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DATE: March 30, 2023
TO: Senate Education Committee, Chair Dembrow and Members
RE: *SB 1066 [For-profit Virtual School Accountability]*

- A student living in Riyadh, Saudi Arabia is enrolled as an Oregon student, taking online classes, paid for with public funds.
- A virtual school administrator sends only a partial list of employees to the Teacher Standards and Practices Commission to disguise the true proportion of unqualified/non-licensed staff working as teachers.
- Two sisters on IEPs with strong musical talent are denied tuition to join their local school orchestra class because the for-profit virtual program they are enrolled in will not pay for it, and instead blames the district for charging tuition.
- Making families submit income-related "free lunch" forms as a condition of application.
- A school alters documents requested in a public information request.
- Enrollment and attendance manipulation, poor educational outcomes, and constant churn of low-paid beginning teachers.

These are just a few of the many practices I have witnessed in my 18 years of working closely with the online education experiment in Oregon.

To be sure, as time has marched on, many high-quality online programs have evolved, chiefly non-profit or those designed and run by school districts themselves. Their much-better student achievement, measured in assessments and graduation rates, shows that it is possible to offer online instruction in a way that meets student needs, but typically, these are programs for which making money is not the point – program quality is.

On the other hand, several large corporate entities have registered overwhelming profits on Wall Street even as the children in their schools do so poorly that some educational researchers who have studied them for years have raised significant concerns in academic and policy circles. Among their critiques are the lack of interaction and relational learning time; embedded inequities in curriculum; poor oversight and academic integrity; and cognitive implications of screen time overexposure. Algorithmic programming has also become a key concern, as has the need to protect student data privacy. *{See attached publications and links.}*

As two Secretary of State audits have reflected, and Department of Education report cards have shown, Oregon's students in these for-profit-run schools have the worst academic achievement in the state by far, year after year. Yet oversight of this industry is difficult and not effectively managed, and when some administrators have tried, they have ended up being sued by the vendors. One particular vendor is nationally recognized for having the worst overall record in terms of student outcomes, and their reputation was so bad that they rebranded and changed their name.

In my advocacy over the years for the state's better stewardship of public funds that flow to these corporations and for better protection of students' educational best interests, I have had representatives of these programs try to bribe me, threaten me, and insult my reputation. So why, in retirement from my career as an education advocate, do I persist in sounding the alarm? Because it matters and because our students deserve better.

As we all have come out of the past three years of the COVID pandemic, which forced online-only education for a time, we know that it's time to do better. So many districts have developed new, promising, high-quality online classes and programs, and so students now have more options than ever to access these high-flier resources. Now is the time to ensure that we are asking the right questions of how best to ensure that the credible programs are funded and the poor-quality programs held to a higher standard in order to receive public resources, especially because the state has an interest in investing wisely for this most treasured of public goods.

As chair of the Education Caucus of the DPO, and as a volunteer who cares, I drafted the concepts in this bill to give specific guidance to the task force it would create, so that some fundamental questions may finally be answered and policy responses developed. These include the topics of right-sizing costs, improving quality standards, meaningful

accountability, regulatory authority, data privacy, curriculum content, equity considerations, and anti-fraud safeguards. Some of you may recall that in 2009, SB 767 passed that sought, in part, to explore online education, but without the level of specificity in SB 1066.

This approach is also different from past work groups on the topic because the required representatives we call for are borne of our significant experience understanding the nature of the problem and how best to approach problem solving. In the 14 years since that interim group looked at the issue, we have much more history, practice, and data to examine, and after the 2011 rollbacks on some of the 2009 protections, more reason to do so.

I hope you will give this bill your support and pass it on in its journey to become law.   Thank you.

{See Attachments}

From ODE's Comprehensive Distance Learning Guide for School Districts

(A COMPANION TO READY SCHOOLS, SAFE LEARNERS)

https://www.oregon.gov/ode/students-and-family/healthsafety/Documents/Comprehensive%20Distance%20Learning%20Guidance.pdf

P 43

Required

❏ Coordinate existing and, where necessary, new digital content in support of educator-facilitated learning.

❏ Digital content must align with academic content standards and ensure access to grade level or above content learning.

❏ Districts that use new digital content as core curriculum for a course of study, or any part thereof (581-011-0050), (for instance, the core curriculum) must complete an independent adoption of instructional materials as detailed in 581-022-2350.

o Districts must provide their local school board with the information in sections 1 through 7 of OAR 581-022-2350 to inform the local school board's review and independent adoption of instructional materials.

o Adopted materials must comply with the most current National Instructional Materials Accessibility Standard specifications regarding accessible instructional materials.

o Adopted materials must provide equitable access to all learners, including Emergent Bilingual students, students identified as Talented and Gifted, and students who experience disability.

Recommended

⇨ Start with what you already have in place: Build from the curricular content and lesson planning already in use prior to COVID-19 and adapt content as needed for distance learning.

⇨ Thoroughly review and evaluate actual digital content quality, including culturally relevant, anti-racist content, identity-affirming language, and grade level alignment.

⇨ Be wary of any system or experience that automates teaching, such as automatically moving a student through learning content based on assessments, automatically providing assessments, etc. This indicates the presence of an algorithm (see Appendix 2) to evaluate student learning and provide feedback.

⇨ Prioritize digital content that honors teacher-facilitated learning experiences (see the "Collections" section in Oregon Open Learning).

⇨ Limit the size of videos and other media to ensure equity of access by limiting data charges and access to students with slower Internet connectivity, while increasing likelihood of student engagement.

P 44

Instructional Materials Review for Digital Content

The instructional materials review process (see Appendix 3) has not yet been updated to adequately review digital content that uses algorithms to personalize and/or adapt the content (see Appendix 2).

As a safeguard for student learning, ODE recommends districts thoroughly evaluate the quality of any purchased digital content. It is especially important for commercial digital content to be evaluated by experts who are independent from the vendor. Digital content should also be evaluated for how it supports equitable connections to culture, home, neighborhood, and communities, as appropriate. Digital content should provide authentic and meaningful student-centered activities that build interest and understanding of varied, lived experiences. Lastly, digital content must align with academic content standards and ensure access to grade level or above content learning.

PP 58-60

Appendix 2: Algorithm Concerns

The following content draws heavily from National Education Policy Center (NEPC) publications and conversations with Faith Boninger and Alex Molnar of NEPC's Commercialism in Education Research Unit.

In a distance learning environment, content software may appear to offer a number of benefits, including but not limited to efficiency and personalization. However, for educators working from a strong equity stance and committed to interrupting institutional racism, such software presents a number of serious concerns. In the absence of strong evidence that concerns in this appendix have been thoughtfully and thoroughly addressed, ODE recommends that, wherever possible, districts avoid purchase and implementation of digital content that includes personalized and/or adaptive algorithms.

Content delivery software automates the learning experience through a set of decision rules called "algorithms." Such software is often sold under the labels of personalized or adaptive content. The algorithms that fuel these programs are typically proprietary, and introduce bias not subject to public scrutiny and review.

Researchers Boninger, Molnar, and Saldaña discuss the dangers of purchased online curricula: ...real human beings are creating these curricula, assessments, and algorithms, and their products reflect their values, assumptions, social positions, and interests. However, the products present themselves as transmitting "truth" or "fact," seemingly independent of any perspective on the part of their creators. ... The assumptions, perspectives, ideologies, and related social positions (in other words, the inescapable bias) of the creators of digital personalized learning software are concealed and thus impervious to review and critique.

Significantly, the more sophisticated software becomes (i.e., the extent that it is adaptive and/or based in machine learning), the more profound and far-reaching the implications of the concealed bias become. These problems are compounded by a general lack of transparency with regard to the underlying assumptions and algorithms used. In other words, algorithms are only apparently neutral. They pay attention to what their programmers have told them to notice, and if those instructions contain bias or prejudice-- even if unintentional--then the computer will execute those instructions to the letter. This is exacerbated by the fact that algorithms can only be taught to notice information that can be sorted and stored electronically, which excludes many types of social, contextual, and environmental cues.

Algorithms are programmed largely by young, white, middle class men, posing the risk of over-valuing information deemed important by this one segment of society. Consider how algorithms change the landscape of local judgment and educator evaluation of student progress and replace it with the use of commercial programming.

Historically, if a district purchased an assessment system, the student score reports and class data were provided to the educators. Local educators could determine what additional evidence of student learning to bring in alongside the assessment results and they could make judgments about how much value or emphasis to put on the results in different contexts. Thus the impact of the assessment results were mediated by local, educator judgment. Similarly, if a district purchased a textbook, the educators had full access to all of the content (they could see everything that was included). Local educators could determine what additional content to bring in alongside the textbook and they could make judgments about how much value or emphasis to put on different portions. Thus the impact of the textbook on course content and instruction were mediated by local, educator judgment.

Algorithms pair assessments with content directly, thereby removing local educators from applying professional judgement to support student learning.

Within an adaptive learning program, educators cannot soften the use of the assessment results or thoughtfully enhance the content; the student learning experience is instead managed by a machine.

Consider a parent-teacher conference within an adaptive learning program. The parent could ask the educator about content the student experienced and the teacher could be unable to see what the student saw (because it was content presented based on the algorithm). The parent could ask about how the student is doing, and the teacher could be limited to saying whatever the score report from the program said (because the rest of the details were not accessible to or observed by the teacher).

The foregoing factors, combined with the assumption that computers can be teachers, threaten to diminish the role of educators in facilitating learning. Within an online content delivery software program, educator influence is typically reduced to rudimentary decision-making such as assigning (rather than creating) lessons and sharing results without a clear understanding of appropriate interpretations. This limited sphere of influence does not match what students and educators experience in typical classrooms, where teachers design learning engagements, work with students to define success criteria, support peer-to-peer interactions, provide descriptive feedback and emotional support.

Profits and Questions at Online Charter Schools

Denita Alhammadi, center, works with her children, Romeo, left, and Yasmine, on their coursework for Tennessee Virtual Academy.Credit...Lance Murphey for The New York Times

By **Stephanie Saul**
Dec. 12, 2011

By almost every educational measure, the Agora Cyber Charter School is failing.

Nearly 60 percent of its students are behind grade level in math. Nearly 50 percent trail in reading. A third do not graduate on time. And hundreds of children, from kindergartners to seniors, withdraw within months after they enroll.

By Wall Street standards, though, Agora is a remarkable success that has helped enrich K12 Inc., the publicly traded company that manages the school. And the entire enterprise is paid for by taxpayers.

Agora is one of the largest in a portfolio of similar public schools across the country run by K12. Eight other for-profit companies also run online public elementary and high schools, enrolling a large chunk of the more than 200,000 full-time cyberpupils in the United States.

The pupils work from their homes, in some cases hundreds of miles from their teachers. There is no cafeteria, no gym and no playground. Teachers communicate with students by phone or in simulated classrooms on the Web. But while the notion of an online school evokes cutting-edge methods, much of the work is completed the old-fashioned way, with a pencil and paper while seated at a desk.

Kids mean money. Agora is expecting income of $72 million this school year, accounting for more than 10 percent of the total anticipated revenues of K12, the biggest player in the online-school business. The second-largest, Connections Education, with revenues estimated at $190 million, was bought this year by the education and publishing giant Pearson for $400 million.

The business taps into a formidable coalition of private groups and officials promoting nontraditional forms of public education. The growth of for-profit online schools, one of the more overtly commercial segments of the school choice movement, is rooted in the theory that corporate efficiencies combined with the Internet can revolutionize public education, offering high quality at reduced cost.

The New York Times has spent several months examining this idea, focusing on K12 Inc. A look at the company's operations, based on interviews and a review of school finances and performance records, raises serious questions about whether K12 schools — and full-time online schools in general — benefit children or taxpayers, particularly as state education budgets are being slashed.

Instead, a portrait emerges of a company that tries to squeeze profits from public school dollars by raising enrollment, increasing teacher workload and lowering standards.

Current and former staff members of K12 Inc. schools say problems begin with intense recruitment efforts that fail to filter out students who are not suited for the program, which requires strong parental commitment and self-motivated students. Online schools typically are characterized by high rates of withdrawal.

Teachers have had to take on more and more students, relaxing rigor and achievement along the way, according to interviews. While teachers do not have the burden of a full day of classes, they field questions from families, monitor students' progress and review and grade schoolwork. Complaints about low pay and high class loads — with some high school teachers managing more than 250 students — have prompted a unionization battle at Agora, which has offices in Wayne, Pa.

A look at a forthcoming study by researchers at Western Michigan University and the National Education Policy Center shows that only a third of K12's schools achieved adequate yearly progress, the measurement mandated by federal No Child Left Behind legislation.

Some teachers at K12 schools said they felt pressured to pass students who did little work. Teachers have also questioned why some students who did no class work were allowed to remain on school rosters, potentially allowing the company to continue receiving public money for them. State auditors found that the K12-run Colorado Virtual Academy counted about 120 students for state reimbursement whose enrollment could not be verified or who did not meet Colorado residency requirements. Some had never logged in.

"What we're talking about here is the financialization of public education," said Alex Molnar, a research professor at the University of Colorado Boulder School of Education who is affiliated with the education policy center. "These folks are fundamentally trying to do to public education what the banks did with home mortgages."

The online companies can tailor their programs by reducing curriculum and teachers. During a presentation at the Virginia legislature this year, a representative of Connections explained that its services were available at three price points per student:

Option A: $7,500, a student-teacher ratio of 35-40 to 1, and an average teacher salary of $45,000.

Option B: $6,500, a student-teacher ratio of 50 to 1, with less experienced teachers paid $40,000.

Option C: $4,800 and a student-teacher ratio of 60 to 1, as well as a narrower curriculum.

Despite lower operating costs, the online companies collect nearly as much taxpayer money in some states as brick-and-mortar charter schools. In Pennsylvania, about 30,000 students are enrolled in online schools at an

average cost of about $10,000 per student. The state auditor general, Jack Wagner, said that is double or more what it costs the companies to educate those children online.

"It's extremely unfair for the taxpayer to be paying for additional expenses, such as advertising," Mr. Wagner said. Much of the public money also goes toward lobbying state officials, an activity that Ronald J. Packard, chief executive of K12, has called a "core competency" of the company.

In all, for-profit educational management companies run 79 online schools around the country, according to the study by researchers at Western Michigan University.

Many educators believe there is a place for full-time virtual learning for children whose pace is extremely accelerated or those with behavioral or other issues, like teenage mothers who need to stay home with their babies. But for most children, particularly in the elementary grades, the school experience should not be replaced with online learning, they say.

"The early development of children requires lots of interaction with other children for purposes of socialization, developing collaboration and teamwork, and self-definition," said Irving Hamer Jr., deputy superintendent of Memphis city schools.

In an interview at K12's headquarters in Herndon, Va., Mr. Packard said, "We're here to help children, and that is our overriding purpose and we want to do it as well and efficiently as possible."

He acknowledged what he called a "degradation" in K12's test scores, but he argued that they are an inaccurate measure because many students are already behind when they arrive. "The type of child now coming to an online school, 75 percent of those kids coming in are behind more than one grade level," Mr. Packard said.

He said K12 continues to invest in its curriculum and has developed interventions, like a remedial math program, to help struggling students.

"Kids have been shackled to their brick-and-mortar school down the block for too long," Mr. Packard has said repeatedly, adding that for the first time, every child, regardless of where he or she lives, has a choice.

Some educators are questioning its value. "It's choice," said Thomas L. Seidenberger, superintendent of the East Penn School District in Pennsylvania, which is outperforming Agora and other online schools its students attend. "What about a bad choice?'"

The Cost

The original pitchman for K12 was William J. Bennett, the former education secretary who helped found the company in 2000. At the time, Mr. Bennett said he viewed online schools as a haven for shy children, those worried about being exposed to drugs and even those with "terrible acne."

The company planned to sell an education package directly to parents who wanted to home-school their children. But within months, K12 had decided to tap into public education dollars.

As the company's product has become more popular, the cost has soared.

Mr. Bennett, who left the company in 2005, originally said a home-schooling package would cost about $1,000 per student per year. Parents who wanted teacher support would pay more.

Today, K12 receives an average of $5,500 to $6,000 per student from state and local governments. The schools also receive money for federal programs.

Because online schools do not collect every type of financing that goes to traditional public schools, Mr. Packard contends that his company's schools, on a national average, cost taxpayers 40 percent less per student.

But online schools have negligible building costs and cheaper labor costs, partly because they pay teachers low wages, records and interviews show. Parents, called "learning coaches," do much of the teaching, prompting critics to argue that states are essentially subsidizing home schooling.

"Any high school student taking economics could immediately recognize the fundamental flaws in their pricing structure," said John E. Freund III, a Pennsylvania lawyer who represents a number of districts who are losing students to the online schools and the public financing that goes with them.

Because many states prohibit for-profit public education, the management companies for virtual schools run schools under contract with public districts or nonprofit charter schools, which also receive public money. But companies like K12 are almost fully in charge — devising curriculum, hiring teachers and principals and evaluating student performance.

Another way K12 maximizes its income is to establish schools in poor districts, which receive larger subsidies in some states. The company administers one of K12's newest schools from Union County, Tenn., a mountainous Appalachian enclave where nearly a quarter of the residents live in poverty.

The Tennessee Virtual Academy is technically part of the local school district, which receives more per pupil from the state than most other districts in Tennessee. But of the school's 1,800 pupils, few are actually from Union County.

Out of the state money, the Union County schools will get an administrative fee of about $400,000. K12 stands to collect almost $10 million to staff and manage the school. Dozens of other Tennessee counties, however, lost state financing when some of their students elected to go to the virtual school.

The online schools have enabled entrepreneurs like Michael R. Milken, whose company Knowledge Universe started K12 a decade ago and who remains an investor, to use education as a source of government-financed business, much as military contractors have capitalized on Pentagon spending.

Mr. Packard reports to investors every year with higher enrollment numbers and sales. On Nov. 15, he announced that the company's online schools had enrolled more than 94,000 students. "I think online schools are becoming more mainstream," said Mr. Packard, who was paid $5 million this year.

A sizable portion of the public money collected by K12 is rolled back into generating more business, a common practice by for-profit companies that nevertheless raises questions when the money is intended to educate schoolchildren. K12 spent $26.5 million on advertising in 2010, according to an analysis prepared for The New York Times by Kantar Media.

"Some of the cyber charter schools have fairly aggressive recruitment campaigns," said Jim Buckheit, executive director of the Pennsylvania Association of School Administrators. "They have vans, billboards, TV and radio ads. They set up recruitment meetings in area hotels and invite parents to come."

K12 has run thousands of the sessions, where part of the pitch is supplying computers and subsidized Internet connections for qualifying families. Dr. Seidenberger said he was surprised to see ads for online schools in the outfield at Coca-Cola Park, the stadium of the Lehigh Valley IronPigs minor league baseball team.

The Churn

Parents who become interested in K12's schools can follow up by calling 866 numbers, which connect them to a call center in Herndon.

School employees who have visited the center have described a high-pressured sales environment aimed at one thing: enrollment.

Some workers, called "enrollment pals," are paid bonuses based on the number of students they sign up, according to former employees knowledgeable of the operations. Mr. Packard's annual bonus is also partly tied to enrollment.

Because the online schools are public, students cannot legally be denied enrollment. But former K12 employees said the aggressive and impersonal enrollment process lures students who are not a good fit.

"When you have the television and the Xbox and no parental figure at home, sometimes it's hard to do your schoolwork," said one Agora teacher, who asked not to be identified because of concerns over job safety.

The constant cycle of enrollment and withdrawal, called the churn rate, appears to be a problem at many schools. Records Agora filed with Pennsylvania reveal that 2,688 students withdrew during the 2009-10 school year. At the same time, K12 continued to sign up new students. Enrollment at the end of the year — 4,890 — was 170 students more than at the beginning, obscuring the high number of withdrawals.

Gary Miron, a professor of education at Western Michigan University who researches for-profit school management companies, called the turnover troubling. "The kids enroll. You get the money, the kids disappear," he said.

A review of K12 management contracts reveals that the company may still benefit from students who end up leaving. Under its contracts with some charter schools, K12 charges "upfront" fees for books and other supplies.

According to an Agora price list for the 2009-10 school year, K12's upfront billings for elementary and middle school students were $60 a course for online services, $75 a course for materials and $75 per student for computers. With students frequently enrolled in six courses, the fees could surpass $800.

Under some of K12's contracts, only a portion of the fees would be returned if students withdrew quickly. Mr. Packard has said the company does not make money if students leave because of the cost of the materials and shipping.

The state audit of the Colorado Virtual Academy, which found that the state paid for students who were not attending the school, ordered the reimbursement of more than $800,000.

With retention a problem, some teachers said they were under pressure to pass students with marginal performance and attendance.

Students need simply to log in to be marked present for the day, according to Agora teachers and administrators.

For most students, attendance is recommended but not mandatory at what are called synchronous sessions — when they can interact online with the teacher. A new grading policy states that students who do not turn in work will be given a "50" rather than a zero. Several teachers said assignments were frequently open for unlimited retakes.

Agora records from last year show that failing students were told they could make up their work. "All students with a course average of 40 to 59 percent were called and told all assignments past due could be made up without penalty," according to minutes from a school board meeting. Similar calls were going out to students with averages of 0 to 39 percent.

Theresa Henderson, an Agora teacher until June 2010 and the mother of four of its students, said she was among faculty members who requested a stronger policy to dismiss students who were not doing their work.

Several current and former staff members said that a lax policy had allowed students to remain on the rolls even when they failed to log in for days. Officials of the Elizabeth Forward School District in western Pennsylvania complained that Agora had billed the district for students who were not attending.

One of them was a girl who had missed 55 days but was still on the school's roster, according to Margaret Boucher, assistant business manager at Elizabeth Forward.

The school has cracked down on disengaged students, according to a statement by its director, Sharon Williams, who said a policy adopted last December mandates attendance at online classes for those students who do not log in, repeatedly fail to complete lessons or are failing three courses. She said the school follows state law by removing students who are absent for 10 consecutive days.

Poor attendance and disengaged students have been such a problem that Agora dismissed 600 students last year for nonattendance, 149 of them just before state tests were administered, according to school board minutes.

The Students and Parents

With K12 estimating the market for its schools as high as $15 billion, the company's manifest destiny is to expand across the United States. Its newest conquest is Tennessee, where the company got legislative approval last May and began holding information sessions in July.

By fall, 1,800 students had enrolled in the Tennessee Virtual Academy.

About 75 of them came from the struggling Memphis city school system, including the children of Denita Alhammadi.

In a neighborhood teetering on the edge of middle class, Ms. Alhammadi has converted her living room into a classroom. Two desks are for her children, Romeo, 13, and Yasmine, 8. Another is for Ms. Alhammadi, a former Army supply officer who is also studying online, through Kaplan University.

Within weeks of attending a K12 information session, Ms. Alhammadi had become parent and teacher, wrapped into one. She spends as much as six hours a day as the official "learning coach" for her children.

Like many parents who move their children to online schools, she had worried about violence. But no single reason leads families to make the switch. The students are a broadly diverse group, ranging from entertainers and athletes in training to children with cancer, seizure disorders, peanut allergies or behavioral problems. Some have been expelled from regular schools. In many cases their parents are simply dissatisfied.

Kathryn Ubiarco, whose son and daughter are also enrolled in Tennessee, said that her daughter's school in Memphis had not been teaching her to read. "There's no way to come up with the B that she got in reading last year," Ms. Ubiarco said. "The child can't read." She believes the virtual school curriculum is more rigorous.

A lesson from a middle school world history class focuses on the history of the calendar and the recording of time. Intended to take one hour, the lesson opens online with an illustrated introduction. A video explains how time zones vary around the globe. After reading from a textbook, students define terms in a written journal. Then, the parent helps chart a timeline of the student's own life.

The student can click on other online resources — flashcards, three timelines, two games and links to more than 20 other Web sites.

Students say the games are fun. They may encounter problems, though, when navigating the links. Of more than 20 links in the history lesson, five were not working on a recent day. Several linked to commercial sites including the History Channel and Yahoo Kids.

Students must score an 80 on an online assessment to move to the next lesson.

Some teachers have complained that it can be difficult to determine whether students are actually doing the work, or getting help from their parents or others. "Virtual schools offer much greater opportunity for students

to obtain credit for work they did not do themselves," said a report in October from the National Education Policy Center, which receives financing from the National Education Association.

Ms. Alhammadi, who runs her tiny school like boot camp, has hidden Romeo's computer login so she has control. Otherwise, he would skip the lessons and move straight to the online test — a habit cited by critics of K12's curriculum.

As two frisky cats run back and forth, Romeo raises his hand — a formality required by his mother — and asks to leave the room. He returns with headphones and plugs them into his computer. As he lip syncs Rihanna's hit "Umbrella" it becomes clear that Romeo is not listening to any lesson. "I concentrate better with my music," he says.

On his computer screen, a series of multiple choice questions ask him to select the correct answer to algebraic equations using negative numbers. Romeo scores a 67 percent.

When Romeo moves to science, he misses a question on the definition of matter.

"Romeo, Romeo," his mother says. "If you had been studying appropriately, you would have found out that there are lots of properties of matter. And you got to take all those elements to build matter. Because elements are gas, solids, liquid."

Romeo is scheduled for a virtual session with his assigned teacher and class at 1 p.m. But when he signs into the class, no one else is there. "Wow, the room is completely empty," he says. He types, "Anyone here?" There is no response.

The Teachers

The monthly meeting of the Agora Cyber Charter School board of trustees is live on Blackboard, the same platform students and teachers use for class. During the November meeting, an elementary teacher, Jessica Long, placed a checkmark by her name, indicating she wanted to speak. Then she challenged school figures showing its student-to-teacher ratio is 49 to 1.

"I know on the elementary level we have anywhere from 70 to 100," Ms. Long said. "I don't know anyone who has 50 students."

Some teachers said they were initially attracted to K12 by the flexibility of working from home, in some cases allowing them to take care of their own children while teaching.

Gwen Schwartz, an Indiana University graduate who teaches for the Tennessee Virtual Academy, works from her home in a remote area of eastern Tennessee while her children are next door with their grandparents. In addition to saving on child care, Ms. Schwartz can save on commuting costs and clothing.

But many teachers said the job had become less desirable as the company increased enrollment, particularly because pay at many K12 schools starts in the low 30s — low even for online schools. Some class sizes have become unwieldy, they said, requiring 60-hour weeks and compromising instruction.

At Agora, enrollment has reached 8,836, up from 6,323 in May, according to figures released by the school. As of late November, the total number of staff members — 408 — was lower than last year. Some high school teachers said they were managing as many as 270 students, even though they had been told they would have 150. Agora officials said last week that they hired 25 teachers in the past couple of weeks.

Some Agora teachers have been asked to take on extra students at the rate of $1 per student, per day, according to a newsletter from the Pennsylvania State Education Association.

In interviews, former teachers at Ohio Virtual Academy and Colorado Virtual Academy also complained of bigger class loads, with elementary teachers who once handled 40 to 50 pupils now supervising 75. A teacher with an elementary class that size and a 40-hour workweek could devote little more than 30 minutes a week to each student.

Mary Ravanelli, a former teacher at Ohio Virtual Academy, said she oversaw more than 70 students at a time, answering calls from 8 a.m. to 5 p.m., updating parents on students' progress and attending various school outings. "We'd actually meet our students several times a year," she said.

With teacher salaries and benefits the biggest cost to K12, increasing student-to-teacher ratios is an easy way for the company to increase profits. Ms. Henderson, the former Agora teacher and mother of four students, said the ultimate losers are the children.

"What has happened now in honors literature courses, the teachers are not able to keep up with 300 students, so they'll just cut curriculum. The kids are losing out," she said. "This past week my son was exempted from 'The Great Gatsby' because of the workload of the teacher."

Politics

"Choice" is a mantra of the charter school movement, which promotes competition as a way of compelling traditional public schools to improve. The for-profit companies that operate some charter and online schools take the idea a step further by arguing that private business models are more efficient than public school systems.

Together, the groups have formed a lobbying juggernaut in state capitals.

In Pennsylvania, where K12 Inc. collects about 10 percent of its revenues, the company has spent $681,000 on lobbying since 2007. The company also has friends in high places. Charles Zogby, the state's budget secretary, had been senior vice president of education and policy for K12. In a statement, Mr. Zogby said he still owned a small number of K12 shares, but did not make decisions specifically affecting online schools.

An analysis by the National Institute on Money in State Politics concluded that K12 and its employees had also contributed nearly $500,000 to state political candidates across the country from 2004 to 2010.

One of the industry's most persuasive promotional tools has been the young children who show up en masse at hearings to support online-school legislation. They are mobilized by groups tied to online schools. Records show that at least some receive industry funding.

When Karen Beyer, then a Pennsylvania state representative, sponsored a bill in 2007 to cut financing to online schools, about 700 people turned out for one hearing. Mr. Freund, the Pennsylvania education lawyer, said the room was "packed with kids."

"They had on different colored T-shirts representing their cyber schools," he added.

One of the organizers of such turnouts has been the Pennsylvania Families for Public Cyber Schools. Records show that the group, which gets money both from K12 and Connections Education, has spent about $250,000 on lobbying in the past five years.

Similar family organizations have cropped up across the country.

Former State Representative Stephen Dyer became suspicious when members of the benignly named organization My School, My Choice paraded through his northeastern Ohio district carrying signs attacking him: "Why Won't Rep. Stephen Dyer let parents choose the best education for their kids?"

The protest was prompted by questions Mr. Dyer had raised over the state's financing formula for charter and online schools. The group describes itself as a coalition of parents, teachers and employees of the schools. But Mr. Dyer said that his wife questioned the people carrying the signs and found out they were paid temp agency workers.

A telephone call to a toll-free number on the Web site for My School, My Choice was returned by Mark Weaver, a Columbus lawyer and political consultant with Republican ties dating back to the Reagan administration.

Mr. Weaver said the group's crowning achievement was a 2009 rally against legislation in Ohio that would limit school choice. "We put 4,500 people on the statehouse lawn," he said. But he declined to answer questions about the group's leadership and financing.

Documents incorporating the organization provide clues. The forms name one of the group's founders as Tim Dirrim, a Huntington National Bank employee who serves as board president of the Ohio Virtual Academy, which is managed by K-12 and receives more than $60 million a year from the state. Mr. Dirrim said he knew little about My School, My Choice and was not aware of the campaign against Mr. Dyer.

Much of the Ohio Virtual Academy's money goes through an account at Huntington National, according to the Ohio auditor's office. Mr. Dirrim said the banking arrangement was made before he joined the board and that he did not make decisions relating to the bank's account with the school.

The Results

Mr. Packard has repeatedly delivered upbeat assessments to Wall Street about the progress of K12 Inc. students, even as many schools were performing poorly on state tests.

In a conference in March sponsored by the investment firm Morgan Stanley, Mr. Packard said that "our kids are doing as well or better than the average child in a brick-and-mortar school."

During an investment analysts call in October, Mr. Packard boasted about results at Agora, calling them "significantly higher than a typical school on state administered tests for growth." Weeks earlier, data had been released showing that 42 percent of Agora students tested on grade level or better in math, compared with 75 percent of students statewide. And 52 percent of Agora students had hit the mark in reading, compared with 72 percent statewide. The school was losing ground, not gaining it.

Mr. Packard said in a recent interview that he was not aware of the data at the time he made the comments. A spokesman said Mr. Packard was relying on older data.

A Stanford University group, the Center for Research on Education Outcomes, tracked students in eight virtual schools in Pennsylvania, including Agora, comparing them with similar students in regular schools. The study found that "in every subgroup, with significant effects, cyber charter performance is lower."

Devora Davis, the center's research manager, said the group's analysis of Pennsylvania online schools showed that students were slipping. "If they were paired with a traditional public schools student, the public school student kept their place in line, and the cyberstudent moved back five spots," she said.

An analysis by the Carroll County Public School District in Virginia shows that the 400 students in the virtual program there performed worse than the regular students in 19 of 26 categories on the state assessment test.

The Carroll County superintendent, James Greg Smith, said he was particularly concerned about scores in middle school math, history and social sciences. In seventh-grade math, for example, only 35 percent of the online students passed a state assessment; 68 percent of the traditional students did.

It will be a while before test results are available for students at the new virtual school in Tennessee. Back in Memphis, Ms. Alhammadi is worried that her daughter, Yasmine, is moving too quickly. A computerized analysis shows that, at the rate she is going, Yasmine will be finished with all but one of her classes by March.

Red flags go up if a student is "zapping through like a rocket, lesson by lesson," according to Tom DiGiovanni, K12's senior director of product planning. "The teachers are instructed to drop in (by phone) and do a little quiz to kind of test students" to make sure they understand the concepts.

Five miles from Ms. Alhammadi's home, Ms. Ubiarco has also turned her living room into a classroom. Her daughter Sabrina, 10, is in the fifth grade and her son, K.C., 6, is in kindergarten at the Tennessee Virtual Academy.

Ms. Ubiarco is giving Sabrina a math lesson — about the distributive property — on a white board in the family's living room.

While his mother focuses on his sister, K.C. is doing his own thing — lying on the carpet crashing cars into Spider-Man and Batman action figures.

For the most part, Mrs. Ubiarco said the switch to online had gone smoothly, although she was initially stumped when she first got the K12 curriculum.

"I called the teacher the other day to find out what a simple predicate is," she said. "She said it's the verb. I said why don't they just say that?"

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