

Information Technology at UK

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Agenda

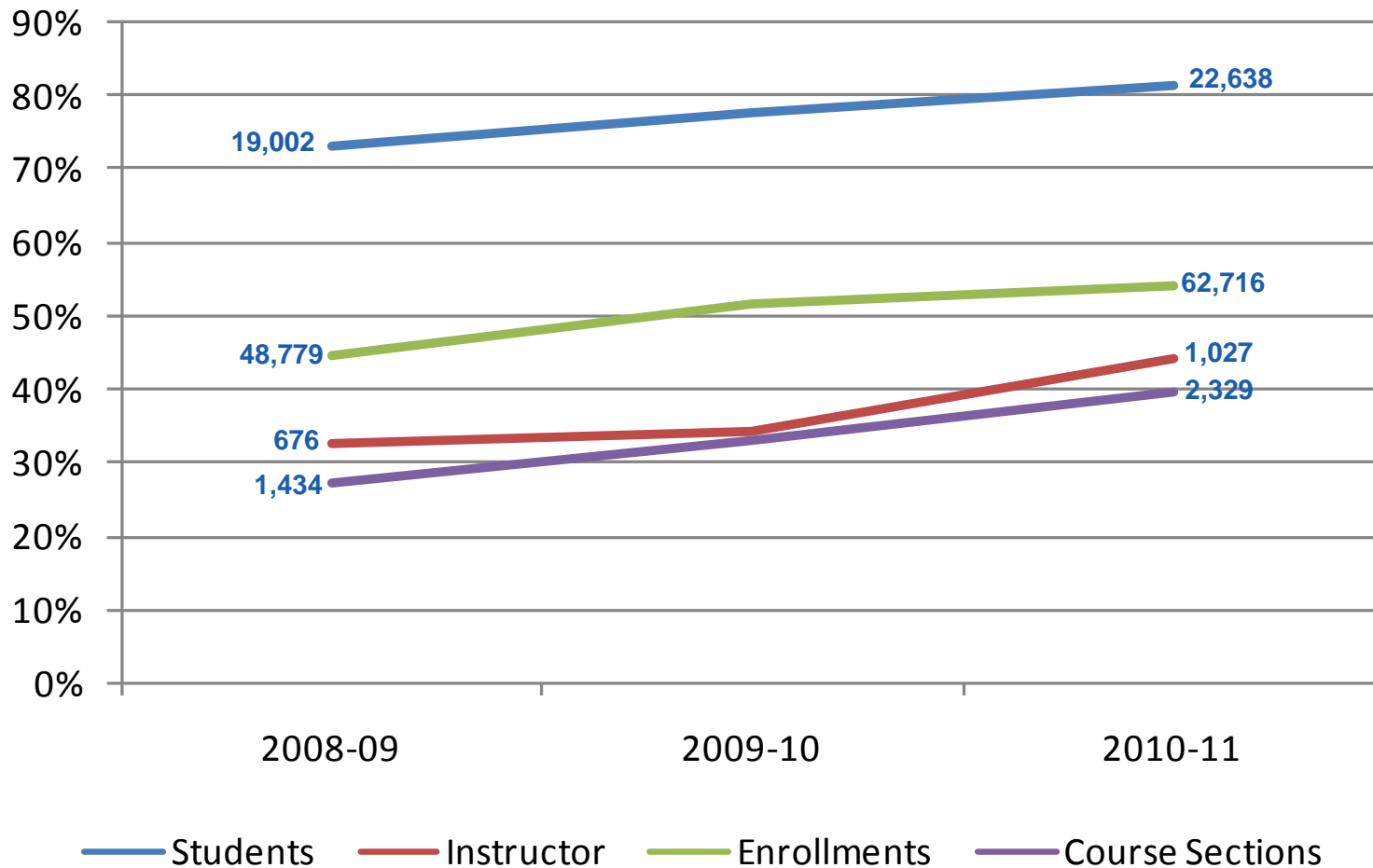
- Teaching and learning technology
 - Learning management system (LMS) adoption
 - Lecture capture, class web conferencing, student retention
 - Mobile access to courses and university information

- Infrastructure
 - Wireless improvements, VoIP, campus and regional networks

- Looking towards the future
 - Cloud computing
 - iPads, e-textbooks and open content

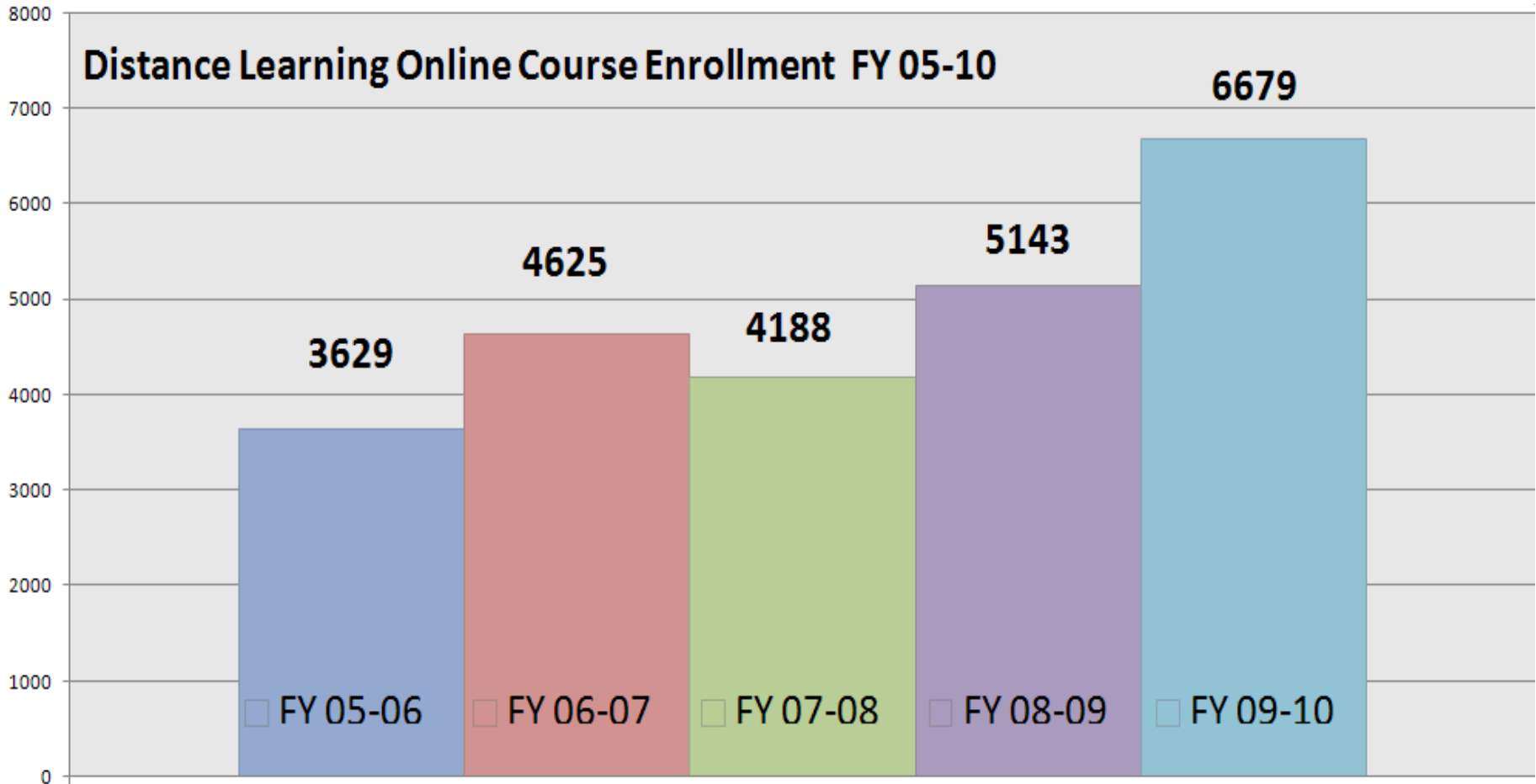
LMS (Blackboard) Adoption

- 51% growth in instructor use in 2 years, 29% growth in total student enrollments
- Improvements in support, ease of use planned for 2011-2012



Distance learning enrollments

- Provost incentives, dean leadership and faculty interest are causing growth



Course Capture

- Makes a recording of class audio, video, what the PC projects, allows students to playback the class numerous times. Piloted in the College of Medicine.
- Installed in 40 rooms sprinkled across campus, 55 by this summer
- To date, 160 course sections have been recorded (3% of total sections), 1,402 course captures are available

The screenshot shows the Echo360 web interface in a browser window. The address bar displays the URL: <http://echo.uky.edu:8080/ess/echo/presentation/6ed6a3ba-f6eb-44bc-a10d-7bd298>. The browser tabs include Blackboard Learn and Echo360. The page content is titled "FEB 14, 2011 6:00:00 PM - MAIN CAMPUS - LEXINGTON, CHEM-PHYS, CP 139 - ARROWSMITH, HEATHER, EGGERS, DEREK, FOX, ANGELA, HOLLER, JIM, STUDENT, A&S" and "CHE 105 Gen College Chemistry I (CHE 105-001) Spring 2011".

The main content area is split into two panels. The left panel (slide 1) contains a chemistry problem: "Use limiting reagent (Al) to calculate amount of product that can be formed." Below the text is a chemical equation: $g \text{ Al} \rightarrow \text{mol Al} \rightarrow \text{mol Al}_2\text{O}_3 \rightarrow g \text{ Al}_2\text{O}_3$. A red arrow points from the Al to the Al₂O₃ in the equation. Below the equation is a calculation: $125 \text{ g Al} \times \frac{1 \text{ mol Al}}{27.0 \text{ g Al}} \times \frac{1 \text{ mol Al}_2\text{O}_3}{2 \text{ mol Al}} \times \frac{102 \text{ g Al}_2\text{O}_3}{1 \text{ mol Al}_2\text{O}_3} = 234 \text{ g Al}_2\text{O}_3$. The right panel (slide 2) shows a video of a lab experiment with several Erlenmeyer flasks on a table, each with a different colored balloon (pink, purple, green, yellow, red, yellow, white) attached to its neck. A person's hands are visible, interacting with the balloons.

The interface includes a navigation bar at the bottom with a play/pause button, a progress indicator showing "00:58:24 / 01:17:01", and a control panel with buttons for "1", "2", and "APPS". The "APPS" menu is open, showing options: Scenes, Search, Info, Help, Feedback, and Share. The Echo360 logo is visible in the bottom right corner.

Web class conferencing, student retention

■ Web class conferencing

- Faculty can conduct online meetings with students
- Since the start of this service in January, we have had 135 sessions held
- Video, voice, sharing of documents, presentations, sessions can be recorded
- Good tool for reaching students that can't easily get to campus, professional education

EDC550-202_ Education in a Culturally Diverse Society.flv

Attendees (12)

Hosts

- Elinor Brown

Presenters

Participants

- Angela Fields
- Carrie Wheeler
- Daphne McCoy
- Helen Jones 2
- Kayla Hinton
- Lisa Miller
- Ricardo Nazari...
- Sara Pope
- Stephanie
- Willow Cooper

Chat (Everyone)

every lived elsewhere? Have you visited outside of kentucky?

Willow Cooper: where did you go to school here in fayette co?

Angela Fields: Do you plan to go back to

Cultural Puzzle

By: Linda Weeks
EDC 550 – 202

Video

Lisa Miller Stephanie

Linda We... Willow C...

Kayla Hin... Ricardo N...

Elinor Br... Angela Fl...

Carrie Wh... Helen Jon...

0:10:54/1:05:19 Stop and Save

■ Student retention and success

- Early alerts, electronic student communication for monitoring progress
- Student and faculty access to course materials, grades, discussion boards
- Leverages wireless devices

Strong growth in mobile devices

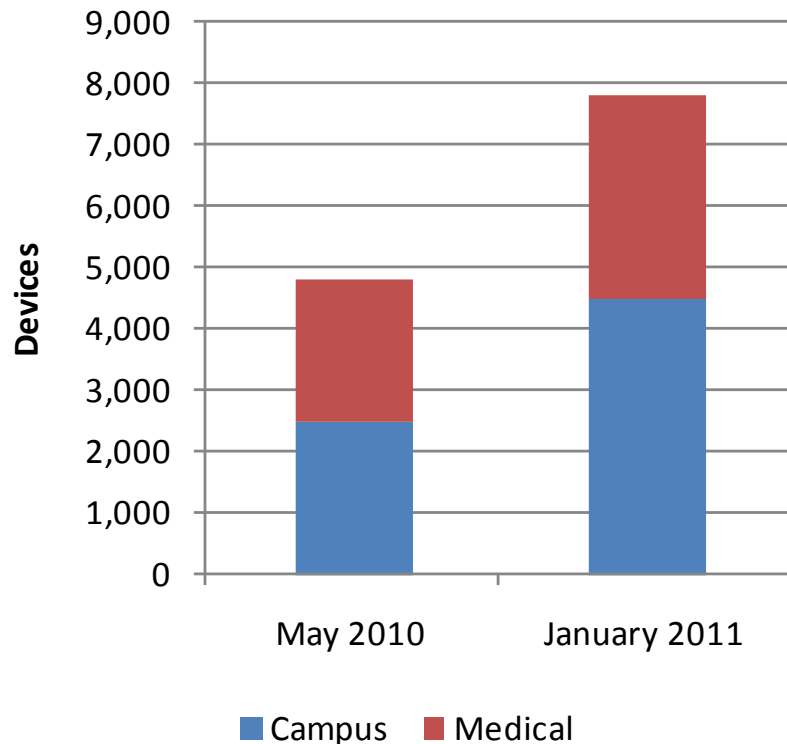
- Global wireless application market, \$5.2 billion in 2011, is expected to hit \$15 billion this year and \$58 billion in 2014
(see <http://www.gartner.com/it/page.jsp?id=1529214>)
- In November, 2010, we launched UK Mobile application, available on Android, Apple and Blackberry devices. Access to campus maps, phone numbers, addresses, news, course information, Blackboard learning management system (see <http://m.uky.edu>)
- To date: 5,508 active users and growing steadily
- We are partnering with several leading institutions on building new applications
 - Stanford, U of Chicago, Northwestern, Clemson, Emory, Florida State, Seton Hall, Loyola-Chicago, Southern Mississippi



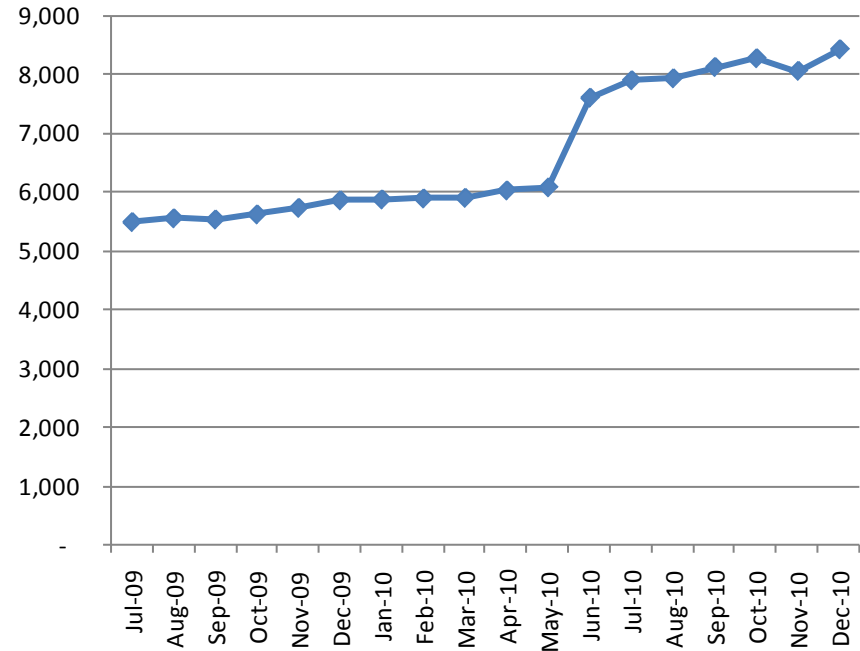
Infrastructure: Wireless and VoIP devices

- 62% growth in wireless devices, 180% growth in wireless usage in 8 months
- 80% of all student common areas have wireless coverage, significant hospital growth
- As VoIP grows, we can bring telecommunication costs down (46% is VoIP, 54% to go)
- We can avoid replacing \$200+ million in copper cable plant

Wireless Devices Growth



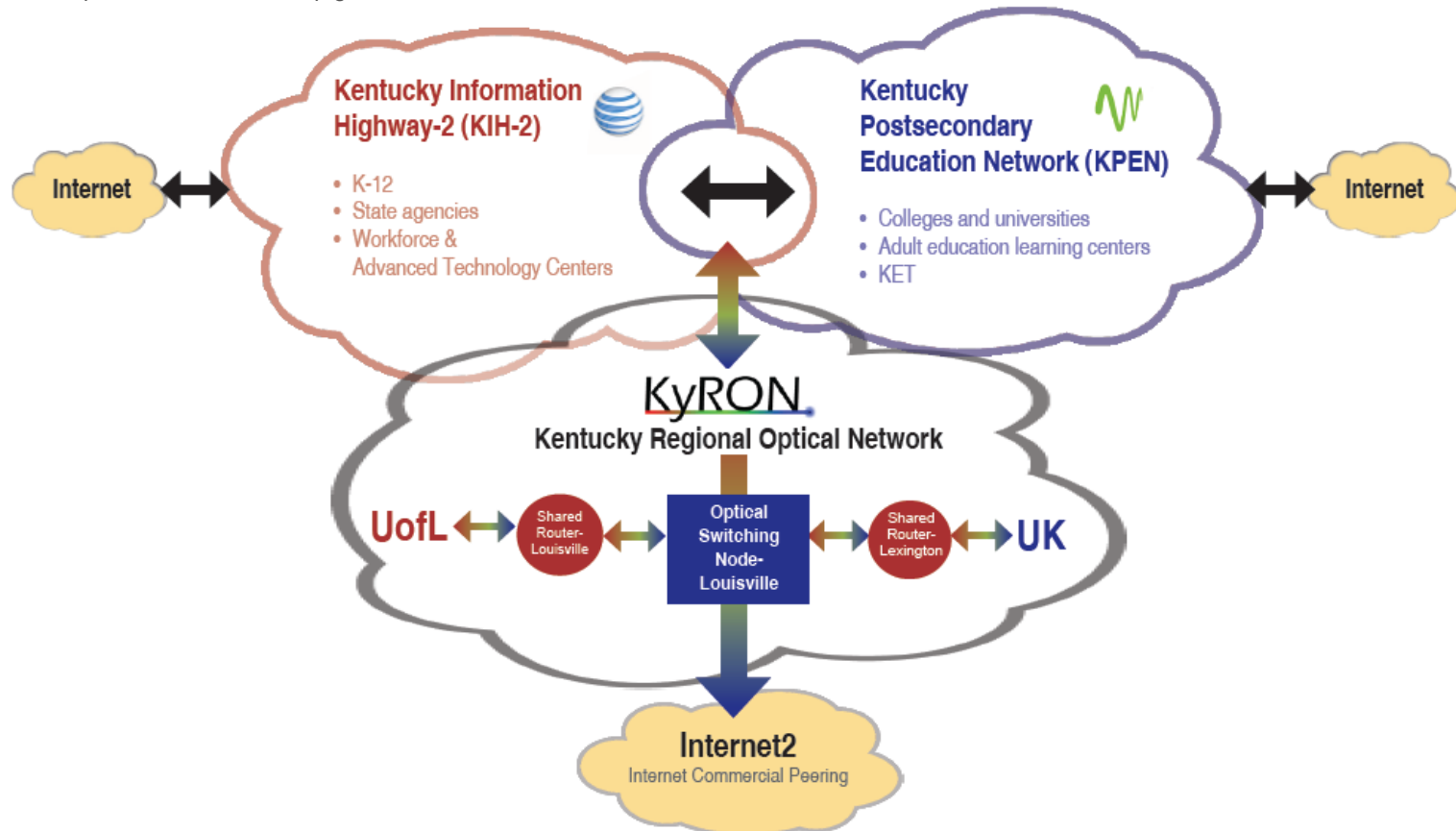
VoIP Growth



Network infrastructure

- New hospital has state of the art network architecture
 - 100% uptime since construction
- UK continues to help lead in state-wide network planning (KyRON, KPEN)
 - But, Kentucky still lags in broadband adoption, ranked in the bottom 10 states

See <http://www.broadbandmap.gov/>



Looking to the future

■ Cloud computing

- Use vendor data centers and applications on a pay-for-use basis
- Excellent for handling overflow (seasonal) and special processing
- Depending on cost, can choose either on premise or cloud computing
- Currently working on cloud projects in three areas
 - Student email (Microsoft and Google)
 - Enterprise systems (SAP - Dell)
 - High performance research computing and storage (Dell)

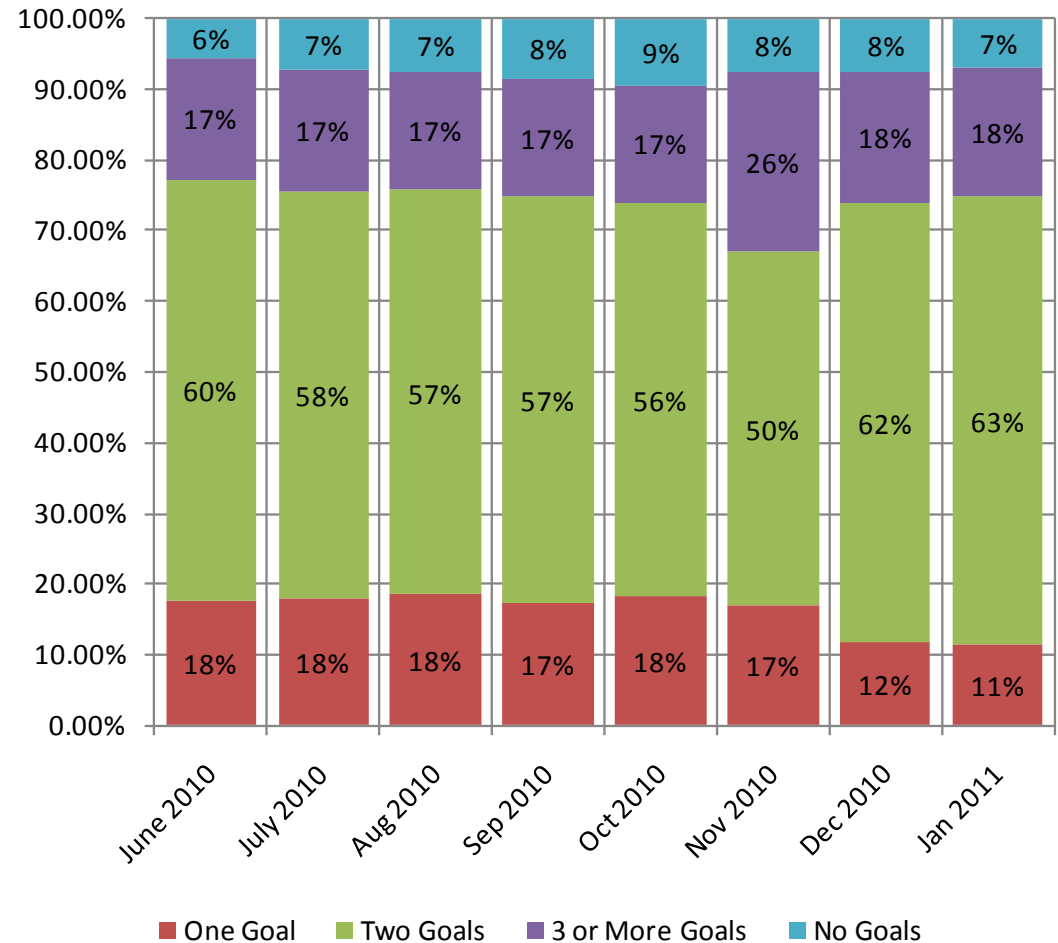
■ E-text books

- Publishing is quickly going electronic. Text books will be following
- Open educational content uses electronic material created elsewhere
 - Suited for common, introductory courses
- A combination of open content and electronic access can reduce the **costs of text books** (WA State estimates a 25% EOR adoption, \$7 million/year in student savings)

IT alignment with the strategic plan

- Currently we have 167 active projects across UKIT representing about 89,000 person hours of work
- All labor and equipment costs are measured and monitored
- All projects are aligned with the university strategic plan
- Projects cover academic, research, healthcare and administrative areas
- Key projects focus on process automation, cost savings, TQM

IT Projects Aligned to Strategic Plan



Concluding remarks

- Digitization in all dimensions is continuing at a very rapid pace
- Mobile technologies are growing rapidly in academic and healthcare environments
- Transformation in publishing is rapidly approaching
- Information technology infrastructure is critical to UK success in education, research and healthcare
- Executive leadership (President, Provost, EVPs) has been strongly supportive