Testimony of Luis A. Huerta
Associate Professor of Education and Public Policy
Teachers College – Columbia University

Before the Senate Committee on Education
Senator Leticia Van de Putte, Chair
October 8, 2012

Hearing on Virtual Education

Framing an Accountability Blueprint for Virtual Schools in Texas

Luis Huerta, Teachers College – Columbia University

INTRODUCTION

Online instruction has grown substantially over the last several decades, with nearly one in every 50 students in the United States receiving online instruction, either to supplement traditional classroom teaching or full time.[1] The growth of online instruction is fueled by a variety of sources, including federal policymakers who have called on educators to prepare students with 21st-century skills,[2] state-led initiatives to expand online or virtual schooling in the form of state virtual schools such as the Florida Virtual School,[3] and non-profit and for-profit management organizations who operate full-time virtual schools in 30 states serving nearly 250,000 students.[4] The rationales offered for promoting online instruction vary widely, and include claims of increased efficiency compared to traditional schools (both in cost and effectiveness), increased personal, customized attention to students' learning needs, and expansion of school choices for families. However, these claims have yet to be fully empirically tested and validated by research.

This brief will describe the wider implementation and accountability challenges of scaling-up virtual school reforms (with a primary focus on full-time virtual charter schools) that have surfaced in recent public and legislative debates. I will highlight recent research and technical reports on virtual schools that have begun outlining the important issues that policymakers need to address in developing new regulatory frameworks that will hold online learning models accountable. Borrowing from these works in addition to my own research on virtual charter schools, I will advance policy recommendations that target the following four salient policy issues:

- Determining per-pupil funding aligned with virtual school expenditures

- Establishing accountability measures for instruction and student performance

- Defining enrollment boundaries and funding responsibilities

- Recruiting, supporting and retaining effective teachers to engage students through online instruction

POLICY RECOMMENDATIONS

Recent legislative amendments have begun building a regulatory blueprint with explicit definitions and expectations for accountability, standards, and resource use for virtual schools, however, many states continue to struggle with defining accountability mechanisms that will both guide and audit the expansion of virtual schools. For example, in 2011, Wisconsin Oregon, Louisiana and Michigan either increased or eliminated enrollment caps for full-time virtual schools, however, none of these states passed amendments that will strengthen accountability mechanisms and oversight of virtual schools. The continuing challenge for states will be in reconciling traditional accountability demands with the unique organizational models and teaching and learning methodologies that virtual schools employ. The following policy recommendations are aimed at guiding policymakers and practitioners through these challenges.

Formulate Per-Pupil Funding Levels That Reflect Real Costs of Virtual Schooling

Much of the debate around funding for virtual schools has focused on the lower overhead costs associated with savings on teacher salaries and benefits, facilities and maintenance, transportation, food service, and other services, compared to their brick and mortar counterparts. The vast differences in these costs, when comparing a virtual school to a traditional classroom-based model, can be accounted for in two funding categories: teacher salaries and benefits, and facilities and maintenance. For example, the costliest budget item in a traditional school model is teacher salaries and benefits, amounting to an average of 56% of total

expenditures.[5] Facilities and maintenance, in most cases the second highest cost, can amount to nearly 11% of a school's budget.[6] The limited demand for each of these resource categories in virtual schools amounts to wide differences in funding needs.

Determining the exact costs of virtual schooling models entails a closer analysis that could account for additional costs over time. For example, in Pennsylvania, the State Auditor General has issued two reports that have alerted the state legislature of important flaws in the virtual charter school funding mechanism. Specifically, Pennsylvania funds virtual charters at an average rate of $10,145 per student, nearly $3,500 more then the national average of $6,500. The auditor general has called for funding caps in line with the national average and an exploration of funding based on actual costs that could further reduce funding for virtual charters, and also eliminate incentives for excessive profit making by the for-profit companies who operate virtual charters.[7] A recent report by Miron and Urschel from Western Michigan University, highlights in detail the funding, operations, and student performance of K12 Inc. operated schools (the largest for-profit, virtual school management organization, with 48 full-time virtual schools serving over 65,000 students).[8] Miron and Urschel explain how K12 Inc. benefits from significant cost advantages linked to minimal or no provision of facilities, transportation and food services, coupled with spending significantly less then comparable schools on teacher and administrative salaries and benefits, student support services and special education instruction. Even though K12 Inc reports that they receive nearly $2,000 less revenue per pupil, compared to the national average of $9,258 for all charter schools,[9] the significant cost advantages of not providing the services listed above, is an issue that states must account for if they are to link virtual school funding to real costs.

However, states have not engaged in the important process of costing out a virtual instructional program. To do so, state officials should consider how the educational needs of individual students will be met through non-traditional teaching and learning methods. States should also consider how virtual schools have adopted resource use patterns that require alternative financial reporting and expenditure levels, including accounting (e.g., maintenance of student records, attendance logs, and transcripts), accountability (e.g., determining what accounts for instructional time and how it is logged and evaluated, as well as evaluating the quality of virtual instruction), and reporting of how per-pupil payments are linked to services provided (e.g., technology, learning materials, paraprofessional services, and third-party curriculum and management service providers). After identifying benchmarks for a quality virtual instructional program that meet both local and state-level accountability demands, as well as calculating the costs of teachers and facilities, a funding formula linked to these benchmarks may begin to more accurately identify necessary resource levels.

Define Accountability Mechanisms for Student Performance and Program Quality at the State and Local Levels
New accountability mechanisms that align with virtual schooling need to address the unique organizational models and teaching and learning methodologies that virtual schools employ. Enrollment, instructional hours, quality of instruction (delivered by parents, computer software, or distance learning), quality of student work, assessments, and level of contact hours between teachers and students, are all part of an accountability formula that begins to define a virtual schooling model.

For example, in California student-funding apportionments for virtual charters are based on the time value of student work rather then average daily attendance. Time value accounts for student work that a certificated teacher evaluates, assesses for quality, and then calculates for a time value equivalent. These factors create a new benchmark with which to determine funding apportionment credit that shifts from seat time attendance to the amount and quality of work that a student produces. What results is an accountability structure that is better aligned with the teaching and learning methods a virtual schooling model employs.[10]

Requiring face-to-face or other forms of communication between students and a certificated teacher will lead to greater accountability of program quality. Teacher-student contact can ensure that teachers will direct instructional objectives, provide the curriculum necessary to complete learning objectives, and monitor student progress more closely. However, student-centered and individualized educational programs may not demand alignment with existing traditional school structures that rely on rule-based compliance such as seat time and instructional minute requirements to account for and monitor the quality of an instructional program.

Monitoring the outputs of virtual schools in the form of student achievement, is another important consideration for accountability mechanisms. Recent school-level achievement data from California indicated that virtual charters have "much lower adjusted test scores than either other charter schools or conventional public schools."[11] In Pennsylvania, Stanford University researchers used a matched pair sampling methodology and found that students in virtual charters made smaller learning gains over time compared to both their brick and mortar charter and traditional school counterparts.[12] And lastly, a comprehensive account of the most recent and robust research on online learning is chronicled in a meta-analysis sponsored by the U.S. Department of Education.[13] This report is oft-cited by advocates of online learning to support their claim that online instructional models have an edge over traditional instructional models. Yet, the authors of the study warn that while some modest positive effects of online learning were found in the included studies, they strongly caution that the measured advantages may be more a result of the types of treatment conditions in online models (such as the amount of time the learner spent on a task in online learning) than of the instructional delivery model itself.[14] These achievement findings are especially important in the context of growing demands for increased student achievement contained in both state and federal accountability mechanisms.

Delineate Enrollment Boundaries and Funding Responsibilities to Clarify Those Accountable for Virtual Schools
As students cross district and county lines, their resident districts struggle to monitor whether virtual schools are providing them with a quality educational program. Auditing the enrollment and attendance records of virtual schools is necessary to ensure that local and state portions of per-pupil payments are forwarded by students' resident districts to the virtual schools that students choose. In addition, a policy that delineates geographic boundaries with manageable enrollment zones can simplify the oversight challenges exacerbated by borderless enrollment zones. This issue may prompt policy-makers to consider state-level approval and sponsorship of virtual schools as well as a funding system in which the state portion of student per-pupil revenue composes the larger share of funding. A state-centered funding system would provide a more stable source of revenue for virtual schools, offer fiscal relief for local districts, and relieve schools from having to solicit the larger share of their per-pupil payments from their students' resident districts.

In addition, the large influx of privately homeschooled students into virtual schools has resulted in an unexpected need for additional state and local funding. Many districts are challenged to reallocate budgets to fund students not previously on the public school rolls. A state-centered funding system for virtual schools will relieve local districts of budget shortfalls caused by enrollment spikes of virtual students. States should consider taking full responsibility for funding or providing partial subsidies to alleviate this funding challenge.

Recruit, Support and Retain Effective Teachers to Engage Students Through Online Instruction
The notion that effective teachers will wholeheartedly embrace digital tools and be motivated to adapt the processes of teaching in a one-dimensional virtual environment, must be further explored. The importance of effective teachers in a digital age must take into account research that considers the contextual factors associated with effective teaching, including the wider school organizational environment that supports teachers.[15] Effective teaching is fostered by strong leadership, peers, professional development, books,

materials and a myriad of other resources that constitute the capacity and school culture necessary to support teachers.[16] Individual attributes, such as subject-specific certification or advanced degrees, that might matter in one context may not matter in another (grade level, subject, school type).[17] For example, while variables of individual teacher quality (e.g. certification, education level) are important, unobserved school, teacher and classroom variables, which are typically not measured in studies of teacher quality (e.g. teacher motivation and behavior, class size) are also vitally important.[18] Lastly, recent research in New York City has reported that strong teacher mentors and induction programs positively influence the performance and retention of new teachers.[19] These important school-level factors must be considered by policymakers in order to insure that teachers are properly trained for delivering online instruction.

The preferences of parents and students must also be considered. Effective schooling is about more than simply the delivery of instruction, but includes the social and cooperative elements of interacting with student peers in person and in real-time, which in part activate effective teaching.[20] The extent to which virtual environments will be able to replicate these important virtues of effective classroom schooling is not known. Nor is the extent to which parents and students will favor virtual learning environments over traditional schooling known.

CONCLUSION
Vital details of the potential implications of widespread adoption of digital technologies on teaching and learning practices, the creation of accountability structures tailored to virtual schools, as well as the resources necessary to implement virtual school reform, are not yet fully developed. As virtual schooling models continue to evolve, policymakers should seek more balanced and empirically robust assessments that will allow them to make informed decisions about how to proceed with school reform polices that advance virtual instruction.

Endnotes

[1] Glass, G. V. & Welner, K. G. (2011). Online K-12 schooling in the U.S.: Uncertain private ventures in need of regulation. Boulder, CO: National Education Policy Center. Retrieved January 17, 2012 from: http://nepc.coloraco.edu/publication/online-k-12-schooling

[2] U.S. Department of Education (2010). *Learning powered by technology: National education technology plan 2010*, Washington, D.C.: U.S. Department of Education Office of Educational Technology.

[3] Watson, J.; Murin, A.; Vashaw, L.; Gemin, B. & Rapp, C. (2011). Keeping pace with K- 12 online earning: An annual review of state-level policy and practice. Durango, CO: Evergreen Education Group, 28. Retrieved September 30, 2012 from http://kpk12.com/reports/graphics/

[4] These schools are mostly charter schools, but also include full-time online schools operated by districts. See Watson, J.; Murin, A.; Vashaw, L.; Gemin, B. & Rapp, C. (2011).

See also, Huerta, L. A., González, M. F. & d'Entremont, C. (2006). Cyber and home school charter schools: Adopting policy to new forms of public schooling. *Peabody Journal of Education,* 81(1), 103-139.

[5] National Center for Education Statistics. (2003). *Statistics in brief, Revenues and expenditures for public elementary and secondary education: School year 2000–01*. Washington, DC: Office of Educational Research and Improvement, U.S. Department of Education.

[6] Ibid.

[7] Special report: The Commonwealth should revise its charter and cyber charter school funding mechanisms, September 2010, Auditor General, Jack Wagner; retrieved September 21, 2012, http://www.auditorgen.state.pa.us/reports/performance/special/speCharterFundingReport100510.pdf; Special report: Charter and Cyber Charter Education Funding Reform Should Save Taxpayers $365 Million Annually, June 2011,Auditor General, Jack Wagner; retrieved September 21, 2012http://www.auditorgen.state.pa.us/Department/Press/CyberCharterSpecialReport201206.pdf

[8] Miron, G. & Urschel, J.L. (2012). *Understanding and Improving Full-Time Virtual Schools: A Study of Student Characteristics, School Finance, and School Performance in Schools Operated by K12 Inc.* Boulder, CO: National Education Policy Center. Retrieved September 22, 2012 from http://nepc.colorado.edu/publication/understanding-improving-virtual.

[9] Ibid.

[10] SB 434 (1999) changed apportionment credit from the traditional "seat time attendance" to apportionment based on time value of student work. Time value calculations are based on three factors: (a) weighing the objectives of an assignment given by a certified teacher, (b) the work submitted by students by specified due date, (c) and the judgment of a teacher who evaluates and calculates the time value of completed work. Together, these factors make up an apportionment credit that is based on student work rather than physical attendance. See Huerta, L. A., González, M. F. & d'Entremont, C. (2006). Cyber and home school charter schools: Adopting policy to new forms of public schooling. *Peabody Journal of Education,* 81(1), 103-139.; Huerta, L. A., d'Entremont, C. & González, M. F. (2009). Perspective on cyber and homeschool charters. In M. Berends, M. Springer, D. Ballou and H. Walberg (eds.), *Handbook of Research on School Choice* (pp.533-550), National Center on School Choice, Vanderbilt University and Lawrence Erlbaum Associates.

[11] Zimmer, R., Buddin, R, Chau, D., Gill, B., Guarino, C., Hamilton, L., Krop, C., McCaffrey, D., Sandler, M., & Brewer, D. (2003). *Charter school operation and performance: Evidence from California.* Santa Monica: RAND. The researchers also found that virtual students come from more mobile families (higher socioeconomic status, including higher parent education levels and much lower rates of free and reduced lunch) when compared to their traditional charter school counterparts (Buddin & Zimmer, 2005). In another recent study that analyzed whether California charters meet the achievement growth targets set by the California Academic Performance Index, nonclassroom-based charters were significantly outperformed by both classroom-based charters and traditional public schools. See EdSource (2005, May). *How are California's charter schools performing?* Palo Alto, CA: Author

[12] CREDO. (2011). *Charter school performance in Pennsylvania.* Palo Alto, CA: Center for Research on Education Outcomes (CREDO), Stanford University.

[13] U.S. Department of Education (2010). *Evaluation of evidence-based practices in online learning*, Washington, D.C.: U.S. Department of Education Office of Planning, Evaluation and Policy Development, (2010).

[14] More importantly, the small statistically significant positive effects of online instruction are limited to studies that measured its effects for adult learners. Specifically, only 7 of the 50 studies included in the meta-analysis examined a K-12 learning environment and the weighted mean of the modest positive effects of these seven studies were not statistically significant. Lastly, the authors of the meta-analysis warn that the number of rigorous studies on K-12 online learning is still too small to warrant confidence about its effects.

[15] Rice, J. K. (2003). *Teacher quality: Understanding the effectiveness of teacher attributes.* Washington, D.C.: Economic Policy Institute.

[16] See the collection of essays in Voices in Urban Education (2010, Spring). *Collective practice, quality teaching.* Providence , RI: Annenberg Institute for School Reform, Brown University.

[17] Rice, J.K. (2003). *Teacher quality: Understanding the effectiveness of teacher attributes.* Washington, D.C.: Economic Policy Institute.

See also, Goe, L. (2007). *The link between teacher quality and student outcomes: A research synthesis.* Washington, DC: National Comprehensive Center for Teacher Quality. Retrieved December 22, 2011, from http://www.tqsource.org/publications/LinkBetweenTQandStudentOutcomes.pdf

[18] Goldhaber, D. and Brewer, D. (1997). Why don't schools and teachers seem to matter? Assessing the impact of unobservables on educational productivity, *Journal of Human Resources* 32(3): 505-523.

[19] Rockoff, J.E. (2008) Does mentoring reduce turnover and improve skills of new employees? Evidence from teachers in New York City, NBER Working Paper 13868. Retrieved January 20, 2012 from: http://www.nber.org/papers/w13868.pdf

[20] Pianta, R. C., Belsky, J., Vandergrift, N., Houts, R., & Morrison, F. J. (2008). Classroom effects on children's achievement trajectories in elementary school. *American Educational Research Journal, 45(2),* 365-397; Roorda, D. L., Koomen, H. M. Y., Split, J. L. & Oort, F. J. (2011). The influence of affective teacher-student relationships on students' school engagement and achievement: A meta-analytic perspective. *Review of Educational Research*, 81, 4: pp. 493-529.