

# INTRODUCTION

## WELCOME TO 1:1 LEARNING

Educators today have an extraordinary opportunity. As technology permeates all areas of society, educators find themselves with a wide-range of powerful digital tools and resources to use to **rethink and reinvent educational practices to meet the needs of modern learners.** The challenge is to find an approach that is agile, adaptable, and in tune with young people's lives outside of the classroom.



**"AALF is focused on developing 21<sup>st</sup> century schools. The global awareness, contacts, and expertise of the organization's resources can help any district, school, or state successfully understand and take effective steps to make the best use of technology in support of teaching and learning."**

**Bette Manchester, President**  
Maine International Center  
for Digital Learning

**1:1 education has the potential to create a revolution in student learning.** But simply giving each child a computer will not produce deeper learning unless you also address teaching, learning, and assessment; cultivate leadership and a culture of innovation; build capacity; and alter the learning environment.

As part of our commitment to education transformation, Microsoft in Education partnered with the Anytime Anywhere Learning Foundation (AALF) to develop a guide for regional/district leaders and school principals who are considering, planning, or starting to implement a learning initiative in which each student has her or his own personal, portable, fully functional digital device, such as a laptop or tablet computer.

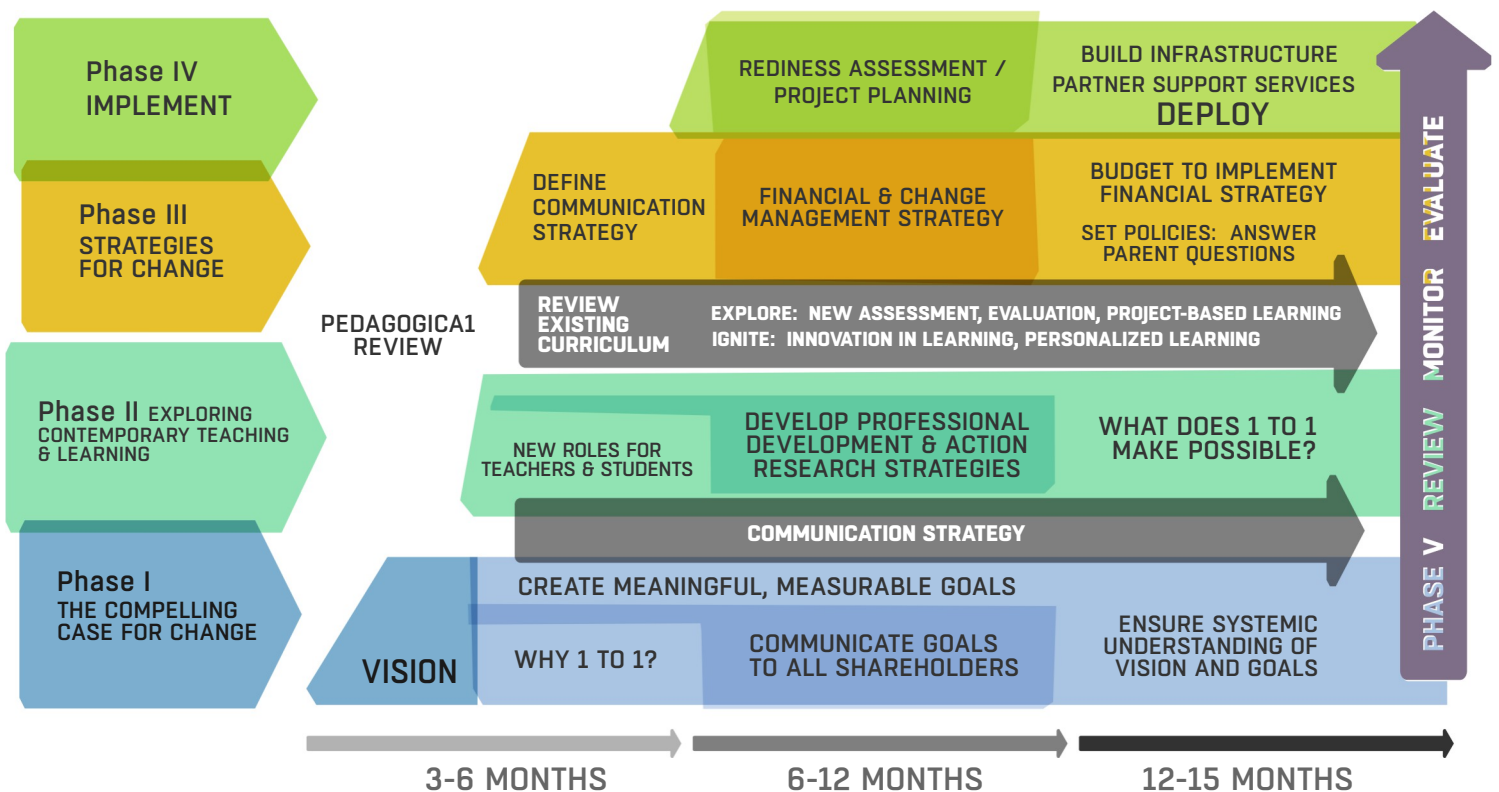
Since the first 1:1 programs began more than 25 years ago, tens of thousands of schools across the globe have piloted or fully deployed 1:1 programs in their schools and school districts. Analyses of their experiences reveal that the most successful 1:1 initiatives have one main characteristic in common: they are first and foremost concerned with learning, not laptops. The successful initiatives also followed a similar set of processes, whereas the schools that reported the most problems did not. The key aspects of their system-wide approach form the core of this guide, **created to help you envision, plan, implement, evaluate, and expand 1:1 learning** in your schools.

# THE 5 PHASES

## Design Deploy & Transform



The **Design, Deploy, & Transform** framework consists of five key phases. In the earliest phases, the perspective is high level, looking at the big picture and focused on vision and strategy, because in leading such an initiative, it's important to see what really matters and what the priorities should be at all times. As you progress through the phases, the framework moves down to the tactical needs and eventually talks about the specifics of the program, helping you understand some of the detail to which every leader should be paying attention.



# THE 5 PHASES

## PHASE I

### PHASE 1

## Compelling Case for Change

### WHAT IS THE COMPELLING CASE FOR CHANGE?

### ACTIONS

The following three actions are the essential first steps that ensure a solid foundation for all future steps. The ability to complete these objectively will be a critical influence on:

- The extent to which the 'institution of school' stays relevant.
- The way in which we are able to craft credible alternatives that meet the needs of young, modern learners.

**Schools are moving to 1:1 because they recognize the following:**

- The new global economy is dependent on new skills, perspectives, and knowledge-based work.
- Many young people interact with and use powerful technology on a daily basis. They expect to have access to rich content and collaborate frequently and easily.



Young people are interacting with the world in a variety of new ways, which is changing the role and expectations of school. There is an urgent need to realign, rethink, and reimagine schools for today's learner.

1

### Build a solid foundation of knowledge:

- Investigate how the world is changing, the global conditions driving the need for 1:1, and the impact these changes are having on how young people learn and interact with the world.
- Review research around 1:1 and how to best prepare young people to become contributors to this future society and economy.

### KEY QUESTIONS



What are the realities of the current technology-immersed environment in which today's young people are growing up?

How are schools responding to this?

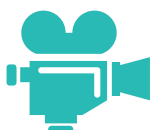
Within the context of the current global economic climate, what are the implications for schools?

### RESOURCES

*Microsoft in Education Transformation Framework: Vision for Anytime, Anywhere Learning for All*

*Learning from the Extremes*

*ITL Research: Innovative Teaching and Learning*



**VIDEO –  
WHAT IS POSSIBLE?**

# THE 5 PHASES

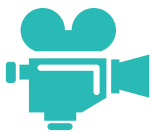
## PHASE I

2

### Define a clear, actionable vision.

A clear vision is critically important and should:

- Describe how the 1:1 initiative will transform the learning environment and improve student outcomes.
- Represent your collective beliefs about the role of school in the 21st century.
- Inform the initiative's direction for the next five to seven years for all those involved.



**VIDEO -  
A VISION OF LEARNING  
AN INTERVIEW WITH  
ESME CAPP**

### KEY QUESTIONS



What is the vision you have for the future of your schools?

How would you articulate a vision that provides clear direction for the school for the next 5 to 7 years?  
What must learning at your schools be like by that time?

How will access to ubiquitous technology shift what learning in your schools looks like?

### RESOURCES

*Microsoft in Education Transformation Framework: Enabling Transformation with Strategic Planning, Organizational Capacity, and Sustainability*

*Vision for Education: The Caperton-Papert Platform*

*Why School? How Education Must Change When Learning and Information Are Everywhere*

*A Policy Agenda for a 21st Century Education*

3

### Outline measureable, actionable goals, along with their expected outcomes.

These will break down the steps you need to achieve your defined vision, and:

Make it possible to measure progress and help everyone involved in the initiative align their work to your vision. Provide milestones as a way for you to gauge how well you are doing in this process.

Create a common language for all stakeholders to understand and discuss the journey to the vision.



**VIDEO – LEARN FROM THE LEADERS**

### KEY QUESTIONS



How will you develop goals that will effectively measure the extent to which you are meeting your objectives and delivering on your vision? How will you ensure learning and teaching practices throughout your school or district are aligned with your goals?

### RESOURCES

*Microsoft in Education Transformation Framework: Quality Assurance: Monitoring and Evaluation to Inform Practice and Leadership*

*The ICT Connection: Harnessing ICT, Transforming Learners – Singapore*

## PHASE 2 – Redesign Teaching and Learning

**WHAT** DOES UBIQUITOUS ACCESS TO TECHNOLOGY NOW MAKE POSSIBLE FOR CONTEMPORARY TEACHING & LEARNING?

With a well-defined vision and actionable goals, it's now possible to rethink, re-imagine, and re-design the very nature of teaching and learning and:

- Boldly analyze and shape all aspects of learning and teaching practice in order to achieve these goals and vision.
- Offer educational leaders an unprecedented opportunity to forge new directions for their schools and for the experiences of their young learners.

### ACTIONS

1

**Rethink every aspect of your learning environment based on your 1:1 vision, including:**

- When, where, what, and how contemporary learners learn.
- The design of both the physical and virtual learning environment.
- Assessment for and of learning.

Focus on the three dimensions of contemporary learners as you redesign learning. Learners are:

- Connected (social learners).
- Curious (inquirers).
- Self-directed.



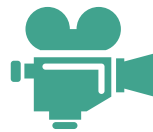


# THE 5 PHASES

## PHASE 2

2

**Switch from teacher to student directed learning in developing a contemporary curriculum strategy that gives learners a more meaningful voice in their education.**



**VIDEO – EXPLORE  
CONTEMPORARY LEARNING**

### KEY QUESTIONS



How does your school support students as autonomous, self-directed learners?

What is personalized learning and how is it enabled and supported in your school?

How can you give students a more meaningful voice in their learning?

How can learning spaces, both physical and virtual, be designed to support learning most effectively?

How can you redefine curriculum to be a strategy for deeper learning?

What impact does the new participatory culture have on learning and school?

What are the conditions that best allow for contemporary teaching and learning?

### RESOURCES

*Microsoft in Education Transformation Framework: Personalized Learning for Global Citizens*

*ITL Research: Innovative Teaching and Learning - 21st Century Learning Design*

*Partners in Learning School Research*

*Colegio Fontan's Case Study*



# THE 5 PHASES

## PHASE 2

3

**The role of teachers is changing. They are now coaches, mentors, learning strategists, curators, talent scouts, networkers, and researchers.**

Explore how each of these roles enriches learning in a contemporary learning environment and how you will support these new roles.

4

**As learning takes place in new ways and in new spaces, how educators work also changes.** Encourage and support structured collaboration among educators, which is the key factor in developing innovative teaching practices.

### KEY QUESTIONS

What are the emerging roles of the 21st century educator?

How do they impact classroom culture?

What are the benefits of teacher collaboration and teachers working in teams?



#### VIDEO

New Roles for 21st Century Educators

### RESOURCES

*Microsoft in Education Transformation Framework: Transforming Learning Environments for Anytime, Anywhere Learning for All.*

*Curriculum, Content, and Assessment for the Real World*

*ITL Research: Innovative Teaching and Learning*

*Partners in Learning School Research*

*Microsoft in Education: Personalized Learning*



### PHASE 3 - Lead the Shift

#### HOW DO YOU BEST LEAD THIS INEVITABLE SHIFT?

Strategies must align with your vision and goals and focus on long-term planning and actions.

The process of shifting peoples' beliefs and attitudes about what is possible is a huge challenge to schools. Before the vision can be turned into reality, strategies need to be put in place to ensure:

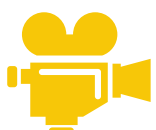
- Stakeholder and community buy-in.
- Teachers' professional growth to support your initiative.
- Equity.
- Sustainable financial support.
- Clear communication.
- Policy clarity and alignment to learning goals.

#### ACTIONS

1

##### Ensure stakeholder buy-in and support by:

- Exploring and implementing strategies for getting school faculty to understand and take ownership of the vision and goals.
- Identifying the transformers, the people to help make the shift. They are those in the middle of the curve who are not completely comfortable with the technology but are willing to see what is possible.
- Making sure there is systemic alignment to the goal of shifting to innovative teaching practices in order to provide ongoing support and development.



**VIDEO**  
Lead the Shift



#### KEY QUESTIONS

Who are the people to help create a shift within the organization?

How and at what pace can it be made?

What are their expectations?

#### RESOURCES

*Microsoft in Education Transformation Framework: Building Leader and Educator Capacity for Transformation*

*Partners in Learning School Research*

*Microsoft in Education Hot Topics Community: Change Management & Culture of Innovation*



2

### Develop a professional learning strategy that will:

- ◆ Provide learning that is continuous, embedded in teaching practice (for example, peer coaching) and focused on the real work of the teacher.
- ◆ Let educators participate in ongoing, meaningful action research to explore their teaching practice and build both teacher competence and confidence.
- ◆ Connect all stakeholders into a large learning space across the community focused on the 7Es – Engage, Experience, Empower, Effect, Emote, Evolve, Efficacy.



### KEY QUESTIONS



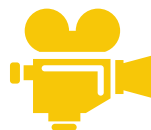
What are the essential elements that underpin the development of a contemporary learning culture?

What are the benefits, implications, and challenges of different professional learning strategies?

### RESOURCES

*Microsoft in Education Transformation Framework: Learning Communities & Support*

*Microsoft Innovative Educator Professional Development Toolkit*



**VIDEO**  
Professional Learning –  
A Critical Priority

3

**Develop a funding mix designed to ensure the initiative is sustainable and that pedagogical goals are not compromised.**

- Consider a shared-cost model with contributions from multiple sources, including families. This provides financial flexibility and some funding stability when local or regional funding options change.
- If thinking of BYOD (Bring Your Own Device), consider it carefully. It may look like the answer in terms of a sustainable financial strategy but BYOD raises a number of difficult, and potentially costly, issues around:
  - Equity.
  - Infrastructure and support.
  - Impact on pedagogical choices.
  - Finances.

### KEY QUESTIONS

How will you finance your initiative to ensure all students have equal and excellent opportunities to learn?

How will your financial strategy ensure sustainability beyond initial funding opportunities?

### RESOURCES

*Bring Your Own Device in Schools.*

4

**A well designed communication and public relations plan helps all stakeholders understand:**

- The school's vision for learning in a technology-rich environment.
- The steps the school needs to take to achieve this vision.

5

**Guidelines and policies should be aligned with the vision and learning goals and determined before any parent nights and the start of the 1:1 initiative.**

### KEY QUESTIONS

What role will each of your stakeholder groups play in planning, implementing, and participating in the ongoing evaluation of your initiative?

What communication strategies will build the strongest support across all stakeholders within the school community?

What process might allow you to develop the most effective policies?

What are the areas around the use of technology that will require policy guidelines?

## PHASE 4 - Manage Implementation

### HOW WILL YOU BEST MANAGE IMPLEMENTATION OF YOUR INITIATIVE?

Implementation occurs along a number of dimensions involving several distinct groups of participants. Although each may have his or her own focus, there will not only be overlap, but a need to constantly communicate to ensure everyone's actions are aligned. If a school/district has defined an actionable vision with unambiguous goals, and if it has developed strategies around this vision and these goals, the teams handling the implementation will have a clear path to follow.

### ACTIONS

1

#### Conduct a Readiness Assessment

A readiness assessment helps identify both a school's strengths and any areas that may need attention. You should consider the current resource position across:

- Faculty.
- Technology.
- Infrastructure.

### RESOURCES

*Microsoft Assessment and Planning Tool*

Once the crucial fundamental pieces are in place, it's time to begin the actual implementation. This involves a number of important steps, many of which can be done concurrently.



### KEY QUESTIONS

How ready are you in terms of teacher preparedness, technology infrastructure, and your facilities?

What ICT is being used now, and how much of that ICT can be redirected to support the implementation plan?

2

### Choose your devices

Prioritize your decision criteria based on your pedagogical goals, not on cost. Remember:

- Choose wisely. Different devices may be appropriate for different age groups. Services and tools that are consistent across a variety of device forms create a more cohesive and comprehensive experience for students and teachers.
- Select devices that provide several input formats, to both enhance accessibility for all students and provide more learning options.
- Every classroom has students who can benefit from using technology designed for accessibility for all. Windows 8's Ease of Access Settings and Ease of Access Center mean devices can be configured for all needs.

#### KEY QUESTIONS

**What processes should be put in place to best inform the decisions around device choice, and which software will be installed on these devices?**

**What are the key criteria that you think should be considered in recommending the most suitable student device?**

**What form factor is most appropriate for students, teachers, and staff?**

**What input format is best for these devices?**

#### RESOURCES

*Microsoft in Education: Range of Windows 8 Devices for the Classroom*

*OneNote for Assessment and Feedback*

3

### Prepare a timetable

Map out your deployment strategies, scope its phases, identify which students and teachers receive devices and when, estimate how long the project will take, and determines what is needed when and where. A typical implementation timeline allots 6 to 12 months for planning and projects three years into the future.

#### KEY QUESTIONS

**Which students will receive laptops in the first phase of your plan?**

**How will the school or district extend the initiative in subsequent phases?**

4

### Manage deployment

#### Decide on:

- A process for configuration for all laptops, which can range from a manual, end user managed process to a fully automated one,
- The initial configuration.
- An ongoing device management protocol.

#### KEY QUESTIONS



How will the school handle the deployment of devices?

How will the device settings be configured?

How will Apps and software or updates be deployed to the devices?

5

### Plan your infrastructure

Infrastructure is the backbone of any initiative. Any problems or weaknesses here will be echoed and amplified throughout the initiative. Anticipate infrastructure changes as the initiative expands so that learning objectives are not compromised.

#### Remember to consider:

- Power sources (electricity, solar, other alternatives);
- Internet grid options;
- LAN/WAN design;
- Server infrastructure;
- Security;
- Data protection and recovery;
- Identity and access management.



**VIDEO:**  
INFRASTRUCTURE:  
A STRATEGIC ASSET

#### KEY QUESTIONS



Is the network infrastructure appropriate for a large scale device deployment?

How will your infrastructure priorities change in light of your move to 1:1?

Is the connection to the internet adequate and your bandwidth adequate?



### 6

## Create a 21st Century Learning Environment

Support 1:1 anywhere, anytime learning, by creating learning spaces that:

- Reflect your institution's vision and beliefs about learning.
- Enable a new, more complete learning experience.
- Are flexible, interesting, and inspirational.
- Cater to a range of learning styles and modalities. Include both physical and virtual learning spaces and tools.

### RESOURCES

*Microsoft in Education Transformation Framework: Transforming Learning Environments for Anytime, Anywhere Learning for All.*

*Microsoft Accessibility in Education Guide.*

*Microsoft Educator Network: Physical Learning Environments with Tony Bryant.*

### KEY QUESTIONS



**How does the physical layout of your classrooms contribute to the development of a modern learning environment?**

**Do the school's learning spaces cater to different learning modalities?**

**What do your students think of the design?**

**Have you created virtual as well as physical learning spaces that fit your educational beliefs and vision?**

### 7

## Prepare the Budget

Create a multiyear budget and build in flexibility to cover changes due to new options for infrastructure, hardware, software, and shifts in pricing. Don't forget to include adequate time and opportunities for professional development.



### KEY QUESTIONS



**What will be the budgeting priorities?  
How might they change over time?**

### RESOURCES

*GESCI (Global e-Schools and Communities Initiative): Deploying ICT : a practical budgeting tool based on Total Costs of Ownership (Excel file)*

8

### Manage Support Services

Provide adequate onsite technical support and service to be sure that students and teachers always have the tools they need, when they need them.

You should:

- Clearly communicate your support services policies to your students, teachers, and parents, and define expectations of what constitutes normal wear and tear.
- Establish key performance indicators (KPIs) for any supplier partnership and review them regularly.
- Create a process for logging repairs, re-imaging, and other services that will be required. Keep a pool of available devices along with swappable batteries, cables, and other components that are easy to stock and replace.

9

### Liaise with Parents

As schools prepare to launch their initiative, they should:

- Set out some guidelines so that staff and faculty are prepared for parent, student, and media questions.
- Prepare answers to a wide-range of questions that typically get asked as 1:1 initiatives begin.
- Invest time in developing a plan that reaches out to both parents and the wider school community.



#### KEY QUESTIONS

What additional support services will be required to ensure use of the technology is seamless for both students and teachers?

Why will there be failures, what might they be, how many can a school expect?

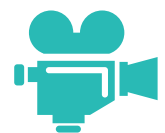


#### KEY QUESTIONS

What will be your communication plan to ensure a genuinely shared understanding of both the vision and reality of its implementation?

Are you prepared to answer most questions from parents?

How will you address questions to which you don't already have answers?



**VIDEO -  
Manage  
Support  
Services**

10

### Establish critical partnerships

Explore various partnership opportunities across a range of needs, including:

- Infrastructure and support.
- Professional learning.
- Student learning.
- Telecommunication needs.
- Engage suppliers that have a vested interest in ensuring the program works, that devices are maintained and students have a reliable 1:1 experience.
- Explore communities that offer valuable resources and support not only for educators, but for school leaders and students as well, such as Microsoft Educator Network and Microsoft Youth Spark, which provides strong networking, technology, and communication opportunities for your students.

### KEY QUESTIONS



What partnerships might be considered to build capacity beyond immediate school resources?

How can a school best evaluate the benefit of such partnerships?

### RESOURCES

*Microsoft in Education Transformation Framework: Public, Private, and Community Partnerships for Employability*

*Microsoft Youth Spark*

*Microsoft Educator Network*

### PHASE 5: **Evaluate Continuously/ Evaluate Implementation Fidelity**

#### **WHAT** WILL BE YOUR ONGOING EVALUATION PROCESS?

Gather feedback from key reviews to help guide and shape your initiative and ensure that you are achieving your goals and, ultimately, your vision.

#### ACTIONS

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1

Set up a formal review process and schedule to determine both what parts of the initiative have been successful and what issues arose that require corrective action.

A decorative graphic consisting of three overlapping hexagons: a light green one on the left, a dark purple one in the middle, and a light grey one on the right. The number '2' is centered in the dark purple hexagon.

2

Establish a review group to oversee progress and resolve problems.

A decorative graphic consisting of three overlapping hexagons: a light green one on the left, a dark purple one in the middle, and a light grey one on the right. The number '3' is centered in the dark purple hexagon.

3

Conduct smaller, less formal evaluations at various other times, in order to confirm initiative steps are aligned with your goals.

### KEY QUESTIONS



What will be the scope and parameters of your continuous evaluation?  
Who will ensure the outcomes impact the ongoing program?

### RESOURCES

*Microsoft in Education Transformation Framework: Quality Assurance: Monitoring and Evaluation to Inform Practice and Leadership*

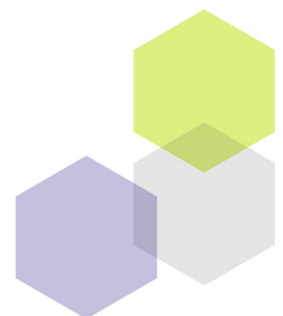
*Microsoft in Education Hot Topics: 1:1 Learning*



## Conclusion

**Not only does a 1:1 program extend learning beyond the school day and the classroom, it also enables learning to be personalized and continuous.**

**The 1:1 relationship empowers students to be natural inquirers, to connect and collaborate with others, and be confident, self-directed learners. When every student has his or her own mobile device, enormous possibilities open up.**





# NEXT STEPS

-  Participate in a **Design, Deploy, & Transform** workshop and use the Design, Deploy, & Transform Workbook and receive a comprehensive planning tool and detailed checklist.
-  Sign up to the Microsoft Educator Network.
-  Download Microsoft Office 365 Education for free.
-  See what sorts of devices, applications, services, and core tools are benefitting your peers.
-  Learn why educators love Windows 8 for education.