More than Just Pressing Buttons: Enhancing our Legal Practice by Changing How we Understand Technology

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We are all tech workers! Legal services advocates do not usually think of ourselves this way, but it is true. Digital technologies are the instruments with which we do most of our work. We write and send emails; we create PDFs and Microsoft Word files; we use SMS and phone calls routed over the internet to communicate with clients. All day long, we are managing electronic records and database entries. Even when we are speaking face to face, we are often explaining digital artefacts like electronic court records. If we were painters, digital technology would be paint.

The legal profession has long recognized the importance of technology to legal services work. We have also understood that the central role of technology implies attorneys have an obligation to maintain some level of expertise with the subject. The rules of professional responsibility codify this when they require attorneys to maintain competence with "relevant technology."

From one perspective, this obligation seems somewhat vague — which specific technical skills should a lawyer have? From another, it seems nearly impossible to meet. We are living through an era of mind-bogglingly rapid change in digital technologies. Innovations offer new ways to streamline legal work, share information, analyze services, and more. We should be able to integrate some of these expanding capabilities into the legal services we provide. But is it fair to expect lawyers to keep up with which encryption algorithms are cryptographically secure, or how to properly configure a new machine learning pipeline?

It is a dilemma. Digital technologies are part of everything we do, but their complexity grows exponentially. How do we reach and maintain a "reasonable" level of expertise? And just as important as maintaining the level of expertise minimally required by the ethics rules, how do we keep getting better? Given our limited resources, how do we take advantage of the explosion of new capabilities of digital technologies for the benefit of our clients?

Structure or Implementation

We often approach "learning technology" as a question of "how do I use product X," where "X" is Microsoft Word, LegalServer, Excel, Salesforce, or some other specific product. "Growth" as a user of technology means learning more of the features that come with one program, and then separately learning to use different features of some other program. We think of adding to the list of products and features we can use as "learning technology." But I have found this approach has shortcomings. Treating features and products in a vacuum makes it harder to learn new tools. If I only memorize the buttons I need to click in tool X, I cannot transport that knowledge to some new tool Y. If I do not know how to use tool Z to accomplish a task, it is difficult to reframe the problem and reach for a more effective tool. And then I have reached a dead end where I simply cannot do the task.

At Community Legal Services of Philadelphia (CLS), we have benefitted from approaching new technologies from the perspective of trying to understand the broader structure of a problem and how a technology interacts with that structure. Once we understand the problem more generally, we often discover exciting new approaches to problems. We also often find extensive resources (such as instructional materials and other software) outside of the legal services community for solving this generalized problem: resources which we can specialize in to solve our problem in our field.

A few examples will make this approach more concrete.

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Understanding Documents

In legal services, one of the main things that we produce is written documents. So, if we are looking to improve our work, we should be looking to technology to improve the written documents that we generate. There is a strong temptation to overcome the technical challenges that we have with a tool that we already use. For instance, we might want to add a table of contents to a Word document. So, we look for tech support assistance to tell us which buttons to push in Microsoft Word that will add the table of contents to the top of the document.

But what if we tried to understand what our needs are outside of the framework of Microsoft Word? From a more general perspective, what are we trying to do by adding a table of contents? We are trying to make a lengthy text easier to navigate, and easier for a reader to understand quickly where to find different pieces of information. In generating a table of contents, we are trying to find some automated method for summarizing pieces of the text and creating links from the summaries to the longer pieces of text. Once we consider the problem of navigating lots of information from this perspective, new possibilities present themselves. A table of contents summarizes texts by searching for predefined tokens (headers) and copying them into a new blob of text at the top of the document. What other ways are there to summarize text automatically? One fascinating technique creates numerical representations of text that encode relationships among words. These numerical representations are called "embeddings." We could use these representations to make the document searchable not just by keywords but by the meaning of the text.

We are experimenting with this approach at CLS, starting with our tech support documentation. We are creating embeddings for tech support articles and will provide a chat-like interface for searching for support articles. Staff will be able to ask our database of support articles natural-language questions like "How do I copy a case in LegalServer?" or "I forgot how to create a calendar event." The chatbot will return the most similar tech support articles by comparing the embeddings. Our chatbot will help make sure our staff get the help they need right away, without needing to wait for tech support staff to be available. We can develop this technique further by applying it to, for example, a library of texts with legal information. A chatbot could guide users to the most relevant legal information in the library. We can create embeddings of the paragraphs of a single complex document to make the document searchable with natural language. Although finding tech support, providing legal information, and navigating a single document all appear to be very different tasks, we can see there are common patterns to these problems to which we can apply a single powerful technology.

In this example, we see by considering what a table of contents is trying to achieve from a more general perspective, we can find opportunities to leverage technology in surprising ways. Understanding overarching structures of a problem can also help us uncover and engage with new resources for solving problems.

Oh, CRUD

We have had several different projects in very different subject matter domains which turn out to share a common structure. For one project, we needed to call a large number of people to inform them of some information related to a settlement with which they were involved. We needed to be able to track these individuals, and we needed to be able to track multiple calls to each person. In another project, we needed to track volunteers for a clinic screening project: what clinics they had signed up for, and what work they were agreeing to do. Still, another project required us to monitor the status of landlord-tenant cases across several different organizations.

On the surface, these all look like very different projects. But if we climb up one or two rungs of the ladder of abstraction, we can see that these projects all share a common structure. They all involved recording structured information (information we can describe in columns and rows of tables), updating that information over time, and providing an interface to multiple users to read and edit those structured records.

You may have had a project or two that shares this structure as well. In fact, this structure of the project is so ubiquitous it has a name: CRUD. CRUD stands for "Create, Read, Update, and Delete." The acronym often refers to applications that are designed to provide an interface to this common set of operations on structured records. Once we understand this project as creating a CRUD app, we discover that there is an enormous wealth of tools for creating CRUD apps. There are books and blog posts; there are videos; there are many, many free software packages to help write CRUD apps; and there are many programmers happy to answer questions on public sites such as StackOverflow,

or to be hired to build a CRUD app for you, once you know that is what you are looking for.

Understanding this type of project as creating a CRUD app also means that what you learn about one tool for CRUD apps is portable to other tools for CRUD apps. I tend to use a programming language called Python, and one of several popular Python frameworks for creating these apps. But because the CRUD structure is so familiar, I could bring that experience to bear when trying out Microsoft's PowerApps platform. PowerApps provides a very different interface to creating applications. But at its heart, it is another tool for providing users forms for creating, reading, updating, and displaying structured records. Building an app in an entirely unfamiliar product took much less time than it might have because I could draw on experience with other approaches to the same kind of technical problem. Time invested in any particular software pays dividends outside the context of that specific program because I considered the general structures of the problem the program is meant to solve.

Automating Quality Assurance

Another common need for legal services is monitoring our case data for compliance-related errors. For example, if a client's birth date is recorded as 1088, there has probably been a typo. This problem initially presents itself to us inside the constraints of the tools we already use. We have paper files and a case management system online (the case management system is a CRUD app too, although it also has other features). Compliance staff can manually page through cases the same way that case handlers interact with their cases. Perhaps they have a checklist of errors to look for. The online system is a database of structured records, so staff can run reports to look at multiple cases at a time, and a case management system may be able to do certain kinds of aggregation within the reports interface. An organization can do a good job monitoring its case data with these techniques. But are there technologies that can make the work faster and offload more rote work onto a computer?

Let's look at the problem from a slightly more general perspective. We record our case information as data that is structured into tables. This is known as a system of relational data because the various fields have well-defined and quantified relations to each other. Just knowing that our case data is relational data unlocks a wealth of expertise and software from other fields for dealing with relational data. To monitor the quality of our relational data, we want to (1) regularly perform some sort of computation on the data, and (2) take some sort of action based on the results of the computation.

We might be used to doing this computation mentally or using a spreadsheet and then manually writing emails to staff so they can correct errors. But if we are thinking about this problem as running computations on relational data, perhaps on a schedule, can we look outside of legal services for solutions to this general problem?

Yes! There is a vast field of research and tooling related to extracting data from one location, transforming it, and then doing something with it. You can search online for terms like "ETL," "data orchestration," and "data warehouses" to get a sense of the diversity of the enormous data manipulation ecosystem.

At CLS, we recently began using one of these data orchestration tools to complete regular checks for typical case errors. Now with the click of a button, we can check dozens of quality assurance rules and send customized emails to case handlers with instructions for addressing each error. Our case handlers can quickly fix errors, and instead of spending time on the same manual reviews over and over, our staff can move on to the next challenge.

It often happens that when we broaden how we understand a problem, and then integrate a new kind of tool to solve the problem, we quickly discover many other uses for this new kind of tool. Introducing data orchestration into our infrastructure is no exception. We can do other sorts of computations on case data. We can use other sources of data, such as public data, and we can take other types of actions besides sending emails. For example, we are now using data orchestration to collect public court data to populate an analytical database, and the analytical database powers a dashboard application that supports our advocacy around unfair debt collection practices. We are working on trend detection that regularly reviews case data and alerts us to anomalies or patterns in changing case volumes. The list of new ideas for how to use data orchestration grows and grows.

Pitfalls

There are risks to this approach that we should mitigate. Specific problems can be generalized to broader structures, and those structures too can be further generalized. It can be hard to know when to stop climbing the latter of abstraction. With each step up we can see so many different new projects to take on and new tools to try. It is easy to get distracted trying

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to find the deepest principles of some problem and fail to actually deliver a working solution. We must balance theorizing about the abstract natures of problems with implementing solutions.

The most successful strategy I have for finding balance is to keep feedback loops between me, as the technologist, and our legal advocates short. Short feedback loops help ensure that the audience for a tool is engaged and is getting what they need, and that I do not get too distracted chasing the deepest theories related to a problem.

You do not need to learn to code.

I am not proposing that "all lawyers should learn to code." If you are representing clients, arguing cases, supervising other advocates, or running an organization, you have plenty of difficult things to do already. Rather, I propose that our field would do well to invest more in training ourselves to think about "technology" in terms of common patterns and structures, rather than as a catalog of specific unrelated products. Our relationship with technology would be less like a slog through one technical manual after another, and more like a continual engagement with how the problems we have relate to each other and to different kinds of technologies. A painter does not need to make their own paint, but a painter will learn, over time, about properties such as pigment and glossiness, to continue growing as a painter.

Approaching technology this way makes keeping up with rapid technical change a more tractable challenge. Principles learned in one area can be applied in others. We can also discover and import resources from fields outside of our legal services community, fields which have different specific needs, but share problems with similar structures and patterns. And inevitably, taking broader perspectives on some technical problem opens the door to many new ideas for how to use technology to improve our services.

Searching for patterns and general principles in specific situations is something that you are already good at, as a lawyer, paralegal, social worker, or other type of advocate. We work with specific people with particular problems (eviction, low income, and so on) and try to craft general solutions to improve our client's specific problems. Shouldn't we take the same approach with learning technology?

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Rather, I propose that our field would do well to invest more in training ourselves to think about "technology" in terms of common patterns and structures, rather than as a catalog of specific unrelated products.

Connecting Diversity, Equity, and Inclusion to Mental Health Initiatives

By Tenille N. Kaus, Director of Diversity, Equity, Inclusion, and Advancement,[1]
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As a Black female lawyer for almost 20 years, I have experienced numerous microaggressions and macroaggressions in the legal field. When I attended a recent virtual Continuing Legal Education course, participants filled the chat with microaggressions they had experienced in the legal field as people of color. Some of these included being mistaken for a defendant instead of the lawyer, repeatedly being given tasks such as note takers and party planners, not being included in key meetings when being the lead on a case, being talked over or interrupted repeatedly, being asked to serve on every diversity initiative at the firm because you are "the only," and countless others.

Legal aid organizations are not immune from microaggressions in the legal field. In their article, "Reviewing Racial Microaggressions Research: Documenting Targets' Experiences, Harmful Sequelae, and Resistance Strategies,"[2] Lisa B. Spanierman, D. Anthony Clark, and Yeeun Kim highlight the mental health effects of microaggressions. They state, "Findings from both qualitative and quantitative studies strongly suggest that racial microaggressions are linked to psychological sequelae such as low self-esteem, stress, anxiety, depressive symptoms, and suicidal ideation." The obvious cure to this behavior is to eliminate microaggressions in the legal field. This is definitely an approach we are exploring and actively implementing at Cleveland Legal Aid. It is a lengthy process. Cleveland Legal Aid has taken steps both forward and backward. However, we encourage and want our employees to bring their full selves to work. Therefore, we must be active in our direct support of employees who experience microaggressions due to their identity.

Findings from both qualitative and quantitative studies strongly suggest that racial microaggressions are linked to psychological sequelae such as low self-esteem, stress, anxiety, depressive symptoms, and suicidal ideation.

At Cleveland Legal Aid, we have taken several steps to support employees of color in their mental health journey. First, we focused on ensuring employees have access to mental health care at no cost to them. We heard from employees; cost was a barrier to seeking mental health services. Black Lives Matter at Cleveland Legal Aid. Cost should not be a barrier to our employees receiving the care they need. Cleveland Legal Aid invested in a more comprehensive Employee Assistance Program (EAP). Our investment includes six sessions of counseling for each occurrence per year. For example, an employee may experience marital issues, a workplace issue, and the death of a loved one. Our EAP would provide six sessions of counseling for each issue, for a total of eighteen sessions. Our EAP benefits also extend to all members of an employee's household. We recognize the connection between employees and their households, which can be even more pronounced in nondominant cultures.

In addition to counseling to support employees, our EAP provides six free sessions of life coaching for employees and members of their households each year. Life coaching can assist individuals with life transitions, communication skills, stress and time management, work/life balance, managing multiple projects, goal setting and action steps, improving relationships, and living a more purposeful life. Other services provided by

our EAP include a personal assistant, medical advocacy, financial consultation, legal consultation, and work-life resources (such as summer camp and childcare recommendations) and referrals. We strive to provide a comprehensive EAP to support our employees.

We have also incorporated mental health programming in our Professional Development Series. Cleveland Legal Aid's Professional Development Series is a series of trainings held twice a month throughout the year that employees at the firm can participate in to support their professional growth. It is a total investment of 24 hours a year for all staff. Some mental health topics include Preventing Burnout, Methods of Deep Relaxation, Rationale Detachment, Grace Under Pressure – Stress Management on the Run, Mindfulness, and Relax the Body – Calm the Mind. In addition, we are offering six pilot mindful meditation sessions for employees. If this pilot is successful, measured by continued engaged attendance by employees, Cleveland Legal Aid will continue the mindful meditation sessions. The Professional Development Series also supports our Pilot Peer Mentoring Program, continuing legal education on substantive legal topics, trainings focused on culture humility, firmwide trainings focused on technology, and sharpening our skills in advocacy and research. Examples include, Multicultural Mental Health, Client Support Services and Interdisciplinary Practice, Document Management System Introduction, and debriefing on the play: *To My White Friends Who Know Me.*

We have also created a feature on our intranet, where we "Pass the Mic" to employees for them to talk about issues important to them. During Mental Health Month, we passed the mic to a colleague who spoke openly about their mental health. As a leader in the organization, I shared publicly with colleagues my struggle with anxiety. This breaks down the silos where people feel "othered" in the workplace. Several employees commented on having a good therapist and the importance of taking care of our mental health.

In addition, we have a group of staff members working on a pilot respite room. This room will be an electronic free room where employees can recharge and center when needed. This is a staff driven initiative financially supported by Cleveland Legal Aid. This room will also aim to be sensory inclusive for staff who might need this type of space.

Lastly, we completed a compensation analysis and salary equity study to ensure our compensation package is competitive and free from bias. Not making a living wage causes stress. Those making a living wage often carry law school loans and other higher education debt. We know from research, women and people of color are paid less than white males. It is incumbent on all legal aid organizations to ensure we are not part of the problem. Pay people of color. Pay women.

When we took care of our minority employees, we took care of all our employees. That is diversity, equity, and inclusion. Our pie did not get smaller, it got bigger for everyone. A rising tide lifts all ships. While we still aspire to be an anti-racist organization and continue working to eliminate microaggressions from our workplace, we must provide concrete support to our colleagues of color now, because research has proven this support is needed.

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2 Spanierman, L. B., Clark, D. A., & Kim, Y. (2021). Reviewing racial microaggressions research: Documenting targets' experiences, harmful sequelae, and resistance strategies. *Perspectives on Psychological Science, 16*(5), 1037–1059.