

UTILIZING SMART DEVICES' COMMUNICATION APPLICATIONS FOR PROMOTING AND FACILITATING THE LEARNING PROCESS

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Abstract: *Smart devices are becoming an important part in people's lives. There are many forms of smart devices, such as smartphones, iPads, and Tablets. Smart devices have entered the field of education and attracted instructors' and learners' attention. They contain robust applications (apps), and these apps can be used in various ways depending on the purpose. Many studies have shown that using smart device apps can address learners' needs because these apps are useful, helpful, and easy to learn and use. It is time to provide training program for familiarizing and training the faculty members in the Department of Curriculum and Instruction at King Saud University (KSU), Saudi Arabia, to use a particular communication app.*

Key words: *Smart Devices, Communications Apps, Training Programs, and Educational Tools.*

Introduction

Communication is an essential component of the learning process. Richard Denny (2009) indicated, "Education is all about communication ..."[1]. Communication comes in a variety of ways, and it is important to choose the most appropriate way in order to ensure the success of the learning process. The technology revolution has caused the appearance of communication apps as a new way to communicate. Currently, instructors and learners are interested in using these apps to achieve their needs and to promote and facilitate the learning process.

Methodology

The instructional designer used the ADDIE model for creating this training program. The ADDIE model has five stages: Analysis, Design, Development, Implementation, and Evaluation [5].

Analysis Stage

Piskurich (2006) recommends conducting educational analysis in Rapid Instructional Design in a training program [5].

Needs Analysis

The instructional designer conducted the needs analysis by surveying faculty members in the Department of Curriculum and Instruction at King Saud University (KSU), Saudi Ara-

bia. The survey included twenty-five questions about the personal and educational use of communication apps, and these questions were divided into three sections. The first section contained four questions about the gender of the participants, their ages, ownership a smart device, and duration of its use in general. The second section included twenty questions about the use of ten communications apps. The third section contained a question to make sure that the participants are willing to participate in a training program if needed. The survey results indicated all of the participants own at least one type of smart device, and most of the participants showed their desire to use communication apps as instructional tools. One app out of ten is not currently being used by most of the participants-the Tango app (See Appendix A).

Based on the findings of the survey, the instructional designer decided to create a training program to display the Tango app to the faculty members as an instructional tool in order to promote and facilitate the learning process. The training program will be presented online due to the audiences' needs, where there will be a website to provide the participants with information and video tutorials about the Tango app. The participants will review the training materials in their free time over the course of two weeks. There is no financial cost because Tango is free, and can be found in the Apple Store or the Google Play Store.

Audience Analysis

The training program will be held for eight men and six women from the Department of Curriculum and Instruction



at KSU. The participants' ages are between 30 to 39 years old. In addition, the participants' background in using smart devices should allow them to access the Internet and download the Tango app.

Learning Analysis

The instructional designer observed the need to create a training program when he analyzed the survey results. Most of the faculty members showed their desire to use communication apps as instructional tools. However, most of them are not familiar with Tango and do not know how to use it in general. Therefore, the instructional designer decided to create a training program to display the Tango app for faculty members to use it as an instructional tool. The training program will address the following:

- A) What is Tango?
- B) How is the Tango app used?
- C) Why should faculty members use the Tango app?
- D) Some learning strategies that involve using the Tango app.

Content

The training program will be delivered online via a website, which will be accessible to the faculty members anytime and from anywhere. The content of the training program will include information and three video tutorials about Tango. Following each video tutorial, participants will be required to do an assignment to ensure their understanding of the presented materials. At the end of the training program, the participants will be asked to fill out a post-assessment form that will be designed to discover the effectiveness of the training program.

Design Stage

Piskurich (2006) recommends using a design document template in Rapid Instructional Design as discussed below [5].

Scope of the Project

Goal: the goal of this project is to train faculty members to use the Tango app as an instructional tool for promoting and facilitating the learning process.

Audience: the training program will be presented to eight men and six women who work in the Department of Curriculum and Instruction at KSU. The participants' ages are between 30 to 39 years old. In addition, the participants' background in using smart devices should allow them to access the Internet and download the Tango app.

Design Time and Milestones: the training program will be completed within a month. In the first week, the instructional designer will conduct a pre-assessment, analyze the data, and identify the program's objectives. Then, the participants will review the training materials through the program's website in their free time over the course of two weeks. In the fourth week, the instructional designer will conduct a pilot study to revise the program if needed.

Delivery

Content: the program will cover the needed knowledge and skills to use Tango as an instructional tool in order to facilitate and promote the learning process. The website's content will contain information and three video tutorials explaining what the Tango app is, how to use it, and some learning strategies that involve using the Tango app.

Method: the training program will be delivered online via a website, which will be accessible to the faculty members anytime and from anywhere.

Training Time: the actual training time will be two weeks. Participants will be given two weeks to access the program's website and review the provided materials.

Problems and Opportunities: this training program uses a website as a delivery method. If any problem appears such as the website breaks down, the trainer will be available via WhatsApp, the Tango app, or email every day from 8:00 A.M to 10:00 A.M Central time (4:00 P.M to 6:00 P.M in Saudi Arabia time).

Objectives

First Level Objective: at the end of the training program, faculty members will be able to use the Tango app as an instructional tool.

Second Level Objectives: participants will demonstrate specific skills. (See Appendix B)

Materials

The training program will consist of pre-assessment and a websites to deliver the instructional materials, three video tutorials, fourteen smart devices with Internet access, the Tango app, on-screen texts, a facilitator (Trainer), and a post-assessment.

Who Is Involved (Project Team)

The training team will contain three people. The first one is the instructional designer. The second one is the web de-

signer and multimedia developer. The third person will train the faculty members, answer their questions, and evaluate their achievements.

Topical Outline

The training program will discuss the following: What is the Tango app? How the Tango app works? Why should faculty members use the Tango app as an instructional tool? Some learning strategies involving using Tango will also be presented.

Administrations and Evaluation

The instructional designer will administer the entire program, and he will use several evaluation methods: pre-assessment, assignments following each video tutorial, and post-assessment. Also, the designer will be responsible for following up on the participants' progress and gathering the evaluation data in order to revise the program as needed.

Development Stage

Piskurich (2006) recommends using a lesson plan template in Rapid Instructional Design [5]. The training program will be delivered online providing information about Tango such as what it is and how to use it as an instructional tool. A website was created for this program to assist the faculty members in accessing the instructional materials, and the website address is <http://www.alfayezme.wix.com/masters-project>. The website will include the program's syllabus that explains the way the program works, standards, video tutorials, the required technology, and resources. At the end of this program, the faculty members will be able to use the Tango app as an instructional tool in their future courses.

Media Selection

On the website, the faculty members will be provided with an electronic training package that includes a facilitator's guide, on-screen texts, images, video tutorials, PowerPoint presentations, and links to other resources. The video tutorials and the PowerPoint presentations will explain what the Tango app is, how to use it, and some learning strategies that involve using Tango. In addition, these video tutorials will be created based on Mayer's (2009) multimedia principles such as Signaling, Temporal Contiguity, Pre-training, Modality, Multimedia, Personalization, and Voice principles in order to provide effective video tutorials [2]. The faculty members will be responsible for accessing the program's website, reading the provided information, and watching the video tutorials by using their smart devices.

Lesson Plan

The lesson plan "allows the teacher to visualize every step of the teaching process in advance...The lesson plan will provide invaluable guidance for the substitute teaching" [4]. In addition, writing a lesson plan is very important because it helps the trainer to achieve the lesson's objectives. The nature of this training program requires visual instructional aids such as video tutorials and PowerPoint presentations. The lesson plan can be found in Appendix C.

Implementation Stage

The training program is designed to train faculty members to use the Tango app as an instructional tool for promoting and facilitating the learning process. This program is a web-based instruction, which supports the faculty members' learning through providing an appropriate educational environment. Faculty members will be provided with an electronic training package that will be delivered online via a website.

Conducting a beta test represents a significant step in order to diagnose any weaknesses in the designed program [5]. Therefore, the instructional designer created an online beta test survey in order to examine the effectiveness of the training program and identify its drawbacks. The survey was divided into three sections: design, lesson, and presentation. Seven faculty members out of fourteen filled out the online beta test survey to make sure that the training program meets expectations. The survey results were positive, and faculty members have indicated some suggestions to improve the training program and to avoid any drawbacks in the future. In order to clarify the survey results see Appendices D and E.

Appendix D shows the beta test survey results, including the lowest scores in each section. Knowing the lowest scores assists the instructional designer to revise and improve the training program. For example, under the presentation section, three participants out of seven thought that the small group involvement was not sufficient. In order to address this issue, the instructional designer will add more activities that support small group involvement in the future.

Data from Appendix E indicates that most of the faculty members' comments were positive, but there were a few meaningful criticisms. For instance, one of the faculty members suggested that the course's website should have an instructor page, which includes a picture and some information about the instructor's background. To address this shortcoming, the web designer added an instructor page.

Evaluation Stage

Placing an evaluation plan is very important to improve the training program. Geri E. H. McArdle (2007) indicated, “Evaluation allows you to determine the effectiveness and efficiency of your training program, and the purpose of the evaluation is to determine if the training is meeting its stated goals and objectives...” [3]. Therefore, the main purpose of creating this evaluation plan is to determine whether or not the training objectives were met. In this training program, the instructional designer created an evaluation plan that is designed based on learning objectives in order to provide the director of the training program with a clear view of how the training went.

This training program has seven learning objectives that directed the faculty members to: (1) download and view the Tango app (2) define the Tango app and discuss its importance as an instructional tool (3) create group discussions by using the Tango app (4) demonstrate the Tango app by chatting with their students (5) demonstrate the Tango app by making phone calls to their students (6) demonstrate the Tango app by making video calls to their students, and (7) identify and utilize one of the appropriate learning strategies that involve using the Tango app.

The evaluation plan contained two different methods of evaluation: formative (Reaction Instrument and Checklist Practice Activity) and summative (Post-Assessment). Piskurich (2006) recommends using Kirkpatrick's four-level evaluation model in Rapid Instructional Design [5]. In this evaluation plan, the instructional designer applied three levels of evaluation, which are reaction, learning, and behavior.

The first level of evaluation is Reaction; the instructional designer asked the faculty members to fill out an online survey, Reaction Instrument, in order to provide their overall impression and determine if there were any issues with the program. The reaction instrument results were satisfactory. As shown in Appendix F, in a sample group of fourteen participants 29% of the faculty members had an excellent overall impression, 50% of the faculty members had a very good overall impression, and 21% of the faculty members had a good overall impression.

The second level of evaluation is Learning, which is all about mastering and retaining the required skills and knowledge. The faculty members were evaluated through answering weekly self-evaluation checklist and participating on the group discussion. The self-evaluation checklist was worth 70% of the total course grade, while the group discussion was worth 30%. The faculty members filled out an online checklist practice activity [the self-evaluation form that had been designed by the instructional designer to meet

the learning objectives] as scheduled in the lesson plan. An example of the self-evaluation checklist form can be found in Appendix G or by clicking (<http://goo.gl/yAVt6D>, <http://goo.gl/FJLUNF>) to view it online. The checklist results were positive; 85.7% of the faculty members completed their practice activities.

The third level of evaluation is Behavior. The instructional designer used the Tango app video call feature to interview each faculty member as a summative assessment at the end of week two. The interview questions were designed carefully to measure whether faculty members have used the Tango app or some learning strategies that involve using the Tango app in their current classes. (See Appendix H) The interview results showed that twelve out of the fourteen faculty members had used the Tango app in their current classes, and two faculty members were planning to use the Tango app in their future classes. That means 85.7% of the faculty members used the Tango app, which is very satisfactory.

Conclusion

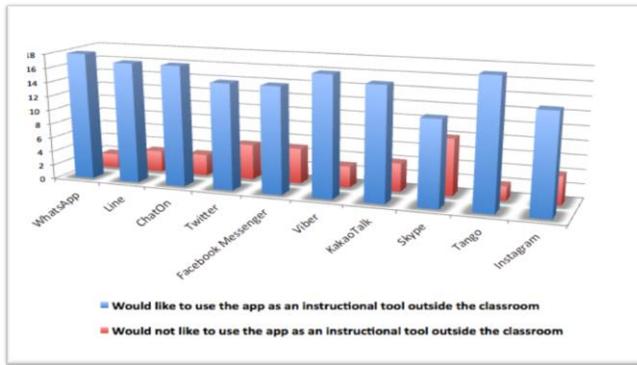
After conducting a needs analysis, the instructional designer discovered that faculty members at King Saud University were interested in using smart devices' communication apps. However, he found that they were not familiar with the Tango app. As a result, the instructional designer decided to create a training program to introduce the Tango app to the faculty members as an instructional tool in order to promote and facilitate the learning process. This training program is for educational purpose, and it is completed within two weeks. Finally, this training program is recommended due to the good results, and it will help any educational institution to reduce its training budget because this training program integrated free smart device technology.

Appendix

Appendix A – The Survey Results

Here is the survey link: <http://goo.gl/6JO5tS>





Appendix B – Second Level Objectives

Weeks	Objectives
Week 1	At the end of the first week, faculty members will be able to: 1) Download and view the Tango app. 2) Define the Tango app and discuss its importance as an instructional tool. 3) Create group discussions by using the Tango app. 4) Demonstrate the Tango app by chatting with their students.
Week 2	At the end of the second week, faculty members will be able to: 1) Demonstrate the Tango app by making phone calls with their students. 2) Demonstrate the Tango app by making video calls with their students. 3) Identify and utilize the appropriate learning strategies that involve using the Tango app.

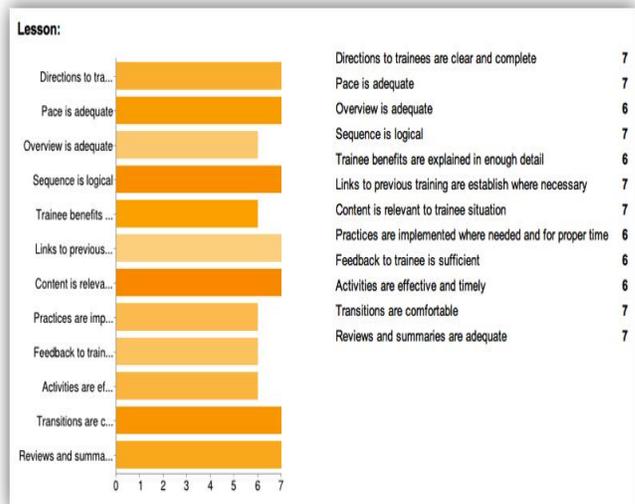
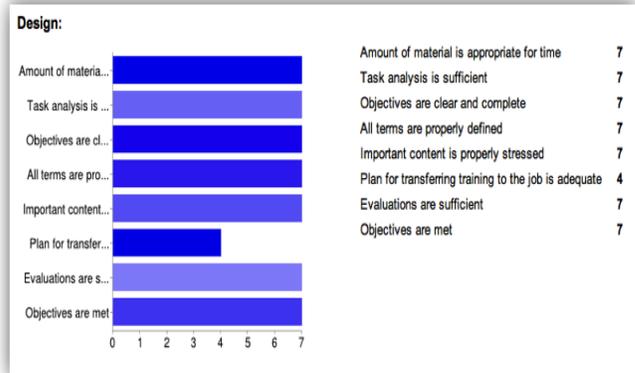
Appendix C – The lesson plan

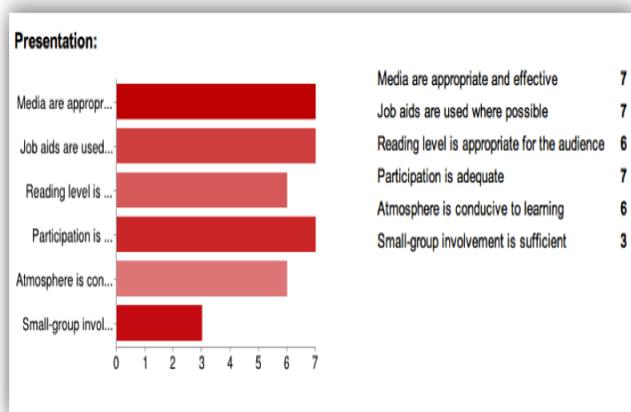
Program Title	Utilizing Smart Devices' Communication Applications For Promoting and Facilitating the Learning Process
Module Title	Using the Tango Application as an Instructional Tool
Audience	Faculty members who work in the Department of Curriculum and Instruction at King Saud University, Saudi Arabia
Number of Participants	Fourteen faculty members
Location	Online
Program Objective	At the end of the training program, faculty members will be able to use the Tango app as an instructional tool.
Lesson Objective	At the end of the first week, faculty members will be able to: <ul style="list-style-type: none"> Download and view the Tango app. Define the Tango app and discuss its importance as an instructional tool. Create group discussions by using the Tango app. Demonstrate the Tango app by chatting with their students. At the end of the second week, faculty members will be able to: <ul style="list-style-type: none"> Demonstrate the Tango app by making phone calls with their students. Demonstrate the Tango app by making video calls with their students. Identify and utilize the appropriate learning strategies that involve using the Tango app.
Resources	A website (www.alfayezme.wix.com/masters-project) that includes information, video tutorials, and PowerPoint presentations about the Tango app.
Media Requirements	The participants must have a smart device with Internet access in order to browse the program's website, read the presented information, and watch the video tutorials and the presentations. In addition, the participants have to download Tango onto their smart device in order to be able to practice what they learn.
Product Prototype	The training program will be presented at the following link: www.alfayezme.wix.com/masters-project
Selection Justification	The instructional designer decided to offer the training program via web-based delivery system because this method enables the participants to access the program's website and review the instructional materials as much as they want at any time from anywhere.
Time	The training schedule is two weeks.

Time	Activities	Content	Media
First Week	<ul style="list-style-type: none"> Self-Introduction Discussion Download the Tango App Creating Group Discussions Chat With Students Self-Assessment 	During this week, each faculty member will post a self-introduction and review a brief introduction about Tango, including what it is and how faculty members can access it. Then, the faculty members will discuss the importance of using Tango as an instructional tool. In addition, faculty members will watch a video tutorial about how Tango works. Then, they will practice creating group discussions by using Tango, where the faculty members can chat with their current students. At the end of this week, each faculty member will be required to fill out a checklist form (self-assessment).	<ul style="list-style-type: none"> On-screen texts Images Video tutorials Presentations All the above media can be found at the program's website: www.alfayezme.wix.com/masters-project
Second Week	<ul style="list-style-type: none"> Making Phone Calls Making Video Calls Apply One Learning Strategy Self-Assessment 	During this week, faculty members will watch video tutorials about using Tango to make audio and video calls. Also, they will review a presentation about some learning strategies that involve using Tango. Then, they will choose the most appropriate learning strategy, and apply it with their current students. At the end of this week, each faculty member will be required to fill out a checklist form (self-assessment).	<ul style="list-style-type: none"> On-screen texts Images Video tutorials Presentations All the above media can be found at the program's website: www.alfayezme.wix.com/masters-project

Appendix D – Beta Test Review Checklist Results:

The survey link: <http://goo.gl/53kbZY>

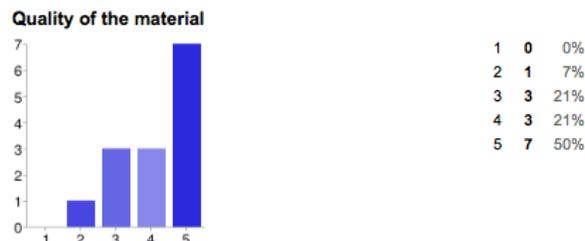




- I like the Tango app, and I think that most teachers should use it in their courses.
- The website should have an instructor page, which includes the instructor's picture and some information about his background.

Appendix F – Reaction Instrument Results:

The Reaction Instrument link: <http://goo.gl/InENUG>



Appendix E – Beta Test Review Checklist (All comments are direct quotes from participants' responses):

Design comments:

- The website is well designed.
- I really like the layout, where it has consistent colors.
- It is a wonderful design.
- The website posses good design. I like the colors; black and orange are so pretty.

Lessons Comments:

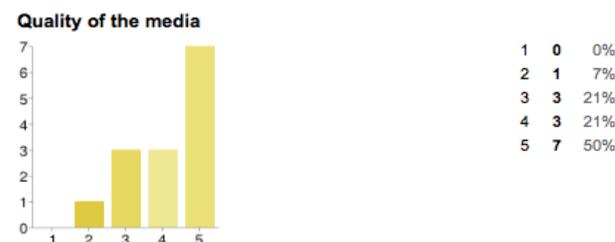
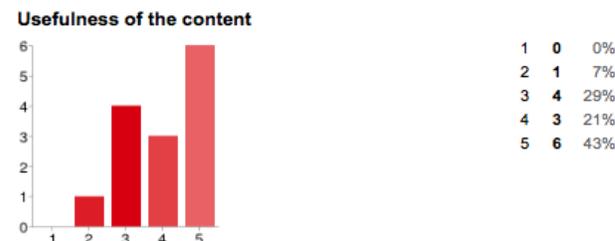
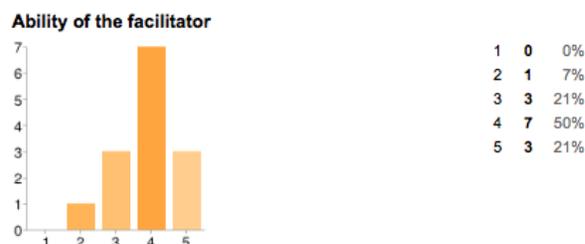
- The lessons are simple and very clear, and I believe that most of the learners are looking for such these lessons.
- The lessons used videos for more understanding, and it provide a good way to motivate learner.
- The lessons are very detailed and easy to achieve the lessons' objectives.
- The lesson plan is well designed.
- It would be better if you teach them the new stuff in Tan go like the photo profile or playing game.

Presentation Comments:

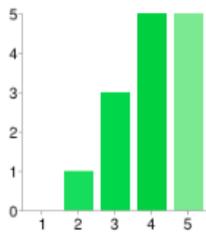
- The presented materials are helpful and easy to be understood.
- The presented materials would help audiences to achieve their objectives.
- The presented materials can help just individual participant, so I suggest adding more activity that involve small group.
- The media that have been used are appropriate and effective.

General Comments:

- Overall very good work, I like the organization of the lessons because it is very easy to understand.
- The Tango app is one of the useful applications to be used in or outside the classroom.

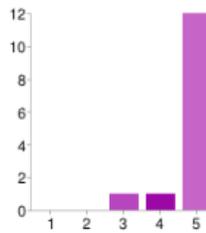


Practice sessions



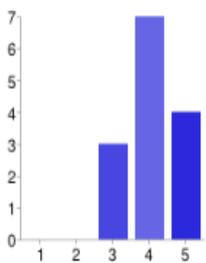
1	0	0%
2	1	7%
3	3	21%
4	5	36%
5	5	36%

Fulfillment of objectives



1	0	0%
2	0	0%
3	1	7%
4	1	7%
5	12	86%

Overall impression



1	0	0%
2	0	0%
3	3	21%
4	7	50%
5	4	29%

Appendix G – Self-Evaluation Checklist Forms:

The URL of the self-evaluation checklist form #1:
<http://goo.gl/yAVt6D>

The URL of the self-evaluation checklist form #2:
<http://goo.gl/FJLUNE>

Appendix H – The Interview Questions:

The faculty member name:

1. Did you use the Tango app with your current students?
 If YES, what do you thank about it?

-
-
-

If NO, would you like to use it in your future classes?

-

2. Did you use the Tango app group discussion feature with your current students?

If YES, how it goes with your student?

-
-
-

3. Did you use the Tango app phone or video call feature with your current students?

If YES, how it goes with your student?

-
-
-

4. Did you use one of the presented learning strategies in any of your current classes?

If YES, what do you thank about it?

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If NO, would you like to use one of the presented learning strategies in your future classes?

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