**STARTING AFTER SCRATCH**

TEACHING TEXT-BASED CODING AFTER GRAPHICAL LEARNING TOOLS

A Master’s Thesis or Doctoral Dissertation Presented to the Faculty of

the Department of Computer Science

Villanova University

In Partial Fulfillment

of the Requirements for the Degree of

Master of Science in Computer Science

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Under the Direction of

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# Abstract

*An abstract (limited to 150 words for Master’s Thesis and 350 words for Doctoral*

*Dissertation) must be prepared on a single page.*

# 1. Introduction

1.1 Problem Statement

1.2 Purpose of Study

1.3 Importance of Study

1.4 Scope of Study

1.5 Rationale of Study

1.6 Definition of Terms

# 2. Literature Review

## 2.1 Importance of K-12 Computer Science Education

President Obama on Science and Engineering in a Google+ Hangout - <http://www.youtube.com/watch?v=Ka-C7yBu_dE> – “math and scince is part of your overall educational experience, we don’t want youy to be intimidated by it.”

President Obama on Computer Programming in High School in a Google+ Hangout - <http://www.youtube.com/watch?v=PClfyIbIr5Q> -

# 3. Methodology

## 3.1 Approach

## 3.2 Data Gathering Method

## 3.3 Database of Study

## 3.4 Validity of Data

## 3.5 Originality & Limitations

## 3.6 Summary

# 4. Presentation of Findings

4.1 Sub-heading

4.2 Sub-heading

# 5. Conclusions

# 6. Future Work

# 7. Bibliography

The reference material contains a bibliography or a list of references arranged

alphabetically and any other pertinent sections, such as appendices. Chicago Manual of Style