

International | Education in a can

Most children in poor countries are being failed by their schools

Having teachers follow pre-baked lessons could help



“**G**ood job you!” shouts Pauline Bika, as a group of schoolchildren completes the hokey-cokey. “Good job me!” choruses her class. Ms Bika runs a small government primary school in Edo state, in southern Nigeria. It is reached by a mud track that starts not far outside Benin City, the state capital. Her school has 140 pupils, but only three teachers. She seems both pleased and a little embarrassed to offer a visitor a plastic chair.

For all that it lacks, Ms Bika’s school has one advantage. At the

start of last year the state education ministry gave each of her teachers a small tablet with a black-and-white touch screen. Every two weeks they use it to download detailed scripts that guide each lesson they deliver. These scripts tell the teachers what to say, what to write on the blackboard, and even when to walk around the classroom. Ms Bika says this new way of working is saving teachers time that they used to spend scribbling their own lesson plans—and her pupils are reading better, too.

That is sorely needed, for much of the education given in much of the world is strikingly bad. Across the developing world many schoolchildren learn very little, even when they spend years in class. Less than half of kids in low- and middle-income countries are able to read a short passage by the time they finish primary school, according to the World Bank. Across sub-Saharan Africa, as few as 10% can (see chart). Experiments like those under way in Nigeria mark one attempt to improve things. They also face fierce opposition from critics who are convinced they mark a wrong turn.



The Economist

The reforms in Edo began in 2018. Godwin Obaseki, the state governor, says that poor schools are one reason youngsters have often left the state for greener pastures (some fall victim to people-traffickers promising better lives in Europe). Since then, the government has provided tablets and training to more than 15,000 teachers. They in turn have given the new lessons to more than 300,000 children, most of them in primary schools.

On any given day pupils throughout the state receive identical lessons, as dictated by the tablet.

The training and technology are provided by NewGlobe, an education company founded in 2007 by three Americans (Pitchbook, a data firm, valued the company at \$250m following a funding round in 2016). NewGlobe developed its approach while running a chain of low-cost private schools, mostly in Kenya, under the brand “Bridge International Academies”. A study by academics including Michael Kremer, a development economist at the University of Chicago, found that, over two years, children who attended NewGlobe’s primary schools made gains equivalent to almost a whole year of extra schooling, compared with their peers in other schools.

F is for factory

Though Edo was the first state in Nigeria to strike a deal with the firm, NewGlobe’s approach has since also been applied in Lagos, the country’s biggest city. The firm is starting work in Manipur, a state in north-eastern India, and in Rwanda. Around a million children are now studying in classrooms that use NewGlobe’s model—far more than its private schools have ever

been able to reach.

Although it seems able to find plenty of clients, the company provokes ferocious arguments among educators. Its private schools have long faced energetic opposition from trade unions and some international ngos, many of whom hate the idea of profit-seeking companies playing any role in education. Others resent the application of mass production to what they see as a skilled, artisanal profession.

Dennis Sinyolo of Education International, a global group of teachers' unions, says scripted lessons "undermine teaching" and encourage "rote learning and exam drilling". He says good lesson plans are written to match local contexts, and the needs of individual students. The freedom to change tack mid-lesson is invaluable if a lesson plan is not working. "There's no one-size-fits-all in teaching," he says.

Visits to schools in Edo provide some perspective on what is going on. There are doubtless many ways to teach a scripted lesson badly. But the idea in Nigeria is that they will tend to make classes more compelling. The scripts enforce instructional

practices that are routine in many rich-country classrooms but often neglected in poor ones. These include techniques such as pausing frequently to pose questions to the class, instead of delivering long lectures at the blackboard, or encouraging pupils to try to solve a problem by chatting to the child sitting next to them.

Detailed, prescriptive lesson plans are also supposed to relieve teachers of the burden of having to write their own. That, advocates hope, will leave them more energy for other jobs—such as making sure their charges stay engaged. Teachers in Edo have been trained to lead their classes in short games and songs whenever they think pupils have grown restless (hence the hokey-cokey). Ms Bika says things are better than in the past. Before, bored children would occasionally wander home during the day. Inattention was sometimes punished with the cane.

The changes do more than alter teaching styles. A study published in 2010 estimated that on any given day around a fifth of Nigeria's primary school teachers were absent from their classrooms. Earlier research suggested as little as one-third of class time is used productively. In Edo, tablets register when

teachers arrive. They can tell if a teacher has scrolled through a lesson faster than appropriate, or if they have abandoned one halfway through. Beneath lies a low-tech foundation: a team of officials—about one for every ten schools—that observe lessons and coach teachers, helped by data from the tablets.

The depth of its scripting and the whizziness of its tablets set the work in Edo apart from many other attempts to improve schooling. But the programme has things in common with a broader family of reforms burdened with the clunky name of “structured pedagogy,” most of which are less controversial. This argues that isolated splurges on goodies such as textbooks often fail to bring benefits. Making big improvements seems to require pulling several levers at once. So the idea is both to give more materials to pupils and better lesson plans to teachers, alongside fresh training and frequent coaching.

In 2020 a panel convened by the World Bank and other bodies concluded that these are some of the best things education reformers can spend money on. In the past few years the approach has been applied in Gambia, Ghana, Nepal and Senegal. One programme in Kenyan government schools helped

push up the number of children reaching the national standard in English by 30 percentage points.

E is for everywhere

But it is not only in poor countries where tightly structured approaches to schooling are gaining a following. In America, for example, there is growing awareness that schools have been clinging to modish but ineffective “child-led” ways of teaching reading that other developed countries such as Britain have junked. Literacy programmes that were dismissed as old-fashioned are coming back into favour.

McGraw Hill, an American publishing company, sells a series of highly scripted courses aimed at primary-school children. Bryan Wickman of the National Institute for Direct Instruction, a charity in Oregon, says that using the simplest, clearest language possible is crucial when teaching the smallest children. He says the idea that lessons based on scripts must inevitably bore children should surprise anyone who enjoys other things that are performed from scripts, such as plays.

Success For All, a programme used in some British and

American schools, puts much faith in “co-operative learning”—which involves encouraging children to solve problems together in small groups. But much else that goes on in its classrooms is structured and scripted. Such prescriptiveness helps teachers adopt techniques that research suggests work well, says Nancy Madden of Johns Hopkins University, one of Success for All’s creators. These include giving pupils quick and frequent feedback and keeping up a rapid pace to keep children interested.

Ms Madden says teachers who have grown familiar with her programme’s techniques are not expected to keep following scripts to the letter. But when, in the past, her team relied mostly on training workshops to spread their approach, they found that only a fraction of teachers kept up the new practices once they were back in their classrooms.

She admits that teachers sometimes bristle at the constraints that scripts impose: “It is not what they teach you in teacher school.” Sceptics often come round, she says, when they see kids making swift progress. Mr Wickman points out that other expensively trained professionals, such as pilots and surgeons, also have

procedures that they must follow to the letter. After some initial complaints (similar to those expressed by dubious teachers) such regimented approaches have become widespread in those fields. They help reduce mistakes, and spread better ways of doing things.

Back in Edo, Mr Obaseki's transformation still has plenty to prove. An analysis published in 2019 by the state government and NewGlobe claims that during the first year of the reforms children learned as much in a single term as they were previously learning in one year. But the project has yet to undergo a rigorous independent evaluation. Much of the existing evidence that supports scripted schooling relates to basic literacy and numeracy among the youngest children. In Edo, lesson scripts are being used to teach almost every subject, and are being applied to teenagers in junior secondary schools.

Whether strict scripting is necessary remains a topic of debate. (The World Bank panel, for instance, argued that word-for-word scripts are less effective than simpler guides.) In 2018, an American non-profit group, analysed 19 school-reform efforts it had been involved in across 13 countries, including Ethiopia and

Uganda. It concluded that programmes with slightly less prescriptive guides—a page of notes per day, say, rather than a full-on script—produced better results. Advocates of a more relaxed approach say another advantage is that leaving teachers with a bit of freedom to tinker can help win their support.

Yet Edo's approach appears to have persuaded most local teachers of its worth. Mr Obaseki, the state governor, says school staff had long felt ignored and unappreciated; he says that providing more training and equipment has brought fresh motivation. He insists that support for the project among unions was crucial to his re-election, in 2020. It has, he says, been “one of my best investments”. ■

贫穷国家的大多数儿童被他们的学校所遗弃

让教师遵循预先准备好的课程可以帮助他们

当一群学童完成霍克基游戏时，宝琳-比卡喊道："你们干得好！"。"我做得很好！"她的班级合唱道。比卡女士在尼日利亚南部的埃多州经营一所小型政府小学。从州府贝宁市外不远处的一条泥泞小路就可以到达学校。她的学校有 140 名学生，但只有三名教师。她似乎既高兴又有点尴尬地给访客提供了一把塑料椅子。

尽管缺少这些东西，比卡女士的学校有一个优势。去年年初，国家教育部给她的每个老师发了一个黑白触摸屏的小平板电脑。每两周，他们用它来下载详细的脚本，指导他们的每一堂课。这些脚本告诉教师应该说什么，在黑板上写什么，甚至何时在教室里走动。比卡女士说，这种新的工作方式为教师节省了时间，以前他们要花时间写自己的教案，而她的学生们也读得更好。

这是很有必要的，因为世界上许多地方的教育都是非常糟糕的。在整个发展中世界，许多学龄儿童学得很少，即使他们在课堂上花了几年时间。根据世界银行的数据，在低收入和中等收入国家，只有不到一半的孩子在完成小学学业时能够阅读一段短文。在撒哈拉以南的非洲地区，只有 10% 的人能够做到（见图）。像尼日利亚正在进行的那些实验标志着改善情况的一种尝试。它们也面临着来自批评者的激烈反对，他们相信这些实验标志着一个错误的方向。

埃多州的改革始于 2018 年。该州州长戈德温-奥巴塞基(Godwin Obaseki)说，糟糕的学校是年轻人经常离开该州前往更广阔的地方的原因之一（有些人成为承诺在欧洲过上更好生活的人口贩子的受害者）。自那时起，政府向 15,000 多名教师提供了平板电脑和培训。他们又向 30 多万名儿童提供了新课程，其中大部分是在小学。在任何一天，全州的学生都会接受相同的课程，就像平板电脑所指示的那样。

培训和技术由 NewGlobe 提供，这是一家由三个美国人于 2007 年成立的教育公司（数据公司 Pitchbook 在 2016 年的一轮融资后对该公司的估值为 2.5 亿美元）。NewGlobe 在经营连锁的低成本私立学校时发展了自己的方法，这些学校大多在肯尼亚，以 "Bridge International Academies" 为品牌。包括芝加哥大学发展经济学家迈克尔-克雷默(Michael Kremer)在内的学者们的一项研究发现，与其他学校的同龄人相比，在 NewGlobe 的小学就读的儿童在两年内取得了相当于几乎一整年的额外教育。

F 是指工厂

尽管埃多州是尼日利亚第一个与该公司达成协议的州，但新全球公司的方法后来也被应用于该国最大的城市拉各斯。该公司正在印度东北部的曼尼普尔州和卢旺达开始工作。现在约有一百万儿童在使用新地球公司模式的教室里学习--远远超过其私立学校所能达到的人数。

尽管它似乎能够找到很多客户，但该公司在教育工作者中引发了激烈的争论。它的私立学校长期以来一直面临着来自工会和一些国际非政府组织的强烈反对，其中许多人讨厌追求利润的公司在教育中扮演任何角色的想法。另一些人则对将大规模生产应用于他们认为是熟练的、手工制作的职业感到不满。

全球教师工会组织 "国际教育 "的丹尼斯-辛约洛（Dennis Sinyolo）说，编写的课程 "破坏了教学"，鼓励 "死记硬背和考试钻研"。他说，好的课程计划是根据当地情况和个别学生的需要而编写的。如果一个课程计划不奏效，在课中改变策略的自由是非常宝贵的。"他说："教学中没有一刀切的做法。

对江户地区学校的访问提供了一些关于正在发生的事情的观点。毫无疑问，有很多方法可以把讲义上的课教得很糟糕。但在尼日利亚，人们的想法是，它们会倾向于使课堂更有说服力。脚本强制执行在许多富裕国家的课堂上是常规的，但在贫穷的课堂上却经常被忽视的教学做法。这包括一些技巧，如经常暂停，向全班同学提出问题，而不是在黑板上长篇大论，或者鼓励学生通过与坐在他们旁边的孩子聊天来尝试解决问题。

详细的、规定性的教案也是为了减轻教师不得不自己编写教案的负担。倡导者们希望，这将使他們有更多精力从事其他工作，例如确保他们的学生保持参与。江户省的教师已经接受了培训，每当他们认为学生变得焦躁不安时，就会带领他们的班级做一些简短的游戏和唱歌（因此有了 **hokey-cokey**）。比卡女士说，现在的情况比过去好。以前，无聊的孩子们偶尔会在白天徘徊回家。不专心的孩子有时会被施以藤条惩罚。

这些变化不仅仅是改变了教学方式。2010 年发表的一项研究估计，在任何一天，尼日利亚的小学教师中约有五分之一的人不在课堂上。早期的研究表明，只有三分之一的课堂时间被有效利用。在埃多州，教师到达时平板电脑会进行登记。他们可以知道教师是否以超过适当的速度滚动了一节课，或者他们是否在中途放弃了一节课。底下是一个低技术基础：一个官员团队--大约每 10 所学校有一个--在平板电脑数据的帮助下观察课程并指导教师。

脚本的深度和平板电脑的便捷性使江户的工作有别于其他许多改善学校教育的尝试。但是，该方案与更广泛的改革方案有共同之处，这些改革方案被冠以 "结构化教学法 "这一笨重的名称，其中大多数都没有什么争议。这就说明，孤立地花钱买好东西，如教科书，往往不能带来好处。要做出大的改进，似乎需要同时拉动几个杠杆。因此，我们的想法是为学生提供更多的材料，为教师提供更好的教学计划，同时提供新的培训和频繁的辅导。

2020 年，由世界银行和其他机构召集的一个小组得出结论，这些是教育改革者可以花钱的一些最好的东西。在过去的几年里，这种方法已经在冈比亚、加纳、尼泊尔和塞内加尔得到应用。肯尼亚政府学校的一个项目帮助将英语达到国家标准的儿童人数提高了 30 个百分点。

E 是无处不在的

但是，不仅仅是在贫困国家，结构严密的学校教育方法正在获得追捧。例如，在美国，人们越来越意识到，学校一直在坚持以“儿童为主导”的阅读教学方式，而英国等其他发达国家已将其废弃。被认为是老式的识字方案正在重新受到青睐。

美国出版公司麦格劳-希尔（McGraw Hill）销售一系列针对小学儿童的高度脚本化课程。俄勒冈州慈善机构国家直接教学研究所的布莱恩-维克曼（Bryan Wickman）说，在教授最小的孩子时，尽可能使用最简单、最清晰的语言是至关重要的。他说，基于脚本的课程不可避免地会让孩子们感到厌烦，这种想法应该让喜欢其他根据脚本表演的事物的人感到惊讶，比如说戏剧。

在一些英国和美国的学校中使用的 **Success For All** 计划，非常重视“合作学习”--即鼓励儿童在小组中共同解决问题。但是，在其课堂上进行的许多其他活动都是有条理的和有脚本的。约翰霍普金斯大学的南希-麦登（**Success for All** 的创建者之一）说，这种规定性有助于教师采用研究表明效果良好的技术。这些技巧包括给学生快速和频繁的反馈，并保持快速的节奏以保持孩子们的兴趣。

马登女士说，已经熟悉她的方案技术的教师不需要完全按照脚本行事。但是，在过去，她的团队主要依靠培训研讨会来推广他们的方法，他们发现只有一小部分教师在回到教室后保持了新的做法。

她承认，教师们有时会对脚本施加的限制感到不满：“这不是他们在师范学校教给你的东西。她说，当怀疑者看到孩子们取得迅速的进步时，他们往往会回心转意。威克曼先生指出，其他经过昂贵培训的专业人士，如飞行员和外科医生，也有他们必须严格遵守的程序。在经历了最初的一些抱怨（类似于那些可疑的教师所表达的抱怨）之后，这种制度化的方法已经在这些领域得到了广泛的应用。它们有助于减少错误，并传播更好的做事方法。

回到江户，奥巴马基先生的转型仍有很多东西需要证明。州政府和 **NewGlobe** 在 2019 年发表的一份分析报告称，在改革的第一年，孩子们在一个学期里学到的东西与他们以前一年里学到的一样多。但该项目还没有经过严格的独立评估。现有的支持脚本教育的证据大多与最年轻的儿童的基本识字和计算能力有关。在江户，课程脚本被用来教授几乎每一个科目，并被应用于初中的青少年。

严格的脚本教学是否有必要仍然是一个争论的话题。（例如，世界银行小组认为，逐字逐句的脚本不如更简单的指南有效）。2018 年，美国非营利组织 **rti** 分析了它在 13 个国家参与的 19 项学校改革工作，包括埃塞俄比亚和乌干达。它的结论是，规定性稍弱的指导方案--比如说每天一页的说明，而不是完整的脚本--产生了更好的结果。更加宽松的方法的倡导者说，另一个好处是，给教师留一点自由来修补，可以帮助他们赢得支持。

然而，江户州的做法似乎已经说服了大多数当地教师，使他们认识到其价值。州长奥巴马基先生说，学校员工长期以来感到被忽视和不被重视；他说，提供更多

培训和设备带来了新的动力。他坚持认为，工会对该项目的支持对他在 2020 年的连任至关重要。他说，这是 "我最好的投资之一"。■