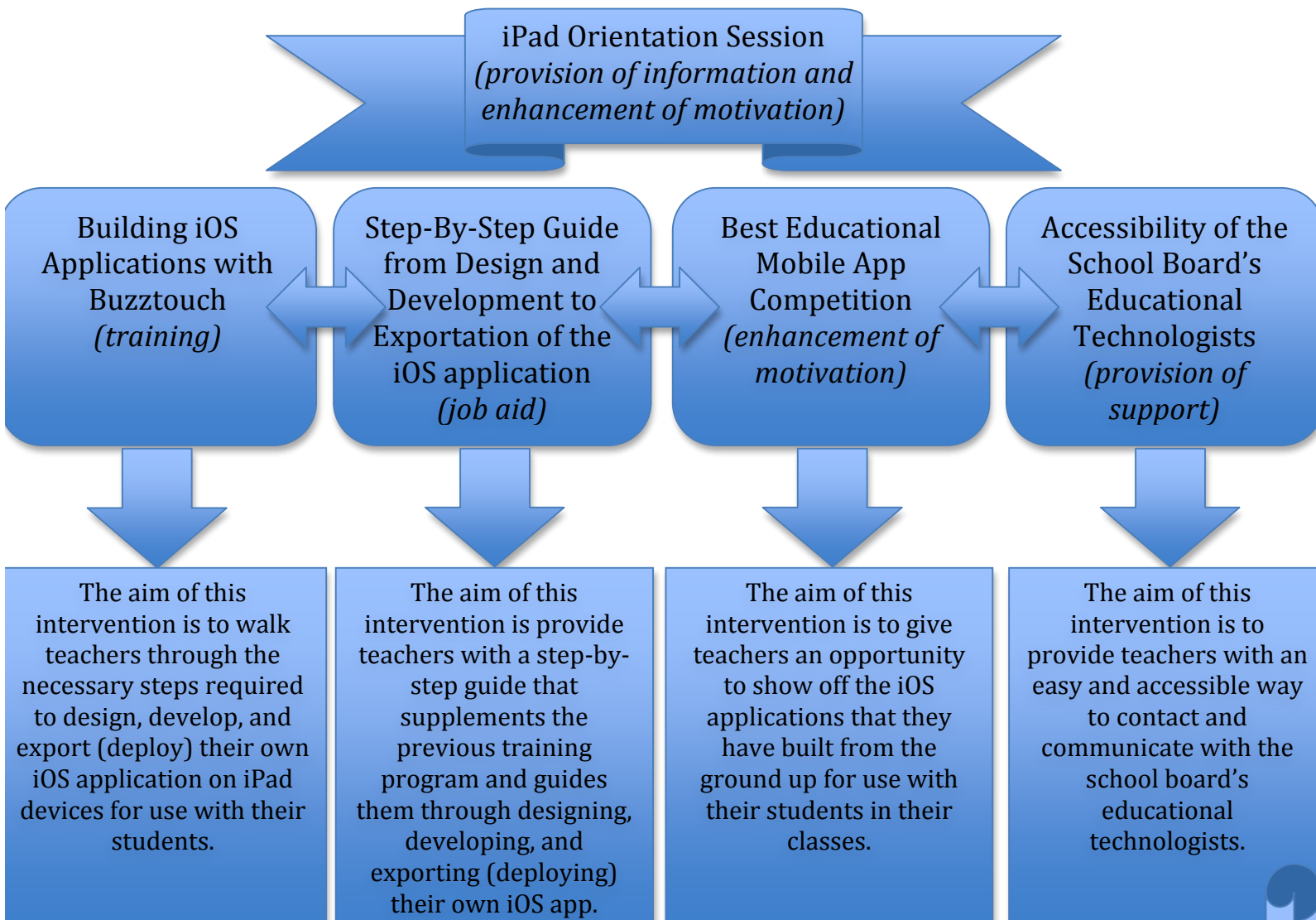


# HIGH-LEVEL DESIGN FOR A PERFORMANCE IMPROVEMENT CAMPAIGN

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## ROADMAP



- Teachers will be able to create a new project and get started on their own subject-specific iOS application for iPad devices.
- Teachers will be able to outline the plugins, functionalities, and core properties of their iOS application.
- Teachers will be able to develop and prepare their iOS application by assembling all the screens and menus in a logical order, either in a single or multi-tab format.
- Teachers will be able to successfully run and implement their iOS application using the Xcode application through the iPad simulator without causing any errors.
- Teachers will be able to export their iOS application onto the physical iPad devices by following the recommended process using the appropriate Apple development tools every step of the way.

## **INTERVENTIONS SELECTED FOR CAMPAIGN**

**INTERVENTION 01** – iPad Orientation Session (provision of information and enhancement of motivation)

### **Description**

The aim of this intervention is to introduce teachers to iPads and inform them of their value within the classroom setting. Specifically, at the beginning of the school year, teachers will be exposed to Apple's iBooks and iTunes U applications as well as the general App Store. Although teachers currently have iPads, they do not use the devices nor have any desire to do so. Through the iPad Orientation, indifferent and newbie teachers alike will be more informed and should be more motivated to utilize the mobile technologies after hearing examples of their use as well as real success stories from innovative teachers and inspired learners.

### **Performance objectives/competencies it addresses:**

*This intervention serves as an introduction to the performing objectives/competencies to be developed in the subsequent interventions.*

### **Performance need it addresses (skills and knowledge, resources or motivation):**

This intervention addresses two performance needs: skills and knowledge as well as motivation. Teachers will learn about the iPad and its many uses, which will

motivate teachers to integrate some of the features within their classroom.

**Level at which it addresses the performance (individual, unit, organization):**

This intervention addresses the performance of the individual.

**Phase of performance addressed (indifferent, newbie, feeling arrogant, feeling humble):**

At this phase of the intervention, teachers are either indifferent or newbies.

- Indifferent: unaware or uninterested in the issue.
- Newbie: intimidated or resistant by the issue.

**Format of the intervention**

**Type of intervention selected:**

The type of intervention selected is provision of information and enhancement of motivation.

**Conventions**

**Rationale for including this intervention:**

This intervention was selected because even though teachers have iPad devices at their disposal (1:1 classroom), most don't see the value in them and therefore, don't use them with their students in the classroom. Thus, the iPad orientation will serve as an introduction to the added value that iPad devices can bring to their students in the classroom setting. In other words, the iPad orientation will provide valuable

information to teachers and motivate them to use the appropriate educational tools, such as iBooks, iTunes U, and the vast collection of educational apps in the App Store.

**Type of information available:**

The type of information available will be an overview of the iPad, which will include specs as well as educational tools such as iBooks, iTunes U, and the App Store. The orientation session will also include success stories and case studies of innovative teachers and inspired learners.

**Structure or format of the information:**

The information will be delivered through the use of a PowerPoint/Keynote presentation on a projector with a lecturer presented and discussing the content on each slide. Teachers will be given the agenda for the day, including the topics to be discussed along with a notes section for teachers to take note of elements they find interesting and might integrate into their classroom.

**Writing Style:**

- The lecture will be informative, providing content that is both explanatory and case-study/example based.
- The number of words on each slide will be kept to a minimum with only the essential content presented. The lecturer will expand on each point.
- There will be no abbreviations used in the slides or by the lecturer.

**Expectations that learners have:**

- Teachers expect to learn about the use, including best practices, of iPad

devices in education.

- Teachers expect to have their questions answered by the expert.
- Teachers expect practical examples in integrating iPad devices in the classroom.

### **Medium Chosen**

Auditorium – Live (face-to-face)

### **Advantages:**

- Easy and quick to develop.
- Relatively inexpensive to produce.
- Can accommodate a large number of teachers at once.
- Teachers can share best practices along with difficulties during the breaks.
- Timing – iPad orientation would be held the week before school starts when teachers have to attend school anyways.

### **Limitations:**

- Compatibility with PowerPoint/Keynote presentations.
- Some teachers may not find the lecture engaging.
- Information provided in the lecture may be outdated and may need to be revisited regularly due to technological advancements.

## **INTERVENTION 02 – Building iOS Applications with Buzztouch**

(training)

### **Description**

The aim of this intervention is to walk teachers through the necessary steps required to design, develop, and export (deploy) their own iOS application on iPad devices for use with their students. Specifically, teachers will use Buzztouch, an open source app engine, to create a subject-specific iOS application. Teachers

currently lack the skills and knowledge to do so. Through the training program, newbie teachers will become ready to begin creating their own subject-specific iOS application and will be able to deploy it onto their iPad devices for student use.

**Performance objectives/competencies it addresses:**

- Teachers will be able to create a new project and get started on their own subject-specific iOS application for iPad devices.
- Teachers will be able to outline the plugins, functionalities, and core properties of their iOS application.
- Teachers will be able to develop and prepare their iOS application by assembling all the screens and menus in a logical order, either in a single or multi-tab format.
- Teachers will be able to successfully run and implement their iOS application using the Xcode application through the iPad simulator without causing any errors.
- Teachers will be able to export their iOS application onto the physical iPad devices by following the recommended process using the appropriate Apple development tools every step of the way.

**Performance need it addresses (skills and knowledge, resources or motivation):**

This intervention addresses the performance need of skills and knowledge.

Teachers will become skillful and knowledgeable in developing their own subject-specific iOS application. As a result, they will have acquired an additional tool to integrating information-communications technology (ICT) in the classroom setting.

**Level at which it addresses the performance (individual, unit, organization):**

This intervention addresses the performance of the individual.

**Phase of performance addressed (indifferent, newbie, feeling arrogant, feeling**

**humble):**

At this phase of the intervention, teachers are newbies.

- Newbie: intimidated or resistant by the issue.

### **Format of the intervention**

#### **Type of intervention selected:**

The type of intervention selected is a training program.

### **Conventions**

#### **Rationale for including this intervention:**

This intervention was selected because most teachers lack the skills and knowledge to design, develop, and export (deploy) their very own iOS app starting from scratch. Thus, the “Building iOS Apps with Buzztouch” serves to train teachers on the basics of creating their own subject-specific iOS app for use with their students in the classroom. That being said, it is important to note that the goal is not to make programmers out of teachers, but instead, to provide teachers with an additional tool in their skillset that they could implement with their students.

#### **Type of information available:**

The type of information available will be an overview on creating a new iOS project, planning an iOS app, developing and preparing an iOS app, running the iOS app in Xcode, and exporting (deploying) the iOS app using the Apple development tools.

**Structure or format of the information:**

The information will be delivered through the use of a PowerPoint/Keynote on a projector accompanied by a lecturer that will present and discuss the content on the slides as well as demonstrate some of the key practices. Teachers will be given a copy of the slides, which will allow them to take notes directly on the copy of slides. Teachers will also have a number of opportunities throughout the workshop to apply what they've learned in each section. Additionally, the workshop will be recorded for future viewing.

**Writing Style:**

- The lecture will be informative and practical, with teachers trying out what they've learned in each section.
- The number of words on each slide will be kept to a minimum with only the essential content presented. The lecturer will expand on each point.
- There will be no abbreviations used in the slides or by the lecturer.

**Expectations that learners have:**

- Teachers expect to learn about designing, developing, and exporting (deploying) their own iOS application.
- Teachers expect to have their questions answered by the expert.
- Teachers expect to partake in exercises and activities to try out what is being taught (hands-on experience).

**Medium Chosen**

Classroom – Live (face-to-face) with Video

**Advantages:**

- Easy and quick to develop.



- Workshop can be held at multiple time slots.
- Teachers will learn and be able to ask questions to a real expert on app development through the Buzztouch platform.
- Timing – training program would be held near the beginning of the school year during a school board pedagogical day.
- Relatively inexpensive (depending on the video).

**Limitations:**

- Compatibility with PowerPoint/Keynote presentations.
- Some teachers may not find the lecture engaging.
- Information provided in the lecture may be outdated and may need to be revisited regularly due to technological advancements.
- Can be expensive (depending on the expert hired as well as the video).

**INTERVENTION 03 – Step-By-Step Guide from Design and Development to Exportation of the iOS application (job aid)**

**Description**

The aim of this intervention is provide teachers with a step-by-step guide that supplements the previous training program and guides them through designing, developing, and exporting (deploying) their own iOS application. In other words, the job aid will act as a crucial resource for guiding teachers every step of the way. Although there is a lot of variability involved in the creation of an iOS application, the job aid will cover the essential steps that every teacher will have to go through, regardless of what type of iOS application they would like to create. The job aid will be particularly helpful for newbie teachers and teachers feeling arrogant alike who do not want to waste their already valuable time on remembering certain steps in the app creation process or how to perform them.

**Performance objectives/competencies it addresses:**

- Teachers will be able to create a new project and get started on their own subject-specific iOS application for iPad devices.
- Teachers will be able to outline the plugins, functionalities, and core properties of their iOS application.
- Teachers will be able to develop and prepare their iOS application by assembling all the screens and menus in a logical order, either in a single or multi-tab format.
- Teachers will be able to successfully run and implement their iOS application using the Xcode application through the iPad simulator without causing any errors.
- Teachers will be able to export their iOS application onto the physical iPad devices by following the recommended process using the appropriate Apple development tools every step of the way.

*Note:* Job aid addresses the same objectives as the training program as it provides teachers with additional support to perform the tasks learned within the program.

**Performance need it addresses (skills and knowledge, resources or motivation):**

This intervention addresses the performance need of skills and knowledge.

Teachers will become skillful and knowledgeable in developing their own subject-specific iOS application. As a result, they will have acquired an additional tool to integrating information-communications technology (ICT) in the classroom setting.

**Level at which it addresses the performance (individual, unit, organization):**

This intervention addresses the performance of the individual.

**Phase of performance addressed (indifferent, newbie, feeling arrogant, feeling humble):**

At this phase of the intervention, teachers are newbies or teachers that are feeling

arrogant.

- Newbie: intimidated or resistant by the issue.
- Feeling arrogant: mastered the basics, but want to become more effective and efficient.

### **Format of the intervention**

#### **Type of intervention selected:**

The type of intervention selected is a job aid.

### **Conventions**

#### **Rationale for including this intervention:**

This intervention was selected for teachers to be able to rely on a job aid to guide through all the steps of creating their very own iOS application for use with their students. There is a lot of variability possible at each step of the process; however, there are essential actions that are required by teachers to be able to successfully move from step to step. This is at the core of the step-by-step guide and provides teachers with the necessary skills and knowledge through a quick and easy reference guide.

#### **Type of information available:**

The type of information available on the job aid will include all the steps required for designing, developing, and exporting (deploying) their own subject-specific iOS application. A list of additional resources will also be included for teachers that

want to customize their app further.

### **Structure or format of the information:**

Since teachers require the use of their Mac computer when building their iOS application, the job aid will be in PDF format and will be made available through the school board's website. From there, if teachers so choose to do so, they may print out their own copy. The job aid will be kept brief with the use of screenshots being heavily relied upon.

### **Writing Style:**

- The job aid will be presented in command form (imperative tone).
- Bullet points will be brief and to the point.
- Screenshots will be used to illustrate the necessary steps.

### **Expectations that learners have:**

- Teachers expect to find easy to follow step-by-step procedures.
- Teachers expect the job aid to be logically structured for each section.
- Teachers expect the job to be an easy read with no technical jargon (unless there's a glossary of terms).

### **Medium Chosen**

Online Print

### **Advantages:**

- Very low cost of production.
- Easy to access, easy to download, and easy to print.
- If a physical copy is lost, the online copy is always available.
- All computers (PC & Mac) as well as tablets and smartphones can read the job aid.

**Limitations:**

- Lack of interactivity.
- Relies on text and images; cannot embed videos (only external links).

**INTERVENTION 04 – Best Educational Mobile App Competition**

(enhancement of motivation)

**Description**

The aim of this intervention is to give teachers an opportunity to show off the iOS applications that they have built from the ground up for use with their students in their classes. Specifically, a “Best Educational Mobile App Competition” will be held on a school board pedagogical day twice during the school year with the board’s educational technologists acting as judges. Teachers with the top 3 iOS apps would receive varying types of awards. The “Best Educational Mobile App Competition” would provide an incentive for teachers feeling arrogant and feeling humble to display their acquired skills and knowledge and be recognized in the process.

**Performance objectives/competencies it addresses:**

- Teachers will be able to create a new project and get started on their own subject-specific iOS application for iPad devices.
- Teachers will be able to outline the plugins, functionalities, and core properties of their iOS application.
- Teachers will be able to develop and prepare their iOS application by assembling all the screens and menus in a logical order, either in a single or multi-tab format.
- Teachers will be able to successfully run and implement their iOS application using the Xcode application through the iPad simulator without causing any errors.
- Teachers will be able to export their iOS application onto the physical iPad

devices by following the recommended process using the appropriate Apple development tools every step of the way.

*Note:* The “Best Educational Mobile App Competition” addresses the same objectives as the training program and the job aid as it provides teachers with an opportunity to display their level of competence regarding app development.

**Performance need it addresses (skills and knowledge, resources or motivation):**

This intervention addresses the performance need of motivation. Teachers will be more willing to create and develop their own subject-specific iOS application if given the opportunity to show off what they’ve built and receive recognition for it.

**Level at which it addresses the performance (individual, unit, organization):**

This intervention addresses the performance of the individual.

**Phase of performance addressed (indifferent, newbie, feeling arrogant, feeling humble):**

At this phase of the intervention, teachers are ones that are feeling arrogant or feeling humble.

- Feeling arrogant: mastered the basics, but want to become more effective and efficient.
- Feeling humble: take the “uncharted” path to performance.

**Format of the intervention**

**Type of intervention selected:**

The type of intervention selected is enhancement of motivation.

## **Conventions**

### **Rationale for including this intervention:**

This intervention was selected to motivate teachers to build and create subject-specific iOS applications with their students in the classroom. By designing the “Best Educational Mobile App Competition”, teachers will have a chance to show off what they’ve created with other teachers and faculty members from the school board, as well as teachers and faculty from their own school. As a result, teachers would gain recognition for their work with awards and rewards alike and only encourage them to build the best educational app to enhance their students’ learning.

### **Type of information available:**

The type of information available leading up to the competition will be the procedure of the competition as well as the rubric that the judges will be using. During the competition itself, each teacher will have 10 minutes to present his or her subject-specific iOS application.

### **Structure or format of the information:**

The “Best Educational Mobile App Competition” would take place in an auditorium during a school board pedagogical day. Depending on the number of entries, the event could last half a day or a full day.

### **Writing Style:**

- Judges will be given a rubric ranking each teacher’s iOS app on functionality, design, compatibility, ease of use, and relevance.
- Teachers are expected to respect the time limit.
- Teachers will have access to the appropriate VGA adapter to mirror their iPad’s screen on the projector.

**Expectations that learners have:**

- Teachers expect to see iOS apps built by fellow teachers for use with their students.
- Teachers that finish in the top 3 expect a prize or award of some sort.
- Teachers expect neutral judges with experience in the educational technology domain.

**Medium Chosen**

Auditorium – Live (face-to-face)

**Advantages:**

- Easy and quick to develop.
- Relatively inexpensive to produce.
- Can accommodate a large number of teachers at once.
- Teachers engage in some friendly competition with “bragging rights” on the line.
- Timing – competitions would be held twice a year during school board pedagogical days at the middle (January) and at the end of the school year.

**Limitations:**

- Teachers are “spectators” (low engagement).
- The judging format does not allow for feedback from teachers.
- Depending on the iPad, a few different VGA adapters will need to be on hand.

**INTERVENTION 05 – Accessibility of the School Board’s Educational Technologists (provision of support)**

**Description**



The aim of this intervention is to provide teachers with an easy and accessible way to contact and communicate with the school board’s educational technologists. Specifically, teachers should be able to ask any question regarding the design, development, and export (deployment) of iOS applications using Buzztouch and should receive a swift and helpful reply. As a result, teachers would be better informed and better supported by their school board for all their app development needs. Increasing the accessibility of the school board’s educational technologists would cater to all teachers of the spectrum, from those teachers that are indifferent to those that are feeling humble.

**Performance objectives/competencies it addresses:**

- Teachers will be able to create a new project and get started on their own subject-specific iOS application for iPad devices.
- Teachers will be able to outline the plugins, functionalities, and core properties of their iOS application.
- Teachers will be able to develop and prepare their iOS application by assembling all the screens and menus in a logical order, either in a single or multi-tab format.
- Teachers will be able to successfully run and implement their iOS application using the Xcode application through the iPad simulator without causing any errors.
- Teachers will be able to export their iOS application onto the physical iPad devices by following the recommended process using the appropriate Apple development tools every step of the way.

*Note:* Accessibility of the school board’s educational technologists addresses the same objectives as the training program, the job aid, and the “Best Educational Mobile App Competition” as it provides teachers with a support platform to communicate their inquiries regarding their app development needs.

**Performance need it addresses (skills and knowledge, resources or motivation):**

This intervention addresses the performance need of resources. Teachers will be better supported in their app development needs through an improved line of communication with the school board's educational technologists.

**Level at which it addresses the performance (individual, unit, organization):**

This intervention addresses the performance of the individual and the organization.

**Phase of performance addressed (indifferent, newbie, feeling arrogant, feeling humble):**

At this phase of the intervention, all types of teachers are involved, including teachers that are indifferent or newbies, as well as teachers that are feeling arrogant or feeling humble.

- Indifferent: unaware or uninterested in the issue.
- Newbie: intimidated or resistant by the issue.
- Feeling arrogant: mastered the basics, but want to become more effective and efficient.
- Feeling humble: take the "uncharted" path to performance.

**Format of the intervention**

**Type of intervention selected:**

The type of intervention selected is provision of support.

**Conventions**

**Rationale for including this intervention:**

This intervention was selected because at the moment, there is a lack of support from the school board regarding ways to communicate with the board's educational technologists and ask questions. By providing an easier way to contact the school board's educational technologists, teachers will be better able to get answers to their questions regarding any step of creating their own subject-specific iOS application.

**Type of information available:**

The type of intervention available will be a more specific "Contact Us" page with a more thorough description of each educational technologist's expertise. This will allow teachers to send their inquiries to the person with the most expertise in that domain.

**Structure or format of the information:**

All information will be delivered through the school board's website. Each educational technologist will have a very brief bio along with a short list of his or her top areas of expertise and a picture. Beside each educational technologist's bio and list of expertise will be an email icon to easily send an inquiry to that person.

**Writing Style:**

- Each educational technologist's bio will be brief.
- The list of each educational technologist's top areas of expertise will be short.
- There will be a profile picture for each educational technologist.

**Expectations that learners have:**

- Teachers expect to be able to evaluate which educational technologist is best suited to answer his or her question.
- Teachers expect a quick turnaround in response time.

### **Medium Chosen**

Website

#### **Advantages:**

- Easy and quick to develop.
- Relatively inexpensive to incorporate an improved “Contact Us” page.
- Educational technologists would be easier to reach via email.
- Teachers can contact the best person for the inquiry (i.e. some are better at handling technical problems with iPad devices while others are more experienced in dealing with app development issues).

#### **Limitations:**

- Communication methods can feel impersonal.