

FORENSIC SCIENCE INTEGRATION IN LEGAL EDUCATION: A PARADIGM SHIFT FOR STRENGTHENING LEGAL EXPERTISE IN PAKISTAN

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Abstract: The objective and scientific interpretation of evidence provided by forensic science is a crucial component of the contemporary judicial system. In Pakistan, forensic science education is not a part of the required curriculum for obtaining a Bachelor of Law (LL.B.) degree. Lawyer's knowledge of the scope and limits of forensic research is hindered by the absence of a thorough forensic science component within law school. This, in turn, may obstruct the proper use of forensics in court procedures, which can slow down the distribution of justice. Forensic science education offers numerous benefits, including a holistic understanding of law and forensic science, interdisciplinary skills development, enhanced collaboration between lawyers and experts, and the development of specialized lawyers for handling complex cases. Law students may benefit from a deeper grasp of the scientific processes involved in criminal investigation, evidence collecting, preservation, analysis, and presentation by taking forensic science courses. Future lawyers will benefit from this understanding while trying cases, challenging expert testimony, and arguing on behalf of their clients. This article addresses the advantages, problems, and possible tactics for integrating forensic science into the LL.B. curriculum in Pakistan.

Keywords: Forensic Science; Legal Education; Curriculum; Pakistan.

1. Introduction

Although law and forensic science are separate disciplines, they work together in a sophisticated way that is crucial to ensuring justice in any community. The need for a thorough knowledge of scientific concepts within a legal framework is becoming more and more obvious as legal systems develop to address the complexity of contemporary life (Lucina, 2021). Since the legal environment is intricately entwined with complicated socio-cultural subtleties and a rising demand for efficient

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and fair administration of justice, this paper explores the crucial incorporation of forensic science education within the LL.B. curriculum in Pakistan.

Forensic science, or the use of scientific approaches to address legal issues, has significantly impacted judicial systems and criminal investigations worldwide. Forensic science aids attorneys in uncovering the truth, establishing guilt, and ensuring a fair trial via the methodical investigation of physical evidence (Delia, 2022). However, it is crucial that lawyers have a firm grasp of the science underpinning forensic evidence if they are going to utilize it effectively in court. In countries like Pakistan, where the judicial systems confront huge backlogs, corruption cases, and uneven degrees of access to justice, this integration is even more crucial.

The LL.B. program provides the foundational education for future lawyers in Pakistan (Ali, 2022). This course of study has historically emphasized the study of substantive and procedural law, providing students with a firm grounding in the fundamentals of law. However, a paradigm change in legal education is necessary due to the quicker rate of technical innovation and the increased complexity of criminal behavior. Including forensic science courses in the LL.B. curriculum may help close the knowledge gap between the two fields, resulting in lawyers and judges who are also well-versed in the analysis and presentation of scientific evidence.

By engaging in forensic science and legal education, the legal community gains a greater ability to address modern challenges, providing more information and a more technical approach to solving legal problems. This symbiotic relationship between forensic science and law school not only makes the training of lawyers more desirable but also guarantees a strong and flexible legal system (Rowan, 2023). It is necessary to establish and promote better relations between experts in the field of forensic science, law schools, lawyers and experts. The results of all legal developments must be communicated directly to lawyers and experts (including litigation, prosecutors and criminal lawyers), federal, state and local legislators, and law enforcement officials so that appropriate corrections are made to criminal and civil law and procedure. enforcement practices, litigation and court decision-making. The best way to equip lawyers and judges is for law schools to offer better forensic science courses in their curriculum.

This article examines the pros, cons, and possible solutions of incorporating forensic science within the LL.B. program in Pakistan. It will investigate how this fusion might help lawyers more skillfully traverse the dynamic contemporary criminal justice system and provide reliable and impartial rulings. The integration of forensic science into the LL.B. curriculum will appear as a crucial step toward enhancing the quality and efficiency of legal practice in Pakistan as the domains of law and science continue to interact with greater regularity. The foundations of democracy and the

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rule of law are strengthened when lawyers are given the tools they need to appreciate and apply scientific evidence in their cases.

2. Forensic Science and Law

Forensic science and law go hand in hand in today's criminal justice system. Using scientific techniques and ideas to address legal issues, such as by investigating crimes and presenting evidence in court, is known as forensic science (Roberts, 2015). This interdisciplinary field draws from the scientific disciplines of biology, chemistry, physics, and others to give objective, empirical data in support of the legal system.

In the realm of criminal investigation, forensic science is a useful instrument for getting to the bottom of things. It aids in the collection, analysis, and interpretation of physical evidence at crime scenes, which may lead to the identification of suspects, confirmation of witness testimony, or extortion of innocent individuals. Criminal cases are investigated and resolved with much more efficiency because of developments in DNA testing, fingerprinting, ballistics, and digital forensics (Shipra & Indu, 2023). Appropriate data collecting and exhaustive research in specialized labs allow for evidence-based arguments to be presented.

The connection between forensics and law is quite helpful. The court often employs investigation evidence to show the truth and make unbiased conclusions (Elénore, Hannes, Eoghan, 2020). The prosecution must provide the scientific weight required to fulfill the "guilty beyond a reasonable doubt" threshold in many forensic disciplines, which is the standard used to determine guilt. Expert witnesses in the courtroom serve as a bridge between the technical and legal spheres, elucidating complex scientific ideas to the bench. By assisting courts and lawyers in interpreting the significance and credibility of the evidence presented, they serve a crucial role in ensuring that justice is delivered based on objective information and facts.

Forensic science has much to offer the legal system, but there are numerous obstacles to overcome. It is really concerning that there is room for mistakes in the analysis and interpretation of the evidence (Swofford & Champod, 2022). Questionable investigation tactics have been related to several incidents of wrongful prosecution or the failure to charge. To guarantee the accuracy and reliability of their work, legal professionals need rigorous quality control systems, established processes, and continual training. Courts also need to make an effort to learn about and embrace new technology like digital identification and biometrics, which increase the process's complexity.

As it has become more specialized, legal science has risen to prominence in the legal system, even in individual cases. It has now found widespread use in fields such as civil litigation, disaster victim identification, and historical studies. After a natural

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catastrophe or humanitarian crisis, forensic scientists may help identify victim's bodies and provide closure to bereaved families. In addition, the use of forensic methods in archaeology and anthropology has helped uncover previously unknown historical realities and shed light on events that may have implications for the law today (Dirkmaat & Cabo, 2016).

The intersection of forensic science and the legal system necessitates careful examination of ethical questions (Yadav, 2017). Honesty and fairness are necessary restraints on one's pursuit of justice. Individuals' rights, including the right to privacy and the right to be free from discrimination, must be taken into account if forensics are used. Finding a middle ground between forensic science's investigative potential and the safeguarding of individual rights is an ongoing issue for the scientific and legal community.

The pursuit of justice is inextricably intertwined with forensic science and the legal system. In criminal investigations, forensic techniques are crucial because they may assist in establishing facts and demonstrate guilt or innocence. The modern legal environment has been shaped in large part by the interplay of various disciplines, notwithstanding the persistence of obstacles like human mistakes and ethical constraints (Young, 2022). To achieve their shared objective of preserving truth, fairness, and justice in society, forensic science and law are expected to become more intertwined as technology develops and public comprehension of science grows.

3. Crucial Role of Forensic Science Education in Law Schools

The objective is not to help future lawyers and law students become specialists in the law. The objective is to provide students with enough grounding in the scientific method so they can assess common forensic issues. This paves the way for them to consult forensics and experts as they build and present their cases. In addition, both lawyers and judges often lack the necessary background in scientific technique, making it difficult for them to comprehend the methods used by other branches of law and the validity of the evidence given in court (Canela, Buadze, Dube, Jackowski, Pude, Nellen, Signorini & Liebreznz, 2019). Since the criteria for acceptable scientific or technical evidence is incomplete, training of this kind is essential. The testimony may be more credible if certain conditions are met, but this is by no means a certainty. Relationships between forensic medical professionals and legal departments, lawyers, and experts must be fostered and improved (Robert Sanger, 2019).

If we want to see the fruits of forensic science reflected in updated criminal and civil law, we need to get the word out to lawyers and experts (including litigation, prosecutors, and criminal defense attorneys), as well as federal, state, and local legislatures, courts, law enforcement, judicial process, police methods. Offering courses in forensic science, allowing students to get credit for forensic science

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courses done at other institutions, and creating cooperative programs are all ways in which law schools may strengthen ties to the scientific community. Also, judges need more education and experience in forensic science (National Research Council, 2009).

4. LL.B. Curriculum in Pakistan

Pakistan's legal education system is under the purview of the Pakistan Bar Council (PBC) and the Higher Education Commission (HEC). The PBC is the leading organization of lawyers in the country, with members elected in accordance with the Legal Practitioners and Bar Councils Act (The Legal Practitioners and Bar Council Act, 1973). The PBC organizes educational institutions and professional bar associations to improve the quality of legal education in Pakistan. It is authorized to investigate the state of legal education in Pakistani universities (The Legal Practitioners and Bar Council Act, 1973). The Legal Education Committee of the Pakistan Bar Council was established with a specific purpose and was responsible for the implementation of the PBC Legal Education Rules, 1978. These rules address issues such as the number of students enrolled in the LLB program, the duration of the LLB program, and the qualifications of the teachers teaching the LLB program, among others. Eligibility of teachers teaching in the Faculty of Law, availability of libraries, minimum passing marks for LLB examination and a minimum number of teachers teaching in the Faculty of Law, library, examination pass percentage criterion, complete participation of Pakistan Bar Council in Board of Studies, Faculty of Law, Board of Governors, and other governing organizations formed to supervise law institutions. Then, PBC drew up the affiliation of Law College Rules to ensure that all private and public law schools in the country adhered to the same standards when it came to establishing affiliations with universities. This was done in an effort to raise the bar for legal education overall.

However, in 2002, the federal government of Pakistan formed the Higher Education Commission to advance higher education in the country via the enhancement of its quality and standards, research, and development (Higher Education Commission Ordinance, 2002). In addition to regulating public university funding, it seeks to raise overall educational quality and standards in Pakistan's public and private university systems. The Higher Education Commission, however, was decentralized and gave control to the provinces as part of the 18th Constitutional Amendment (The Constitution Eighteenth Amendment Act, 2010). Yet, only Punjab (The Punjab Higher Education Commission Act, 2015) and Sindh (The Sindh Higher Education Commission Act, 2013) Provinces have promulgated legislation on the matter. As a result, the federation continues to have unfettered authority over legal education throughout the nation. It is surprising, however, that a standard procedure is not

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followed everywhere throughout the nation. In an effort to provide a more well-rounded legal education, the Pakistan Bar Council (PBC) has implemented a five-year LLB curriculum in place of the previous three-year LLB program. With reference to the PBC Education Regulations 2015, the PBC will be in charge of coordinating the program's implementation. Students with a minimum post-graduate degree and on the basis of merit may now apply to a five-year LLB program (Pakistan Bar Council Legal Education Rules, 2015).

Curriculum, learning goals, and learning outcomes for the five-year LL.B. program were developed by the National Legal University Project with input from academics and legal faculties around the nation and were subsequently authorized by the Higher Education Commission (HEC) and Pakistan Bar Council (HEC Report on Curriculum of Law for 5 Years LLB Program, 2011). To better align with worldwide education standards and to address national, economic, political, and social challenges, HEC considerably changed this curriculum in 2015 (HEC Report on Curriculum of LLB, 2015). The LL.B. curriculum requires 166 credit hours to be completed over the course of five years, with each semester lasting between 15 and 18 weeks. Therefore, the course load is 15-18 credits every semester, and the number of courses is 5-8. The curriculum consists of 10 compulsory courses for a total of 28 credits, 8 general and non-law courses for a total of 24 credits, and 34 law-specific and major courses for a total of 102 credits, as well as research projects, dissertations and internships. Foundation/ basic courses, such as Introduction to Sociology, Principles of Political Science, Introduction to Logic and Reasoning, and Introduction to Psychology, are taught in the first two years of the five-year LL.B. degree, whereas required legal courses are often given in the last three years. The goals of this course of study are to enhance student's abilities and to widen their understanding of the political, economic, and social context in which the legal system functions (LLB 5 Years Curriculum, 2011).

In addition, private institutions with affiliations to the University of London offer LLB programs that may be completed in three years via a combination of on-campus and remote study. Students in these schools are expected to study on their own time using the textbooks and online resources provided for them. They also provide lectures on a variety of subjects to help students out. Before beginning this activity, any institution offering an external/distance learning LLB program must be approved by the university and get NOC from the Pakistan Bar Council. Under the Pakistan Bar Council Legal Education Rules, 2015, the PBC is also responsible for monitoring these law schools and may remove any professors who fail to follow the rules (Legal Education Rules, 2015).

5. Need for Integration of Forensic Science in LL.B. Curriculum

While the LL.B. curriculum covers a wide range of legal topics, forensic science is noticeably absent. The absence of forensic science in the LL.B. curriculum is a major bottleneck that slows down the administration of justice in the nation. The contributions of forensic scientists to the investigation, prosecution, and defense of criminal cases are crucial to our judicial system. Not only does leaving it off the LL.B. curriculum deprive aspiring attorneys of important information, but it also reduces the likelihood of a fair and efficient trial. To guarantee a level playing field in the courtroom and safeguard the rights of victims and suspects alike, it is crucial that this evidence be collected, preserved, and analyzed correctly. Removing Forensic Science from the LL.B. curriculum may leave future attorneys unable to present or refute evidence in court because they lack a foundational grasp of the ideas behind these scientific approaches.

In addition, the gap in legal training suggests that lawyers and subject matter experts are intertwined. The intricacy of the evidence may be too much for lawyers and judges who are not familiar with forensic science. Because of this information gap, justice may be thwarted because of faulty interpretations or careless treatment of evidence. The best decisions may be made in criminal cases when attorneys and forensic scientists work together. Forensic Science education as part of the LL.B. program would help students better communicate with and represent their clients in front of experts.

Overall, the criminal justice system in Pakistan would benefit from forensic science being taught to LL.B. students. A more informed legal community would simplify processes, lessen room for error, and boost faith in judicial rulings. Since attorneys would thus be able to evaluate the legitimacy of forensic investigations and their procedures, it would also lead to more openness and accountability. In turn, this would safeguard the rights of all parties concerned by preventing the exploitation or manipulation of such evidence.

In order to fill this knowledge deficit, LL.B. degree-granting universities in Pakistan should think about including forensic science in their curricula. Case studies illustrating the influence of forensic research on legal results, as well as discussions of the fundamental principles of different branches of the law and the correct treatment of evidence might all fall under this umbrella. In addition, collaborations between forensic science programs and law schools may provide students with practical experience in both fields.

Finally, it is worth noting that the lack of Forensic Science in the LL.B. curriculum in Pakistan is a serious shortcoming with far-reaching consequences for the administration of law and the search for justice. The legal profession is ill-equipped to properly traverse the complexity of contemporary criminal justice because it does

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not teach future attorneys the information and abilities connected with forensic analysis. This divide must be closed by joint efforts between schools and law enforcement. Incorporating forensic science into the LL.B. program would improve not just the legal profession but also the criminal justice system.

6. Challenges and Hurdles in Integrating Forensic Science into LL.B. Curriculum

Adding forensic science to the Bachelor of Laws (LL.B.) program in Pakistan is crucial if the country is to develop a modern legal education system. However, there are a number of complications that make this integration difficult to achieve. A major obstacle is the country's entrenched, outdated system of legal education. Pakistan's LL.B. program has traditionally only covered the more theoretical areas of law, such as legal principles, case law, and laws. Forensic science's incorporation calls for a paradigm change to a multidisciplinary approach, which goes against the grain and may be met with resistance by traditionalists who prefer the existing quo.

One of the biggest obstacles to incorporating forensic science into the LL.B. curriculum is a lack of funding. Large sums of money are needed to acquire and keep up-to-date cutting-edge forensic labs, technology, and equipment. Allocating cash for such infrastructure renovations might be challenging for many educational institutions in Pakistan due to present financial restrictions. The expense of preparing educators to convey legal ideas and methods to their students is also not to be discounted. In addition to slowing progress toward an inclusive curriculum, these financial implications might discourage institutions from readily adopting this shift. The shortage of trained educators with expertise in the fields of law and forensic science also presents a significant challenge. A thorough familiarity with scientific theory and practice is essential for success in the area of forensic science. It might be difficult to locate lecturers who are well-versed in both law and forensic science. However, there is still a barrier to providing these students with a well-rounded education, even once they have been recognized. The objective of incorporating forensic science into the LL.B. curriculum may be undermined by a lack of skilled faculty, which can lead to ineffective instruction and ultimately worse educational quality.

The department's problems and the lack of adequate study materials and resources are inextricably connected. Because of rapid developments in both technology and scientific understanding, forensic science is an ever-evolving discipline. Course materials that are either out of date or insufficient might have a negative impact on students' ability to learn the topic and provide them with the skills they will need to succeed in the real world. In the first phases of integration, resources may not be easily accessible to devote to developing and maintaining up-to-date resources.

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Another barrier to incorporating forensic science into the LL.B. curriculum is the unwillingness of the legal community to change. Pakistan's lawyers, judges, and advocates have always adhered to a framework that places a premium on long-standing legal standards. By bringing scientific data and techniques that may be foreign to many lawyers, forensic science has the potential to question some of these standards. The acceptance of this interdisciplinary approach may be stymied by resistance to change, fear of the unknown, and worries about how forensics may impact judicial results.

The complexity of incorporating forensic science into the LL.B. curriculum is exacerbated by the social and cultural setting in Pakistan. In the court system, long-held social, cultural, and religious beliefs often come into play. Forensic science sometimes necessitates resolving tensions between long-held beliefs and modern scientific understanding. Integration of forensic science might potentially alienate some groups within society or raise moral questions if this fine line is not well handled.

After all, even if forensic science enrolment in the LL.B. curriculum has great potential to improve legal education and encourage students to see the law in context, but it also faces significant challenges as stated above. For these obstacles to be overcome, educators, lawyers, and legislators must work together because they see the value in producing lawyers who understand both the law and forensic science. Only by collaboration and consistent work can these hurdles be overcome and pave the path for a more inclusive and progressive system of legal education in Pakistan.

7. Advantages of Integrating Forensic Science into LL.B. Curriculum

The legal and academic communities in Pakistan stand to benefit greatly from forensic science's inclusion in the LL.B. curriculum. The disciplines of law enforcement, judicial administration, and legal education may all benefit from a more strategic partnership among them. Modern legal practice relies heavily on forensic science, a field that blends scientific concepts with legal practice to provide evidence-based analysis, uncover the truth, and guarantee a fair and just judicial system.

To begin, law student's capacity for analysis and investigation may be greatly enhanced if forensic science is included in the LL.B. curriculum. Students will benefit from learning the fundamentals of forensic science because they will have a better grasp of how physical evidence is analyzed, connections are drawn between crimes and crime scenes, and crime scenes are reconstructed using scientific methods. Future lawyers may benefit from these abilities as they improve their capacity to analyze evidence, gauge witness's reliability, and cross-examine experts in court. These abilities may help strengthen legal arguments and ensure fair

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decisions, which is especially important in a nation like Pakistan where a correct interpretation of evidence is crucial.

Second, the gap between legal theory and practice may be narrowed by including Forensic Science in the LL.B. program. With this knowledge, students will be better equipped to deal with challenges requiring forensic scientific techniques such as DNA testing, fingerprinting, and computer forensics. To ensure that the legal process is founded on both legal principles and scientific rigor, this synergy may produce graduates who are better suited to cope with legal problems across the globe. In addition, it may facilitate communication and collaboration among specialists from different fields of law and justice, leading to a more comprehensive approach to both academic study and judicial practice.

In addition, Pakistan's criminal justice system stands to improve with the introduction of forensic science. More false convictions and injustices may be avoided if attorneys are taught to think critically and use scientific methods. Instances when evidence collecting, processing, or analysis deviates from established procedure, raising issues about the reliability of evidence presented in court, may be identified by attorneys with expertise in forensic methods. The criminal justice system may become more open, accountable, and fact-checked as a result of this.

Integrating forensic science also boosts public faith in the justice system. The public has more faith in the justice system when they see serious scientific inquiry being applied to criminal cases. Maintaining the rule of law, ensuring compliance with court rulings, and fostering a feeling of security in society all need this level of confidence. Pakistan may make significant progress in modernizing its legal system in accordance with international norms by training law students with the ability to properly explain and analyze forensic evidence.

Adding forensic science to the LL.B. curriculum has the potential to promote academic inquiry and technological development in the realms of law and science. Students who devote themselves to learning about forensic science and technology may help fill in knowledge gaps, provide new ideas for improving the field, and ultimately advance it. This research-based strategy has the potential to enhance Pakistan's research capability by fostering the growth of indigenous legal practices that are tailored to the country's specific legal and social circumstances.

Finally, there are several advantages outside the classroom that may be gained by including forensic science in the LL.B. program in Pakistan. The integration of forensic science has the potential to transform the legal landscape of the nation in a number of ways, including the development of analytical and research abilities among law students and the improvement of the accuracy and transparency of the criminal justice system. Pakistan may take strides toward a more just and efficient judicial system by training attorneys to handle scientific evidence and collaborate

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with forensic specialists. Together, we are a reflection of the nation's growing dedication to securing justice, truth, and equality for all of its residents.

8. Designing LL.B. Curriculum Integrating Forensic Science as a Key Component

Students should be exposed to standard forensic science practices in order to have an understanding of the processes involved in forensic investigations, data processing, reporting, and testifying (Claude, Sheila & Celine, 2021). They may understand how the principles of laboratory research can be, and sometimes must be, compromised in the actual world by looking at real-world applications. They get that when a forensic investigator is also helping the police solve a case, it might cloud their judgment and make them less credible in court. They may gain knowledge about biases like loyalty and how they impact performance. Students should be prepared to collaborate with professionals in the legal field in a variety of capacities, including as lawyers and witnesses. Preparing the expert to provide views based on science, trustworthy facts, and their genuine experience and knowledge by introducing the case to them, giving them access to the raw data, preventing contamination that may induce bias, and giving them time to think through their thoughts (Resnik & Elliott, 2016). The. Last but not least, make sure the viewpoints are presented in the same way a genuine scientist would, without any room for debate, conjecture, or exaggeration.

However, if the evidence does not adhere to scientific standards, it should not be presented (and should be contested if presented) in court. In this respect, students should be taught the most recent versions of the best practices in forensic science as published by industry experts. Legal and procedural methods of presenting and challenging forensic evidence must be taught to students. It is important to know how to object to a claim and what kinds of evidence might be used to support one (Martin Enserink, 2016). The students will also need to familiarise themselves with statistics to be ready for any witness evidence involving the frequency and/or probability of a game of chance. This means that a comprehensive analysis of the science and legislation surrounding forensic medicine is necessary. They should be able to interact effectively with legal experts, regardless of whether or not they pursue more forensic science education via electives. In general, they should be able to tell the difference between what is considered acceptable in the scientific community and what is not. A true understanding of how to present a case to the court is essential so that the judge can do his job without being distracted. All law students should take some time to learn the fundamentals of forensics, including how to conduct an investigation, analyze evidence, report findings, and give testimony (O'Brien, Daeid & Black, 2015). That can only happen if teachers have access to

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relevant materials and provide sufficient class time to impart such fundamental knowledge.

The fundamentals of science should also be taught at the undergraduate level so that students may formulate thoughtful inquiries (Stone, 2014). Forensic investigation covers a wide range of topics, and a required course would likely only have time to touch on a few of them briefly before moving on. Uncertainty, hypotheses and testing, error rates, blind and double-blind testing, black box analysis, and the breadth and bounds of proper scientific judgment should all be made clear.

To counter arguments about the admissibility of testimony or the need to restrict it to what is scientifically sound, it is important to educate students on the fundamentals of gathering and presenting evidence to witnesses, offering expert testimony, and holding hearings. The demonstration course or a required clinical training course will need to include activities that put this theoretical knowledge into practice. The goal is to provide students with the background knowledge to identify typical forensic medicine research topics and formulate appropriate questions in the field (Robert Sanger, 2019).

9. Conclusions

The legal and criminal justice systems would benefit greatly from including forensic science within the LL.B. curriculum in Pakistan. Lawyers need a thorough grasp of legal concepts due to the fast growth of legal processes and the increasingly complicated nature of criminal cases. This action is not only in line with current global tendencies but also tackles the unique difficulties in delivering justice in Pakistan. First, the gap between judicial and scientific evidence may be closed by including forensic science in the LL.B. program. Today, forensic scientists use a wide range of scientific techniques, from DNA analysis to computer forensics, to solve crimes. Future lawyers will benefit from training that emphasizes the importance of these methods in order to better comprehend the complexities of evidence collection, preservation, and presentation. The quality of legal reasoning will increase, leading to more equitable rulings. Incorporating forensic science also helps decrease the number of innocent people who are wrongly convicted. Cases of erroneous conclusions drawn from a lack of comprehension of the scientific data have been documented in Pakistan. As a result, the rights of the accused may be better protected and the justice system can be more accurate and dependable if future attorneys are taught the nuances of forensic analysis.

There are a number of obstacles that must be overcome in order to successfully include Forensic Science in the LL.B. curriculum. In order to provide legal students with correct information, law schools need sufficient funding, experienced teachers, and current data. Partnerships with prominent legal institutions may be necessary if the law school wants to maintain a relevant curriculum.

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Finally, it can be claimed that the addition of forensic science courses to the LL.B. program in Pakistan will be a step in the right direction toward strengthening the criminal justice system. By elevating the significance of scientific evidence, fostering more cooperation between legal professionals and scientists, and decreasing the incidence of both false convictions and recidivism, this approach has the potential to radically alter the judicial system. The resources available, the quality of the curriculum, and the enthusiasm of the staff will all play critical roles in the plan's likelihood of success.

Integrating forensic science into legal education is an important factor in increasing the effectiveness of the criminal justice system in Pakistan. The results of this study can be an example for countries that face similar challenges in combining legal education with the needs of professionals today. First, effective strategies and best practices can be identified in Pakistan to adapt to the unique legal and cultural conditions of other Asian countries, promoting an alternative regional approach to legal education. Second, this research can be shared in different countries around the world, an example for those who want to make a difference between legal education and involvement in forensic science research. Expanding effective implementation programs, curriculum development and collaborative processes can contribute to the international organization of legal education, ultimately strengthening the ability of lawyers to solve complex criminal cases. In addition, international joint efforts can be undertaken to help share knowledge and experience on public procurement. The international community can work together to improve the field of legal education and ensure that legal scholars around the world have the necessary skills to navigate the complexities of law and forensic science in the pursuit of justice.

Law schools should start courses that emphasize the principles and methods of forensic science so that future lawyers have a solid understanding of the scientific methods used in criminal investigations. Hands-on training should be the cornerstone for students to gain experience in criminal investigation, evidence collection, and laboratory procedures. Collaboration in research laboratories and experts can bridge the gap between theory and practice. Law schools should encourage collaboration and cooperation between law schools and legal departments. Emphasis on emerging technologies and methodologies is essential to keep lawyers abreast of developments in the field of law. Law schools should also focus on research science, lifelong learning, and updating new technologies and processes. Integrating digital forensics, DNA testing and other advanced technologies into the curriculum can help graduates solve modern crime problems.

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