A Pandemic-Provoked Pedagogical PIVOT:
It May Be Permanent

Katherine Watson
Santiago Canyon College, United States
bizarrissime@gmail.com

During the mid-fourteenth century, the "Black Death" of bubonic plague killed more than one third of Europeans. Educational centers in France, Italy, and England lost students and faculty to the indiscriminate killer. The Catholic Church, which had sponsored and stimulated learning, lost influence; movements of individualism, self-directed education, grew. Simultaneously, the term "pivot" was born in French to describe a mechanical "hinge-pin" or fulcrum, the base of a turning mechanism. Centuries later, the COVID-19 pandemic continues to kill millions, schools have lost students and staff, and the term "pivot" has multi-disciplinary new meanings. How has pedagogy pivoted? Is its pivot permanent? Online study of French language and culture exemplifies an acronymic PIVOT: Personalization, Inquiry, Variety, Online, Teaching. Specific ways in which these five features describe and foster learning will be set forth here, and techniques for their application to disciplines across the curriculum will be suggested.

Key words: Education, technology, ICT, diversity, distance learning, communication, distributed learning, teaching, Inquiry-Based Learning, personalization

INTRODUCTION

Online study of French language and culture exemplifies an emulable acronymic PIVOT. That is, teaching and learning during the era of the COVID-19 pandemic can be defined with five characteristics: Personalization, Inquiry, Variety, Online, Teaching. Specific ways in which these five features describe and foster learning in general, particularly since the arrival of COVID-19, will be set forth here below; ways in which they are being utilized fruitfully in France will then be noted; and techniques for their application across the curriculum will then be proposed. Throughout the narrative, it will become evident how pedagogy is in the act of a pandemic-provoked pivot that is in all probability permanent.

Personalization, the P of the PIVOT

What Personalization is and how it proceeds, generally: We personalize things when we make them uniquely our own. But to personalize things educational, teachers and learners cannot just announce that they are going to create something unique out of whole cloth; rather, they must begin with a particular, clearly stated idea and then share responsibility in its development. Teaching and learning are co-active, interactive undertakings. Each tweak of a thing may be personal, but in education, those tweaks must shed light and lead somewhere. The "e-" of education signifies an opening-outward movement, and the "-duc-" indicates a leading or guiding somewhere. Teachers may personalize, or tailor, the mode of course materials delivery, these days using flexible learning management tools, and learners can exploit the tools in their own personal ways. When teachers release the authority inherent in fixed, pre-fabricated sage-on-the-stage traditional learning systems, they will sense excitement, engaging students and making them into active, curious "personalizing" learners. When we are in charge of our own path, we can attend to creativity. It has been written that "personalized learning" is to "traditional learning" as driving a car is to riding on a train (Vodicka, 2019). The user of the car is its personal, engaged driver, controlling how fast it goes, where it goes, how long it stays wherever it stays, and how it is maintained inside and out. The user of the train, by contrast, is a passenger; outsiders control its speed, its route, its stops, and its maintenance. Indeed, much of the teaching going on during COVID-19 has entailed efforts to personalize things in a world tempered by outsider-developed technology. The educational infrastructure available for online learning comprises high-speed highways, but the cars using them are not all the same. "Personalization is especially important when students and instructors are separated by screens," reports Abramson (2022) for the American Psychological Association. Teachers and students have to learn how to personalize in a zone where infrastructure is at once remote, dynamic, and inconstant. First-person language, friendly gestures, and sympathetic eye contact make the

electronic infrastructure a more personalized and personable space. Physical distance is mentally surmounted by teacher-learner attention to paralanguage and kinesics, all those extra-verbal sounds and gestures that comprise more than half of ordinary human linguistic messages. This is part of the pandemic-provoked new way of interacting via videoconference. It is part of what makes each videoconference personal.

How Personalization has been and is now practiced in France since COVID: As Chalon (2022) has reported in *Le Parisien*, French universities have taken a new "beyond distance" stance to help students proceed through the rigorous reading, writing, and examination traditionally comprising higher education curricula; "personalized accompaniment" is something new to the formerly staid, depersonalized French schools of business, technology, and the sciences, which have since 2020 begun to offer personable "interveners" at any time of day or night to help learners with psychological, social, financial, health questions. Too, schools are providing small group and one-on-one coursework counseling in learning centers, cafés, and student residences. These moves break from a tradition in which students' mental or personal lives were outside the aegis of the institution; academic life was solely academic, statewide tests were mandated at defined times and places, and "homework" amounted to hundreds of pages of reading and dozens of pages of writing per week. Particularly since the late eighteenth century, when politician/philosopher Jules Ferry reformed French education, all youths from 6 to 16 years of age have always been able to profit from high-caliber schooling that has been at once free-of-cost, non-sectarian, and readily available, but also infrastructurally intractable. Universities have also been affordable, though entry requires success on a rigorous set of exams, and most schools require that students learn to practice the presentation of ideas within a set infrastructure of reasoning called "explication." And now, in the twenty-first century, French higher education is witnessing the birth of joint goals: "Project-based study", the analytical self-examination of Inquiry-Based Learning, is uniting with the synthesis that defines the videoconference, in which students share their personalized plans with one another through multiple media, usually live. Brunel and Heisel (2020), for instance, have altered the explication model in a way they believe will better fit the "unstabilized world" of pandemic-painted pedagogy; they have proposed that the long-established explication de texte now begin pre-textually online, taking advantage of electronic tools that were not yet available when conventional modern schooling arose. Explication should then proceed with multiple media to round out, to deepen students' awareness of the works under study; the traditional explication format requires analyzing an author's work in detail, and modern tools can expedite this. When students gather for synthesizing videoconferences, their personal perspectives are made plain.

Inquiry, the I of the PIVOT

What Inquiry is and how it proceeds, generally: Inquiry amounts to questioning. And the late twentieth century American "Inquiry-Based Learning" (IBL) movement could be said to have roots in the proposition made by John Dewey (1859-1952) that the student learns best who discovers the reason for his learning through questioning. IBL is "about triggering curiosity…a far more important and complex goal than mere information delivery" (Wolpert-Gawron, 2016:01), however. Wolpert-Gawron (2016) reminds teachers that IBL comprises more than the simple posing of questions, too. She points out that "pre-presentation" of a subject is necessary to provoke inquiry: The teacher has to feel enthused about the subject and transmit the excitement, making it burst forth. When a subject is presented fully, after the pre-presentation, IBL will proceed in a four-step fashion: Hypothesizing or problem-stating comes first, with students presenting queries in a logical fashion; research about the problem comes next; presentation to the whole class for discussion happens next; reflection follows. These four steps of IBL resemble the scientific method (SM), a centuries-old human process of querying about the world, hypothesizing about it, researching the hypotheses, collecting data, and publishing results for others to use, discuss, and/or refute. But IBL is not exactly the same as the SM. IBL need not be as linear as SM; students engaged in IBL are encouraged to ask all sorts of questions all the time, and hypotheses grow out of question-asking. Students in a calculus class may be presented with a theorem to prove individually, after having learned a number of applicable definitions and axioms; this sort of task exemplifies IBL perfectly, as it depends upon students' individual mental infrastructures' all leading to the same conclusion. IBL differs from the scientific method in that the latter proceeds according to a step-by-step process, while the former promotes outside-the-box, sidestepping thinking, asking about context, details, things that might be so implicit as to require further questioning, such as axioms or definitions. In all disciplines, IBL exploits not only the 5 W's and H questioning model, but also the "Model of the 5 Es": Engage, Explore, Explain, Elaborate, Evaluate.

How Inquiry has been and is now practiced in France and francophone countries: It can be said that IBL describes French argumentation not only in mathematics but in humanities, the arts, and other areas; each point of study in

French courses may be asked about, its concepts questioned, and facts given support, in opposition to being examined only for simple, explicit utility, as is common in the American model. As Boilevin, Morge, and Delserieys (2021) have written, France has for more than a century seen "a longstanding phenomenon of students deserting the sciences," beginning with middle schoolers at the start of the twenty-first century, however, and so pandemic-era educators are encouraging what they call "important evolutions" in science study, in which "scientific literacy for all" is being promoted. During the pandemic, in particular, numbers and statistics are peppering readings in history and social science, the physics of color and form underlie art history and practice, and literary extracts are being analyzed that incorporate numbers, weights, and measures alongside notions of philosophy. In the pandemic environment, IBL problem-solving, games, and other "out-of-school activities" have become more popular. The universities of Aix-Marseille and Blaise Pascal have incorporated new STEM across the curriculum interactive projects in an attempt to overcome what STEM professors in France have noted to be a continuing dearth of new science students during COVID. And as Brunel and Heisel (2020) have reported, inter-campus, transdisciplinary projects are being broadened and deepened during the pandemic. That is, a "larger gamut of probabilities" made available through exploitation of the Internet has rendered the traditional "explication de texte"-based educational process simultaneously more inductive—broadening perceptions that may be questioned after point-by-point observation of a text—and deductive—facilitating data collection to support one or several hypotheses concerning the text's theories. French students are born into a culture of questioning; they learn early on that le marchandage, or negotiation, comprises much of human interaction, and each give-and-take with another will offer a new opportunity not only to distinguish oneself but to demonstrate a "multi-active" cultural type, in which impulses and emotions often interrupt logical reasoning, usually with the goal of showing interest in what is being discussed. In fact, France's CNDP, or national center for public debate, and L'Arbre des Connaissances, or Tree of Knowledge, are only two of many examples of free-access multimedia debating services that have become ever more popular in schools as lockdowns and travel restrictions have kept learners close to home. CNDP began as an environmentalist site concerned about wind farms off the coast of France, about the disappearance of forests and wildlife, and about biodiversity; it now invites questions of ethics and politics into its public fora as well, since the French are particularly politically motivated about most things. L'Arbre des Connaissances hosts more than 4000 educational discussions, laying out present and projected problems, then setting forth pros and cons, ultimately inviting learners to join the debates synchronously or asynchronously, as they wish.

Variety, the V of the PIVOT

What Variety has always been and is becoming even more: The processes of personalization and inquiry will naturally lead to variety. The well-educated person is one whose mind continues to stretch, to grow, personalizing its cache of knowledge as it does so. Inquiry becomes a habit of mind, and with inquiry arrives variety, flexibility, a wealth of alternatives. Besides the ordinary 5 W's and H of Who, What, Where, When, Why, and How, teachers in the pandemic era have a panoply of perspectives on each of these. For instance, students can see and hear the Who, thanks to multiple media, and they can be transported virtually into Where. The immersion into varying ways of seeing things will provoke questions of Why. Naturally, a discussion of educational variety in the pandemic era will lead to mentions of subject matter delivery modes; few schools were left during the pandemic to meet fully face-to-face in traditional classrooms; millions of students of all ages were suddenly cast out of schools and into home offices with cellphones or computers that were not necessarily up to the educational task. Administrators, teachers, parents, and students have had to call upon varying modes of knowledge sharing. This, however, is a type of educational infrastructure variety wagging a curricular dog. True substantive variety, as the Organization for Economic Co-operation and Development (OECD) points out, is presented in 30-minute units or less and is aimed to pique interest; the idea is that short, multi-media-enriched data sets will motivate students to learn; the sets typically offer varying views on a topic, such as the use of solar panels in an era of global warming or the question of how people vote in American elections.

How Variety is in France: French education has long been based on connections and context. Mathematics instructors use works by the playwright Molière and the modern surrealist writer Queneau for references to math and what they mean; fractions come up in Rabelais; the notions of form, shape, and plane and solid geometry come up in Jules Verne. Students read the literature, feel out the math, discuss its context in French history and thought, and then place their thoughts in a modern context. Nothing is a single topic separated from all else. A transdisciplinary approach to learning is easy to pursue with technology, too: The aforementioned subject of elections might call into play France's history with an aristocracy, the divine right of kings, and how leadership should be defined, decided, or attained. Pandemic-era students are being invited to analyze the annual Tour de France cycling competition, examining its history, the

geography of the race and the towns visited, the construction of the bicycles and how that has changed over the years, the why and how of the race's history, and the reason that the Tour, not to mention cycling itself, might never lose its beloved cultural cachet in France. A variety of viewpoints washes over the country every summer, with timely multiple media making them rich topics for student study.

Online, the O of the PIVOT

What Online came from, is, and will be, worldwide: People are communicators. Humans speak one or more of thousands of languages. And humans are social transmitters of culture. During times of crisis, people need to communicate, to transmit culture, to educate, leading one another from the discomfort of the strange unfamiliar into the comfort of things established, common, peaceful, and personal. Plagues and epidemics that have touched humankind historically have led their socially integrated educational institutions to isolate those affected, to meet outdoors or in remote places for academic study, or even to close their doors entirely. A study made in 2009 of American schools' responses to the early twentieth century Spanish flu reveals that big-city school closures in 1918 probably reduced the number of flu infections by about 15% (Atterberry, 2020). Indeed, Los Angeles, California, and Cleveland, Ohio, launched "mail-in schooling" programs as a kind of early form of "distance learning" to keep people both safe and educated during crisis and beyond. Plagues and epidemics have always placed a burden upon educators and those who would be educated. But as the United Nations (2021) states, educating one another is essential to us in the prevention of crises, during crises, and after crises. These days, humans can profit from a new educational infrastructure. The electronic infrastructure underlying online learning is being strengthened everywhere every day. During the current pandemic, "an immediate shift to online education" has been a necessary "opportunity and challenge" provoked by the COVID-19 pandemic (Grady, 2022). And the online environment to which education has shifted has itself been evolving rapidly, too. Online teaching began more than two and a half decades ago with instructor-created materials being sent to technical experts or designers and then delivered over a variety of platforms; the process was often awkward or "clunky", as Wieland and Kollias (2020) have written, and it was off-putting to many instructors who saw their personalities effaced in cyberspace. The individuality and flavor of the warm body classroom experience were sensed and sorely missed. When COVID-19 hit, nearly 74% of the world's student population was cast adrift, as a United Nations report states (Alcazar, 2020). In much of Africa, the "modèle présentiel", or face-to-face model, disappeared entirely; for at least a month, absolutely no formal education took place. And when education began again, coursework was typically disseminated by State governments via television and radio, rather than online. Online activity took up the educational slack in fits and starts; in many rural or isolated spots, it was teachers using WhatsApp or Facebook. In much of the "rural south", meaning Africa, South America, and many island states, the one person in an area who had access to the Internet had to host group education sessions; the French government has been making efforts to broaden and improve online access to former colonies and to DOM-TOM (Départements d'Outre-Mer and Territoires d'Outre-Mer), but the infrastructure of the information superhighway is not there yet.

Teaching, the T of the PIVOT

What Teaching has been and has become, generally: Teaching used to be a somewhat safe profession. Particularly for young women, entering the teaching profession meant stability, a certain salary, a predictable schedule, opportunities to integrate into a community, as well as the chance to mingle among others of similar interests, all the while enjoying a most obvious opportunity of being among eager learners, usually sitting in rows and columns in well-lit classrooms designed for the task. In colleges and universities, the profession of teaching offered an occasion to do and share research, to write, to read, to roam the realm of ideas. In the sub-continent of India, Mahatma Gandhi's "Each One Teach One" was more than a high-minded wish; by the middle of the second decade of the current millennium, hundreds of young people had learned to read, write, and calculate thanks to the C. P. Ramaswami Foundation, based on Gandhi's teachings. But all of that was then.

This is now: Teaching comprises continuous challenge; the job depends upon irregular schedules and unfixed salaries, lifestyles, and learners surrounded by social, economic, technical, and material instability. Each student is an individual, rather than a member of a class, and each individual has singular wants, needs, desires. Losses, gains, and transformations in schooling, in the transmission of educational materials, and even in the variety of those materials, have become affected in ways previously unheard-of; "emotional practice," "professional capital", and "emotional capital" comprise areas of study by educators of educators that have fallen out of the COVID-19 experience.

What it has been and has become in France: Since the 1879 Republican reforms of Jules Ferry and Camille See, education in France has been free of cost and of religious influence. Youths of all socioeconomic circumstances have had access to high-quality education, free textbooks, and properly trained teachers. At the end of the Second World War, CETs were established; these Collèges d'Enseignement Technique offered vocational-technical training to adolescents, who could enter school without having to study the Greek and Latin of "standard" or "traditional" institutions. Thus, it could be said that the American-style notion of "differentiating" education, offering alternative pathways to a goal or a certificate, a diploma, or a job, is not really new to the French. And as Connac (2021) states, rendering the concept of differentiation, of personalization, more ubiquitously palatable to the traditionalist French professoriate has become easier during the pandemic; the idea has been presented as a move toward freedom of expression among teachers and learners alike, spiced with individualization of thought, in opposition to the non-French influence of "massification", in which MOOCs and learning management, for instance, represent alien groupthink. The French are big on freedom of expression, Connac asserts; it is a political act, and proper education is an entrée into the political. A problem with pandemic-era teaching , however, has been one that the World Bank has reported upon: A necessary "recalibration" of teachers' time. That is, teaching and engaging with students are having to give way, time-wise, to administrative and technical tasks. Teachers have had immense difficulty, the Bank reports, "finding a balance between teaching, interacting with students, and doing administrative work." Teachers from around the world responded to the World Bank's questionnaire by stating that they feel overwhelmed, as if they have no break from work; many of them have said that they feel as if they are teaching one-on-one with their so-called "remote" learners, rather than teaching groups of them in a classroom. To help cope with these concerns, virtual EdCamps have been organized in France. Like sports or scouting camps, these use peer mentors and practicum reviewers to lead and keep learners on track, while the teachers can use their time more creatively, developing broad-brush ideas for students to touch up through their own multimedia research.

The PIVOT in the past, present, and perennially

The bubonic plague decimated Europe. Professors and students ran from the cloistered confines of the university; many of those who did not run off ended up dying in dark, dank homes along narrow streets. But the Holy Roman Emperor Charles IV established new institutions, and donations were amassed that helped grow more schools. The university was no longer just a place to learn prayers to ensure salvation; earthly services were born there, nurtured, developed. And since teachers were in short supply who knew Latin and the vagaries of Church acumens, educators began to communicate in the vernacular and to teach colloquial matters. Indeed, Italy and France particularly saw the separation begin to dissolve that had isolated institutions from the worlds around them. Physically, university fathers built their campuses outward as well as upward, integrating academic structures into the agricultural or metropolitan spaces that had once been separate or distinct. Medical schools and scientists began to look to the space around them, as well as to their standard texts. The student population began to diversify; spontaneous educational query into a new variety of topics was stimulated. A pivot to the more personal, more inquiry-based, more variety-rich was turning.

Hundreds of years on, the World Bank has noted that teachers around the world harbor mixed emotions regarding the possible permanence of the twenty-first century's pandemic pivot. A 2020 survey of nearly 200 countries revealed that fewer than 10% of teachers worldwide felt comfortable, confident, and competent enough with the "forced" move from classroom to virtual space. In addition, the Bank found, even in countries whose governments have offered support, training, and financial aid to teachers and learners, exhaustion is rife. Administrators are tired of repeating the same old suggestions, teachers are tired of spending all hours of day and night, week-ends, and holidays, trying to wade their way through unwieldy waves of W3, and students are just tired. In Brazil, for instance, newly available technologies have led students to find that WhatsApp and text messaging can operate at any hour of day or night to "talk" with an instructor much more easily than they might do via school "electronic portals". For this reason, the Brazilian state of Minas Gerais has launched the mobile app Conexao Escola to facilitate and expedite the infrastructure of unpretentious inquiry. The Organization for Economic Cooperation and Development (OECD) has noted that new seriousness surrounds the question of education's purpose; if "education" now

means networking and developing social opportunities as well as amassing subject matter from books, then what? France has for more than three decades been digitizing as much of its cultural patrimony—art, music, literature, design, cinema dating from the first Black Plague and even before that—for worldwide access, 24/7. Users of the BnF, the country's national library, are invited to network with one another, to join social groups online or in person, to integrate the history of human learning into human knowledge.

The European Investment Bank states that the OT of the PIVOT must breach the boundaries of the digital divide. Education cannot and should not become completely virtual or remote. In addition, adults must learn not only how to help their children with technology but how to incorporate technological awareness into everyday life. The Bank holds that the current pandemic should have taught us all that we need one another, just as the pandemic did lo those hundreds of years ago. We each can gain access to world knowledge despite the flood of ambient sensory noise, despite the frustrations of finitude; the educator's job remains as it has always been: to teach the student how to get rid of all the noise and find exactly what will lead to learning. Each one can teach one.

References

Abramson, A.. Enhancing online learning. *Monitor on Psychology*, *51*(4). May, 2020. https://www.apa.org/monitor/2020/06/covid-online-learning

Alcazar, G. L'enseignement à distance en contexte COVID-19. Paris: United Nations. 2020. https://unesdoc.unesco.org/ark:/48223/pf0000374160_fre

Atterberry, T. Education during plagues and pandemics: A historical perspective. Gale Blog. 2020. https://blog.gale.com/education-during-plagues-and-pandemics-a-historical-perspective/

Barron, M. Evolution du rôle des enseignants. World Bank Blogs. 2021. https://blogs.worldbank.org/fr/education/levolution-du-role-des-enseignants-et-des-technologies-dans-le-contexte-de-la-pandemie-de

Baudry, P. *Français et Américains : L'Autre Rive*. 2003. New York : New Books.

Bombardieri, M. COVID changed education permanently. Politico. April, 2021. https://www.politico.com/news/2021/04/15/covid-changed-education-permanently-479317

Brunel, M. and Heiser, L. « Analyser les textes avec internet : étude d'une pratique professionnelle en transformation », *Recherches en éducation* [En ligne], 42 | 2020, mis en ligne le 01 novembre 2020, consulté le 11 juillet 2022. URL: http://journals.openedition.org/ree/1607; DOI: https://doi.org/10.4000/ree.1607

Connac, S. Pour différencier : Individualiser ou personnaliser. 2021. Paris: Edso Journal. https://journals.openedition.org/edso/13683

Courtenay, W. J. "The Effect of the Black Death on English Higher Education." *Speculum*, vol. 55, no. 4, 1980, pp. 696–714. *JSTOR*, https://doi.org/10.2307/2847661

Duvert, R. Mathématiques et littérature. APMEP. 1999. https://www.apmep.fr/Mathematiques-et-litterature,4113

Grady, M. How has teaching changed during the COVID-19 pandemic? Buffalo: CATT Blog. 2022. https://www.buffalo.edu/catt/blog/catt-blog-021622.html

Hargreaves, A. "What the COVID-19 pandemic has taught us about teachers and teaching." *FACETS*. **6**(): 1835-1863. https://doi.org/10.1139/facets-2021-0084

Kidman, G., Casinader, N. (2017). 'Intelligence in the Wild'—Inquiry in the Field. In: *Inquiry-Based Teaching and Learning across Disciplines*. Palgrave Pivot, London. https://doi.org/10.1057/978-1-137-53463-7_9

Mittlieder, B. An international teacher on showing up for life. NY Times, May 31, 2022. https://www.nytimes.com/2022/05/31/learning/student-contest-winner-an-international-teacher-on-showing-up-for-life.html

Modica, Allison. United States and Ukraine - Virtual Edcamps (English). Education Continuity Stories Washington, D.C. : World Bank Group. 2020. http://documents.worldbank.org/curated/en/416761598358040890/United-States-and-Ukraine-Virtual-Edcamps

Patterson, J. A Path to inquiry-based learning in geometry courses. 2016. Master's Thesis. Harvard Extension School. https://dash.harvard.edu/bitstream/handle/1/33797306/PATTERSON-DOCUMENT-2016.pdf?sequence=1&isAllowed=y

Rogers, H. and Sabarwal, S. Pandémie de COVID-19: Chocs pour l'éducation. The Docs, World Bank Group. 2020 https://thedocs.worldbank.org/en/doc/854091590757049975-0090022020/original/Covid19EducationSummaryfren.pdf

Rozin P, Remick AK, Fischler C. Broad Themes of Difference between French and Americans in Attitudes to Food and Other Life Domains: Personal Versus Communal Values, Quantity Versus Quality, and Comforts Versus Joys. Front Psychol. 2011 Jul 26;2:177. doi: 10.3389/fpsyg.2011.00177. PMID: 21845184; PMCID: PMC3145256

Sab, E. Inquiry-based physics education in French middle school. KIPDF. 2021. https://kipdf.com/inquiry-based-physics-education-in-french-middle-school_5ab34e751723dd339c80c122.html

Schleicher, A. The Impact of COVID-19 on Education: Insights. Education at a Glance, OECD. 2020. https://www.oecd.org/education/the-impact-of-covid-19-on-education-insights-education-at-a-glance-2020.pdf

Vodicka, D. What is personalized learning. Learner Centered. 2019. https://learnercentered.org/what-is-personalized-learning/