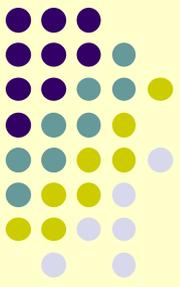


# Building a computer-based model of assessment for writing skills

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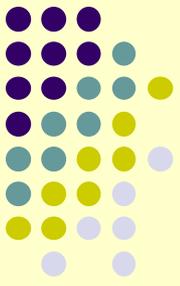
International University – Vietnam National University HCM



# Introduction

This study explores the possibility of using computers to assess learners' writing abilities through analysis of data from the post tests and the theoretical interpretation of second language acquisition (SLA).

The focus of the study is given to a survey of high intermediate level students of English taking writing tests at a Vietnamese university. The writing tests were collected, scored and categorized into a 1-5 point scale in accordance with the international writing rubrics.

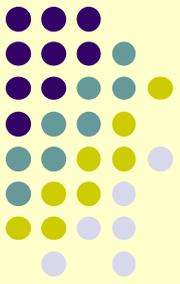


# Introduction

The results of the study show the statistical significance for the writing tests and the test-takers.

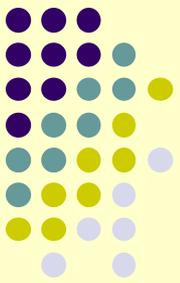
Suggestions for the effective implementation of an assessment model as a foundation to assess students' writing performance are provided

# The purpose of the study



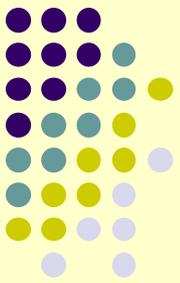
To investigate the computerized assessment of English learners' writing ability in the writing tests in view of the use of computer-assisted language learning (CALL) for EFL Vietnamese learners.

To see if an assessment model as a foundation to assess students' writing performance can be built.



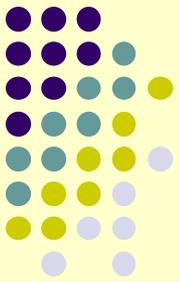
# Limitations of the study

- Referring to the language convention by ETS;
- Considering language structures in lexical-grammatical aspects through the experiential expression.



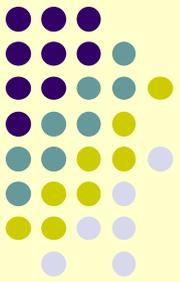
# Literature review

- There is a gap in the theory for CALL and CALL does not have a dedicated theory.
- CALL theory is drawn from a number of sources that are comprised of SLA theories, general learning theories, linguistic theories, and human-computer interaction theories (Hubbard, 2012).



# Literature review

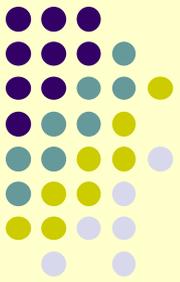
The three meta-functions comprise three characteristics: Interpersonal, textual, experiential. Halliday (1985), Martin (1992) & Eggins (1994)



# Literature review

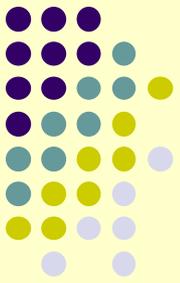
- Students were more motivated to write on a computer.
- If the score on a given test is interpreted as an indicator of students' language ability, that score must be reliable and valid (Bachman, 1997).

# Literature review

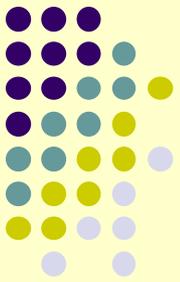


This study develops the idea to build an assessment model (in reference to ETS rubrics) as a foundation to assess EFL Vietnamese students' writing performance to reach high intermediate levels.

# RESEARCH QUESTIONS



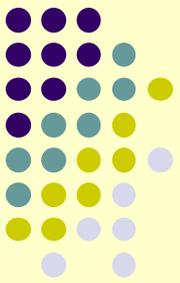
1. What are the effects of the writing rubrics (Educational Testing Service, 2005a) in rating the learners' writing ability in their SLA ?
2. What is a suitable model-based assessment of their writing ability based on the investigation ?



# Method

## *Participants*

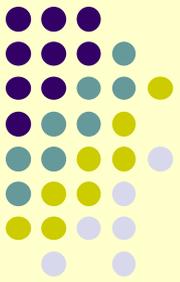
The population that is accessible to this study consists of students who finished studying high intermediate intensive English courses and took the final writing tests.



# Method

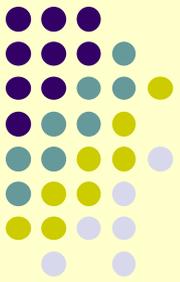
## *Data collection and procedures*

All participants took the computer-based exams (which are designed similarly to those of ETS writing exams (2005b)). The participants performed an integrated task in the allotted time of 25 minutes to give writing responses. After they finished the integrated part, they went on to implement an independent task for 30 minutes.



# Method

- In this section, the dialog box showed an essay topic only for the participants to give responses
- A sample size of 500 participants

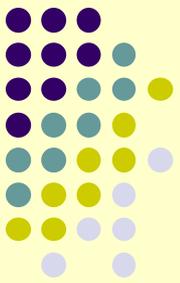


# Method

In this post test design, the two types of writing responses received a  $p$  value that emphasized the probability of facts.

All participants taking the writing tests were measured at seven weeks after the intake (post test)

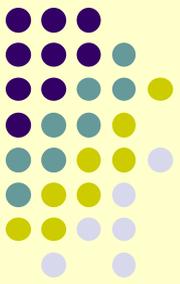
# Results



*Test scores in integrated and independent writing responses*

	<b>Integrated responses</b>	<b>Independent responses</b>
<b>Addressing topic</b>	3.5	4.0
<b>Organization</b>	3.5	3.5
<b>Coherence</b>	3.0	2.5
<b>Language use</b>	3.0	2.5

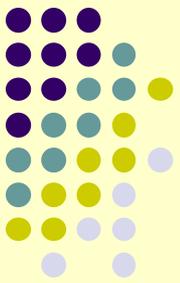
# Results



*Comparison between integrated and independent responses*

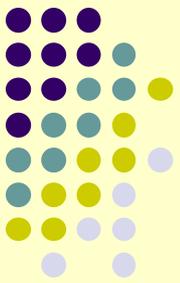
Mode of delivery	Mean	SD	df	t-value	p
Integrated responses	3.250	0.790600	3	8.2216	0.0038
Independent responses	3.125	1.687400	3	3.7039	0.0342

# Results



## *Percentage of respondents acquiring test criteria*

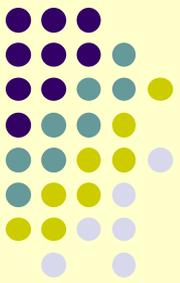
	Percentage of integrated respondents	Percentage of independent respondents
Addressing topic	70.2%	74.2%
Organization	60.4%	40.4%
Coherence	40.6%	45.8%
Language use	41.6%	56.8%



# Results

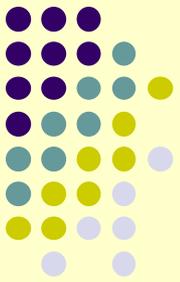
## *Comparison of percentage of integrated and independent respondents*

Percentage of respondents	<i>Mean</i>	<i>SD</i>	df	<i>t</i> -value	<i>p</i>
Integrated responses	53.200	14.539	3	7.3182	0.0053
Independent responses	54.300	14.919	3	7.2794	0.0054



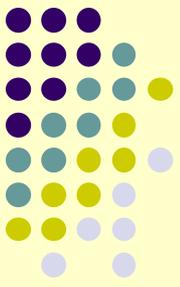
# Discussion

- The statistical findings in this study indicate that there is a statistical significance for the two kinds of writing tasks with the  $t$  values and  $p$  values for integrated responses (8.2216 and 0.0038), and independent responses (3.7039 and 0.0342) respectively.



# Discussion

In the same way, there is a statistical significance for the proportion of test-takers assessed with the t values and p values for doing integrated responses (7.3182 and 0.0053) and independent responses (7.2794 and 0.0054) respectively.



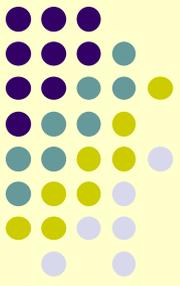
# Discussion

The proposed model for the assessment of written English performance:

*The model for computer-assisted scoring system*

INPUT OF THE WORD DOCUMENT (1)	ANALYSIS OF THE DOCUMENT (2)	SCORING PROCESS (3)	SCORES (4)
Writing tasks (integrated or independent)	Checking errors against information & language conventions	Matching types of errors made with the conventions, scoring based on the test criteria	Providing converted scaled scores

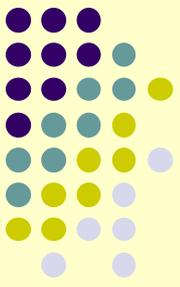
# Conclusion



The study contributes to

- the theoretical framework related to automated essay assessment which supports the processes of identifying language errors as they impact the course outcomes,
- the provision of necessary feedback to work out the appropriate methods to improve students' weaknesses

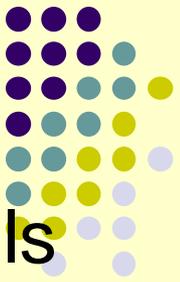
to build a computer-based model of assessment for writing skills



# Implications of the study

- Accordingly, a model for assessing writing skills on the computer is conducted as a first step to lead to automatic scoring.
- The model can help to satisfy the evaluation of students' language ability and make student aware of their learning.
- The results of the study can lead to developing high-stakes selection for students to go on to take university courses on effective written presentation.

# Implications of the study

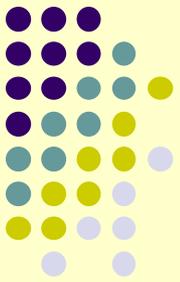


- Accordingly, a model for assessing writing skills on the computer is conducted as a first step to lead to automatic scoring.
- The study may also serve as a model in exemplifying how research on linguistics affects the second language acquisition, but also how technology can meet the requirement of computerized assessment.

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**Thank you for listening**