This report presents the results of surveys of school leaders and educators at testscool. The surveys measure participants' reports of innovative teaching practices in the school, including the use of technology for learning and school support for innovative practices. The goal of the research is to provide tools for schools to measure and develop innovative teaching and learning, and to ultimately better prepare students for life and work in the 21st century.

This research is based on the school leader and educator surveys developed for a broader multinational study called Innovative Teaching and Learning (ITL) Research, which is sponsored by Microsoft Partners in Learning and has advisors from UNESCO, OECD and other organizations. For more information, see www.itlresearch.com.

The survey data reported in this document focuses on measuring key elements of the ITL Research Model, including the extent of Innovative Teaching Practices educators use.

What is ICT?
Throughout this report information and communication technologies (ICT) refers to a broad set of technology tools and resources such as computers (including laptops), mobile phones, graphing calculators, digital cameras, electronic whiteboards, other computer hardware, computer software (such as presentation software, word processors, and spreadsheets) and the Internet. The words computers, technology, and ICT are used interchangeably.
Introduction and Methodology

Schools around the world are striving to improve students' learning experiences through pedagogical changes and the effective use of technology. Students need skills for life and work in the 21st century that are not well developed through traditional education. Microsoft's Partners in Learning School Research (PILSR) provides tools that any school or system can use to measure innovative teaching practices and make progress on transforming education to meet students' needs.

This report is based on surveys of the school leaders and educators at testscool testcity, Albania that were completed in September, 2013. These surveys can be repeated by the school each year to measure progress.

The objectives of this report are to provide a basis for discussion and reflection within the broader school community and to inform strategic planning and professional development decisions. Each school participating in PILSR is invited to join the international community of educators interested in this research at [www.pilntest.com] to share ideas, examples and experiences.

Method

The surveys were conducted online among school leaders and educators in testscool in September, 2013.

Survey questions were asked in English.

Measures of innovative teaching practices are based on educators' reports of their own teaching practices.

Survey sample

Access to the surveys was provided to all school leaders and teachers in the school.

All measures shown in the report are based on the number of survey responses from the school.

Sample size and response rate

Out of 4 educators at testscool, 4 responded to the teacher survey, for a response rate of 100%.

Out of 4 school leaders at testscool, 4 responded to the school leader survey, for a response rate of 100%.

Response rates below 80% (of the total educator and school leader populations in the school) have low reliability (they may not accurately reflect practices in the school).
"Innovative Teaching Practices" in this research include more than the use of technology alone. Having technology in schools does not by itself change teaching and learning. For it to be effective in improving student learning, technology use needs to be part of the pedagogical shifts that include student centered learning and practicing learning in ways that can take place anytime and anywhere.

*Based on definitions from the Innovative Teaching and Learning Research project: [www.ittresearch.com](http://www.ittresearch.com).
Innovative Teaching Practices

Use of the term "innovative" to describe the combination of the three teaching practices described below is intentional. Student centered pedagogy and extending learning beyond the classroom are concepts that have very long histories. The term "innovative" in the context of this research describes combining these practices with technology to solve teaching and learning challenges in new ways. It is the combination of these pedagogical practices with technology that has the potential for real innovation.

Student-Centered Pedagogy

Student-centered pedagogy includes practices of teaching and learning that are project-based, collaborative, foster knowledge-building, require self-regulation and assessment, and are both personalized (allowing for student choice and relevance to the individual student) as well as individualized (allowing students to work at their own pace and according to their particular learning needs).

Each of these elements has a strong base of prior research, linking them to positive outcomes in terms of developing 21st century skills among students.

Extending learning beyond the classroom

This teaching practice refers to learning activities that reflect the nature of high-performing work groups in modern organizations.

Learning activities extend beyond the traditional boundaries of the classroom, for example, by including individuals beyond the classroom (for example, parents, experts, community members), by providing opportunities 24/7 learning (for example, research outside the classroom), fostering cross-subject connections, and promoting global awareness and cultural understanding.

ICT used for teaching and learning

This teaching practice relates to technology use by educators and by students for learning purposes. Because the impact of information and communication technologies (ICT) can vary widely depending on its pedagogical application, this construct includes a focus on how ICT is used and not simply whether it is used.

For example, the surveys distinguish between basic or rote use of technology and higher-level technology use that takes better advantage of technology for deep student learning.
The chart on the right shows how educators at testscool report their use of the different elements of innovative teaching practices, and how school leaders estimate the use of these practices among educators in the school. These practices are described in more detail on the following pages.

Other related research demonstrates that innovative teaching practices are strongly associated with students' development of 21st Century skills (see www.itlresearch.com)

*All items are measured based on educators' reported frequency of a practice on a 5 point scale. Higher scores indicate a higher reported frequency of a practice. All items show averages across all responses from the school for each group (educators and school leaders). Data has been adjusted to account for the number of times a class meets per week.

**Student and Teacher ICT Use has been calculated taking the average of basic and high level technology use (see pages 10-11).
Student Centered Pedagogy
Student Centered Pedagogy

These charts show how frequently educators and school leaders report using student centered pedagogical practices.

### Example Learning Activity: Student-Centered Pedagogy

Student-centered learning requires students to be active, responsible participants in their own learning. An example would be a learning activity where students are asked to organize into three groups, where each group develops a project (collaboration) to design a better school library (knowledge construction). The project must include applications of concepts from math, history and human biology (knowledge construction). Students choose the particular concepts they will use from these areas and how they will apply them in the design (personalized learning). Finally, students assess each group's work according to specified expectations and modify the project design based on feedback from peers (self regulation).

<table>
<thead>
<tr>
<th>Personalized Learning</th>
<th>% Educators who practice this at least 1-3 times per month</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allow students to choose their own topics of learning or questions to pursue?</td>
<td>25%</td>
</tr>
<tr>
<td>Allow students to choose how they will accomplish a task or how they will demonstrate what they have learned?</td>
<td>25%</td>
</tr>
<tr>
<td>Provide students with opportunities to learn or work at their own pace?</td>
<td>75%</td>
</tr>
<tr>
<td>Adjust the pace of instruction to respond to students’ levels of understanding?</td>
<td>50%</td>
</tr>
<tr>
<td>Adjust assignments for individual students based on their knowledge, skills or learning needs?</td>
<td>50%</td>
</tr>
<tr>
<td>Select topics, activities, or examples that are relevant to students' lives outside school?</td>
<td>50%</td>
</tr>
</tbody>
</table>
Student Centered Pedagogy

Chart shows how frequently educators and school leaders report using student centered pedagogical practices.

% Educators who ask students to do this 1-3 times per month

- Develop their own answers using information they gather: 75%
- Support their own ideas with numbers, facts, or other relevant information: 75%
- Combine information from multiple subject areas: 75%
- Analyze information from multiple sources to develop a report or a solution to a problem: 0%
- Discuss their work with one another: 25%
- Present their group work to the class: 50%
- Complete a specific task with other students: 75%
- Create joint products that include contributions from each student: 0%
- Work on an investigation or a question for one week or longer: 25%
- Assess the quality of the work they have completed: 50%
- Give feedback to peers or assess other students’ work: 50%
- Monitor their own progress toward the completion of an activity: 50%
- Use the feedback they have received to revise their own work before receiving a final grade: 25%
Extending Learning Beyond the Classroom
**Extending Learning Beyond the Classroom**

These charts show how frequently educators and school leaders report using practices that extend learning beyond the classroom.

**Example of Learning Activity: Extended Learning and Real World Problem Solving**

Students are asked to create a presentation of their research on how work is changing. Student groups visit parents' workplaces in teams using digital photography and video, generating stories, images and knowledge about the issue. Then the teams investigate labor market trends using data collected from the internet or other sources to make charts that compare what they saw and learned locally with patterns in other countries. Finally, they send the reports to local authorities identifying resources and programs needed to help develop the workforce capacity in their community.
ICT Used for Teaching and Learning
ICT Used for Teaching and Learning by Educators

These charts show how educators and school leaders report on educators' use of technology for learning. Higher-level uses of ICT integrate more deeply with learning objectives and are more strongly associated with innovative teaching methods than basic uses of ICT.

<table>
<thead>
<tr>
<th>Basic ICT Uses</th>
<th>Educators</th>
<th>School Leaders</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prepare a lesson (for example, do research or make handouts for students)</td>
<td>0%</td>
<td></td>
</tr>
<tr>
<td>Present information or give class instruction to students</td>
<td>0%</td>
<td></td>
</tr>
<tr>
<td>Conduct classroom demonstrations (for example, computer-based simulations, virtual labs)</td>
<td>0%</td>
<td></td>
</tr>
<tr>
<td>Communicate with students (for example, e-mail)</td>
<td>0%</td>
<td></td>
</tr>
<tr>
<td>Communicate with parents (for example, e-mail)</td>
<td>0%</td>
<td></td>
</tr>
<tr>
<td>Collaborate with experts, teachers in other locations, or other community members to enrich student learning</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>Post teaching or learning resources on the internet (for example, on a blog or wiki) for other teachers or students</td>
<td>0%</td>
<td></td>
</tr>
</tbody>
</table>

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ICT Used for Teaching and Learning by Students

These charts show how educators and school leaders report on students' use of technology for learning. Higher-level uses of ICT integrate more deeply with learning objectives and are more strongly associated with innovative teaching methods than basic uses of ICT.

<table>
<thead>
<tr>
<th>% Educators who say students do this at least 1-3 times a month</th>
</tr>
</thead>
<tbody>
<tr>
<td>Find information on the Internet</td>
</tr>
<tr>
<td>Practice routine skills and procedures</td>
</tr>
<tr>
<td>Take tests or turn in homework</td>
</tr>
<tr>
<td>Use simulations or animations to explore a system or abstract concept</td>
</tr>
<tr>
<td>Analyze data or information</td>
</tr>
<tr>
<td>Work with students or adults from outside class (for example, students from other schools or adult mentors)</td>
</tr>
<tr>
<td>Collaborate with peers from class through e-mail, videoconferencing, or discussion boards</td>
</tr>
<tr>
<td>Create multimedia presentations (for example, using sound or video)</td>
</tr>
<tr>
<td>Develop simulations or animations of a system or abstract concept</td>
</tr>
</tbody>
</table>

![Bar chart showing the percentage of educators and school leaders reporting students' use of technology for learning.](chart.png)
Barriers to Technology Use

This chart shows percentage of educators and school leaders who say the item is the "most significant barrier" to ICT use in teaching and learning.

% saying "Most Significant Barrier"

- Not enough computers for teacher use: 0% 0%
- Not enough computers for student use: 0% 0%
- Outdated computers and software: 0% 0%
- Internet connection not available or unreliable: 0% 0%
- Computers are vandalized or stolen: 0% 0%
- Weak infrastructure to support ICT (for example school wiring): 0% 0%
- Not enough technical support for ICT: 0% 0%
- Blocked access to relevant Internet sites: 0% 0%
- Difficult to access computers in labs or the library: 0% 0%
- Insufficient time to prepare lessons using ICT: 0% 0%
- Not enough professional development/training around using ICT for teaching and learning: 0% 0%
- ICT is not supported by school leadership or policy: 0% 0%
- Required curriculum content not supported by ICT: 0% 0%

Educators: 50% 50% 25% 25% 25% 0% 0% 0% 0% 0%
School Leaders: 50% 50% 25% 25% 25% 0% 0% 0% 0% 0%

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ICT Access

"Please estimate the percentage of teachers who have personal electronic devices for use in your school? Please include school and teacher-owned devices in your estimate."

"Please estimate the percentages of students who have personal electronic devices for use in your school? Please include school and student-owned devices in your estimate."

"Are computers for teachers and student use connected to the Internet?"
(School Leader Survey Only)

<table>
<thead>
<tr>
<th>Device Type</th>
<th>Percent of teachers using devices</th>
<th>Range of students using devices</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent of laptops or notebooks</td>
<td>26-30%</td>
<td>36-40%</td>
</tr>
<tr>
<td>Percent of tablet PCs (Surface, iPad, Android Tablet, or Slates)</td>
<td>16-20%</td>
<td>36-40%</td>
</tr>
<tr>
<td>Percent of desktops or workstations</td>
<td>16-20%</td>
<td>46-50%</td>
</tr>
<tr>
<td>Percent of E-readers (Amazon Kindle)</td>
<td>26-30%</td>
<td>51-55%</td>
</tr>
<tr>
<td>Percent of smartphones</td>
<td>21-25%</td>
<td>61-65%</td>
</tr>
<tr>
<td>Percent of simple cell phones</td>
<td>16-20%</td>
<td>61-65%</td>
</tr>
<tr>
<td>Percent of gaming console or device</td>
<td>21-25%</td>
<td>66-70%</td>
</tr>
</tbody>
</table>

Internet Access

- No: 100%
- Yes: 0%

School Leaders
### Types of Professional Development and Levels of Innovative Teaching Practices

"In the last two years, did you participate in any of the following types of professional development activities?"

(Educator Survey Only)

This chart shows the average difference in innovative teaching practice scores between educators from testscool who participated in these types of professional development and those who did not.

Each variable is isolated by controlling for participation in the other types.

| Professional Development | Average Innovative Teaching Practices Index Score*
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Formal class instruction or workshop</td>
<td>2.0</td>
</tr>
<tr>
<td>Qualification program (for example, a degree or credentialing program)</td>
<td>2.3</td>
</tr>
<tr>
<td>Observation visits to other schools</td>
<td>2.3</td>
</tr>
<tr>
<td>Education conferences or seminars (where teachers or researchers present their research results and discuss educational problems)</td>
<td>2.9</td>
</tr>
<tr>
<td>Informal dialogue with your colleagues on how to improve your teaching</td>
<td>3.4</td>
</tr>
<tr>
<td>Mentoring or peer observation and coaching, as part of a formal school arrangement</td>
<td>2.3</td>
</tr>
<tr>
<td>Participation in a network of teachers formed specifically for the professional development of teachers</td>
<td>3.4</td>
</tr>
<tr>
<td>Individual or collaborative research on a topic of interest to you professionally</td>
<td>2.3</td>
</tr>
</tbody>
</table>

*All items are measured based on educators' reported frequency of innovative practices on a 5 point scale.
Collaboration Among Educators

“How often do you collaborate with colleagues at your school in the following ways?”

These questions were asked on a 5-point scale: ‘Never’ is coded as 1 and ‘4-5 times per week’ as 5. Higher scores indicate a higher reported frequency of a practice.

This chart shows educators’ level of self-reported collaboration with their educator colleagues in the school.

In other related research, the level of collaboration among educators in a school has been shown to be strongly associated with the overall level of innovative teaching practices in that school. (See www.itlresearch.com)

*All items are measured based on educators' reported frequency of innovative practices on a 5 point scale.
Incentives and Recognition for Innovative Teaching

“What supports are in place at your school to help teachers improve the way they teach?”

This chart shows perceptions of support for innovative teaching practices in the school among educators and school leaders.