

Class.ly: **Helping Students Collaborate**



By: Parker Klein & Mitch Masia

The Problem



https://bizcombuzz.files.wordpress.com/2015/01/shutterstock_182518145b.jpg
<https://d13kvjv9gs2swm.cloudfront.net/blog/wp-content/uploads/2013/11/bigstock-Stress-business-person-stres-48848486.jpg>

Solutions(?)

The screenshot shows the Blackboard LMS interface. At the top, there's a navigation bar with 'Main', 'Courses & Organizations', and 'YES'. Below this is a 'Personalize Page' button. The main content area is divided into three sections: 'For help with Blackboard', 'Courses', and 'Blackboard News'. The 'For help with Blackboard' section includes links for email support, on-demand resources, and the Center for Teaching. The 'Courses' section lists various courses with their status (e.g., 'not currently available'). The 'Blackboard News' section contains announcements about new features and support resources. A sidebar on the left provides quick links to 'Tools', 'Announcements', 'Calendar', 'Tasks', 'My Grades', 'Send Email', 'User Directory', 'Address Book', 'Personal Information', and 'Academic Materials'.

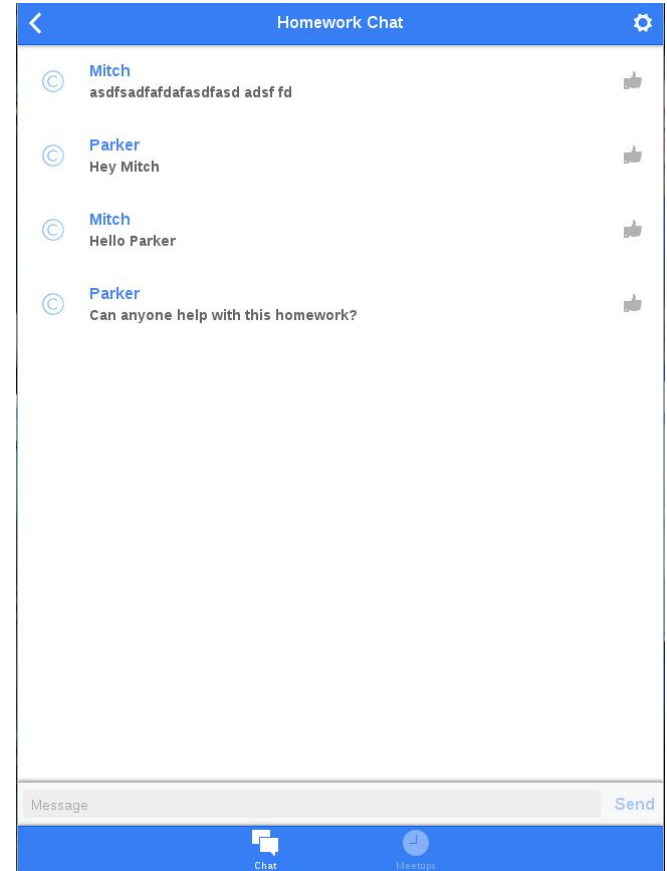
The screenshot shows the Piazza Q&A interface. At the top, there's a navigation bar with 'CS 202', 'Q & A', 'Resources', and 'Statistics'. Below this is a 'Personalize Page' button. The main content area is divided into three sections: 'Class at a Glance', 'Careers at a Glance', and a sidebar. The 'Class at a Glance' section shows a summary of the class, including the number of unread posts, unanswered questions, and unresolved followups. The 'Careers at a Glance' section shows a summary of career opportunities, including the number of companies that ran searches and the number of students who viewed them. The sidebar contains a 'Your Profile Discoverability' section with a progress bar and a '12%' indicator.

There has to be a better way....

- Originating Requirements
 - Automatically pull enrollment information
 - Automatically create chatrooms
 - Allow meetup scheduling
 - Allow custom group creation
 - Allow opt-out

Enter Class.ly

- Write-Once, Run-Anywhere
- Integrate with Vanderbilt YES
- Instant-Messaging Interface
- Meetup Scheduler
- Custom Group Creation
- Opt-Out



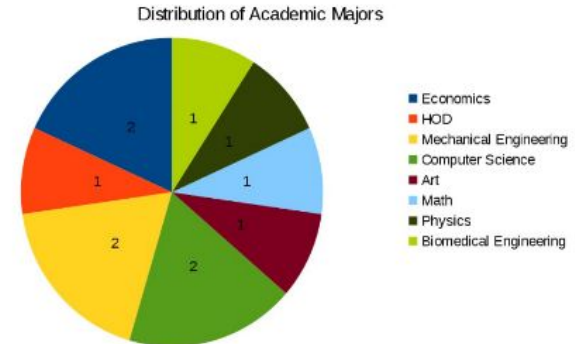
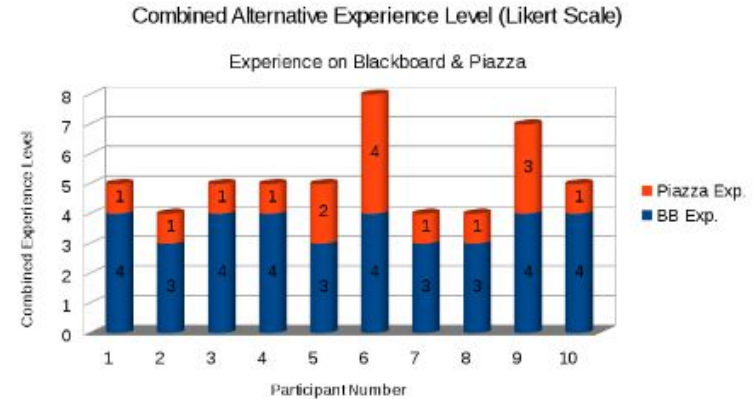
Testing - Overview

- Introduction
- Introduction Survey
- Time-on-Task Comparison
 - Blackboard
 - Piazza
 - Class.ly
- Learning Percentage Determination
- Exit Survey



Testing - Participants

- 10 participants, 8 male
- Average age of 21.25 years
- Seniors at Vanderbilt University
- “High” Mobile & Desktop Operating Environments



Testing - Results

Hypothesis: Average Time-on-Task for sending a message to an entire class on Class.ly is shorter than for Blackboard (and Piazza).

H_{01} : $ATMC - ATMB \geq 0$ (using Student's t test) \longrightarrow $p = 0.00468$

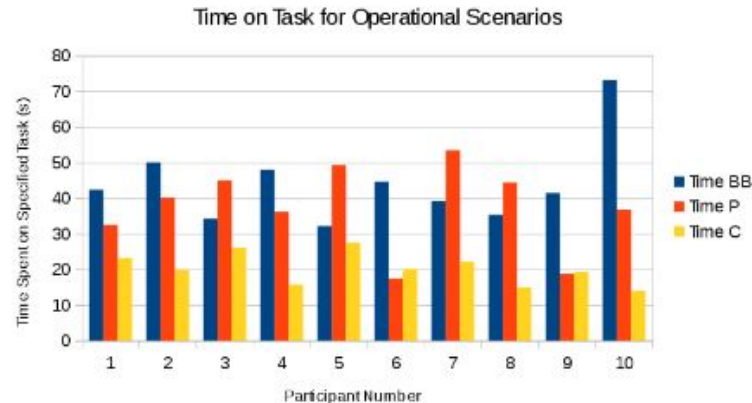
H_{02} : $ATMC - ATMP \geq 0$ (using Student's t test) \longrightarrow $p = 0.00420$

Results:

ATMB: $\mu = 44.062s$, $\sigma = 11.765s$

ATMP: $\mu = 37.401s$, $\sigma = 11.947s$

ATMC: $\mu = 20.274s$, $\sigma = 4.558s$



Testing - Results

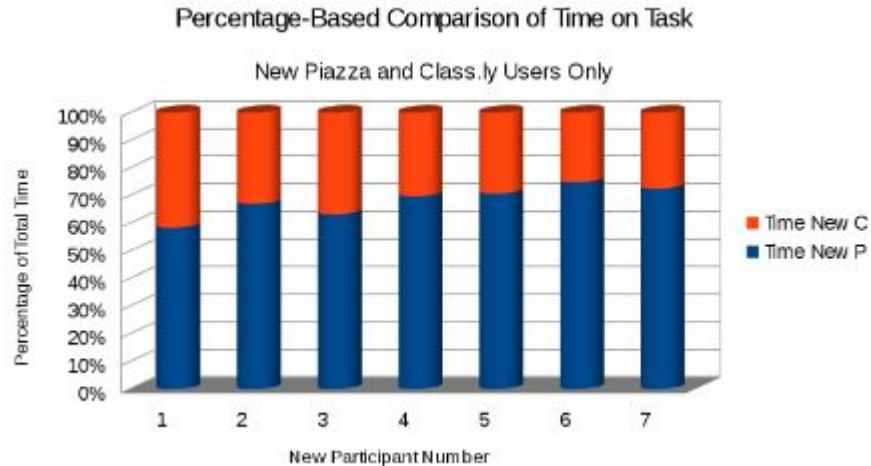
Hypothesis: Average Time-on-Task for sending a message to an entire class is shorter for new users (A) on Class.ly than on Piazza.

$H_{03}: \text{ATMC by A} - \text{ATMP by A} \geq 0$ (using Student's t test) $\longrightarrow p = 0.16995$

Results:

ATMP: $\mu = 45.957s$, $\sigma = 7.379s$

ATMC: $\mu = 20.31s$, $\sigma = 4.363s$



Testing - Results

Hypothesis: Users will achieve less than a 50% learning percentage in creating a meetup on Class.ly.

$$H_{04}: t_1 / t_2 \geq 0.5$$

$$z = \frac{p - p_{\text{exp}}}{se(p)}$$

where p is the observed proportion
where p_{exp} is the null, expected proportion
where $se(p)$ is the standard error of p

$$se(p) = \sqrt{\frac{p_{\text{exp}}(1 - p_{\text{exp}})}{n}}$$



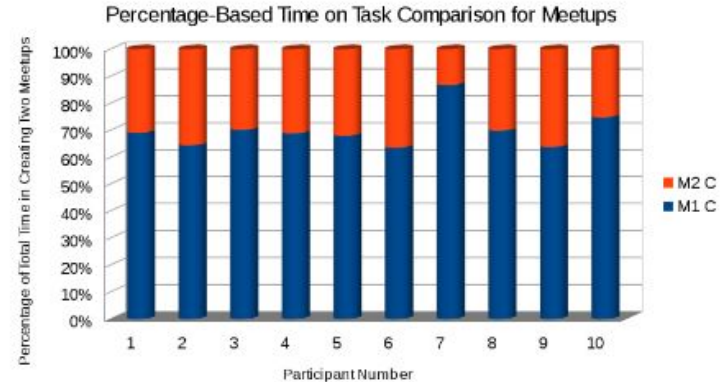
$$p = 0.07140$$

Results:

ATM1: $\mu = 64.206s$, $\sigma = 32.809s$ (149.91s)

ATM2: $\mu = 25.052s$, $\sigma = 4.011s$

ATM2: $\mu = 18.21s$, $\sigma = 6.118s$



Testing - Other Results

- 80% of testers would use a prod version of Class.ly
 - Would not use because of low adoption
 - Would not use because of annoyance
- 100% of testers say Class.ly intuitiveness > BB intuitiveness
- 100% of testers say Class.ly intuitiveness > P intuitiveness
- Most important feature: meetup scheduler
- Most desired feature: meetup calendar integrations

Discussion

- Statistically significant speed increase over BB
 - Great for on-the-go students
 - Indicate high intuitiveness
 - Comparatively limited feature-set
 - Amdahl's Law
- Statistically insignificant intuitiveness calculations v. Piazza
- Learning percentage is low, but our users does not achieve the desired threshold (50%)

Discussion

- Standard Deviations Time-on-Task for Messaging
 - $\sigma_{BB} = 2.58$
 - $\sigma_P = 2.62$
 - $\sigma_C = 1$
- Correctly profiled psycho-graphic
- Need help building a mental model

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