

A young man with short dark hair, wearing a plaid shirt and jeans, is sitting on a set of stairs. He is looking down at a smartphone in his hands with a slight smile. The background is a blurred staircase. The entire image has a color gradient overlay, transitioning from a teal/cyan on the left to a magenta/purple on the right.

BbWORLD[®] 2014

**Transforming Bb Learn into a
Research Engine: The little
engine that could!**

Tuesday, July 15, 2014
2:45 PM - 3:30 PM
San Polo 3401

#BbWorld14

Study Purpose & Methodology

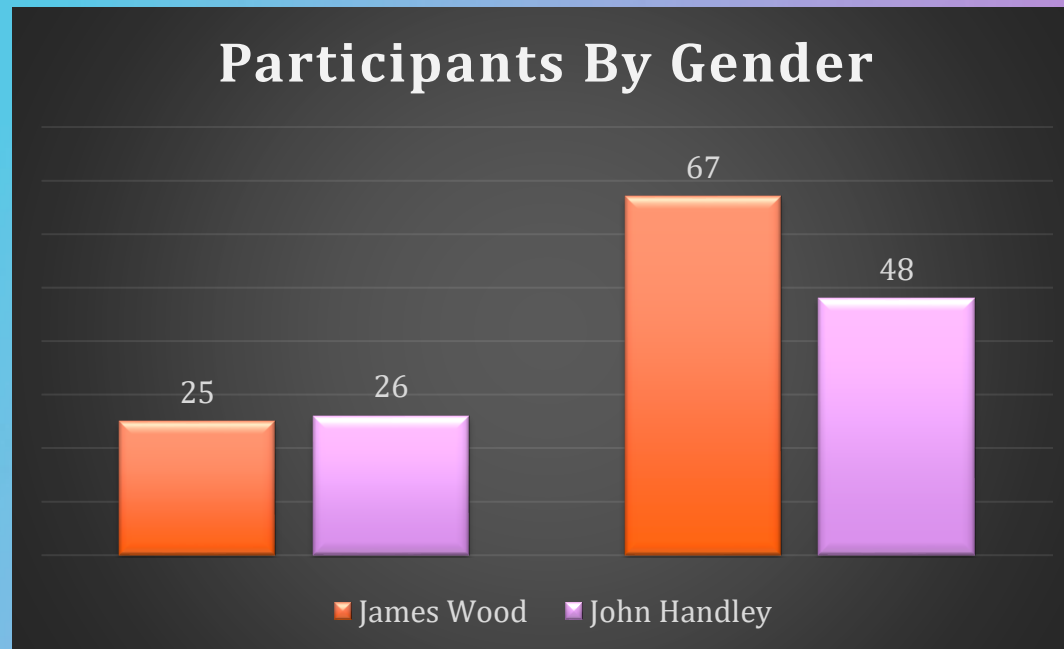


- Screening Teens Early With Identification & Intervention (STEWii)
- Identify the prevalence of risk factors for the development of heart disease and diabetes in teens.
- Determine the effectiveness of a two part, reoccurring electronic education program (REEP) on influencing therapeutic lifestyle changes and reducing selected risk factors
- Quasi-experimental, descriptive/pre-post survey/repeated measures
- Four phases each include screenings, health indicator report (HIR) distribution, and REEP.



Year One Demographics

- 166 Student Participants
- 2 High Schools (James Wood & John Handley)





Study Key Partners

- **Shenandoah University**
 - Institutional Computing
 - School of Nursing
 - School of Pharmacy
 - Marketing & Publication
- **Sunrise Medical Laboratory**
- **Frederick County Schools**
- **Winchester City Schools**
- **Blackboard Inc.**





Blackboard Re-conceptualized

- Transformation of a LMS into a research model
- Development of a confidential & secure digital repository for research data
- Creative & innovative utilization of LMS tools and integration with LEARN
- Coding modifications for smooth utilization
- Pushing the envelope



The Beginning

- SU Google Document
 - su.edu/stewii
- STEWii Bb Domain

Domains > Manage Collections

Collections: STEWii

Administrators:
STEWii Domain Admin (stewii_mc, stewii_mg, stewii_pw)

Collection	Criteria
Users	Collection Options: Include items according to the criteria below Institution Roles: STEWii Research Project
Courses	Collection Options: Include items according to the criteria below Specific Courses: RP.PW.NUR.2013SP
Organizations	Collection Options: Include no items
Tabs	Collection Options: Include items according to the criteria below Specific Tabs: Education

LMS Site Setup



- STEWii Specific Modules
 - Edit Personal Information Without Social
 - Change Password
- STEWii Tabs
- STEWii Roles
 - STEWii Research Project
 - Observer

The screenshot displays two panels for role selection. The top panel is for STEWii roles, and the bottom panel is for System Roles. Both panels have an 'Available Roles' list on the left and a 'Selected Roles' section on the right.

STEWii Roles Panel:

- Available Roles:** Alumni, BbMobile User, Consultant, CTL Support, Datatel User, Faculty, Guest, IC Special, iTunesU, LoginAs, Observer, Other.
- Selected Roles:** Primary Institution Role: STEWii Research Project. Secondary Institution Roles: (empty).

SYSTEM ROLES Panel:

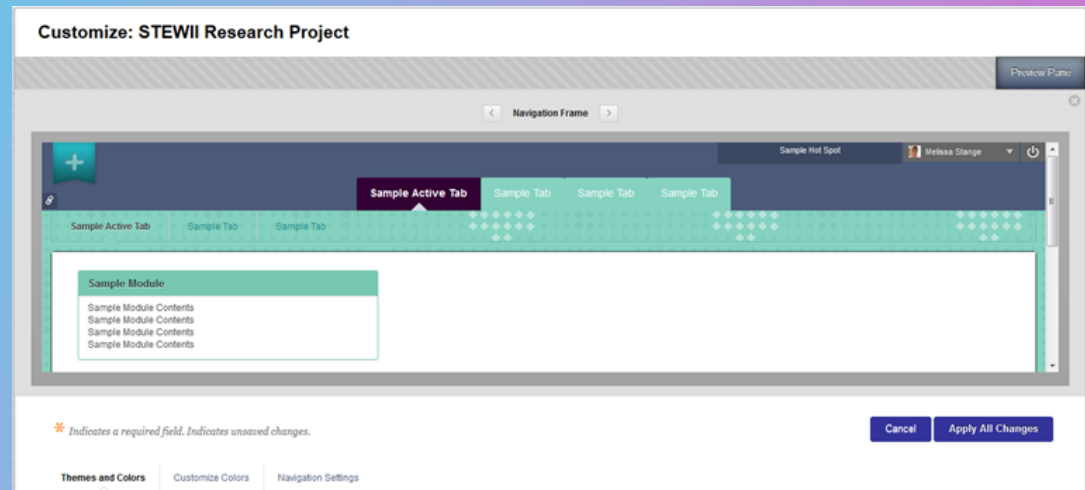
- Available Roles:** Community Administrator, Course Administrator, CTL Support, Goals Manager, Guest, IC Support Technology Liaison, iTunes U Administrator, Learning Environment Administrator.
- Selected Roles:** Primary System Role: Observer. Secondary System Roles: (empty).



LMS Setup Continued

- STEWii Language Pack
 - 289 custom properties available

- STEWii Brand
 - Colors
 - Layout



- STEWii URL Redirect
 - GoDaddy Domain redirects to SU Bb



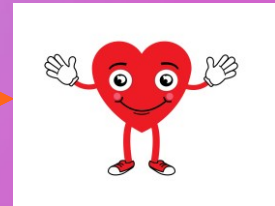
Technology Launch

SU STEWii Email (stewii@su.edu)

- Creation & delegation
- Mail merge with Grade Center
- Google SMS shortcomings resulted in Bb Connect For Learn use

SU Marketing

- Created initial website
- Newspaper & SUN-e
- Animated STEWii Logo





LMS Setup Continued

- STEWii Reporting Server
 - Built in Microsoft SQL Reporting Services
 - Secure login
 - Adhoc reporting tool

SQL Server Reporting Services
Home >
STEWii

Contents Properties

New Folder New Data Source Upload File Report Builder

- [JHCheckIn](#)
- [JHCheckOut](#)
- [JHCheckOut](#)
- [JWDemographics](#)
- [JHDemographics](#)
- [JWScreeningData](#)
- [JHScreeningData](#)
- [Research Team](#)
- [JWCheckIn](#)

Username	First	Last	Gender	Grade	Address	City	Zip	Email	Mobile Phone	Department
stewii_bbm	Bb	Mobile						stewii@su.edu		Bb Mobile App Test
stewii_ecourts	Elizabeth	Courts						ecourts@su.edu		STEWii
stewii_jjames12	Jasmine	James				hagerstown	21742	jjames12@su.edu	(240) 302-4347	Stewii
stewii_lquarles	Kathleen	Quarles						lquarles@su.edu	(540) 247-4424	STEWii
stewii_ljung	Lorena	Jung						ljung@su.edu	(703) 965-8248	STEWii
stewii_mnc	Melissa	Stange	F	12	1216 Salem Church Road	Stephens City	22655	mstange94@su.edu	(540) 327-6530	Institutional Computing
stewii_mg	Mary	Gardiner						mgardine@su.edu		Nursing
stewii_mg_stu	Mary	Gardiner - STUDENT						mgardine@su.edu	(540) 664-2692	
stewii_pmcnulla	Pam	McMullan			12824 Independence Rd	Clear Spring	21722	pmcnulla@su.edu	(301) 302-6610	STEWii
stewii_pw	Pam	Webber						pwebber@su.edu		Nursing
stewii_pw_stu	Pam	Webber - Student						pwebber@su.edu	(540) 336-2682	STEWii
stewii_rlewis3	Rosalie	Stewart			640 Bellview Avenue	winchester	22601	rlewis3@su.edu	(757) 803-4980	STEWii
stewii_wburns09	Wendy	Burns						wburns09@su.edu		STEWii
stewii_wmarsh	Wallace	Marsh						wmarsh@su.edu	(540) 533-1808	STEWii

Conversion Of Grade Center Into A Command Center a.k.a Screening Center



Communications



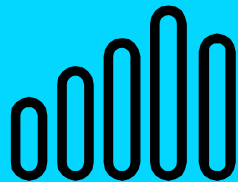
Smart Views



Laboratory Result



Trending Data



**Upload/Downld
Within Google Drive**



Serial Data Collection



Integration of the Data: Health Indicator Report

STEWii STUDY HEALTH INDICATOR REPORT			
STUDENT'S NAME:		SCHOOL:	
KEY and RECOMMENDATIONS			
VE	Step 1: Review this KEY box, including the Preventive Activity Levels A, B, and C.		
Y	Step 2: Review your health indicators below and the Preventive Activity Level (A, B, or C) recommended for each.		
	Step 3: Go to the STEWii website and review additional information about each health indicator.		
	*Remember! A healthy lifestyle is a process that takes time. Take one step at a time until it becomes a habit.		
	Review health indicator information on the STEWii Study website and integrate recommendations into your daily habits. Repeat full screening in spring 2015 and each spring until you graduate. Reminders will be sent for repeat screenings.		
	Review health indicator information on the STEWii Study website and integrate recommendations into your daily habits. Repeat screening of abnormal findings in spring 2014 and full screenings each spring until you graduate. Reminders will be sent for repeat screenings.		
	Review health indicator information on the STEWii Study website and integrate recommendations into your daily habits. Make an appointment with your primary care provider to discuss the health indicators that are outside the normal range. Take this report with you. Repeat screening of abnormal findings in spring 2014 and full screenings each spring until you graduate. Reminders will be sent for repeat screenings.		
HEALTH INDICATOR	RANGES	YOUR RESULTS	PREVENTIVE ACTIVITY LEVEL and RECOMMENDATIONS See KEY above. Log on to STEWii Website for more information
Resting Blood Pressure (BP)	< 120/80 Optimal 121/81-139/89 Pre-Hypertension 140/90-159/99 Stage I 160/100 or > Stage II		Please note: Diagnosis of blood pressure issues is usually based on a series of readings not just one.
Resting Heart Rate (rest)	< 60 too Low 60-100 Optimal > 100 High		Please note: Diagnosis of heart rate issues is usually made on a series of readings not just one.
Body Mass Index (BMI) (with height)	< 18.5 Underweight 18.5-24.9 Optimal 25-29.9 High 30 > Very High		
Wound Inspection (infection)	No redness, swelling, or bleeding		Please note: Findings may have been reported or observed.
Urine Glucose (fasting)	<70 To little glucose 70-100 Optimal >100 Too much glucose		Please note: Eating prior to this test will raise this number.
Hemoglobin A1C (HbA1C)	< 5.7 Optimal 5.7-6.0 Risk of Diabetes 6.1-6.4 High Risk of Diabetes 6.5 or > Diabetes		
C-reactive Protein (CRP)	< 5.0 Optimal > 5.0 Inflammation		Please Note: Occasional mild elevations of CRP are not unusual. CRP will be studied over time for chronic elevation.
Thyroid Function (TSH)	< 0.35 Overactive thyroid 0.35-5.5 Optimal > 5.5 Underactive thyroid		
Iron Status (TIBC)	< 10 Deficiency 10-29 Insufficiency 30-80 Sufficiency > 100 Toxicity		Please Note: There is lack of consensus among national laboratories and health organizations as to what constitutes beginning insufficiency (20 or 30) and deficiency (10 or 15).
Cholesterol (Total)	< 200 Optimal 200-239 Borderline High >239 High		
	< 150 Optimal 150-199 Borderline High 200-499 High > 500 Very High		
LDL (Low Density Lipoprotein)	> 60 Optimal 40-59 Near Optimal < 40 Low		
HDL (High Density Lipoprotein)	< 100 Optimal 100-129 Near Optimal 130-159 Borderline High 160-189 High > 190 Very High		
Triglycerides (TG)	5-30 Optimal > 30 High		
LDL (Low Density Lipoprotein)	< 4.5 Optimal 4.5-6.0 Borderline high > 6.0 High		

Reviewed by: _____ Date: _____

Technology Involved

- Google Email & Spreadsheet
- Microsoft Word & Excel
- Bb Learn
 - Screening Center
 - My Screening Results
 - Batch Upload B2
 - Rubrics

STEWii Course



- Information/Directions/Online help
- Dedicated tabs to each risk factor with very specific lifestyle recommendations to modify each risk
- Interactive resources
 - For example: online food diaries and BMI calculators
- Easily accessible evidence-based websites (in lay terms) that address each health indicator for participants and parents

stewiistudy.com/

- Announcements/Notifications



Technology Findings & Faults

- Communication must be multiple ways
- Assessment tool not mobile friendly
- Lack of Computers
- Lack of Internet Connection
- Poor Typing Ability
- Bb Item Analysis Shortcomings
- Bb User state field textbox
- Demographic Data cannot be seen via course
- Bb Reporting Limiting
- Need for multiple application integration
 - Bb Connect For Learn Limiting
 - Google Limiting

Mobility

- STEWii Mobile App
 - STEWii Study (Android, iPhone)
- STEWii Mobile Site
 - <http://stewiimobile.su.edu/>
- Twitter
 - [@STEWiiSU](#)
- YouTube
 - Videos



What's Next

1. Three more years of 6:00 am STEWii draws (2015-2017)
2. Data Analysis & Reporting
3. Development of the first of it's kind E-Rubric that will deliver a single Framington-like Score for Teens
4. Advanced Usage of Bb ConnectTxt
5. Creation of the Northern Virginia Technology Council

Contact Information & Feedback

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Please provide feedback for this session:

- 1) Select “Schedule” icon in BbWorld14 Mobile App
- 2) Find **Transforming Bb Learn into a Research Engine: The little engine that could!**
- 3) Click “Tap here to take a survey.”