Simulation Dominated Approach versus Video Dominated Approach in Teaching Consecutive Interpreting to Undergraduates: An Exploratory Comparison Study

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Video dominated instruction (VDI) and simulation dominated instruction (SDI) are commonly practised in interpreter training, and yet their teaching effects have not been adequately researched so far. The present study was intended to compare the effectiveness of the two instructional approaches in teaching consecutive interpreting (CI) to third-year undergraduates. A quasi-experimental two-group pre-test/post-test comparison design was used. Sixty-two students took a pre-test on consecutive interpreting skills and completed a pre-self-assessment to rate their competence in eleven learning objectives at the beginning of a consecutive interpreting course. Thirty-one students in class one as the comparison group received VDI, while thirty-one students in class two received SDI. Sixteen weeks later at the end of the course, the two classes took a post-test on consecutive interpreting skills and completed a post-self-assessment to rate their competence in the same eleven learning objectives. After controlling the effects of pre-test and pre-self-assessment scores, ANCOVA results suggested that VDI and SDI are equally effective in teaching CI to undergraduates, except for one aspect that the latter is more effective in cultivating students’ ability to use non-verbal elements. Pedagogical implications about the complementary nature of the two approaches were discussed.

**Keywords:** consecutive interpreting; undergraduates; video dominated instruction; simulation dominated instruction; comparison of teaching effects.
1. Introduction

University-level interpreter training is characterized by productive disagreement (Moser-Mer- 
cer, 1994; Pöchhacker, 1999). Interpreter trainers may use a plurality of approaches in their 
classrooms. Recent studies on interpreter training have reported innovative approaches, in-
cluding distance learning, online learning or computer-assisted teaching (see Blasco Mayor 
& Jiménez Ivars, 2007; Bowen-Bailey, 2012; Carr & Steyn, 2000; Cervato & De Ferra, 2014; Chan,
Sandrelli & Manuel Jerez, 2007; Tymczyńska, 2009). Video dominated instruction (VDI) and 
simulation dominated instruction (SDI) are two commonly used approaches. While VDI is a 
more traditional form of interpreter training, SDI is a more recent trend, reflecting a shift in 
teaching paradigm from a de-contextualised approach to a situated, experiential approach 
(González Davies, 2012; Kim, 2013; Kiraly, 2000, 2015, 2016; Kiraly & González Davies, 2006; Pi-
otrowska, 2015; Thelen, 2016). Though both approaches have their own merits, research on 
their teaching effectiveness has been quite rare so far. A comparison study may reveal the 
advantages of one approach over the other and maximize the teaching efficiency of inter-
preter training.

Against such a background, this research was intended to investigate the effectiveness 
of SDI compared with VDI in teaching consecutive interpreting (hereafter CI) to third-year 
undergraduates. The key is to measure and compare students’ achievement in their overall 
CI competence as well as that in each learning objective because of the application of the 
two methodologies. Achievement here refers to learners’ gains in terms of knowledge, skills,
and attitudes, indicating the extent to which they have accomplished specific objectives of 
instructional activities (Hattie, 2009). It is usually determined through pre- and post-test by 
comparing students’ baseline competence with their end-of-instruction competence.

2. Theoretical framework: VDI vs. SDI

VDI is a traditional form of interpreter training. According to Kurz (1989, 2002) and Cenková 
(1994), there are advantages in using videotapes in interpreting teaching. Firstly, it is easier 
to build up a bank of different types of lectures, speeches and panel discussions than invit-
ing live speakers who are sometimes not available. Secondly, the speech bank can include a 
large variety of disciplines, speakers, speech styles, and foreign accents which may not be 
feasible by relying on live speakers. Thirdly, using videos may better prepare for new modes 
of interpreting as interpreting for the media and videoconferencing are becoming popular. 
Additionally, the use of videos may help trainees acquire basic skills before they experience 
real-life situations through simulations or internships (Tsuruta & Naito, 2011). This approach 
is more classroom-centered, unlike SDI, which is market-driven.
SDI is a recent form of teaching practice in interpreter training. Given the gap between curriculum content and employability (Leveson, 2000), one recent trend in higher education is to incorporate work placements in curriculum to bridge academic studies and market needs (Mandilas, Kourtidis & Petasakis, 2014). Similarly, to bridge the gulf between curriculum and industry (Donovan, 2008; Drugan, 2013; Kiraly, 2005; Massey, Jud & Ehrensberger-Dow, 2015; Schnell & Rodríguez, 2017), T&I scholars have been advocating a transition from a de-contextualised, product-oriented, disempowering, and teacher-centred approach to a situated, process-oriented, empowering, students-centred, experiential, and holistic emergentist approach through simulations or work placements (González Davies, 2012; Kim, 2013; Kiraly, 2000, 2015, 2016; Kiraly & González Davies, 2006; Piotrowska, 2015; Thelen, 2016). According to the theory of situated learning, learning is an unintentional process of co-constructing a new identity in partnership with peers and teachers by getting involved in a community of practice that embodies expert beliefs and behaviours, and is situated within specific social and physical environments and cultures which make it more relevant and meaningful to the learner and transferable to similar contexts (Lave & Wenger, 1991; McLellan, 1996; Wilson & Myers, 2000). Since work placements opportunities are often limited and they are too challenging to be used in the early stages of training, simulations could be an alternative experiential learning approach. In the educational context of interpreting, scholars believe that the creation of real-life situations in the classroom through simulations serves as a stepping stone for real working scenarios, connects what trainees do in the classroom with what professionals do in the market and provides enculturation into the professional community (Thiéry, 1990; Moser-Mercer, 1994; Pöchhacker, 1999; Sawyer, 2004; Mackenzie, 2004; Gile, 2009; Setton, 2010; Gillies, 2013). Specifically, simulations present the pragmatic aspects of inter-linguistic communication, evaluate if trainees are able to interpret different types of speech acts, help trainees experience the real scenarios with protections in controlled contexts, and stimulate trainees’ enthusiasm and autonomy (Ardito, 1999; Lim, 2003; Lin et al., 2004).

3. Methodology
3.1. Research design and research questions

This research was intended to evaluate and compare the effectiveness of two teaching approaches from the perspective of learning, the second level of Kirkpatrick’s model. According to Kirkpatrick’s model of training evaluation (1996), a widely used training evaluation model, the evaluation of training effectiveness can take place at four levels: reaction (trainees’ satisfaction about a learning experience), learning (trainees’ gains in terms of knowledge, skills, attitudes), behavior (to what extent trainees can use what they have learned on the job when the training is over), and result (the measurable impact on trainees’ performance because of a training event). In the current study, the second level of learning applies. The amount of
learning occurred can be determined by comparing gains between two assessments, one 
prior to and the other after training.

This study aims to investigate the degree to which two groups of learners acquire knowl-
edge, skills, and attitude as a result of their participation in a consecutive interpreting course, 
and compare the difference in achievement between the two groups because of different 
interventions (VDI and SDI).

It used a quasi-experimental two-group pre-test/post-test comparison design. A pre-
test and a pre-self-assessment were administered to test participants’ baseline compe-
tence. The pre-test was implemented to test learners’ general consecutive interpreting 
competence, and the pre-self-assessment questionnaire to rate their consecutive inter-
preting sub-competence which is consistent with each of the eleven learning objectives 
of a consecutive interpreting course. After the differentiated instruction (VDI to the com-
parison group class one, while SDI to class two), a post-test and a post-self-assessment 
were implemented respectively. Comparing the pre- and post-test gains of one group with 
those of the other group suggested the difference in achievement between SDI and VDI 
on learners’ improvement in overall consecutive interpreting competence. Comparing the 
pre- and post-self-assessment gains of one group with those of the other indicated the dif-
ference in achievement between the two teaching approaches on learners’ improvement 
in each of the eleven learning objectives. The pre-test/post-test gains and pre-self-assess-
ment/post-self-assessment gains provided evidence to the two research questions of the 
current research:

(1) How do students receiving SDI compare with students receiving VDI in terms of their 
overall achievement in consecutive interpreting?

(2) How do students receiving SDI compare with students receiving VDI in terms of their 
achievement in each learning objective of the consecutive interpreting course?

3.2. Participants

The participants were 62 third-year undergraduates of two intact classes attending a T&I BA 
programme in the participating university. Their average age was about 20 years. Students in 
class one (n=31) were assigned to the VDI condition, while those in class two (n=31) to the SDI 
condition. They had been assigned to the two classes based on their college entrance exam-
ination to ensure equal academic achievement. They had attended the same language and 
knowledge courses for two years and were taking a consecutive interpreting course when 
this research project was initiated. Therefore, the two classes were similar, if not the same, in 
terms of academic background.
3.3. Context

Unlike MA students who usually specialise in either translation or interpreting, the participants in the teaching context concerned were receiving general T&I education. They had focused on bilingual competence, communicative competence, and knowledge in their first two years of study, working on such courses as business and technical parallel text reading, public speaking, debating and technical writing. From the third year on, they progressively took four interpreting-related courses, CI, sight translation, advanced CI and conference interpreting. The CI course was introductory in nature: it used non-subject-specific materials, and was concerned with basic skills of interpreting from B to A language.

3.4. The SDI approach versus the VDI approach

The two classes completed four modules in the CI course, which lasted for 16 weeks. While the objectives, teaching modules, and difficulty of materials (table 1 and table 2) were almost the same for both classes, the main teaching methodology was different, with one using SDI while the other VDI. In both instructions, the speeches were on similar topics.

**TABLE 1**

<table>
<thead>
<tr>
<th>LEARNING OBJECTIVES</th>
</tr>
</thead>
<tbody>
<tr>
<td>At the end of the CI course, students are expected to be able to:</td>
</tr>
<tr>
<td>1) Apply analytical listening skills and comprehend no less than 90% of the original speech.</td>
</tr>
<tr>
<td>2) Apply good memory skills and reproduce 85% information of a one-minute chunk of the original without note-taking.</td>
</tr>
<tr>
<td>3) Apply note-taking skills efficiently.</td>
</tr>
<tr>
<td>4) Display good psychological quality and stay calm under pressure.</td>
</tr>
<tr>
<td>5) Present the original message in fluent and acceptable target language.</td>
</tr>
<tr>
<td>6) Use non-verbal elements in communication (eye contact, intonation, voice projection, etc.).</td>
</tr>
<tr>
<td>7) Apply appropriate strategies (addition, omission, compression, explanation, etc.) to prevent or cope with problems (incomprehension, missed message, high information density, accents, etc.).</td>
</tr>
<tr>
<td>8) Use patting phrases and set expressions of certain circumstances (opening remarks, ceremonial speeches, etc.).</td>
</tr>
</tbody>
</table>

| Skills |
| 9) Know the function and principles of note-taking. |
| 10) Know the criteria of good interpreting performance. |

| Knowledge |
| 11) Reflect on and criticize their own performances and make plans for improvement. |

| Metacognition |
VDI is very popular in the country of the participating university. This might be because of the lack of native English speakers and adequate financial support to invite them to interpreting classrooms. Consequently, instructors usually resort to videos downloaded from the Internet, for example, the websites of various international organizations and governments. Another reason is the washback effect of assessment practices. In the teaching context concerned, most oral proficiency tests and interpreting proficiency tests are based on video or audio input and students’ performances are usually recorded for subsequent scoring. Such a non-situated assessment format may have negative impact on teaching and learning practices. Therefore, many instructors use VDI in their classrooms. In the present study, VDI used in class one followed five procedures:

1. Before class, the instructor emailed students the topic of the English speech to be interpreted for them to make preparations. The speech in the form of a video clip was based on an international event and delivered by a native speaker.

2. On the class day, the instructor and students discussed the topic of the speech to be interpreted for about 20 minutes, students sharing background knowledge and glossaries, and the instructor drawing students’ attention to the contextual factors of the speech (who, when, where, why, for whom, and for what effect) and potential difficulties.

3. Then volunteer students took turns to interpret the speech consecutively in front of the classroom, which lasted for about 50 minutes depending on the length of the original speech. Because of the limited class time and length of the speech, only about 10 students had chances to volunteer as interpreters for each teaching session. During the interpreting, the teacher played the video chunk by chunk and did not interrupt the student interpreters even if mistakes or inadequacies were found.

### TABLE 2

The teaching modules, content, materials, and instructional approaches

<table>
<thead>
<tr>
<th>MODULES</th>
<th>CONTENT</th>
<th>MATERIAL DESCRIPTION</th>
<th>TEACHING APPROACHES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Module 1 Week 1-5</td>
<td>Course orientation; Active listening &amp; analysis; CI without note-taking (short chunks).</td>
<td>Non-subject-specific materials of preliminary difficulty</td>
<td>Class one: VDI</td>
</tr>
<tr>
<td>Module 2 Week 6-7</td>
<td>Memory training; CI without note-taking (long chunks).</td>
<td>Non-subject-specific materials of preliminary difficulty</td>
<td>Class two: SDI</td>
</tr>
<tr>
<td>Module 3 Week 8-11</td>
<td>Note-taking skills; CI with note-taking (short chunks).</td>
<td>Non-subject-specific materials of intermediate difficulty</td>
<td></td>
</tr>
<tr>
<td>Module 4 Week 12-16</td>
<td>CI with note-taking (long chunks).</td>
<td>Non-subject-specific materials of intermediate difficulty</td>
<td></td>
</tr>
</tbody>
</table>
(4) After the interpreting, the instructor asked the student interpreters to reflect on their inadequacies, invited non-interpreter students to provide feedback on the interpreters’ strengths and weaknesses, and commented on the performance of each student, which lasted for about 30 minutes.

(5) After class, as an assignment, the students were asked to listen to and interpret speeches on similar topics and reflect on the feedback they had received.

SDI is also practised in the teaching context concerned, and is gaining popularity resulting from the impact of a paradigm shift from the de-contextualised approach to situated approach in T&I teaching. In the present study, SDI received by class two also followed five procedures, which were similar to those of VDI, except for the presentation of the speech. In SDI, the speech was based on simulated interpreting scenarios, and the instructor (or occasionally students) played the role of the speaker. Although native speakers of English could have been invited as guest speakers, the lack of financial support made it impossible.

In summary, in VDI, speeches took the form of videos and were played by the instructor chunk by chunk for the students to interpret. They were made by native speakers in the videos. By contrast, in SDI, speakers (usually the instructor or occasionally invited students) made the speech live in the classroom and stopped at intervals for the students to interpret.

### 3.5. Measure instruments

Two measure instruments were used in this study, a CI task and a self-assessment questionnaire (table 3). The questionnaire was administered in a pilot study and checked by students and colleagues for better clarity and comprehensibility.

<table>
<thead>
<tr>
<th>TABLE 3</th>
<th>Measure instruments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>RESEARCH QUESTIONS</strong></td>
<td><strong>INSTRUMENTS</strong></td>
</tr>
<tr>
<td>How do students receiving SDI compare with students receiving VDI in terms of their overall achievement in consecutive interpreting?</td>
<td>A consecutive interpreting task as the pre- and post-test.</td>
</tr>
<tr>
<td>How do students receiving SDI compare with students receiving VDI in terms of their achievement in each learning objective of the consecutive interpreting course?</td>
<td>A questionnaire as the pre- and post-self-assessment to assess students’ competence in the eleven learning objectives.</td>
</tr>
</tbody>
</table>
The CI task was used firstly as the pre-test and then as the post-test. It involved a three-minute videotaped speech made by an English speaker. The participants interpreted it consecutively and their performances were recorded for subsequent scoring. The use of videotaped input speech and audio recordings of students’ performances for scoring was consistent with and influenced by the assessment practices in the country concerned. For example, in the National Accreditation Test for Interpreters, applicants’ performances are rated based on their audio recordings. This test format favoured class one in the post-test because, in the 16 weeks that followed the pre-test, class one (comparison group) received VDI, while the other class received SDI. Consequently, the comparison group was likely to be better prepared for the post-test. Because of the existence of such bias, even if results revealed that there was no significant difference between the two classes after the two instructional approaches, it could indicate that class two, that received SDI, made more gains. The fact that the measure instrument was in favour of the comparison group provided room for a more stringent test of the effectiveness of SDI.

The CI task measured most of the learning objectives. The CI course, however, aimed at not only cultivating linguistic and cognitive ability, but also producing reflective and autonomous learners. The expected learning outcomes can be seen from the eleven learning objectives. The effect of the two instructions on students’ progress in certain learning objectives, for example, those related to the ability to use non-verbal elements in communication, knowledge, and meta-cognition, was not observable in the recorded CI performances. Another measure instrument was therefore needed to compensate for the limitation.

A self-assessment questionnaire (see appendix) was used firstly as the pre-self-assessment and then as the post-self-assessment, respectively before and after the two classes received different instruction conditions. It was developed for the participants to evaluate their achievement in the eleven learning objectives. It covered cognitive and linguistic skills, knowledge and meta-cognitive aspects. For each learning objective, they were asked to rate their current achievement on a five-point Likert scale: 1 very low competence, 2 low competence, 3 neutral, 4 high competence, and 5 very high competence.

Students’ actual proficiency can be better assessed through direct measures, or ideally, by combining both self-assessment and direct measures. Unfortunately, writing and administering direct measures to assess students’ learning outcomes in each of the eleven learning objectives is time-consuming, costly, and impractical for classroom research. On the other hand, there are no reasons to reject the use of self-assessment when previous research supports it as a reliable and valid indirect measure of students’ competence.

Research has suggested the use of student self-reported ratings as an indirect measure of their learning outcomes. For example, Brown et al. (2014) conclude that students’ self-assessment of learning outcomes can be high in reliability and offer valuable information on their
achievement over time. Other researchers (see Hilton et al., 1985; LeBlanc & Painchaud, 1985; Bachman & Palmer, 1989; Hargan, 1994; Ross, 1998; Alderson, 2006; Brantmeier & Vanderplank, 2008; Wolochuk, 2009, Brantmeier et al., 2012; Benton et al., 2013; Préfontaine, 2013; Lappin-Fortin & Rye, 2014) have also found that self-assessment and standardized tests are positively correlated. The correlations between self-assessments and more objective measures are about the same magnitude as those between different subtests in a standardized language test battery (Oscarson, 1997), though self-assessment may be biased against as a proxy for objective standardized measures. Scholars therefore consider using self-assessment as a valid and reliable measure for gathering information on students’ proficiency (Oscarson, 1997; Ellis, 2003; Brantmeier, 2006; Ross, 2006; De Saint-Leger, 2009). In particular, self-ratings of items directly connected with students’ immediate task objectives have been found to be more accurate (Butler & Lee, 2006), as is the case of the current study. For this reason, self-assessment is also used by T&I instructors. Lee (2011) has found that students’ self-assigned grades were similar to those of the teachers in interpreter training. A recent study by Fernández and Zabalbeascoa (2012) has indicated that trainees’ self-assessment results and their translating performance quality are positively correlated.

Since the accuracy of self-assessment data may be influenced by some factors, for example, ways of presenting the self-assessment instrument, students’ familiarity with rubrics, etc., they were taken into account in the current research design. Firstly, the objectives in this study were specific and focused, which could help the students assess their abilities more accurately (Pierce et al., 1993; Oscarson, 1997; Alderson, 2006). Secondly, the items were originally written in the students’ mother tongue so that they can more accurately assess their competence in each objective (Oscarson, 1997).

### 3.6. Procedures

The study consisted of three phases: pre-test and pre-self-assessment at the beginning of the semester, implementation of VDI and SDI, and post-test and post-self-assessment at the end of the semester.

Before the instructions started, the two classes were given the pre-test to assess their baseline CI competence. The students were subsequently asked to complete the pre-self-assessment questionnaires to rate their competence in each of the eleven learning objectives. The students’ interpreting performances were recorded and then scored holistically by the instructor (researcher). A holistic instead of analytical method was used because it is easy to apply in scoring. The main criteria were consistency with the original speech, delivery, and language quality. Scoring was based on five scales: 90%-100% (excellent), 80%-89% (very good), 70%-79% (good), 60%-69% (adequate), and 59% or less (poor).
After pre-testing, the two classes of students participated in two different instructional conditions (class one receiving VDI and class two SDI) for 16 weeks.

At the end of the instructions, students participated in the post-test to assess their interpreting competence, and subsequently completed the post-self-assessment to assess their competence in each of the eleven learning objectives. The students’ interpreting performances were recorded and scored holistically by the instructor, following the same criteria as those in the scoring of the pre-test.

In data analysis, SPSS GLM was used to perform ANCOVA to examine whether there was a significant difference in students’ interpreting competence and in their progress in the eleven learning objectives between the two classes after receiving the two different instructional interventions for 16 weeks, respectively using the pre-test and pre-self-assessment as the covariates.

4. Results
4.1. Gains in overall achievement in CI

One of the research questions was how students receiving SDI compare with those receiving VDI in terms of their overall learning achievement.

A univariate analysis of covariance (ANCOVA) was performed using SPSS GLM. The two treatment conditions (VDI versus SDI) were used as an independent variable. Students’ performance in the post-test was used as the dependent variable. ANCOVA was conducted to investigate the effect of the independent variable on the dependent variable. In order to control for any initial differences in the students’ interpreting ability, the pre-test scores were used as the covariate.

A preliminary check was performed to determine whether any statistical assumptions underlying the use of ANCOVA (normality, homogeneity of variance, and reliable measurement of covariance) were violated in the dataset. The results of the tests of between-subjects effects demonstrated that the assumption of homogeneity of regression slopes was successfully met, F (1, 58) = 1.916, p = .172.

Table 4 shows the number of participants, mean, and standard deviation of achievement in CI for the VDI class and SDI class. Both classes obtained higher scores in the post-test than in the pre-test. The post-test score mean (M) and standard deviation (SD) of the two classes were respectively (M = 88.9032, SD = 2.49473) and (M = 88.9355, SD = 1.99892), suggesting that students who received SDI and those who received VDI obtained similar mean post-test scores.
Table 5 shows the result of ANCOVA on post-test scores. The difference was not statistically significant ($F = .403$, $\eta^2 = .007$, $p = .528$), suggesting that there was no difference in learning achievement between the VDI class and the SDI class.

### 4.2. Gains in the eleven learning objectives

The second research question was how students receiving SDI compare with those receiving VDI in terms of learning achievement in the eleven learning objectives.
ANOVA was conducted using SPSS GLM. The two instructional conditions were used as an independent variable. Students’ post-self-assessment scores on their competence in the eleven learning objectives were used as the dependent variables. For each learning objective, ANCOVA was performed to investigate the effect of the independent variable on the dependent variable. To control for any initial differences in students’ competence in the objectives, the pre-self-assessment scores were used as the covariate. Preliminary checks were conducted to determine if statistical assumptions underlying the use of ANCOVA were violated. The results of the tests of between-subjects effects showed that the assumptions of homogeneity of regression slopes were successfully met (F = .002, p = .962; F = .467, p = .497; F = 2.527, p = .117; F = .246, p = .622; F = .480, p = .491; F = .088, p = .768; F = 2.259, p = .138; F = 2.252, p = .139; F = .039, p = .843; F = .455, p = .503; F = .982, p = .326).

Table 6 shows the number of participants, mean, and standard deviation of students’ achievement in the eleven learning objectives for the VDI class and SDI class. As displayed, for learning objective six, the post-self-assessment score mean and standard deviation of the two classes were respectively (M = 3.5484, SD = .67521) and (M = 4.3548, SD = .55066), while the pre-self-assessment score mean and standard deviation of the two classes were respectively (M = 2.3548, SD = .55066) and (M = 2.3871, SD = .49514). The results suggested that the students who received SDI had much higher achievement in objective six than those who received VDI. Although both classes obtained higher scores in post-self-assessment than in pre-self-assessment for the rest ten learning objectives, they had similar gains in the post-self-assessment.

### Table 6

Means and standard deviations for pre-self-assessment and post-self-assessment on the eleven learning objectives

<table>
<thead>
<tr>
<th>Measure</th>
<th>VDI class</th>
<th>SDI class</th>
<th>VDI class</th>
<th>SDI class</th>
<th>VDI class</th>
<th>SDI class</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obj 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre-self-assessment</td>
<td>2.8710</td>
<td>3.1290</td>
<td>.80589</td>
<td>.84624</td>
<td>31</td>
<td>31</td>
</tr>
<tr>
<td>Post-self-assessment</td>
<td>3.8387</td>
<td>3.8710</td>
<td>.52261</td>
<td>.61870</td>
<td>31</td>
<td>31</td>
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<tr>
<td>Obj 2</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Pre-self-assessment</td>
<td>2.8710</td>
<td>2.9032</td>
<td>.71842</td>
<td>.39622</td>
<td>31</td>
<td>31</td>
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<tr>
<td>Post-self-assessment</td>
<td>3.1290</td>
<td>3.0000</td>
<td>.71842</td>
<td>.89443</td>
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<td>31</td>
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<td>Obj 3</td>
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<tr>
<td>Pre-self-assessment</td>
<td>1.9677</td>
<td>1.9355</td>
<td>.65746</td>
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<tr>
<td>Post-self-assessment</td>
<td>3.1935</td>
<td>3.3226</td>
<td>.60107</td>
<td>.65254</td>
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<td>31</td>
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<td>Obj 4</td>
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<tr>
<td>Pre-self-assessment</td>
<td>2.1613</td>
<td>2.1613</td>
<td>.63754</td>
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<tr>
<td>Post-self-assessment</td>
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<td>3.9032</td>
<td>.58842</td>
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<tr>
<td>Pre-self-assessment</td>
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<td>3.1935</td>
<td>.53882</td>
<td>.47745</td>
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<td>31</td>
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<tr>
<td>Post-self-assessment</td>
<td>3.5806</td>
<td>3.8065</td>
<td>.71992</td>
<td>.70329</td>
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</tbody>
</table>
Table 7 displays the results of ANCOVA on post-self-assessment using pre-self-assessment scores as the covariate. For learning objective six, there was a statistically significant difference between the VDI class and the SDI class ($F = 27.100, \eta^2 = .315, p < .01$), suggesting that SDI resulted in the variance in learning objective six between the two classes, with eta squared ($\eta^2 = .315$) indicating a strong effect. However, for learning achievement in the rest ten objectives, the differences between the two classes were not statistically significant, suggesting that the effect of the two types of instruction on the achievement in those objectives was not evident (see table 7 on the next page).

The above results generally triangulate the conclusion of the previous section. Although the two classes obtained similar gains in the CI task in the post-test, it did not suggest that the two different instructions had equal effect on students’ learning achievement. There was competence that was not tested in the CI task. The SDI class obtained higher achievement in learning objective six than the VDI class, suggesting that SDI is more effective in this regard.

In sum, results suggest that VDI and SDI were equally effective in teaching CI to undergraduates, except for one aspect, that the latter was more effective in cultivating students’ ability to use non-verbal elements.

5. Discussion and implications
5.1. The advantages of SDI

The results suggest that SDI is more effective in developing students’ competence in using non-verbal elements in communication. The reasons may lie in two aspects, one related to the nature of CI and the other to the advantage of SDI as pedagogical method.
Given the situated nature of interpreting, interpreter competence such as the use of non-verbal elements may be better acquired in a simulated teaching context. Interpreting is a highly situated communicative activity (Hatim & Mason, 1997; Pöchhacker, 2004). Embedded in certain social and cultural contexts, the interpreter needs to deal with both verbal and non-verbal elements (Viaggio, 2002). Comprehension of the source language relies on the knowledge of the communicative context, for example, participants, paralinguistic features (intonation, prosody, pitch, etc.), body language, physical environment, and so on (Cook, 1998). The interpreter’s roles change depending on the needs and constraints imposed by the context (Angelelli, 2004), and their decisions are influenced by contextual variables (Clifford, 2001; Davidson, 2000; Napier, 2006). This is especially true in CI where interpreters interact face-to-face with participants and are highly visible in the context (De Pedro Ricoy, 2010; Baxter, 2012). Given the importance of contexts in interpreting, contextual cues like paralinguistic and extra-linguistic signs should be used by interpreters (Baker, 2006). Therefore, trainees need to develop the awareness of interpreting as a situated practice (Angelelli, 2004), and interpreting should be learned in a contextualised environment (Thiéry, 1990; Boyd & Monacelli, 2010). Simulation of interpreting events in classrooms is one way to provide access to rich contextual cues.

Pedagogically speaking, SDI may have more advantages in developing non-linguistic dimensions of interpreter competence than VDI, for example, psychological competence, interpersonal skills, and professionalism and so on (Fernández Prieto & Sempere Linares, 2010). This includes

### TABLE 7

Results of ANCOVA on post-self-assessment using pre-self-assessment as a covariate

<table>
<thead>
<tr>
<th>Measure</th>
<th>Source</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>p</th>
<th>η²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obj 1</td>
<td>group 1</td>
<td>1</td>
<td>.002</td>
<td>.006</td>
<td>.939</td>
<td>.000</td>
</tr>
<tr>
<td>Obj 2</td>
<td>group 1</td>
<td>1</td>
<td>.287</td>
<td>.441</td>
<td>.509</td>
<td>.007</td>
</tr>
<tr>
<td>Obj 3</td>
<td>group 1</td>
<td>1</td>
<td>.250</td>
<td>.626</td>
<td>.432</td>
<td>.011</td>
</tr>
<tr>
<td>Obj 4</td>
<td>group 1</td>
<td>1</td>
<td>.581</td>
<td>.854</td>
<td>.359</td>
<td>.014</td>
</tr>
<tr>
<td>Obj 5</td>
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<td>.765</td>
<td>1.486</td>
<td>.228</td>
<td>.025</td>
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<tr>
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<td>group 1</td>
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<td>27.100</td>
<td>.000</td>
<td>.315</td>
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<tr>
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<td>.047</td>
</tr>
<tr>
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<td>group 1</td>
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<td>.741</td>
<td>2.196</td>
<td>.144</td>
<td>.036</td>
</tr>
<tr>
<td>Obj 9</td>
<td>group 1</td>
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<td>.062</td>
<td>.170</td>
<td>.681</td>
<td>.003</td>
</tr>
<tr>
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<td>group 1</td>
<td>1</td>
<td>.747</td>
<td>1.680</td>
<td>.200</td>
<td>.028</td>
</tr>
<tr>
<td>Obj 11</td>
<td>group 1</td>
<td>1</td>
<td>.313</td>
<td>.523</td>
<td>.473</td>
<td>.009</td>
</tr>
</tbody>
</table>
the ability to use non-verbal elements in communication. In contextualised practices, audience, speakers, and interpreters are present in the same physical environment of the event, and trainee interpreters can feel the real need to mediate communication and have better sense of involvement (Lee, 2005). Therefore, they are more likely to use non-verbal elements when delivering information, for example, having eye contact with the speaker and audience. By contrast, in VDI classrooms, contextual elements, for example, participants, physical environment of the conference, and any non-verbal elements, are present in videos. Student interpreters and speakers belong to two different physical contexts, the former present in classrooms while the latter in videos. It is hard for student interpreters to use non-verbal elements, for example, having eye contact with the speakers. Therefore, VDI deprives trainee interpreters of some of the contextual elements vital for oral communication (Kurz, 1989; Cenková, 1994). Consequently, trainee interpreters are less likely to use non-verbal elements in communication in VDI classrooms. That is why SDI is more effective in developing students’ competence in using non-verbal elements in communication.

However, the SDI class in the current study did not show more gains in other competencies. This does not echo the T&I literature, which suggests that simulations are beneficial to the development of other competences, for example, psychological competence, interpersonal skills, and professionalism (Fernández Prieto & Sempere Linares, 2010). Interpersonal skills and professionalism were not part of the learning objectives of the CI course concerned and gains in them were not tested. What about psychological competence? The fourth learning objective of the CI course was ‘display good psychological quality and stay calm under pressure’, which is associated with psychological competence. The SDI class did not show more gains than the VDI class in this objective. In the pre-self-assessment, both classes were of the same level (M = 2.1613). In the post-self-assessment, the SDI class had higher mean score (M = 3.9032) than the VDI class (M = 3.7097). However, ANCOVA analysis showed that the difference was not statistically significant (F = .854, p = .359, η² = .014). One possible explanation can be made in terms of the pedagogical design of the two instructional approaches. In both of the two instructions, students were asked to perform their interpreting tasks in front of the class. Such practices put a lot of pressure on them and they had to learn how to stay calm. Therefore, both of the instructional formats contributed to the development of students’ psychological development.

One implication of the present study is that SDI may be an essential pedagogical format in interpreting teaching. It may better contribute to developing the ability to use non-verbal elements, psychological competence, and other non-linguistic dimensions.

5.2. The use of VDI

The results do not support any advantages of VDI. According to the literature, videotape-based instructions can expose students to more diversified types of speeches (Kurz, 1989, 2002; Cen-
ková, 1994). In the current study, the VDI class listened to video-based speeches made by various speakers while the SDI class listened to speeches delivered live by the instructor (occasionally student speakers). The materials were on similar, if not exactly the same, topics. The difference lied in the format of presentation. The VDI class had access to more varieties of speakers. Supposedly, VDI should have more advantages in increasing students’ ability in learning objective one (apply analytical listening skills and comprehend no less than 90% of the original speech). The VDI class made more progress, as reflected in the mean of the pre- and post-self-assessment scores (from M = 2.8710 to M = 3.8387), compared to those of the SDI class (from M = 3.1290 to M = 3.8710). However, ANCOVA analysis using the pre-self-assessment as a covariate showed that the VDI class did not outperform the other class significantly (F = .006, p = .939, η² = .000).

One possible explanation is that the two classes both used non-subject-specific materials of preliminary to intermediate difficulty. Given the low difficulty of the materials, though the VDI class had been exposed to more native-speakers with different speaking styles, the students may not have perceived their progress. On the other hand, for the SDI class, they listened to the instructor, who played the roles of speakers for most of the time. Since it was much easier for them to comprehend the instructor, they may have comprehended more of the source speech in weekly exercises. Had the speeches been made by native English speakers, their comprehension would have been lower. The ease of listening to the instructor might have given them a wrong perception that they made more progress. Such factors may have had impact on the students’ post-self-assessment. The VDI class might have underestimated their progress in listening comprehension while the other class overestimated it.

Another possible explanation is that two times of exposing the VDI class to different speaking styles every week was not enough for the present study to see more gains in analytical listening and comprehension compared with the SDI class. If the VDI class had made significant progress in comprehension, they should have shown significantly higher scores in the CI task in the post-test because analytical listening and comprehension was the most important step in the CI task. As shown by the descriptive statistical data, the pre-test and post-test scores of the VDI class in the CI task were respectively M = 81.4194 and M = 88.9032, compared with those of the SDI class which were respectively M = 82.1613 and M = 88.9355, suggesting that the gains of the VDI class was slightly higher. However, the difference was not statistically significant, as displayed in ANCOVA analysis using the pre-test as a covariate (F = .403, p = .528, η² = .007). Research shows that exposure to different channels of input for a limited amount of time may not bring higher listening comprehension gains (Cubillos et al., 2008). Given the fact that the class only met twice each week and evolution was measured over one semester only, the amount might not have been enough for the current study to see any significant gains.

Although the results do not show strong evidence of the advantage of VDI, it may still constitute a complementary teaching format in interpreter training. Some competences,
such as linguistic, textual and cultural competence, transfer, research, and subject-specific knowledge, are key building blocks of interpreter expertise and can be developed in a less-contextualised environment (Fernández Prieto & Sempere Linares, 2010). The researcher agrees with Sawyer (2004), who believes that, although situated approaches are essential to expertise development, other instructional formats such as practices based on video clips of a variety of speeches also help trainees make progress. This is especially true for undergraduates. Unlike trainees at MA level who have clear career orientation and strong motivation to be involved in professional practices (Lin, 2013), undergraduate trainees still need to focus on enhancing language skills and general and subject-specific knowledge (AIIC Training Committee, 2006). Using videos in classrooms has advantages: it is easier to build up a bank of different types of lectures, speeches, and panel discussions than inviting live speakers who may not be available; the speech bank can include a large variety of disciplines, speakers, speech styles, and foreign accents which may not be feasible by relying on live speakers; and the use of video clips may better prepare students for new modes of interpreting as interpreting for the media and videoconferencing are becoming popular (Kurz, 1989, 2002; Cenková, 1994).

Another implication of this research is that some competences cannot be measured through traditional non-contextualised test formats. In the current study, students’ ability to use non-verbal elements was not tested in the CI task which was based on video-based input and scoring of interpreting output recordings. As a highly contextualised activity, interpreting needs to be assessed against specific situational parameters (Viaggio, 1999). Some interpreter competences, for example, psychological competence, interpersonal skills, and professionalism and so on, can be better acquired in contextualised environments (Fernández Prieto & Sempere Linares, 2010). In the same way, tests involving contextualised interpreting practices can better assess students’ competence in those aspects. As is agreed by other scholars, assessment of interpreting needs to be situated to evaluate not only linguistic and cognitive skills but also many other skills, for example, interpersonal skills, social skills, problem-solving skills, etc. (Angelelli, 2004), and to be authentic to ensure that the criteria correspond to those used for assessing real-life tasks (Chen, 2009).

6. Conclusion

This study was intended to investigate the effectiveness of SDI compared with VDI in teaching CI to third-year undergraduates. The results suggested that VDI and SDI were equally effective in teaching CI to undergraduates, except for one aspect that the latter was more effective in cultivating students’ ability to use non-verbal elements. The reason is that, as a highly situated activity, such non-linguistic competences as the use of non-verbal elements, may be better acquired in simulated practices.
Based on the results, the author discussed the pedagogical implications. While simulations should be used as an essential instructional format in interpreter training, VDI still have advantages and could be an important complementary format. Therefore, the two should be combined to develop interpreters’ overall competence. The author also argues that tests involving contextualised interpreting practices may better assess students’ competence, especially non-linguistic dimensions of competence.

This study has limitations. The findings relate to the use of VDI and SDI in teaching two classes at the participating university. The instructor invested a lot of time and effort in the design and implementation of the CI course. The unique features of the course, instructors and students at the participating university may prevent the findings from being generalised to other contexts. The fact that the researcher was also one of the instructors of the course may have posed a threat of potential bias. Future studies may be conducted with a larger sample size from diverse universities without the researcher playing the dual role of both instructor and researcher. Given the scope and subjects of the current study (teaching CI to beginning undergraduates), some advantages of SDI in teaching interpreting may not have been empirically validated, for example, cultivating other non-linguistic dimensions of interpreting competence such as professionalism and interpersonal skills. Therefore, further studies on advantages of simulations in teaching interpreting to advanced MA students are welcome and may provide further evidence.

This study serves as an initial exploration to compare the effect of VDI with that of SDI in interpreter training. It provides preliminary evidence for the advantages of SDI and implies the need to combine both approaches in interpreter training. It is hoped that this study could contribute to the selection of instructional strategies among colleagues of interpreter training.

7. Acknowledgements

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8. Bibliographic references


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9. Appendix. Self-assessment questionnaire

Instructions: please rate your current competence on each of the following learning objectives of the consecutive interpreting course on a five-point scale: 1 very low competence, 2 low competence, 3 neutral, 4 high competence, and 5 very high competence.

(1) Apply analytical listening skills and comprehend no less than 90% of the original speech.

(2) Apply good memory skills and reproduce 85% information of a one-minute chunk of the original without note-taking.

(3) Apply note-taking skills efficiently.

(4) Display good psychological quality and stay calm under pressure.

(5) Present the original message in fluent and acceptable target language.

(6) Use non-verbal elements in communication (eye contact, intonation, voice projection, etc.).

(7) Apply appropriate strategies (addition, omission, compression, explanation, etc.) to cope with problems or emergencies (incomprehension, missed message, high information density, accents, etc.).

(8) Use patting phrases and set expressions under certain circumstances (opening remarks, ceremonial speeches, etc.).

(9) Know the function and principles of note-taking.

(10) Know the criteria of good interpreting performance.

(11) Reflect on and criticize your own performances and make plans for improvement.