

Digital Transition in Judicial Training and Practice: Benefits and Challenges*

*Transición digital en la formación y práctica
judicial: beneficios y desafíos*

J E A N C A R L O M E J Í A A Z U E R O

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Abstract

This article presents a critical and proactive review of the growing tendency to use Information and Communication Technologies (ICT) in judicial training and the administration of justice in Colombia. The approach is based on problem-based research (PBI), as a descriptive-analytical approach to possible lines of research based on the initial training programs of the “Rodrigo Lara Bonilla” Judicial School. It is analyzed how, although ICT and virtual and blended learning modalities represent ample advantages over traditional classroom training models, such benefits must be evaluated in terms of factors such as quality, transparency, and equity, not only in the training system of the Judicial Branch but also in the administration of justice. It is concluded that, given the high demand for judicial services and the need for flexibility in the training of judges and magistrates, the opportunities with the digital transition for judicial training and practice are greater than the risks. However, such transitions must be thought through in pedagogical and ethical terms.

KEYWORDS

Judicial training, judicial practice, ethics, *b-learning*, digital competencies, Information and Communication Technologies (ICT).

Resumen

Este artículo presenta una revisión crítica y propositiva en torno a la creciente tendencia de utilizar las Tecnologías de la Información y la Comunicación (TIC) en la formación judicial y la administración de justicia en Colombia. El abordaje se realiza a través de la investigación basada en problemas (IBP), como una aproximación descriptiva-analítica a posibles líneas de investigación con base en los programas de formación inicial de la Escuela Judicial “Rodrigo Lara Bonilla”. Se analiza cómo, si bien las TIC y las modalidades de formación virtual y semipresencial representan amplias ventajas frente a los modelos tradicionales de formación presencial transmisionistas o dogmáticos, tales beneficios deben ser evaluados en virtud de factores como la calidad, la transparencia y la equidad, no solo del sistema formativo de la Rama Judicial sino de la administración de justicia. Se concluye que, en virtud de la alta demanda de servicios judiciales y necesidad de flexibilidad en el entrenamiento de jueces y magistrados, son mayores las oportunidades con la transición digital para la formación y práctica judicial que sus riesgos. No obstante, tales transiciones deben ser pensadas integralmente en términos pedagógicos y éticos.

PALABRAS CLAVE

Formación judicial, práctica judicial, ética, *b-learning*, competencias digitales, Tecnologías de la Información y la Comunicación (TIC).

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I. INTRODUCTION

Judicial training represents an important activity within the administration of justice in any democracy. It is developed as a special case of selection by competencies and gnoseological and methodological aspects of high professional specialization (Goldbach, 2016; Mayoral, Jaremba and Nowak, 2014; Muñiz-Argüelles; Fraticelli-Torres, 1985). This is justified in that, unlike other types of professions (without detriment to the high social interest of each one), the jurisdictional function has broad repercussions on the social rule of law and the guarantees to the fulfillment of democratic principles and values.

Similarly, judicial training is particularly complex due to the articulation of two organically linked (albeit separate) orders. On the one hand, *initial judicial training*, the purpose of which is to select and prepare new candidates for judicial work. And, on the other hand, *continuing judicial training*, whose main function is to update the skills of those who have already been appointed in one of the modalities authorized by law.

Such servers make up precisely the network of trainers for the learning and selection process of new judges and magistrates in *initial judicial training (input and output)*. Therefore, both processes must be considered in light of the opportunities and challenges represented by global trends in learning and evaluation by competencies (Restrepo, 2016); problem-based research (Mejía, 2020), and flexible educational modalities through *b-learning* (Escuela Judicial “Rodrigo Lara Bonilla” -EJRLB- and Unión Temporal Formación Judicial 2019 -UTFJ 2019-, 2020).

These challenges have led Ibero-American judicial schools to a constant self-evaluation and improvement of their processes (Red Iberoamericana de Escuelas Judiciales, 2017). Within these transformations, the inclusion of Information and Communication Technologies (ICT) has gone hand in hand with increasingly widespread trends towards the flexibilization of educational processes (even the most demanding ones) through virtual and distance modalities (Area, 2012; Poblet and Teodoro, 2012). Indeed, there are more advocates than detractors of these new pedagogical mediation systems, not without first establishing a set of elements that not only justify, but also validate quality in virtual education (Rama, 2016). It is in such a context that the idea of “digital competencies” of judges and magistrates arises (Area, 2012).

It could then be said that the question about the implications of the use of ICT in judicial training brings with it the problem of the digital transition in the administration of justice (Consejo Superior de la Judicatura -CSJ-, 2019; Ocampo, 2019; Villegas, 2019; Medina, 2019), since it refers to the *digital literacy* of those who, being judges and magistrates, are also trainers, without taking

into account the corresponding in the case of officials who operate the offices (González and Gimeno, 2017).

This article represents a first descriptive-analytical approach to this panorama, based on the theoretical and practical knowledge originated in the planning and design of the *IX Initial Judicial Training Course* (IX CFJI) in Colombia. The approach is framed in a *problem-based research* (PBI) proposal (Figure 1), with a pedagogical approach whose purpose is to provide elements for learning and discussions focused on possible debates and contextualized solutions (Font, 2012; Mejía *et al.*, 2018; Mejía, 2020).

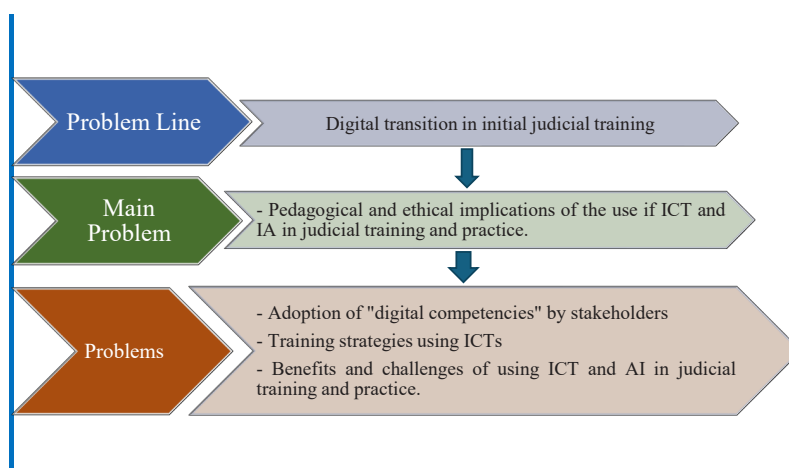


Figure 1. Basic scheme of work by Problem Line: problematizing thematic nucleus. Main Problem: particularization of the issues to be problematized through a transversal axis. Problems: concerns to describe and analyze the problematized issues and propose possible solutions.

II. TRANSITION TO DIGITAL TECHNOLOGIES: WHAT ARE THE IMPLICATIONS FOR JUDICIAL TRAINING AND PRACTICE?

The transition to digital technologies is now inevitable in most areas of work, and it is necessary to adapt in order to reduce their possible effects on labor equity. Indeed, if it is expected that between 14% and 32% of economic activities have a “high” and “significant” risk of automation, thus, it is necessary to put on the table the need for training and retraining, in order to accompany such transformation of activities and their means, without losing labor rights and increasing social inequality (OECD, 2020, pp.6-7).

In the administration of justice, this would not only be a risk due to job losses, but also the need to strengthen training processes to avoid what Medina (2019, p. 88) has called “digital illiteracy”. Hence, strengthening “digital competencies” is currently proposed as one of the main objec-

tives of judicial training (Area, 2012). This process is based on benefits such as better access, equal treatment, and efficiency of judicial processes (Contini, 2020, p.7), among others directly related to a criterion of quality in the administration of justice, such as judicial diligence from an integral perspective (Restrepo, 2020). Such positions transcend the field of digital technologies and even conceive *artificial intelligence* (AI) as a strategic prospective of the administration of justice.

Some tools that are part of this transformation include rapid voice-to-text conversion and the *digital dossier*, or more complex aspects such as predictive models to determine the probability of recidivism in the crime of a justiciable person or a person with a criminal record (e.g., COMPAS *software*¹). However, such “benefits” are not without certain risks around ethical aspects such as transparency, publicity, and fairness (Larson, Mattu, Kirchner, and Angwin, 2012; Mohamad, Hamin, and Othman, 2019; Restrepo, 2020).

It is these situations that raise questions in two ways: on the one hand, the preparation in *digital competencies* of justice administration servants and, on the other hand, the ethical and pedagogical implications of the inclusion of ICT and AI in training.

III. DIGITAL TRANSITION IN JUDICIAL TRAINING: THE CASE OF COLOMBIA

In Colombia, the adoption of ICTs in judicial practice during the last twenty years has developed in line with updates and advances in training processes for the judiciary. In fact, article 95 of Law 270 of 1996 already proposes the use of technology as a strategic prospective:

- The technology should assist in the practice of evidence, training, preservation and reproduction of files, communication between offices, and a reasonable operation of the information system.
- Documents issued by computer and telematic means shall be valid and effective.
- Computerized processes must guarantee the confidentiality, privacy, and security of data (Congress of the Republic of Colombia, 1996).

In this regard, the Constitutional Court, in Ruling 037 of 1996, stated that the use of these media in courts, tribunals, and judicial corporations requires proper management by officials and individuals who require it. In this sense, it suggests an ethical responsibility regarding the incor-

1 Correctional Offender Management Profiling for Alternative Sanctions.

poration and use of ICTs in the administration of justice, urging, firstly, a decent use by judicial servants, and, secondly, the guarantee of the constitutional right to privacy and confidentiality of personal data (Congress of the Republic of Colombia, 1991, art. 15).

Similarly, the Corporation makes a legal recommendation on the use of ICTs: “(...) it should be noted that the probative value of the documents referred to in the rule under examination must be determined by each code of procedure, that is, by the respective ordinary provisions issued by the legislator” (Constitutional Court, Ruling 037/96). This establishes, both, an ethical and legal control of the use of technology in the administration of justice.

However, these provisions have gone beyond jurisprudence, taking shape through regulations such as the General Procedural Code, which in article 103, paragraph 1, establishes the Digital Justice Plan in order to promote and direct the inclusion of ICTs, including the use of digital files and online litigation (Congress of the Republic, 2012).

More recently, the CSJ has called such assumptions as a “judicial digital transformation” (2020), justified in the adaptation of the administration of justice to rapid social and labor transformations. Indeed, similar to how Contini (2020) warns of a transition from first generation ICT to Artificial Intelligence (AI), Colombia has begun to conceive the inclusion and integration of these “advanced technologies”. However, the Judicial Branch warns that the *transition* is not simply the adoption and use of such technologies, but a change in attitudes and skills. Therefore, it should be:

(...) something that transcends the simple operational use of technology, as we usually know it. It is an evolution of the above and part of really optimizing the way of thinking and functioning of an organization, as well as generating a real benefit to the user, for which the advantages of digital tools and solutions are “leveraged” (CSJ, 2020, p.4).

This implies the intention of opting for a more active role in judicial servers and employees, an issue that puts on the table the problem of *digital competencies*, i.e., a matter that is primarily a matter of training in order to achieve “digital literacy”. In fact, it cannot be assumed that currently all members of the Judicial Branch are “digital natives”, regardless of their age of entry into the career.

A study by Universidad Nacional de Colombia made a first approximation of how judges and magistrates evaluate themselves (Table 1) in the use of *computer tools*, despite the fact that these are only the first generation in the classification made by Contini (2020).

Table 1. Self-assessment in the use of IT tools

Virtual courses	Digital platforms for training	Search in digital catalogs	Efficient search for information on the Internet	Word (Office)	Excel (Office)
Advanced: 18%	Advanced: 16%	Advanced: 18%	Advanced: 36%	Advanced: 16%	Advanced: 7%
Intermediate: 42%	Intermediate: 38%	Intermediate: 42%	Intermediate: 47%	Intermediate: 51%	Intermediate: 30%
Basic: 33%	Basic: 35%	Basic: 33%	Basic: 17%	Basic: 30%	Basic: 54%
Nil: 7%	Nil: 11%	Nil: 7%	Nil: 0%	Nil: 4%	Nil: 9%

Source: Adapted from Escalante (2017a², p.47).

It is observed that the basic and intermediate levels predominate, which, from an empirical point of view, is possible to confirm three years later in the development of the planning, preparation, and validation process of the IX CFJ. In fact, the change in work interactions as a consequence of the Covid-19 pandemic, demanding the use of virtual platforms and digital tools (Redacción Judicial, 2020), showed an asymmetry in the digital competences of the network of trainers. This raises the need for a *re-training (re-skilling)* of human talent in the administration of justice for the adoption of ICT and AI (Mohamad, Hamin & Othman, 2019).

Hence, the strategic prospective of the Judicial Branch makes sense, when conceiving the *transition or digital transformation* not simply as the operational use of computer or *web* tools, but as the adoption of an organizational culture around the use of ICTs. But what does this imply from the training point of view? In this regard, some elements are proposed to define *digital competencies*:

Table 2. Dimensions of digital competence

Instrumental dimensión	To know how to access and search for information in different types of media, technologies, databases or libraries.
Cognitive dimension	To know how to transform information into knowledge (skills of selection, analysis, comparison, application, etc.).
Communicative dimensión	To know how to express and communicate through multiple languages and technological media.
Axiological dimension	To know how to ethically and democratically use information.
Emotional dimension	To know how to enjoy and control emotions in a balanced way with ICTs by developing socially positive behaviors.

Source: Adapted from Area (2012, p.9).

² To date, there is no more updated quantitative data on the network of trainers in the Colombian Judicial Branch.

Poblet and Teodoro (2012) consider technological integration in the administration of justice as an important part of the agenda for training strategies within judicial schools. In this sense, it is considered that judicial training can contribute in both ways: while it is an increasingly important modality in the selection of judicial officials and employees, when it is developed from technological resources and *b-learning* modality, it allows to comply with training plans, and, therefore, with the necessary retraining for the transition to digital technologies in judicial practice (CSJ, 2019).

IV. PEDAGOGICAL STRATEGIES

In Colombia, the EJRLB has developed a process of adoption of ICTs in both *initial* and *continuing education*. As a result of this transition, and due to the need for flexibility in the training processes with adults and professionals, in recent years courses have been developed in blended or *b-learning* mode (CSJ, 2016; 2019).

In fact, the Pedagogical Agreement of the Sixth Competition Course refers to a campus and a virtual classroom as spaces to develop pedagogical mediations in the training of future judges and magistrates (CSJ, 2013). However, just as technology in the administration of justice has had several phases (Contini, 2020), in the previous Colombian Judicial Branch *competitive courses*, the design of campuses and virtual classrooms had basic formats, such as a web page with academic material hosted in PDF format; *banners*, hyperlinks, and intuitive interfaces for users. Therefore, although the idea of blended learning has been conceived for several years, it has required several updates in order to meet the requirements of the *b-learning* modality. Its technical specifications were improved in the VII Merit Competition Course of the Colombian Judicial Branch (CSJ, 2016), and optimized through the training and instructional design of the IX CFJI (EJRLB and UTFJ 2019, 2020).

For example, the VII Initial Judicial Training Course (CSJ, 2016) used the *LearnMate 5* platform, provided and managed by the UNAD (National Open and Distance University). Its implementation allowed trainees to interact with a user interface with access to simulation activities of each evaluation, consultation of materials, and internship through a first version of the *virtual court*. Similarly, the platform provided a dashboard for lifelong learning; the delivery of academic material and the availability of data to track participants (CITCO S.A.S., 2020).

With the logistical and coverage needs that led to continue implementing the *b-learning* modality, it is in the preparation phase of the IX CFJI that both, EJRLB and UTFJ 2019, optimized the training (curricular) and instructional design, by means of pedagogical scripts and production of interactive didactic content. Among these advances, the change from the *LearnMate 5 LMS*

platform³ 5 to the *Territorium* platform, which is currently used by SENA (National Learning Service), can be observed. This resource (Table 3), according to the UTFJ 2019 technical specifications, provides added value for the teaching-learning process.

Table 3. Features of the “Territorium” platform for the IX Initial Judicial Training Course

Feature	Description
Security	<ul style="list-style-type: none"> - Allows for secure connections, guaranteeing authenticity in the handling of information. - The information is proprietary to EJRLB. - Information from learning activities generates accurate and comprehensive reports. - The preservation of original data prevents manipulation of the data.
Online and offline access	<ul style="list-style-type: none"> - Allow the student to consult the academic material of the courses in online and offline mode (for mobile devices).
Tools for different users	<ul style="list-style-type: none"> - Consumer adaptive instructional design tools for the visually and/or hearing impaired. - Authoring toolkit integrated to the LMS, allowing EJRLB trainers and tutors to produce interactive content, perform collaborative management, and update. - Automated alerts for workshops, evaluations, course completion, and other activities via email and push to the mobile app. - Recommendation of activities and/or reinforcement content. - Satisfaction surveys.
Responsive web design	<ul style="list-style-type: none"> - Agile and intuitive so that the user can access from any browser or fixed or mobile device (with any operating system) with internet access.
Reporting, monitoring and facial recognition system	<ul style="list-style-type: none"> - Monitoring and progress graphs. - User connection statistics. - Possibility to create customizable and parameterized reports with relevant information for the EJRLB. - Detail of consumption and individual performance by course. - Attendance. - Formative and summative evaluations. - Facial recognition system, - Have the ability to manage “hashtags” in publications to follow up on topics.

Source: Adapted from UTFJ 2019 (2019, pp.24-26).

Other improvements in the IX CFJI involve optimizing the leading role of its network of trainers. Indeed, it was proposed that judges, magistrates, and thematic experts participate in the creation of didactic contents that have been successfully implemented in some judicial schools in Ibero-America, such as *informative video capsules* (RIAIEJ, 2017). Similarly, work was done to improve the *virtual courtroom*, the purpose of which is to provide a simulation context for judicial practices as an *internship*. In this, the students of the IX CFJI will be able to develop a Problem Based Learning (PBL) experience through virtual means (EJRLB and UTFJ 2019, 2020). These are very important aspects in terms of accessibility and equity, given that, in Colombia, compared to

3 Learning Management System.

countries such as Chile, Spain or France, it is necessary to respond to a greater coverage in terms of number of participants and applicants in this type of calls (Escalante, 2017a, p.13).

Thus, both EJRLB and its consulting teams, in the same measure that they develop a two-way optimization process: both pedagogical and technological, are aware that the transition towards the appropriate and widespread use of ICT in judicial training and practice, must be accompanied by constant retraining and pedagogical mediation in order to achieve the recommended digital literacy (OECD, 2019; Area, 2012; Poblet and Teodoro, 2012; Contini, 2020).

Also noteworthy in this work is the implementation, in 2020, by the EJRLB, of eight (8) virtual diploma programs for judicial practice. The programs were based not only on areas of jurisdictional interest, but also on the development of pedagogical competencies. This activity was strategic, since it aimed at two purposes: on the one hand, the appropriation of the use of ICTs in continuing judicial training, and on the other, the retraining in pedagogy of judges and magistrates who will be part of the network of trainers in IX CFJL. One of the achievements of this digital transition was the coverage and flexibility of access to the courses, as evidenced by the number of people under training. In the first cohort, a total of 2,572 students were covered, and, in the second, 1,006 (EJRLB, 2020, pp.18-19).

Therefore, it could be considered that, in Colombia, the transition towards the adoption of ICTs has been progressive, as intended by the CSJ (2019, p.6). This has allowed judges and magistrates to have a staggered process of skills development, since in order to be trainers and even teachers, it has been essential to appropriate and assimilate digital skills, not only in the training aspects, but also in the jurisdictional work itself.

V. BENEFITS

At this point, it is necessary to differentiate two aspects within the same problem line. *Firstly*, there is *computer law*, i.e., that which regulates everything related to digital technologies within tax investigation and the problems of different jurisdictions, especially civil. And, *secondly*, the application of ICT and AI in the administration of justice. Within this second aspect, it is important to take into account the initiatives that the CSJ has developed, which date back almost to the last twenty years, when the *Justice XXI System* was implemented in its first version, updated in 2015 after its evolution to a “web environment”:

Its functionality allows for the distribution, registration of the judicial process, proceedings, and sentences in the judicial offices, electronic signature. Its implementation has been gradual, as some incidents have been overcome and adjustments have been made. Currently, about a thousand judicial offices implement the system in its web version (CSJ, 2020, pp.11-12).

Similarly, related to the *Justice XXI System*, the Council of State has been implementing the SI-GED and SAMAI systems, with different functionalities such as electronic signature, internal management of the offices, and integration with collaborative tools, among other options. These internal and external management systems have also been incorporated by the Constitutional Court, in order to provide public access to the proceedings and the status of constitutional processes (CSJ, 2020, pp.12-13). For its part, the latter corporation has adopted the *digital tutela*, a tool that optimizes the management and communication between instance offices and the Constitutional Court.

Other initiatives have been the implementation of tools such as *Business Intelligence* for the analysis and virtualization of data and statistics (CSJ, 2020, p.14), and the implementation of the *judicial file through the Model of Requirements for the Management of Electronic Documents* (MOREQ). Its function is basically to standardize the electronic document management of the Judicial Branch (CSJ, 2020, p.15), and the implementation at the macro level of the Integrated Judicial Management System (SIUGJ), with a modern electronic document management system, including “(...) process management and digital services, with conditions of security, openness or interoperability, authenticity, etc.” (CSJ, 2020, p.20).

Beyond these technological tools, the arrival of *artificial intelligence* (AI) is inevitable as a subsequent phase to the use of first-generation computer and digital resources, an issue that also emerged in the studies by Contini (2020) and Mohamad et al. (2019). This new phase within the digital transition would allow, as in the case of the *prototypes for data analysis* (Pretoria) in the Constitutional Court:

(...) solve some specific needs associated with the selection process of judicial protection actions (*tutelas*), automate certain procedures, and standardize the production of documents, enhance the data associated with this judicial process, in order to promote legal certainty, transparency and generate value-added information for the promotion of public policies. (CSJ, 2020, p.17).

In short, the benefits of the digital transition are enormous both in training and in judicial practice, among which it is possible to summarize:

- Greater agility and reliability in all types of administrative and training processes within the administration of justice.
- Flexibility and possibilities of access and coverage greater than in traditional face-to-face learning strategies.

- Navigation alternatives and sequencing of learning, according to the multiple alternatives offered by digital platforms.
- Access to a greater number of sources (theoretical and practical), both for applied research and for the construction of doctrinal knowledge.

However, these benefits would not be so clear if the training processes did not have a fundamental relationship with judicial practice. Indeed, as can be inferred from the above, “landing” in the digital transformation within the administration of justice would be an abrupt (and even failed) process if there were not a structural and strategic connection in the different executive and jurisdictional instances of the Judicial Branch, with the EJRLB and the competitive courses, since it is already necessary to develop *digital competencies* from the selection of judges and magistrates.

VI. CHALLENGES

As may have been noted by now, the first challenge is the *digital literacy* of judicial servants and employees. Although in recent years there has been significant progress in this direction, as shown by the self-assessment of judges and magistrates, satisfactory, in terms of the use of computer tools (Table 1), it is important to close the digital divide in the judiciary, addressing, in terms of equity, two fundamental aspects that have not yet been sufficiently examined: the digital divide in judicial servants by age and by region.

Regarding age differences, contrary, for example, to countries such as Spain or France, where certain ages (between 26 and 30 years old) are set for access to the initial stages of selection of judges (Escalante, 2017b, p.13), in Colombia, so far, neither the law nor the CSJ guidelines set an age limit for application. Hence, according to a study conducted by Universidad Nacional de Colombia (Escalante, 2017a; 2017b), where it was shown that in recent years the age to access the highest positions in the judiciary was increasing in Colombia (Table 4), the problem of digital competencies as an integral aspect of the judiciary should be taken as a first order concern, in the sense of leveling for functional practice.

Table 4. Age of judges and magistrates of the Republic

Between 46 and 60 years of age	53%
Between 36 and 45 years of age	32%
Between 26 and 35 years of age	13%
Over 60 years old	3%

Source: Adapted from Escalante (2017a, p.32).

Thus, achieving digital literacy for all members of the Judicial Branch should be an objective, not only in terms of quality, but also in terms of equity, since the executive and operational initiatives that account for progress in digital transformation would remain halfway if there is no systemic conception of appropriation and efficient use of ICT and AI. This implies the question of the socioeconomic gaps between the regions of the country, whose structural inequality is recognized, especially in education (García et al., 2013).

Certainly, the self-assessment of judges and magistrates regarding their skills in accessing virtual courses (Table 5) shows that in Colombia it is not possible to generalize the achievements in terms of *digital competencies*. Until this gap is closed with greater strategic investments in education, connectivity, and technological appropriation in all regions of the country, it is possible that inequalities remain among the same applicants and contestants of the Judicial Branch, which could affect in the medium and short term the performance of the administration of justice in terms of equal opportunities and equity.

Table 5. Ability of judges and magistrates to access virtual courses by region

Amazon Zone	Andean Zone	Caribbean Zone	Orinoco Zone	Pacific Zone
Advanced: 11%	Advanced: 20%	Advanced: 16%	Advanced: 22%	Advanced: 12%
Intermediate: 22%	Intermediate: 41%	Intermediate: 48%	Intermediate: 39%	Intermediate: 46%
Basic: 56%	Basic: 31%	Basic: 28%	Basic: 39%	Basic: 38%
Nil: 11%	Nil: 8%	Nil: 8%	-	Nil: 4%

Source: Adapted from Escalante (2017a, p.49).

Although the gaps do not seem to be very wide when comparing regions, differences in the *advanced level of 9, 8, and 4 percentage points* between the Andean headquarters and other regions such as the Amazon, Caribbean, and Chocó, could indicate -together with the differences in connectivity- academic results inherent to these deficiencies, and, therefore, asymmetries in the academic performance of those who participate in both initial and continuing judicial training. In this sense, the concern is not simply one of equity, but of comprehensive and quality coverage of the administration of justice.

Despite the fact that there are several studies arguing for the inclusion of ICT and AI in the training of the administration of justice (Area, 2012; Poblet and Teodoro, 2012; Contini, 2020; Mohamad et al., 2019), there seems to be an ambivalence about whether achieving the best judges and magistrates can be done by virtual or face-to-face (traditional) means. This was evident not only from the debates raised among the consulting teams of the UTFJ 2019, the EJRLB and the network of trainers, but also from the same unknowns generated by the need to design and

program pedagogical activities in the virtual modality, in effective response to specific competencies (UTFJ 2019, 2020).

Now, if the aforementioned data shows the need for strategic foresight in the structural achievement of a transition to digital technologies, some of the mentioned benefits intersect with concerns such as the loss of autonomy in the judge's decision-making power. However, more than traditional ICTs, it is AI that poses a serious challenge to issues such as the objectivity of judges in their decision-making powers. This concern is justified to the extent that *software* such as COMPAS, programmed with complex logarithmic formulas to predict recidivism of a crime, could often incur failures of transparency, and, more seriously, possible racial bias and discrimination (Larson et al., 2016; Contini, 2020, p.13).

Some people might reasonably criticize that the development of this transition in the administration of justice delegates a great deal of institutional responsibility to the level of predictability and efficiency with which the computer system performs tasks that were previously the exclusive competence of human actors. However, it is perhaps erroneous to think that the work performed by judicial servers and employees can be completely replaced by *hardware* or *software* devices. Rather, what should be considered from both an educational and functional perspective is how to make the digital transition a means and not an end. That is, a resource to improve the capabilities of the administration of justice and not to replace them.

With this, the ethical problem of the adoption of ICT and AI in jurisdictional work arises once again, especially in cases where social circumstances do not allow for a completely progressive and homogeneous transition towards the development of digital competencies. In fact, in Colombia, an analysis of these problems should be developed in the context of its cultural diversity and basic educational asymmetries, especially when other countries are already implementing advanced systems that pose serious challenges to impartiality, publicity or judicial transparency (Contini, 2020, p.14).

This type of questioning arises in the context of the question of the boundary between the jurisdictional competence that can only be performed by a person who meets the profile of a judge (Gómez, 2001), and that set of activities that can be (optimally) supported by means of ICT and AI. It is reasonable, then, to think that this compromises the field of initial judicial training from the basis of its formative design and ethical criteria, since the fact of training in specific competencies through *e-learning* and *b-learning* modalities, rather than implying a "relaxation" of the level of commitment to the judge's profile, should lead to a strengthening of his or her suitability (now including digital literacy).

VII. PROPOSALS (BY WAY OF CONCLUSION)

The elements analyzed so far allow inferring not only the *problems* from a theoretical point of view, but also possible solutions to the tensions between the benefits and challenges of the digital transition in accordance with the proposed *problem line* (Figure 1). Evaluating the *problems* in this way implies a practical mode of analysis that starts (as has been explained throughout the text) from the experience in the design and execution of the IX CFJJ.

Therefore, these conclusions, more than reflective *feedback on the proposals* of the article, allow, in the first place, to establish the importance of increasing and qualifying research for decision-making, emphasizing the pedagogical and ethical scope of the transition to digital technologies in the administration of justice. Although this type of evaluations has already been recently suggested at the administrative level by the CSJ (2019, 2020), they require henceforth to be focused on the aspects of training and judicial ethics. Specifically, such investigative bets should review the following *issues* from an inter and transdisciplinary perspective:

- Feasibility and pedagogical convenience of the virtual modality with trends in initial and continuing judicial training: Problem Based Learning (PBL), case analysis, simulations, and role-playing games, among others.
- Curricular aspects of virtual and blended modalities: What impact do they have on the general and specific competencies of the contemporary judge?
- Conformity between the training and instructional design through virtual and blended modalities, with the evaluation of satisfaction and impact on the institutional results of the administration of justice.
- Ethical and pedagogical implications of adopting ICT and AI in judicial training and practice.

The investigative approach to these problems for decision-making, although it is part of a specialized training component such as initial and continuing judicial training, should begin to be implemented in an inter-institutional manner. This implies the participation not only of the judicial school, but also of universities with undergraduate degrees in law, and of institutes of legal thought that address specific and complex aspects of the political system and the administration of justice.

However, it is important that the CSJ, the EJRLB, and the consulting teams, by means of reports and progress in the area of technological appropriation in judicial training, be the ones to set the course from the point of view of the specific competencies of judges and magistrates. This

should constitute a solid system of institutional self-evaluation, in accordance with the legal system and the democratic goals of access to justice for all persons without discrimination of any kind.

This implies that it cannot simply be a public policy in technological or economic matters, or the functional evolution itself, that leads courts, tribunals or corporations to adopt technology in their work. On the contrary, it must be the strategic foresight in training and retraining that sets the course for this evolution, safeguarding the purposes and ethical principles that must be guaranteed in these transitions. The results of this research-guided self-assessment should even set the course for the decisions to be taken in the new proposals for the total adoption of virtuality for the administration of justice, as is already being announced in Colombia.

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