Anne Arundel Community College is a mid-sized commuter college located in Arnold, Maryland. Due to the prolonged economic downturn, more students are turning to web-based distance learning. Traditional enrollments have grown steadily since 2009 with a headcount of 17,957 reported for the 2011 fall term. Nevertheless, an increasingly large number of students now take one or more classes online, reducing or entirely eliminating the need to return to campus as was once the norm. So, the question confronting the college and the bookstore is “What can we do to engage our student body as their individual buying habits change?”

The answer, we believed, was to appeal to the students’ innate need to stay informed, engaged and in control of their options. Developing mobile commerce solutions (smartphone apps) and employing emerging technologies (QR codes) seems to be paying immediate dividends and has been praised by our students as being very forward thinking. (See Attachment 1.1.1 / 1.1.2 / 1.1.3)

Over the past year, the AACC Bookstore has been actively engaged in the development of m-commerce applications for the iPhone and Android series of smartphones. The basic functionality closely mirrors that of our bookstore website, www.aaccbooks.com, and consists of a book search feature, real-time buyback quotes, store information and events calendar. A few highly rated, user-friendly features include a bookstore auto dialer and GPS campus locator. Please refer to Attachment 1.2 for full details of smartphone apps (Android Attachment 1.2.1 / iPhone Attachment 1.2.2). Our m-commerce applications are available for free on the Android market and iTunes app store. Updates and product enhancements are published to the bookstore’s social networking sites. Data detailing the number of total active downloads can be found on Attachment 1.3.

In addition to the emergence of mobile applications, we have also seen a sharp rise in the number of students using original or after-market barcode readers installed on their smartphones to read Quick Reference Codes. QR codes represent an emerging technology that allows smartphone users to scan a barcode and receive extended information. We have deployed several QR codes throughout our store. The goal was to provide pertinent, easily accessible information to help students make well-informed purchase decisions. (See Attachment 2.1) In addition to providing detailed purchase information, QR codes can be used to clarify the information listed on the shelf tag, such as contents of bundled components, order status, required items and instructor recommendations along with the ability to provide actual visual depictions of the item scanned. We are able to track each time a student scans one of our QR codes and can also identify the type of mobile device used. (See Attachment 2.2)

Initial development cost associated with the production of the Android smartphone application was offset in part using monies awarded through the 2010 NACS Store of 2015 Investment Grant. It was also necessary to purchase an Apple iMac to create the iPhone application at a cost of about $1,200. Mobile apps require occasional tweaking and programming updates to stay in top operational order. Costs to date, for all aforementioned expenses, are approximately $6,000 with the bulk of the overall investment expended in the first year of development. After
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the initial development stage is completed, the maintenance and advertising costs are negligible
(See Attachment 3 for advertising examples / Attachment 4 for financial breakdown).

Our initial plans for the m-commerce applications were drawn together in June 2010 following
discussion of retail trends and social marketing. While AACC Bookstore has been using
Facebook to interface with students and give them information about sales, services and special
events since January 2009, we felt that there was yet untapped potential in connecting with
students technologically.

Working with one of our employees, we were able to establish what we wanted in an application
and a timeline for completion. We bought our Google Developer License and Apple Developer
License July 13th, 2010 and began the groundwork for the applications. To help offset our
costs, we wrote a proposal for the NACS College Store of 2015 Investment Grant on August 6th,
2010, which had a submission deadline of September 7th, 2010.

We were grateful to receive the College Store of 2015 grant and in early October 2010, we hired
our main programmer to work on the applications. We reached a proof of concept for the
Android application November 9th, 2010. We added a temporary programmer on from mid-
November to mid-December to help keep us on track for the College Store of 2015 project
submission deadline. On December 10th, 2010, to coincide with our buyback, we held a
demonstration event where students could test out the app on a Droid2 smartphone, watch a
video demonstrating all of the functionality, fill out a smartphone survey and enjoy a slice of
pizza. January 15th, 2011, we submitted the first version of our Android app to the Android
Market and entered our submission for the College Store of 2015 Grant.

After the initial version of the app was released, subsequent versions were published adding
new features such as buyback price quotes and rental availability checks on February 17th,
2011 and May 2nd, 2011. Groundwork for the iPhone app started during this time. In July 2011,
we spoke with Nebraska Book Company, who we currently use for our website and primary
POS operation, about our apps and purchased their WebPRISM API to make the apps smaller,
 faster and more accurate. Version 2 of the Android app, which was the first version to use the
WebPRISM API, was released on August 15th, 2011, exactly 6 months after the first version of
the app was published. On August 19th, 2011, we released our first five QR Codes on select
shelf tags within the store.

Following these releases, our attention was focused on getting a working version of the iPhone
app distributed as soon as possible. The core functionality was finished in early October 2011
and it is currently in the final stages of development before submission to the Apple review
process. At present, it requires only minor aesthetic modification, bug testing and general
quality assurance tests before it is submitted and subsequently released to the general public.
We plan to host another launch/demo party during buyback if possible to spread the word about
our latest app. The next version of our apps will feature a shopping cart and the ability to
purchase all of the required materials from the phone, as well as an integrated QR Code reader
that will enhance the QR Codes already being used on our sales floor.
We at the AACC Bookstore appreciate the opportunities and support that NACS Corp has and continues to provide us in our past, present and future endeavors regarding these applications and mobile solutions for an ever-changing market environment. Our submission for this award is based upon the knowledge that we are in a difficult environment to remain a positive part of students’ academic lives and that we are pushing to remain on the cutting edge of technologies that will allow us to be so. We recognize the ongoing importance of continuing to engage our student population with relevant technologies that will enhance their shopping and scholastic experience. If we are fortunate enough to win this award, the monies will be used to enhance our technology initiatives. Thank you for your consideration.
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1 AACC Bookstore Mobile Applications

1.1.1 Student Reactions during Android Demo Day (1:30 – 4:40)

1.1.2 Recent Comments from Android Market Dashboard

Recent Comments

⭐⭐⭐⭐⭐
by Suzanne
Dope app!!! Well thought out & designed application. Life made easier so big thumbs up!!

⭐⭐⭐⭐⭐
by Brian P Robinson
Way to go AACC, this is too cool! Hopefully this is a sign of things to come for our forward thinking school. Maybe a college catalogue app too? :D

⭐⭐⭐⭐⭐
by Cara
How cool to have info without going to the trouble of opening the browser and opening webpage. What a huge timesaver! Thank you AACC bookstore staff!

⭐⭐⭐⭐⭐
by Brian
Excellent!

1.1.3 Comment on Facebook January 18th, 2011

AACC Bookstore Hey AACC Bookstore Fans! The official AACC Bookstore for Android™ app is now available in the Android Market! This app is 100% free and features a book search, up-to-date new and used prices, store information with auto-dialer and navigation, store hours calendar and the ability to add important dates and sp...
1.2 Feature Breakdown for AACC Bookstore Smartphone Applications

1.2.1 AACC Bookstore for Android

1.2.1.1 Book Search Feature
1.2.1.2 Buyback Price Check Feature

(Not featured: Droid Camera reading barcode)

1.2.1.3 Important Dates and Events
1.2.1.4 Hours of Operation and Store Information (to be combined in next update)

1.2.1.5 Submit Feedback
1.2.2 AACC Bookstore for iPhone

1.2.2.1 Book Search Feature
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1.2.2.2 Buyback Price Check Feature

(Not featured: iPhone Camera reading barcode)

1.2.2.3 Important Dates and Special Events Feature
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1.2.2.4 Store Information and Hours of Operation

1.2.2.5 Submit Feedback Form
1.3 Total Installs for Android App as of January 13, 2011 - October 11, 2011
2 AACC Bookstore Mobile QR Codes

2.1 Screenshots of AACC Bookstore Mobile Pages
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2.2 Screenshots of Goo.gl Tracking Information

Clicks for the past: two hours | day | week | month | all time

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Hide URL
Hidden URLs remain public, but are permanently removed from your dashboard.

Long URL: www.saccbooks.com/q/plspara111.html
Short URL: goo.gl/6Gu0
Created: Aug 3, 2011

Report spam

Clicks
5 clicks on this short URL
5 total clicks on all goo.gl short URLs pointing to this long URL

Traffic sources

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Visitor profile

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<tbody>
<tr>
<td>United States</td>
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<table>
<thead>
<tr>
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<tr>
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<td>3</td>
<td>3</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>
3 Advertising for AACC Bookstore Technology Initiatives

3.1 In-store Android Advertisement

SEARCH FOR YOUR BOOKS BY COURSE!
-- Compare new, used and rental prices!
-- See the cover before you buy!

CHECK BUYBACK PRICES FROM YOUR PHONE!
-- Scan the barcode for easy look-up!
-- The latest and most up-to-date prices!

LOOK UP THE HOURS OF OPERATION!
-- Sorted by campus and month!
-- Includes holiday and extended hours!

NEVER MISS ANOTHER SPECIAL EVENT!
-- Includes term start dates and refund deadlines!
-- Adds events straight to your Google calendar!

FIND STORE INFO FOR ALL THREE CAMPUSES!
-- Automatically dials phone numbers!
-- Launches maps or navigation apps for addresses!

100% FREE -- NOW AND FOREVER!
SEARCH “AACC BOOKSTORE”
ON THE ANDROID MARKET
AND TAKE THE BOOKSTORE
WHEREVER YOU GO!
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3.2 In-Store QR Code Advertisement

Have you seen this CODE?

AACC Bookstore is rolling out QR Codes for some of our most popular courses!
QR Codes can be scanned by any smartphone with a barcode scanning app!
iPhone users can try Scan, RedLaser or over 50 other QR scanning apps!
Android users can try Google Goggles or ZXing to scan QR Codes!
Blackberry users can try the native App World application to scan QR Codes!

Just start up your scanning app, read the QR Code on the shelf tag... ...and view extended information for that particular class, including:

- Required books and materials
- All available versions of text
- Available purchasing options
- Information on available bundles, boxes, packages and sets
- Suggestions for when to keep the text for additional courses
- Additional suggested materials

Don't have a smartphone? Text a picture of the QR Code to 43588 to get the link!

Standard carrier messaging rates apply. *Works with Verizon, AT&T and Sprint mobile plans with an authorized camera. AACC Bookstore is not liable for any associated charges with this service and cannot be held responsible for the use or misuse of the service, nor the quality of service, as provided by ScanTron's Scan & Send service.
4 Financial Breakdown for Mobile Initiative and Advertising

4.1 NACS Store of 2015 Investment Grant and Initial Set-Up Costs

4.1.1 NACS Store of 2015 Investment Grant: $1200

4.1.2 Flip Camera (as required by terms of grant): $200

4.1.3 Google Developer License: $25

4.1.4 Apple iOS Developer License (1-Year License): $99

4.1.5 Programming Wages: $876 (from Store of 2015 Grant)

4.1.6 Application Launch Event: $300

4.2 Second Generation Android App and iPhone App

4.2.1 Apple iOS Developer License (1-Year Renewal): $99

4.2.2 iMac (for use in development): $1200

4.2.3 Nebraska WebPRISM API

4.2.3.1 Set-Up Fee: $500

4.2.3.2 Monthly Maintenance Fee: $100

4.2.4 Continuing Wages for One Developer: ~$3700

4.3 Advertising and In-Store Signage

4.3.1 Bag Inserts and Table Talkers (from AACC Printshop): $100

4.3.2 Laminated Multi-Use Foam-Core Posters: $130