The No Child Left Behind Act: 
Challenges and Implications for Educators

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The No Child Left Behind (NCLB) Act is potentially the most significant educational initiative to have been enacted in decades. Among the salient elements of this initiative are requirements that all students have qualified teachers and be given the opportunity to attend high-quality schools. The NCLB legislation also requires that states raise academic achievement levels for all students, including those with disabilities. Linked to these components and related issues, this article discusses the major components of the NCLB along with implications and recommendations for educators.
The No Child Left Behind (NCLB) Act of 2001, signed into law by President George W. Bush on January 8, 2002, is the most noteworthy of recent congressional attempts to improve student achievement and otherwise reform elementary and secondary educational programs in the United States. Included in the NCLB enactment is the requirement that within a decade, all students, including those with disabilities, will perform at a “proficient” level on state academic assessment tests. Indeed, the assertively stated goal of NCLB “is to ensure that all children have a fair, equal, and significant opportunity to obtain a high-quality education, and reach, at a minimum, proficiency on challenging state academic achievement standards and state academic assessments” (NCLB, 2001).

The standards associated with NCLB represent an unprecedented and Herculean challenge for our nation’s schools. By mandating that all students demonstrate annual yearly progress, NCLB serves as the most rigorous and exacting of standards-based strategies yet enacted for reforming schools (Albrecht & Joles, 2003; Center on Educational Policy, 2003). Furthermore, NCLB dramatically extends the contingencies of high-stakes assessments by creating strong rewards and punishments based on students’ performance. Under NCLB guidelines, schools that perform well may receive public recognition and financial rewards but those whose students perform poorly could receive sanctions and even be subject to state takeover. As noted by Hardman and Mulder (2003), the NCLB Act expands the involvement of the federal government “from ‘assisting States in setting standards and improving local performance,’ to fiscal sanctions and corrective action for both States and schools that fail to meet set criteria” (pp. 5–6). So, as Algozzine (2003) pointed out, despite the federal government having no designated power to control education, federal control is exerted through discretionary and other incentives to state and local education agencies, driving the very pulse of each and every U.S. classroom.

The proficiency requirements of NCLB are expected to be a particularly difficult hurdle for the approximately 6.6 million students who are eligible to receive special education services and the educators who are responsible for their learning. That many of these pupils with disabilities have traditionally been excluded from state evaluation and testing programs and other accountability requirements makes NCLB simultaneously a significant opportunity for full participation and a daunting challenge. Thus, in spite of being passed by Congress with overwhelming bipartisan support and in spite of educators recognizing positive features of the enactment, NCLB has been a source of controversy (Robelen, 2002). Relative to students with disabilities, issues of particular concern include:

- availability of adequate resources to implement the NCLB mandate;
- allowances for the use of flexible and individualized evaluation accommodations and modifications that address students’ unique learning abilities, disabilities, and other needs; and
- support for personnel preparation and professional development needed to successfully implement the mandate.

As of February 2004, approximately a dozen states had rebelled against NCLB on the basis that it imposed costly new requirements without funding to carry them out. State legislators have also passed or introduced legislation or nonbinding resolutions challenging NCLB’s standards for licensing teachers and testing students. The Virginia legislature, for example, approved a resolution in January 2004, calling on Congress to exempt Virginia without penalty from “the most sweeping intrusions into state and local control of education in the history of the United States.” Despite the controversy surrounding this legislation, NCLB remains the “law of the land,” thus one that teachers need to understand and follow.

This article discusses the major components of the NCLB Act and identifies issues directly relevant to classroom teachers:

- the major themes of the act,
- implications for educators and related service personnel, and
- recommendations for teachers.

Particular emphasis is given to issues that most directly affect the education of children and youth with disabilities—teacher quality mandates and the use of scientifically based research practices.

**Major Themes of NCLB**

The central and overarching theme of NCLB is accountability, including accountability for positive academic outcomes and related results. To be sure, the idea of accountability is replete in NCLB, and it is this concept that forms the foundation of the Act. NCLB holds individuals accountable for improvements in student achievement, with particular emphasis on closing the achievement gap between high- and low-performing students and children and youth from disadvantaged groups and minority populations.

**Accountability Through Adequate Yearly Progress**

NCLB has established the goal of having every student, including those with special needs, be accountable and meet state-identified standards by the conclusion of the 2013–2014 school year. To meet the aforementioned goals,
Accountability Through Highly Qualified Teachers

An important accountability component of NCLB involves states developing plans to ensure that all teachers of core academic subjects are “highly qualified” by the end of the 2005–2006 academic year. The instructional importance of paraeducators is also recognized, and these individuals must also meet minimum qualification standards. There is considerable debate regarding the resources and means of implementing this element of NCLB. Nevertheless, this NCLB accountability caveat is logical in light of reports by researchers and other professionals that have shown a link between the quality of teachers and the outcomes demonstrated by students (Darling-Hammond, 1999; Darling-Hammond & Youngs, 2002; Ehrenberg & Brewer, 1994). Wayne and Youngs (2003) succinctly summarized the importance of qualified personnel: “Both intuition and empirical research tell us that the achievement of school children depends substantially on the teachers they are assigned” (p. 89). Yet, as previously noted, the resources and assessment procedures associated with important elements of NCLB, including the highly qualified teacher component, are clearly controversial.

NCLB and Scientifically Based Research Practices

NCLB promotes the use of effective educational practices based on scientifically based research (SBR), which is defined as methods that have met rigorous standards and that have been shown, when correctly applied, to reliably yield positive results. Typically such practices have been subjected to rigorous peer-review standards.

The U.S. Department of Education (USDOE) has established the What Works Clearinghouse (WWC; see www.w-w-c.org) to promote the use of evidence-based practices. The WWC is designed to provide teachers and others with a reliable and proven source of scientific evidence regarding effective and scientifically supported educational methods. The proposed method for identifying SBR practices is the WWC-developed Design and Implementation Assessment Device and a related protocol to ensure that methods are supported by scientific evidence. The Design and Implementation Assessment Device and its related validation process are controversial because an infrequently used educational research method, randomized experimental group design methodology, is the preferred strategy for showing scientific evidence. Yet, beyond the controversy regarding the precise means of determining scientific evidence, scholars agree that using effective methods bodes well for students, including those with special needs (Algozzine, 2003; Sharelson & Towne, 2002).

Expanded Options for Parents

Another provision of NCLB is that parents are afforded expanded opportunities for decision making and other amplified alternatives associated with their children’s education. To be sure, parents are encouraged to become active participants in their child’s education under NCLB. Related to the accountability provisions of NCLB, parents are afforded access to information about their child’s performance on standardized academic measures, as well as aggregate school and school district performance information. Such data and information are considered to be essential for parents to objectively and conscientiously exercise their NCLB-related rights and options. These options are particularly significant for parents whose children attend schools considered to need improvement. In such instances, parents have the option of transferring their child to a school in their district with a better performance record. Supplemental services, such as free tutoring, are available to some families whose children are enrolled in schools that fail to demonstrate satisfactory AYP.

Interestingly, expanded parental involvement under NCLB is interpreted as the home being a disciplinary model and resource site. That is, parents and families are thought to be an integral educational resource and alternative under NCLB. Moreover, instilling in children the
values of home and discipline are thought to be NCLB parental participation components.

## Increased School District Control and Flexibility

NCLB supports increased flexibility for states and school districts to exercise discretion in finding solutions to local issues. This decision-making authority includes greater latitude in using federal dollars earmarked for education than previously permitted. The premise behind this allowance for more dynamic decision making and use of resources is that community personnel—educators, parents, and community leaders—can best determine local needs. Of course this plasticity is offered in exchange for school personnel meeting the accountability standards under NCLB. That is, contingent on schools and school districts demonstrating acceptable levels of student achievement, they are allowed increased flexibility under NCLB in making decisions about dealing with local problems and in determining how to best use federal monies to educate pupils. Technology-based instruction and supporting programs that promote teacher quality and safe and drug-free schools are examples of how money may be used under NCLB.

The highly qualified teacher (HQT) and scientifically based research (SBR) components of NCLB are arguably the most significant and controversial elements of the NCLB Act. Accordingly, these elements are discussed in more detail in the following sections, along with implications and recommendations for educators.

### Highly Qualified Teachers

NCLB identifies core content area knowledge and teaching skills as minimum requirements for teachers to be considered “highly qualified.” That is, teachers are expected to have expertise in the subject area in which they are teaching, along with the skills to teach what they know (USDOE, Office of the Under Secretary, 2003, p. 11). Even though NCLB gives some leeway to states in developing their “highly qualified” definitions and criteria, they are expected to generally follow the NCLB “highly qualified” provision guidelines. Salient elements of these guidelines are as follows:

- Teachers who are “highly qualified” must . . .
  - have at least a bachelor’s degree and
  - demonstrate competencies in each content area as defined by their state.
- All teachers who teach core academic content subjects must be “highly qualified” by the 2005–2006 school years.

- New teachers
  - Elementary teachers must pass a rigorous state knowledge and skill exam.
  - Middle and high school teachers must either pass a rigorous exam in each subject area they teach or hold an academic major or coursework equivalent, advanced degree, or advanced certification or credentials.
- Experienced teachers must meet the requirements for new teachers or demonstrate competency as determined by each state (USDOE, Office of the Under Secretary, 2003, pp. 12–13).

NCLB supports alternative certification routes as a means of bringing increased numbers of high-quality candidates into the profession. Although the research on this controversial issue is somewhat unclear, many scholars and educators criticize alternative certification programs. For example, Darling-Hammond and Youngs’ (2002) analysis of teacher certification and student achievement led them to conclude that traditional teacher education programs were clearly superior to alternative certification options.

### Paraeducator Issues

The importance of paraeducators is unmistakably understood by frontline educators. Indeed, paraeducators are of vital importance in implementing Individualized Education Programs and supporting students with special needs in inclusive environments. In recognition of this importance, NCLB contains highly qualified provisions for paraeducators who instruct students. Thus, at least one of the following three requirements must be met by newly hired paraeducators, retroactive to January 2, 2002, and by previously hired paraeducators by January 8, 2006:

1. have an associate degree or higher, or
2. have completed at least 2 years of study at an institution of higher learning, or
3. pass a rigorous state or local assessment that demonstrates knowledge and skills needed to assist in teaching reading, writing, and math (USDOE, Office of the Under Secretary, 2003, p. 10).

You could logically argue that requiring schools to hire more qualified paraeducators bodes well for students’ progress. Yet, creating higher standards for these often poorly paid and difficult-to-hire personnel without taking other steps to support and compensate them for their work may prove to be of little benefit; indeed, it might do more to increase teachers’, parents’, and administrators’ stress than to facilitate students’ improved learning.

### Implications

It is imperative that teachers understand what is expected of them in light of NCLB’s higher standards. Teachers
who hold licensure from their state within a general area (e.g., elementary education) or a content area (e.g., English, mathematics) will generally be considered highly qualified. Noteworthy for special educators is the Council for Exceptional Children’s (CEC) analysis of “highly qualified.” According to Egnor (2003), this analysis revealed that in order for special education teachers who teach at least one core content area to be “highly qualified” under NCLB, they must meet both special education and content standards. However, a more recent CEC analysis (Allbritten, Mainzer, & Ziegler, 2004) concluded that the NCLB Act does not comment on special education teachers when addressing core content areas.

Because of severe teacher shortages, many classrooms, including those for students with disabilities, are staffed by uncertified personnel or those personnel who have not yet demonstrated competencies in areas of special education. The CEC (Allbritten et al., 2004) reported a nationwide shortage of 40,000 qualified special education teachers. In the ubiquitous world of teaching shortages (Darling-Hammond, 2001, 2003) where tens of thousands of teachers are teaching without the minimum required credentials (Allbritten et al., 2004; Ingersoll & Smith, 2003), the “highly qualified teacher” element of NCLB is both a critically important and a troubling component. As of the 2002–2003 school year, 6% of all teachers nationally were not certified. This number increases to 8% for special education teachers and for teachers who teach in high-poverty areas (USDOE, Office of Policy Planning and Innovation, 2004, p. 7). NCLB does include a provision for teachers who have emergency certification or waivers to be considered “highly qualified,” contingent upon their working to complete certification that meets NCLB standards (USDOE, Office of Policy Planning and Innovation, 2004, p. 6). Given the reported teacher shortages, it is understandable that government standards would be altered to permit personnel who enter the profession via nontraditional routes to be counted as “highly qualified.” Yet, even though teachers who enter the profession via alternative methods are required to demonstrate content knowledge, this caveat nevertheless appears to devalue the benefits of traditional teacher training.

Merely demanding highly qualified teachers, even if the demand is in the form of a federal enactment, will not necessarily increase the availability of such personnel. Indeed, without government support to reach this goal, it will not happen. In this regard, Mathis’s (2003) analysis of 10 states’ projected costs for implementing NCLB leaves too many questions about where the money to fund the Act will come. One solution may be incentives for teachers to work in areas that are perceived to be less attractive. In this connection, Darling-Hammond (2003) described how the teaching shortage in the United States is a problem of getting teachers to teach in high-poverty areas. That in June of 2003, New York City Public Schools declared that they had hired more than 3,000 new teachers who were underqualified (Bracey, 2003) is a compelling example of why this matter is so noteworthy.

Despite gloomy statistics regarding teacher shortages, a recent Phi Delta Kappa/Gallup Poll (Rose & Gallup,
2003) concerning the public’s attitude about public education highlights several important issues pertaining to highly qualified teachers. Foremost, the public is concerned about hiring and retaining good teachers; and low teacher salaries are perceived to be a significant area of concern. Second, despite reported problems and declining overall trust in U.S. education (e.g., see previous Kappa/Gallup polls, conducted by Rose & Gallup, 2001, 2002), the majority of citizens rated their own community’s school as earning the letter grades A, B, or C. In fact, 48% of schools were given a grade of A or B.

**Recommendations**

We agree that all students deserve competent, caring, and certified teachers. This is sacrosanct to the profession. NCLB’s strong stance that those who teach the neediest of students (e.g., Title 1 teachers) be highly qualified is commendable. However, the problems endemic to the educational system’s long-term health and vitality (i.e., teacher stress, low pay for teachers and support staff) will not be changed simply by establishing new standards. Although the government has implemented new measures to support existing teachers and encourage potential teachers entering the profession, it fails to go far enough. Accordingly, effective long-term steps for improving teacher quality must involve strategies that address these foundation matters.

The possible requirement that special education teachers, already overburdened with paperwork and stress, be dually certified might prove to be the tipping point that will, at the least, negatively impact the hiring and retaining of an already dwindling supply of personnel. This requirement might also deter individuals from pursuing a career in special education. Moreover, many issues related to this matter require clarification, such as whether or not those who teach in self-contained programs, wherein they instruct students in multiple content areas, will be required to hold multiple certifications in addition to special education certification. It is our recommendation that multiple certifications for special education personnel not be a requirement.

In March 2004, following continual criticism from teachers, professional unions, elected officials, and others, Secretary of Education Ron Paige announced amendments to HQT requirements. These modifications only delayed certification requirements until 2007 for those who teach in rural communities and those who teach science and multiple subjects. It is our recommendation that this same review and consideration be given to other elements of the HQT provision of NCLB.

**Scientifically Based Research**

As we stated earlier, NCLB promotes the use of effective educational practices based on SBR. Mentioned more than 100 times in NCLB, SBR is defined as “research that involves the application of rigorous, systematic, and objective procedures to obtain reliable and valid knowledge relevant to education activities and programs” (NCLB, 2001), which means products and materials validated by means of research designs that use random samples and control and experimental groups. Relative to NCLB, this model of research qualifies as the gold standard; however, for a variety of sound reasons, randomized control-group designs are more commonly used in medical research than in education.

Explaining the narrow interpretation of SBR, Smith (2003, p. 126) cites the USDOE’s “Questions and Answers on No Child Left Behind: Doing What Works,” a guidance tool for parents and educators:

> **To say that an instructional program or practice is grounded in scientifically based research means there is reliable evidence that the program or practice works. For example, to obtain reliable evidence about a reading strategy or instructional practice, an experimental study may be done that involves using an experimental/control group design to see if the method is effective in teaching children to read.**

> **[NCLB] sets forth rigorous requirements to ensure that research is scientifically based. It moves the testing of education practice toward the medical model used by scientists to assess the effectiveness of medications, therapies and the like. Studies that test random samples of the population and that involve a control group are scientifically controlled. To gain scientifically based research about a particular educational program or practice, it must be the subject of such a study.**

This interpretation has broad implications for schools—the understanding that only such wide-scale testing can lead to validated educational practices.

The call for implementation of SBR practices in our schools has been promoted by the Coalition for Evidence-Based Policy. Using the rationale that decades of stagnation in U.S. education be reversed through the promotion of evidence-based practices, the Coalition, in November 2002, proposed that the USDOE

- build a knowledge base of educational interventions that have been proven effective in clinical trials using large-scale replications and
- create incentives for those receiving federal education funds to use such interventions.

Relative to SBR, curriculum materials supported by high-quality research are in demand more than ever before. As a result, educational products are routinely advertised using terms such as “evidence-based,” “research-based,” and so forth. Indeed, such terms are prominently displayed on the Web sites, catalogs, and pamphlets of companies that sell educational materials. Simply saying that
a product is supported by research does not necessarily make it so. Thus, the process by which practitioners and other educators are expected to select SBR-based tools and make related programmatic decisions is an obvious and noteworthy question. To assist with this process, the USDOE awarded $18.5 million in August 2002 to the WWC to assess and report on effective programs (Eisenhart & Towne, 2003). Billed as “a central, independent and trusted source of evidence about what actually works in education,” the intent of the WWC is to provide a one-stop shop of reliable, scientifically based research practices and supporting evidence from which educators can make choices. At the time this article was written, the WWC had yet to post the results of their investigation of any products or practices, so it is unclear whether they will be successful in this effort.

Implications

The SBR requirement of NCLB has several significant implications for educators, students, and parents. One obvious implication is that the NCLB interpretation of SBR effectively restricts and even impedes methods of research. This matter is particularly obvious related to students with special needs, especially those with severe and low incidence disabilities. Research involving these students often precludes use of randomized group-design methodology because of limited student samples, heterogeneous educational programs, and so forth. Indeed, such methods are often impossible to use with special needs students. Thus, by narrowly defining the use of federal dollars for research, NCLB has significantly restricted the manner by which educators can be informed of effective practices. Algozine (2003) recognized that there are important occasions when randomization is not feasible. Yet it is likely that the funding necessary to carry out important lines of inquiry that fall outside the scope of randomized group designs will be negatively affected. We are in agreement with Sailor and Stowe (2003) in concluding, “With passage of No Child Left Behind and accompanying education legislation at the federal level, policy has begun to not only inform inquiry, but also to restrict it.” Algozine (2003) continued this line of logic by advancing the notion that governmental control of “discretionary” and other incentives allows it to wield power over state and local education agencies, institutes of higher education, and any other individual who must “comply” with NCLB, thus effectively tying the hands of all concerned. As evidence of the potential impact of this NCLB requirement, we need only consider that even large-scale research projects, such as READ 180’s Great City Schools Validation Study (www.scholastic.org), were unable to apply randomization because parents, teachers, administrators, and students themselves requested—even demanded—that they be included or excluded from the treatment group. Eisenhart and Towne (2003) were pragmatic in their analysis of the NCLB SBR debate, noting that additional dialogue is essential. Their sage words, “Would that there be more of it,” make a great deal of sense to us.

The call for reliance on SBR methods is only as good as the stockpile of effective practices and the ability of practitioners to carry them out. When methods for particular groups of students or subjects or needs are unavailable, unpalatable, or when they require complicated and difficult implementation steps, they will not be used and fidelity of implementation cannot be ensured. Cook and Schirmer (2003) pointed out that it is uncertain whether any classroom interventions are used with fidelity, that is, correctly, consistently, and conscientiously implemented using all of the practices, procedures, steps, and techniques required for promised results. Moreover, Allbritten et al. (2004) observed that there is ample evidence that most teachers are not prepared to use research-based interventions, even on those limited occasions when such methods are purportedly known. Hence, the process of complying with the SBR component of NCLB will involve more than simply attempting to identify what works best according to some narrow interpretation of science. Indeed the process will be neither easy nor quickly undertaken. That the NCLB SBR mandate also appears to discount the utility of teacher judgment, that is, their clinical judgment and experience in making educational decisions, only adds to this complexity.

For those who work with students with disabilities, Secretary Paige’s February 2003 comments regarding the USDOE foundation principles for the currently proposed reauthorization of the Individuals with Disabilities Education Act (IDEA; 1997) hold significant impact: “IDEA should ensure that schools, local education agencies, state education agencies and the Federal Department of Education quickly adopt research and evidence based practices” (USDOE, Office of Public Affairs, News Branch, 2003). It is highly likely that the SBR theme of NCLB will be a prominent feature in the forthcoming IDEA reauthorization process, and all educators and parents will want to pay close attention and make their voices heard on this significant topic.

Recommendations

With dollars short, and AYP and HQT hanging as double pendulums, educators are frequently left to their own investigation to determine whether a method meets the current SBR standard of NCLB. Thus, as the WWC effort continues to plod toward fruition, the onus for making fiscally and programmatically responsible decisions about the programs and practices that are used in schools continues to fall to local personnel. Accordingly, examining options for SBR interventions for wide-scale or individual implementation requires not only skill in interpreting research but also knowledge of the conditions of implementation necessary to derive expected results. This fea-
tured will not change, even as additional information on SBR practices is made available. Thus, decisions regarding that which is most effective for a particular school, classroom, and student must be made at the local level by individuals who possess the most knowledge and information about unique student characteristics and circumstances. For instance, discerning the relative benefits and costs of an intervention that requires 1:1 instruction for two 50-minute periods per day for 30 weeks to derive a promised result versus a method that can be beneficially used within a 1:5 or 1:10 ratio structure for daily 50-minute periods over 18 weeks is only one example of the need for local decision making.

In the final analysis, teachers and other educators must become better consumers in regard to methods available for use with their students. Even if organizations such as the WWC provide listings of efficacious strategies and methods, teachers will still need these consumer skills. In this regard, we offer the following recommendations for assisting classroom teachers in becoming better consumers:

1. Read and analyze professional journals, including those that publish research literature. Being up-to-date on the latest methods takes time, though it is imperative that educators take this important step. Critically consuming such information will require that teachers keep in mind that some groups of students with disabilities, especially those with severe disabilities, will not fit the so-called USDOE “gold standard” of research. Moreover, certain methods that are not based on randomized group-design methodologies will nevertheless yield promising and effective results for both teachers and students.

2. It is essential that authors of research-based journal articles and the editors and publishers who oversee these publications make sure that the information they provide is in a form that classroom personnel can understand and apply in real-world settings. We strongly recommend that teachers make their voices heard: recommend to journal editors that authors clearly inform educators of SBR-related matters, including
   • the research design upon which a method is based,
   • the targeted populations,
   • the outcomes, and
   • the resources needed by classroom personnel to replicate within classrooms the outcomes reported by researchers.

3. Work to develop a critical and discerning eye to determining those methods that are most efficacious and scientifically based. Just as teachers are knowledgeable and savvy at discriminating among noneducational products, they must become better at selecting among the products with which they come into contact, especially those in which slick packag-

4. Become familiar with impartial resources that have examined educational products and strategies. For example, SEDL (www.sedl.org) publishes a product guide that evaluates secondary literacy products.

5. Network within professional organizations and with colleagues, local experts, and school district professionals, especially those who have research knowledge and experience. Every teacher must be a product and research evaluator to build advocacy and a knowledge base needed for effective decision making.

6. Network with colleges and universities about conducting and interpreting effective practices and scientifically supported methods. These mutually beneficial and reciprocal relationships are more important now than ever.

7. Collect outcome data in your own classroom. Data are invaluable in decision making, especially regarding SBR matters. Curriculum-based measures, for instance, are an excellent and utilitarian method of understanding what works with both individuals and groups of students.

### Conclusion

NCLB Act has established the lofty goal of having every student in the approximately 15,000 public school districts in the United States have an authentic opportunity for educational success. Provisions contained in the Act—

- increased accountability for desired educational outcomes,
- qualified personnel to staff the nation’s classrooms,
- reliance on educational programs and practices that are supported by scientific research,
- expanded school district control and flexibility in using federal funding resources, and
- increased parental involvement and authority related to educational decisions

—are having a significant impact on both educators and the general public. Consequently, it is imperative that teachers and other educators be familiar with NCLB and its policy and practice implications.

Equating the significance of NCLB is its controversy. Some have cast NCLB as an enlightened scientifically based reform effort that will dramatically improve U.S. schools.
In contrast, others have described NCLB as a misguided enactment whose foundation is unproven change strategies (McKenzie, 2003). Time will tell which (if either) of these perspectives most accurately describes NCLB. In the meantime, educators must understand and follow this law of the land.

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