WHITE PAPER

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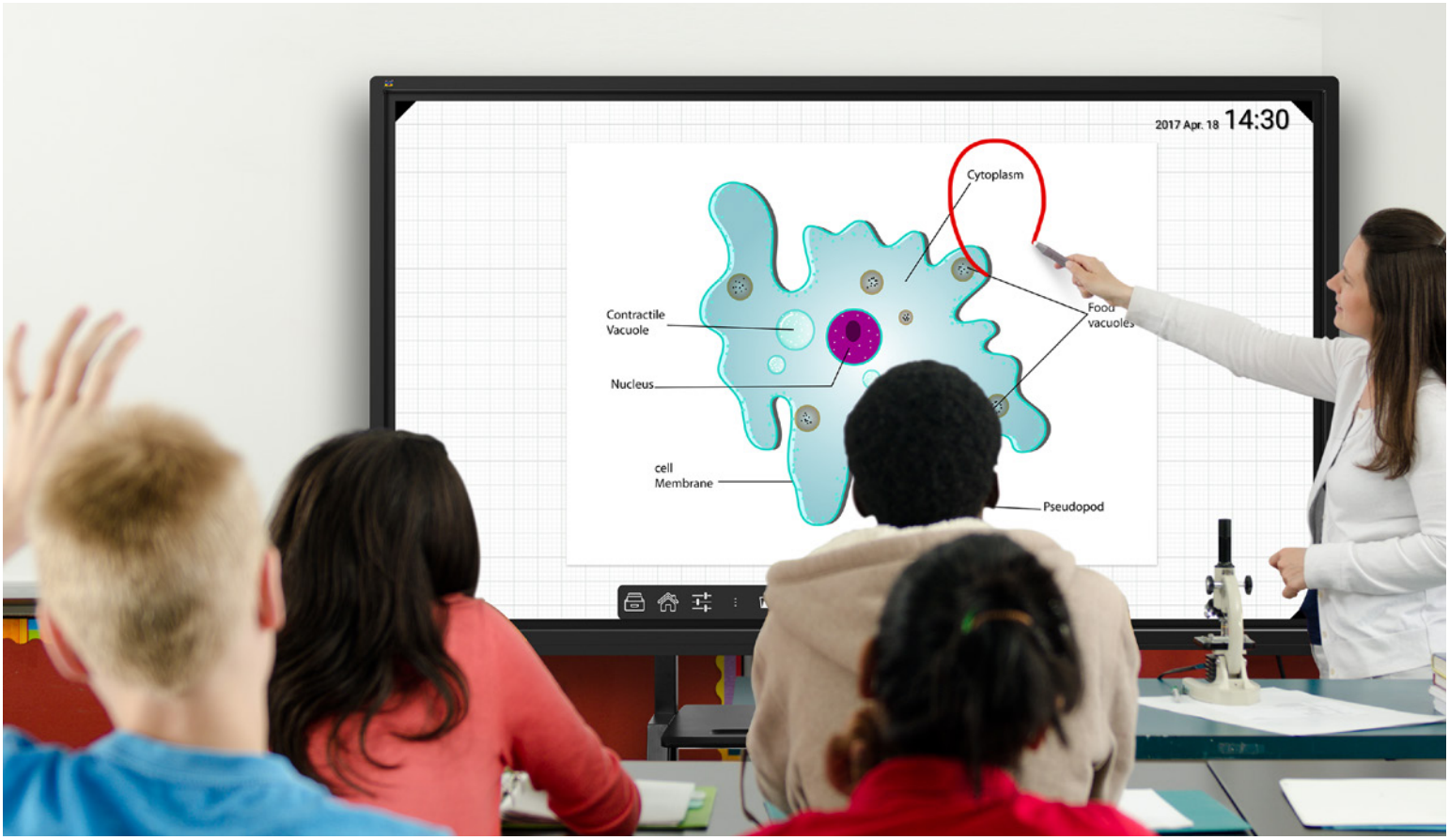
Boost Student Success with Evidence-Based Teaching Techniques and Qwizdom™ Software



This paper reviews the top evidence-based teaching strategies and the ways technology is impacting teaching methodologies, then discusses how Qwizdom software can empower key teaching techniques.

— Andy Chien, 10/16/17

Introduction

Teaching is a challenging profession, and each day in a K-12 classroom presents its own array of countless challenges. Teachers must select and apply appropriate strategies not only to foster effective learning but to accomplish effective classroom management, discipline, differentiation and more. Classroom technology offers the promise of help, however, it too presents an ever-growing array of options to choose from. Collaboration and whiteboarding software from ViewSonic partner Qwizdom offers easy implementation of some of the most effective strategies for learning.

Evidence-based teaching strategies

The teaching methods an instructor calls on in any given circumstance will vary based on a host of factors: experience and educational philosophy, classroom demographic, subject matter, available resources, and the school's values and mission to name a few. Results from educational researcher John Hattie provide insight into the classroom practices most frequently linked to high levels of student achievement in K-12 classrooms[1], which include:

- **Teacher Clarity** - Providing clear purpose and learning goals for projects/units of study.
- **Classroom Discussion** – Enables students to learn from each other and provides the opportunity for formative assessment through observation.
- **Consistent Feedback** – Individual feedback is invaluable for learning growth; whole-group feedback reveals patterns in the collective class' areas of need.
- **Formative Assessment** – Frequent, routine checks of student understanding during instruction enable teachers to provide effective and accurate feedback. Hattie recommends spending equivalent time on formative evaluation and summative assessment.
- **Metacognitive Strategies** – Providing the opportunity to plan and organize, monitor work, direct their own learning, and self-reflect along the way.

To this list, many instructors add the following evidence-based core teaching strategies[2]:

- **Collaboration and Cooperative Learning** – Providing the opportunity for students to work with others has been demonstrated to boost learning over working solo; it can also improve student self-confidence.
- **Inquiry-Based Instruction** – Involving students in the learning process brings a deeper understanding and greater ability to apply learned concepts in new situations.
- **Differentiated instruction** – Deploying strategies that allow teachers to engage each student according to their learning style

The role of technology

The availability of resources, most notably technology, is a key factor influencing the expanded use of various teaching strategies in a given environment. In recent years, digital technology has been altering the K-12 teaching and learning experience in several distinct ways.

Collaboration

Group work has long been a staple of classroom learning. Facilitated by new technology and mirroring workplace trends, tech-based classroom collaboration is becoming standard practice, with much research backing its usefulness for improving learning outcomes and preparing students for career- and college-readiness.

Information Gathering

Today's K-12 students have unprecedented ease of information access via electronic academic databases

Remote and Online Learning

Online learning has proliferated in higher education and is increasing in prevalence in K-12 settings. Many secondary schools now supplement available curriculum with online course offerings and educators at all levels have discovered the benefits of integrating online learning into their standard curriculum to support flipped learning strategies.

Teacher Prep

Technology offers ready access to information, as well as tools for easily integrating it into lessons, enabling teachers to efficiently build expanded lesson content. One survey found that nearly three-quarters of teachers used mobile apps for classroom activities, with a similar percentage using digital resources to expand and reinforce class content[3]. Nearly 70% said that edtech helps them "do much more than ever before" for their students, with the most-used resources being online lesson plans, interactive web games and online articles[4].

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The Qwizdom Advantage: Empowering Key Teaching Strategies

Developed to deliver research-backed strategies for maximizing classroom learning, Oktopus™ and Ximbus™ education software from ViewSonic partner Qwizdom make it easy for teachers to increase their use of collaboration, formative assessment, polling and data-driven instruction, along with enhanced lesson development. Both platforms seamlessly integrate with ViewSonic ViewBoard® and interactive ultra-short throw projectors.

Ximbus

Designed for schools that rely on Google – from select apps and Google Drive™ to the full G Suite for Education (formerly GAFE) – Ximbus offers easy whiteboarding, collaboration, polling and lesson development. Online learning is seamless, using familiar Google cloud-based resources. Ximbus provides easy integration with Google log in, contacts, class rosters, resources and Google drive. Ximbus is ideal for districts, schools and instructors looking to build presentations using resources stored on Google Drive, who may also want to export SMART or Promethean (IWB) files as pdfs or other file formats and store on Google Drive for integration into Ximbus lessons. Students collaborate using their individual Chromebooks

Oktopus

Oktopus is a LAN-based learning solution offering whiteboarding, interactive widgets, premade lessons, collaboration, and online learning options. Oktopus and the expanded Oktopus Blend enable lesson building using a wide variety of resources, including software, local documents and websites. Students collaborate with Oktopus lessons by downloading the free Qwizdom Notes+ App to their android, iOS or Windows touch-enabled device.

Lesson Development

Most teachers are lifetime learners themselves who strive to keep up with and employ best practices like those outlined above. Qwizdom software can streamline this process, helping time-pressed teachers deliver lessons that offer clarity, facilitate collaboration and inquiry, integrate discussion time and provide opportunities for delivering student feedback and obtaining formative assessment data.

Teachers in Google-based classrooms can easily build Ximbus lessons by dragging and dropping documents from Google Drive, Google Apps and other online content. Ximbus users can integrate SMART and Promethean lessons by converting them to pdfs or other formats and saving them to their Google Drive.

With Oktopus, teachers can create their own interactive lessons using PowerPoint, YouTube videos and other online content. Oktopus Blend further offers integrated course material rigorously designed to individual state standards. These pre-packaged math, reading and science courses include a pretest, post-test and hundreds of lessons with instruction slides followed by instant assessment and remediation through explanation slides. Oktopus Blend enables the seamless use of existing Smart Notebook and Promethian IWB files as well as any application or website.

Lessons created in any Qwizdom software can also be easily enabled to deliver the collaboration, polling and blended learning capabilities outlined below.

Interaction and Collaboration

Savvy teachers have always known that getting students to interact – by offering up opinions, asking questions or working together – increases engagement and understanding. The advent of new interactive classroom technology has accelerated the use of collaboration as a teaching strategy. As global workplaces increasingly rely on collaboration as a strategy for success, incorporating it into classrooms is critical to preparing students for career- and college-readiness. Combined with the interactivity of a ViewSonic ViewBoard or projector, Oktopus and Ximbus learning software add easy opportunities to incorporate collaboration into your classroom.

The process is simple. Both Oktopus and Ximbus mirror content from the classroom ViewBoard and deliver it real-time to students' individual devices. (Oktopus requires a one-time install of their Notes+ app; Ximbus harnesses the cloud-power of Google.) Students see exactly what's on the big screen, including any on-screen annotations the instructor makes to highlight material, create diagrams or add notes for emphasis while delivering the lesson. Then, when enabled by the instructor, students can contribute to the lesson by adding their own notes, drawings or other annotations. Teachers keep the process orderly by selecting one or more students to participate at a time. Oktopus and Oktopus Blend further foster engagement with over 70 easy-to-use interactive learning tools and widgets.

Formative Assessment via Polling

Providing meaningful feedback is one of the most powerful ways to increase student learning and achievement[5]. In fact, spending less time lecturing and more time providing feedback through student-centered peer review activities has been shown to further boost student cognitive engagement and learning levels. One of the most powerful forms of feedback is formative assessment – feedback delivered during instruction that provides explicit information about how to adjust ongoing teaching and learning to improve students' achievement of intended instructional outcomes[6]. For maximum efficacy, teacher feedback must be timely, consistent and frequent, as well as delivered in a respectful, user-friendly manner[7].

Asking questions then responding to and remediating incorrect answers is a basic form of formative feedback familiar to all instructors. Technology expands upon this with classroom polling tools, which, when used with an interactive display, have been shown to increase student achievement scores by as much as 31%[8]. The mechanism is likely two-fold: students receive immediate information about whether they are grasping a concept correctly, and can apply this knowledge to future attempts; teachers receive valuable formative feedback that enables them to immediately modify their approach to best match student levels of understanding.

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Qwizdom software makes it easy for instructors to harness the potential of polling. Using the collaborative capabilities of Oktopus or Ximbus described above, teachers can poll an entire classroom by enabling all students to collaborate using their individual devices. For small group polling, they simply scale back and choose select sets of students. The interface and specific functions of the two platforms differ, however both provide intuitive toolbars, from which instructors select the voting function to begin executing a poll.

Oktopus enables the execution of eight question formats: Multiple Choice, Yes / No, True / False, Numeric, Sequence, Rating Scales, Text Input, and Vote. With Ximbus, teachers can launch instant Yes/No, Agree/Disagree and Multiple-Choice polls.

Each enabled student receives the question on his or her device and their selected response is automatically recorded by the software. Techers use the toolbar to call up graphical response data, which instantly provides insight into the percentage of students who responded accurately. Oktopus Blend offers the added ability to compile and view data later according to numerous variables, enabling detailed analysis and data-driven instruction.

Questions can be developed in advance and integrated into the lesson, or launched spontaneously when teachers sense the need for insight into student understanding. Either way, students gain the learning benefits of in-lesson feedback, while teachers gain immediate insight into how well students are grasping the lesson content. Integrated polling further enhances student engagement by introducing the element of unpredictability and interactivity into the lesson.

Online Learning & Blended Classrooms

Blended learning combines traditional, teacher-to-student classroom lessons with technology-based instruction. A student-centered approach, blended learning uses classroom tech and online learning to give students control over the time, pace, and place of portions of their learning. One of the most used blended learning tools is flipped learning, a strategy that reverses the traditional learning environment by delivering instructional content outside of the classroom and bringing activities traditionally considered homework into the classroom. Teachers are increasingly finding that this "flipped" approach helps keeps class time running smoothly, with fewer interruptions for clarification. It is fast becoming the new norm, with 78% of teachers in 2014 reporting having flipped a lesson; 71% of this group noticing improved grades; and 96% of them saying they would recommend this approach to a colleague[9].

Qwizdom software facilitates easy classroom flipping by enabling instructors to provide lessons to students for viewing as at-home assignments. For a blended approach, students can view lessons in class at their own pace, or in leveled peer groupings.

With complete, seamless compatibility with Google resources, Ximbus makes it easy for instructors to develop Google cloud-based lessons and share them with students before, during, or after class time. Oktopus offers similar save-and-share capabilities for teacher-prepared lessons. With both, lessons can be assigned for after-class viewing, enabling students to review the material at their own pace and as many times as needed, without pressure to immediately "get it" in front of peers. They can then demonstrate their mastery, apply the new knowledge, or seek assistance with the teacher during class the next day.

Oktopus Blend offers the added ability to assign the included math, reading and science courses as self-paced online learning modules for viewing in small groups, individually during class time or at home for flipped learning. Students are empowered to work independently on content including the lessons, quizzes and tests, anytime and anywhere with internet access.

Conclusion

Technology is making it easier for teachers to integrate today's proven teaching strategies into their classes. Ximbus and Octopus software from ViewSonic partner Qwizdom offer easy ways to boost student success with added interaction, collaboration, formative feedback and flexible, targeted instruction both in and out of the classroom.

For more information, contact ViewSonic sales at salesinfo@viewsonic.com or visit www.viewsonic.com

Sources:

1 Alber, Rebecca, Five Highly Effective Teaching Practices. February 27, 2015. Accessed 9.5.17 at: https://www.edutopia.org/blog/5-highly-effective-teaching-practices-rebecca-alber

2 Cox, Janelle, Top 5 Teaching Strategies. Accessed 9.5.17 at: http://www.teachhub.com/top-5-teaching-strategies

3 Lynch, Matthew, Four Ways Digital Tech Has Changed K-12 Learning. 5/20/15. Accessed 9.5.17 at: https://thejournal.com/articles/2015/05/20/4-ways-digital-tech-has-changed-k12-learning.aspx

4 Larson, Eric. How Many Teachers Use Technology in the Classroom? Feb. 5, 2013. Accessed 9.5.17 at: http://mashable.com/2013/02/05/teachers-technology-infographic/#Wn9ZomxlGZqq

5, 7 Wiggins, Grant. Seven Keys to Effective Feedback Education For Learning. September 2012, Volume 70, Number 1 Pages 10-16. Accessed 3.30.17 at:http://www.ascd.org/publications/educational-leadership/sept12/vol70/num01/Seven-Keys-to-Effective-Feedback.aspx

6 McManus, S. (2006). "Attributes of Effective Formative Assessment." Accessed 9.15.17 from The Council of Chief State School Officers website at: http://www.ncpublicschools.org/docs/accountability/educators/fastattributes04081.pdf [return]

8 Marzano, Robert J. "Teaching With Interactive Whiteboards." Educational Leadership Nov. 2009. Web. 13 Jan. 2011. http://www.ascd.org/publications/educational-leadership/nov09/vol67/num03/Teaching-with-Interactive-Whiteboards.aspx

9 The Flipped Learning Network, 2014. Accessed 9.5.17 at: https://www.sophia.org/flipped-classroom-survey