (2023) hypothesize that people do not fully utilize these vouchers due to information deficiencies and/or barriers in the housing search process.

The authors conduct a two-phase experiment to try to improve voucher utilization. In the first phase, they offer a bundle of resources to facilitate moves to neighbourhoods with high upward mobility, including information about high-opportunity areas, short-term financial aid, customized housing search assistance, and landlord connections. They label this the Creating Moves to Opportunity (CMTO) program. In the second phase, to understand underlying mechanisms, they run another experiment with three treatment arms: (A) information and financial aid only; (B) reduced personal support services, plus information and financial assistance; and (C) full personal support services, mirroring the original phase. (There is also a pure control group.)

Results from the first phase indicate that the proportion of families moving to high upward-mobility areas rose from 15% in the control group to 53% in the CMTO group. In the second phase, treatment A yielded an 8.9 percentage point (p.p.) effect, treatment B a 13.8 p.p. effect, and the full package a 40.8 p.p. effect, aligning with the bundled treatment in the first phase. These findings suggest that while information or financial services alone have a modest impact, the program's more substantial effect is tied to the comprehensive package, which includes personal assistance. The authors also report long-run effects of the CMTO treatment, with treatment effects decreasing only by 4.9 p.p. three years after implementation.

A survey applied to a representative sample of those in the bundled treatment identified five key ways the program assisted them in moving to better neighborhoods: (i) provision of emotional support and communication; (ii) enhancing motivation to move by making such a move seem more attainable; (iii) streamlining the search process with help in preparing rental applications and résumés; (iv) offering brokerage services and landlord representation; and (v) providing financial assistance.

These findings align with the conceptual arguments presented in Section 2: although information and financial services do increase moves to more upwardly mobile neighborhoods, more personalized assistance (in conjunction with information and financial services) has a much greater effect on mobility. Survey respondents' answers support several conceptual benefits detailed in Section 2, including the importance of tailoring, providing help at various stages throughout a complex process, and supplying human emotional support and motivation.

Providing the full-bundle treatment here is more expensive than just providing financial aid and information: Treatment A costs $420 per person, Treatment B $720, and the full CMTO program $2,670. However, due to the substantial benefits of the full CMTO program, it is the most cost-effective treatment in promoting actual program uptake. The costs per additional percentage point of upward mobility are 47.2, 52.2, and 65.4 for each respective treatment arm.

3.3 – Parenting school-age children

A study by Bergman et al (2018) investigates low and high-touch interventions to increase middle school and high school performance. In one intervention, text messages are sent once every two weeks outlining the child's grades, absences, and missed assignments. In another intervention, professional staff visited homes and taught parents how to interpret this additional information and establish better home learning environments.

The text-only treatment gave parents more information to make decisions with but did nothing to guide parents towards what decisions to make. The home-visit program likely did more to break students out of bad studying routines and initiate good ones. Furthermore, the home visitors discussed high-school graduation and college readiness with parents, encouraging them to focus not just on their child's present academic performance, but the long-term implications of that performance.

In line with our discussion in Section 2, the text-only treatment had no significant impact on test scores while the home-visit program did. The authors concluded that "information alone may be insufficient to improve a broad array of outcomes in schools with high rates of suspensions and very poor transcript grades; in these contexts home visits may be a particularly important complement."

3.4 – Transitioning to post-secondary education

The complexity of and informational frictions involved in the post-secondary application process has made this domain a popular testing ground for both low-touch nudge interventions and more intensive interventions incorporating personal assistance. For example, Bettinger et al (2012) provided a group of low-income parents of high school seniors with information about their child's potential eligibility for post-secondary financial aid. This intervention had no impact on post-secondary enrollment. However, in another treatment arm, parents were invited to stay an additional 10 minutes with their tax professional during a tax preparation meeting to receive help completing aid applications. For this treatment arm, post-secondary enrollment increased by almost 30%. This result illustrates the considerable impact that just 10 minutes of targeted personal assistance can have. The effect here is consistent with the idea presented in Section 2 that having a personal assistant guide an individual through an unpleasant task can make that task less unpleasant, reducing present bias and increasing the likelihood that the task is completed.

Carrell and Sacerdote (2017) similarly compare informational treatments (as well as financial incentives) to personal assistance and find that only trials that incorporate mentoring/college-coaching from an undergraduate are successful in increasing post-secondary enrollment among high school students. The authors "do not find evidence that the treatment effect derives from simple behavioral mistakes, student disorganization, or a lack of easily obtained information." Instead, they find that the "mentoring program appears to substitute for the potentially expensive and often missing ingredient of skilled parental or teacher time and encouragement." Mentors keep students accountable by tracking their progress on college applications in detail and are able to adaptively respond to challenges as they arise in a way that

the behavioral nudges tested cannot. The authors conclude that "direct in-person help and hand holding" is required to substantially increase college enrollment rates among marginal students. They note that their treatment is cost-effective, with estimated benefits far outweighing costs.

Holzman et al. (2023) compare the effectiveness of intensive personal assistance from college advising program staff to a low-touch information intervention. They find that the former treatment generates large impacts on selective college applications and enrollments, while the latter has no effect. They write that the personal assistance treatment addresses "the information barriers and unfamiliarity navigating the complex college application process that socioeconomically marginalized students and families face," indicating the importance of an adaptable and interactive source of information in this context.

The examples in this subsection underscore the potential of personal assistance interventions to significantly increase post-secondary enrollment, even in the face of complex application processes and seemingly entrenched behaviors and even in specific contexts in which behavioral nudges have proven ineffective.

3.5 – Succeeding in post-secondary education

Beyond just helping students enroll in post-secondary education, personal assistance interventions are also able to improve students' academic performance once enrolled. Oreopoulos and Petronijevic (2018) studied whether low-cost behavioral nudges can improve course grades and GPA among first-year university students as much as one-on-one coaching can. They randomized 4,000 students into either a control group or various treatment groups. One treatment group participated in a one-time online exercise that asked them to think about their future. Another

received this exercise plus text and email messages providing studying tips, available resource information, and general encouragement. A third group received one-on-one proactive coaching from an upper-year student throughout the year.

The authors find that neither of the low-cost nudge treatments affect academic outcomes. Conversely, one-on-one coaching generates large positive improvements to GPA. These results "suggest that the benefits of personal coaching are not easily replicated by low-cost interventions using technology." The authors posit two reasons for why the coaching intervention was so much more effective than the text-message campaign. First, "coaches proactively initiated discussion with students about their problems." Second, coaches "could establish relationships based on trust in which students felt comfortable to discuss their issues openly." Whereas the text-messaging campaign could provide only canned tips and encouragement, coaches proactively checked in on students' well-being and academic status and offered targeted assistance with challenges students were facing (e.g., applying for scholarships).

This example reflects the broader point that, while technology can facilitate support, it is human connection that often proves to be the key catalyst for significant behavior change. Later related research by these authors finds additional evidence that various low-cost nudge interventions do not impact post-secondary student academic performance, while personalized assistance also reduces stress and improves mental health (Dobronyi et al., 2019; Oreopoulos et al., 2022).

3.6 – Personal assistance for adults in the labour market

Recent research has demonstrated that programs incorporating personal assistance can be impactful even beyond childhood and adolescence. In particular, Bobonis et al. (2022) study the long-run effects of the Canada Self-Sufficiency Project program. This experiment targeted single parents on social assistance, providing them with large temporary subsidies if they committed to full-time work. The objective was to determine if the initial wage doubling would motivate single parents on welfare to re-enter the workforce and remain employed, even after the removal of the subsidy three years later. Interestingly, the results indicated that while those who received the subsidy returned to work more quickly than the comparison group who received no subsidy, there were no long-term differences between the two groups after five years.

However, a second group within the study that received personal assistance demonstrated significant and enduring benefits. Each single parent in this group was assigned a coach who proactively aided in job searching and job retention for up to five years. For this group, average earnings were notably higher than the comparison group, and this difference lasted for 20 years.

These findings provide more evidence for the efficacy of personal assistance. The core difference between the "coached" group and the "subsidy only" group was having access to someone who cared and offered support, making the program recipients feel more motivated, empowered, and confident, while replacing their self-perceived negative identity with a more positive one. Testimonials from participants highlight the value of this support: "The job leads—when you're alone and looking for work, you can get awfully depressed, and there's no one to talk to … These people, they're there … They brought the more positive [me] out." This study emphasizes the potential long-term benefits of integrating personal assistance not just into educational

interventions, but also into social programs, suggesting that its incorporation can facilitate sustained changes in behavior, financial stability, and personal empowerment. This approach aligns with the conceptual discussions in Section 2. Decisions regarding continued participation in the labor market are dynamic and influenced by uncertainty, risk, and behavioral biases.

4 – Conclusions

This paper argues that while low-touch behavioral nudges may provide cost-effective ways to improve human capital, more intensive interventions involving personal assistance are often required to meaningfully alter life trajectories. Generating substantial improvements to well-being is the ultimate goal of policy-making, and thus personal assistance interventions should not be systematically ignored in favor of lower-cost nudges. While hiring qualified coaches, mentors, social workers, or home visitors to build personal relationships with each target subject may be expensive, policies involving social interaction may be necessary for large-scale improvement. Besides, despite higher costs, the examples presented throughout this paper show that there are many cases in which including personal assistance in policy initiatives is a worthwhile investment.

Technology may play a role in facilitating social connection at lower costs. Offering personal assistance over the internet, for example, may greatly reduce transportation and inconvenience costs. Both personal assistant and client may find it easier to meet online. Personal assistants can be hired across a wider regional market. Of course, research is needed to explore whether meeting online reduces effectiveness compared to meeting in person. Some recent research on the impacts of online and telephone tutoring during the COVID pandemic indicates that personal assistance can yield robust effects in those environments (Angrist et al., 2023; Carlana and La Ferrara, 2021).

With the development of natural language processing tools like ChatGPT, personal assistance may soon be possible without human assistants. These language models allow for customized interaction to produce tailored advice, sustain conversations, and respond to specific questions. Artificial personal assistance could greatly reduce costs in many areas, such as help with finding work, choosing courses, obtaining parenting advice, and completing application forms.

Khan Academy, for example, is a computer-assisted learning platform that facilitates personalized assistance by allowing students to follow a sequential roadmap of videos and short exercises, not moving forward until each exercise is mastered. In addition, Khan Academy recently introduced Khanmigo, an open language artificially intelligent chat-bot, based on GPT-4, that provides one-to-one support to students in the style of an exceptional tutor. Students can interact with Khanmigo in a free-flowing way to assist them along their learning roadmap, or with any question they are working on. Khanmigo interacts with students as a tutor would, using emojis, encouragement, and enthusiasm. The chat-bot also helps teachers motivate topics, offers students feedback, and suggests lesson plans. Whether this kind of assistance is less effective because it is unable to offer socio-emotional support is a topic for further research.

Other topics of further research for understanding potential benefits of personal assistance include possible identity-interactions between assistant and client. Do female tutors have more of an effect on female students than male tutors do? Do Black home visitors have more of an effect on the parenting investments of Black parents than White visitors do? Some recent work suggests these questions may be worth exploring: Kosse et al. (2020) present evidence that matching mentors and mentees based on gender and socio-economic factors leads to improved outcomes in a mentorship

program designed to enhance prosocial behavior in Germany. Research from health economics also provides some support for these hypotheses (Alsan et al., 2019; Frakes and Gruber, 2022).

It is also of interest whether peer or volunteer personal assistants are as effective as highly-trained professional personal assistants; if this is the case, it could present a viable option for increasing the cost-effectiveness of personal assistant interventions. In this regard, research on tutoring provides reason for optimism; it finds that volunteer and parent tutors do improve learning outcomes, though not by quite as much as professional tutors. Furthermore, the question of how to prepare non-professionals to provide personal assistance raises several unresolved issues. While training for personal assistance may be straightforward in some contexts, in others it may present an active constraint on the expansion of such programs. Agostinelli et al. (2023), for example, examine a change in the training of mentors within a school program in Mexico. Their findings reveal that enhanced training led to a significant improvement in children's outcomes, moving from a null effect in the original program to significant impacts on test scores and school attendance.

While this essay focuses on traditional human capital interventions in predominantly developed countries, it is worthwhile noting that there potentially may be broader applications of personalized assistance. Research in non-traditional contexts of human capital accumulation points to other avenues for further investigation. Take, for example, entrepreneurship training. A study by Brooks et al. (2018) finds that mentorship by experienced local entrepreneurs boosted profits for novice microenterprise owners. In contrast, a traditional standardized business education intervention did not yield any rise in profits. Not only does this underscore the efficacy of personalized guidance

over standard approaches, but it also hints at the potential of local individuals as cost-effective personal assistance providers.

In summary, this paper emphasizes the crucial role of personal assistance interventions in enhancing human capital and societal well-being. While cost-effective nudges have their place, the transformative potential of personal connections should not be underemphasized. Technology offers innovative possibilities, such as AI-driven assistance, to reduce costs and broaden access. Further research into identity-based interactions, the effectiveness of different types of personal assistants, and training methods is also important. While cost considerations are significant, policymakers and researchers must remain focused on the long-term societal benefits of ambitious, human-centric interventions.

References

1. Agostinelli, F., Avitabile, C., & Bobba, M. (2023). Enhancing human capital in children: A case study on scaling. *National Bureau of Economic Research*.
2. Alsan, M., Garrick, O., & Graziani, G. (2019). Does diversity matter for health? Experimental evidence from Oakland. *American Economic Review*, *109*(12), 4071-4111.
3. Bergman, P., Chetty, R., & DeLuca, S. (2023). Creating moves to opportunity: Experimental evidence on barriers to neighborhood choice.
4. Bergman, P., Edmond-Verley, C., & Notario-Risk, N. (2018). Parent skills and information asymmetries: Experimental evidence from home visits and text messages in middle and high schools. *Economics of Education Review*, *66*, 92-103.

5. Bettinger, E. P., Long, B. T., Oreopoulos, P., & Sanbonmatsu, L. (2012). The role of application assistance and information in college decisions: Results from the H&R Block FAFSA experiment. *The Quarterly Journal of Economics*, *127*(3), 1205-1242.
6. Bobonis, G. J., Bonikowska, A., Oreopoulos, P., Riddell, W. C., & Ryan, S. P. (2022). A helping hand goes a long way: Long-term effects of counselling and support to workfare program participants. *National Bureau of Economic Research*.
7. Bronfenbrenner, U. (1979). The ecology of human development: Experiments by nature and design. *Harvard University Press*.
8. Brooks, W., Donovan, K., & Johnson, T.R. (2018). Mentors or teachers? Microenterprise training in Kenya. *American Economic Journal: Applied Economics*, *10*(4): 196-221.
9. Carrell, S., & Sacerdote, B. (2017). Why do college-going interventions work? *American Economic Journal: Applied Economics*, *9*(3), 124-151.
10. Chetty, R., Hendren, N., & Katz, L. F. (2016). The effects of exposure to better neighborhoods on children: New evidence from the Moving to Opportunity experiment. *American Economic Review*, *106*(4), 855-902.
11. Cook, P. J., Dodge, K., Farkas, G., Fryer, R. G., Guryan, J., Ludwig, J., ... & Steinberg, L. (2014). The (surprising) efficacy of academic and behavioral intervention with disadvantaged youth: Results from a randomized experiment in Chicago. *National Bureau of Economic Research*.
12. DellaVigna, S., & Linos, E. (2022). RCTs to scale: Comprehensive evidence from two nudge units. *Econometrica*, *90*(1), 81-116.

13. Dobronyi, Christopher R., Philip Oreopoulos, and Uros Petronijevic. Goal setting, academic reminders, and college success: A large-scale field experiment. *Journal of Research on Educational Effectiveness* 12.1 (2019): 38-66.
14. Frakes, M. D., & Gruber, J. (2022). Racial concordance and the quality of medical care: Evidence from the military. *National Bureau of Economic Research*.
15. Grossman, J. B., & Tierney, J. P. (1998). Does mentoring work? An impact study of the Big Brothers Big Sisters program. *Evaluation Review*, *22*(3), 403-426.
16. Heckman, J. J., & Mosso, S. (2014). The economics of human development and social mobility. *Annual Review of Economics*, *6*(1), 689-733.
17. Holzman, B., Chukhray, I., & Thrash, C. (2023). EMERGEing educational opportunities: The effects of social capital and nudging on selective college outcomes. *Annenberg Institute at Brown University, Working Paper*.
18. Kosse, F., Deckers, T., Pinger, P., Schildberg-Hörisch, H., & Falk, A. (2020). The formation of prosociality: causal evidence on the role of social environment. *Journal of Political Economy*, *128*(2), 434-467.
19. Lavecchia, A. M., Oreopoulos, P., & Brown, R. S. (2020). Long-run effects from comprehensive student support: Evidence from pathways to education. *American Economic Review: Insights*, *2*(2), 209-224.
20. List, J. A., Pernaudet, J., & Suskind, D. L. (2021). Shifting parental beliefs about child development to foster parental investments and improve school readiness outcomes. *Nature Communications*, *12*(1), 5765.
21. Oreopoulos, P. (2020). Promises and limitations of nudging in education. IZA Discussion Paper.

22. Oreopoulos, P., Brown, R. S., & Lavecchia, A. M. (2017). Pathways to education: An integrated approach to helping at-risk high school students. *Journal of Political Economy*, *125*(4), 947-984.
23. Oreopoulos, P., Patterson, R. W., Petronijevic, U., & Pope, N. G. (2022). Low-touch attempts to improve time management among traditional and online college students. *Journal of Human Resources*, *57*(1), 1-43.
24. Oreopoulos, P., & Petronijevic, U. (2018). Student coaching: How far can technology go? *Journal of Human Resources*, *53*(2), 299-329.
25. Resnjanskij, S., Ruhose, J., Wiederhold, S., Woessmann, L., Wedel, K. (2023). Can mentoring alleviate family disadvantage in adolescence? A field experiment to improve labor-market prospects. *Journal of Political Economy*, forthcoming.
26. Scrivener, S., Weiss, M. J., Ratledge, A., Rudd, T., Sommo, C., & Fresques, H. (2015). Doubling graduation rates: Three-year effects of CUNY's Accelerated Study in Associate Programs (ASAP) for developmental education students. *MDRC*.
27. Thaler, R. H., & Sunstein, C. R. (2008). Nudge: Improving decisions about health, wealth, and happiness. Yale University Press.
28. van der Steeg, M., van Elk, R., & Webbink, D. (2015). Does intensive coaching reduce school dropout? Evidence from a randomized experiment. *Economics of Education Review*, *48*, 184-197.
29. Vygotsky, L. S., & Cole, M. (1978). Mind in Society: Development of Higher Psychological Processes. Harvard University Press.