| RESEARCH ARTICLE

Hybrid Clil-Based Speaking Model Designed and Developed by Considering Students' Learning Style toward Students Speaking Performance

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| ABSTRACT

This study is based on the perspective that considering students' learning styles in the design and development of learning material is crucial. Furthermore, by considering the promises offered by CLIL (content and language integrated learning) – as reported in many scholarly-published articles – claiming that CLIL is effective in addressing the learning of content and language, this study attempts to explore and examine the effects of taking into account students' learning style in the design and development of English speaking model. A total of 39 6th-semester students participated in the study. In dealing with the design of a hybrid CLIL-based speaking model, the 4D model was applied. This publication is restricted to informing the implementation and assessment phases. Diagnostic and achievement tests reveal that significant difference exists – meaning that the participants successfully enhance their speaking scores. This study suggests English teachers and lecturers involve students' learning preferences as one of the key aspects of speaking material design and development as it potentially enhances participants' academic achievement.

1. Introduction

It is agreed that one of the most crucial foreign language skills is speaking. For many Indonesian students, speaking is treated as the most feared course. Based on the literature, speaking needs automatic processing of a foreign language (Sampelolo et al., 2021). It has been amplified that major barriers encountered by Indonesian students, which lead them to lack speaking English, are vocabulary, pronunciation, and grammar (Sayuri, 2016; Wahyuningsih & Afandi, 2020). To deal with these, a 2019 publication suggests that enrolling in speaking exercises can be helpful in addressing speaking challenges (Pratolo et al., 2019).

Based on the finding of a preliminary study where speaking was found challenging and even difficult by university students, it is considered crucial to design and develop a speaking model as a solution to the lack of speaking ability. The design of the speaking model is considered both important and urgent for some reasons. First, being able to be fluent in English is important. Second, by considering the fact that every human learns differently, the learning of speaking should be based on students learning styles.

Among various definitions of speaking as defined by experts, three definitions regarded in line with the purposes of this study are (1) a skill that consists of producing systematic verbal utterances to deliver meaning (Bailey, 2005); (2) a process of articulating words, phrases, and sentences meaningfully through oral language to convey information (Clark & Clark, 1997); and (3) an interactive process of constructing meaning that involves producing, receiving, and processing speech sound (Brown, 2007).

Operationally, this study treats speaking as the ability to express ideas and thoughts orally in order to accomplish the class task.

On many occasions in speaking class, the students tend to be passive in expressing their ideas or opinion. Based on preliminary investigation, the language barrier becomes the most fundamental factor in learning them into passiveness – they have the points to talk about, but they cannot express them in English because they lack vocabulary, are not certain about the grammar, fear of mispronouncing word(s), etc.

To deal with the previously explained contextual issue, CLIL (content and language integrated learning) is promoted as a solution. It is considered important to address the mastery of content as well as the language aspect simultaneously since literature has convinced us that it potentially brings the students into more meaningful learning – the learning that benefits the students from the side of content and the side of language – so that they know what to say and they are able to say it. The most important reason is that CLIL is indicated as the most urgently needed learning approach by the students in the locus of this study.

In the design of the speaking model, students learning style is considered for some major reasons. The first is to appreciate the fact that every human learns differently. The second special approach is needed to cope with the contextual issue found in the locus of the study. Third, students enrolled in preliminary studies address the instructional learning model that suits the way they learn best. In this publication, the implementation of the hybrid CLIL-based speaking model is reported.

2. Literature Review
Some studies exploring and examining students learning styles have been conducted. The most commonly appeared in literature is the VARK model comprising visual, aural, read/write, and kinesthetic (Flemming, 2001). Another source amplifies four learning styles, namely visual, auditory, kinesthetic, and tactile (Reid, 1987). The latest study adds the mix of those 4 learning styles (Tight, 2010).

As the term suggests, visual learners are found to learn best through visual aids, auditory learners learn best through listening, kinesthetic learners learn best through experiential learning – the total physical involvement and tactile learners learn best through hands-on learning (Reid, 1987). Based on the classification, it can be inferred that educators can only expect the maximum result of the study if the educator has considered that each individual learns differently (Plendbrleith & Postman, 1957). Consequently, educators should manifest it by providing content and material that can cover all the identified learning styles.

CLIL gained its impetus in Europe and was termed bilingual immersion education (applied in Canada), content-based instruction (applied in the USA), and English-medium instruction or EMI (applied in Hong Kong) (He & Lin, 2018; Lo & Lin, 2019). In its implementation, it targets foreign language learning and content learning mastery where content is taught in a second language (Mehisto et al., 2008).

3. Methodology
Research and development guided the implementation of this study. The instructional system design applied was a 4D model covering definition, design, development, and dissemination (Thiagarajan et al., 1974). A total of 39 6th-semester students learning English for specific purposes participated in this study.

In regards to the design and development, the study firstly defined the context and content, covering situational analysis as well as a needs analysis. In the very first phase, the existing lesson plan was carefully examined. The result of the analysis was used to inform the design of the speaking model applied in the implementation.

In regards to the implementation, the designed and developed speaking model was executed mostly in an online mode of delivery through a virtual conferencing application due to social restrictions. Participants were involved in the learning through Google Meet as the replacement for the face-to-face meeting due to the Covid-19 pandemic, which disallowed regular face-to-face meetings to be held. Videos from the TED-Ed website were adopted as authentic learning material. It was considered that learning through video covered all the learning styles, and therefore, it was proposed that the participants could learn from visual aids, audio, the videos based on their preferred learning style.

Observation, questionnaire, document analysis, and tests were applied as instruments of the study. The online observation during the online meeting conducted through Google Meeting was addressed to find out the actual implementation of the learning through a hybrid CLIL-based speaking model. The questionnaire was used to measure the participant's responses to the inclusion of learning styles in the design and development of the hybrid CLIL-based speaking model and participants' responses to the implementation of the hybrid CLIL-based speaking model. Furthermore, document analysis was performed to address participants'

weekly tasks and their speaking performance in speaking tests. In addition, a test consisting of pre-test and post-test was applied to measure the effect of the implementation of the hybrid CLIL-based speaking model.

In regards to the assessment of participants' speaking performance, it was illuminated that measurement of successful completion of an assigned project with evaluations of communicative performance from several individuals through videotape offers tremendous possibilities for both training and for on-sight judgment (Wiemann, 1978). In addition, several studies on speaking agreed that online tests could inform their learning progress.

Due to the Covid-19 pandemic, which prevented physical classroom meetings, participants' speaking performance was assessed through weekly task videos assigned to them. However, during the study took place, the government relaxed physical meeting restrictions. Therefore, the authors performed limited or timed face-to-face speaking tests where participants were called based on the topic assigned to them to perform the speaking test.

In the test, the participants were required to choose a topic and talk about the topic they chose from the participants' preferred perspectives for 3 minutes. Fluency, accuracy, grammar, and pronunciation were applied as aspects assessed in the speaking test.

In regards to the validity and reliability of items listed in the research instrument, the self-developed questionnaire items were rated by 2 individuals considered experts. Their expertise was measured through the theme or topics of publication the individuals have published in the last 5 years. Based on the result of validity judgment performed by 2 experts, the questionnaire items were treated as both valid and reliable. It descriptively means that the questionnaire met the purpose of the study and was rated as able to measure what to be measured.

4. Results and Discussion

The preliminary investigation reveals that based on VARK learning styles (Flemming, 2001), all participants (100%) agree that they can learn best through visual, aural, and reading & write. Based on learning styles as informed by Reid (Reid, 1987), all participants (100%) treat themselves as visual-auditory-dominant learners. The finding indicates that visual-, audio-, and text-based learning content and material are learnable by the participants.

Participants acknowledge that their tendency to learn a foreign language is ruled by their prior experiences in language learning. The participants explicitly state that they have been familiar with visual-, audio-, and text-based material in learning a foreign language.

The data generated through the questionnaire reveal that majority of participants mainly appreciate the fact that their learning style is considered a primary resource in the design and development of the speaking model. Students' learning style is known as an essential factor that it informs how students learn best. In the hybrid CLIL-based speaking model, the students are enabled to flexibly choose the model of delivery that they think suits their learning style.

This finding supports the fact that every student shares different characteristics in learning (Plendbrleith & Postman, 1957). In regards to students' learning styles, this study amplifies a similar finding revealed in a 2007 study claiming that considering learning style instruments to inform the choice of learning activities and approaches improves the effectiveness and quality of learning for students (Hawk & Shah, 2007).

The visual-dominant learners who learn best through visual aids, the auditory-dominant learners who learn best through audible content, and kinesthetic-dominant learners who learn best by doing are enabled to learn based on their learning characteristics.

Table 1 Data on Pre-test and Post-test

Test	Cumulative	Cont.	Lang.
Diagnostic	43.08	45.64	40.51
Achievement	81.28	76.92	85.64
Verbal Label			

Information presented in Table 1 reveals that the cumulative mean score covering content aspect and language aspect enhances from 43.08 to 81.28. To measure which aspect the participants enhance more, the table also provides the mean score for the content aspect and the mean score for the language aspect. Based on the calculation, both the mean score of content and mean

score of language enhance. Furthermore, it is implied that participants enhanced more in the language aspect – with a difference of 45.13. As for enhancement of content, the difference found is 31.28.

Based on verbal interpretation, the participants enhanced from fairly good to good. If it is divided based on the aspect measured in this study, the content aspect is static to fairly good while the language aspect enhances from fairly good to excellent.

The following table informs the interval score, frequency, percentage, and verbal category of participants' performance in the diagnostic test.

Table 2 Interval score, percentage, and category of diagnostic test

No	Interval	Freq.	%	Category
1.	85 - 100	0	0	Excellent
2.	75 - 84	1	2.56	Good
3.	50 - 74	15	38.46	Moderately good
4.	25 - 49	21	53.85	Poor
5.	0 - 24	2	5.13	Very poor
Total		39	100	

The following table informs the interval score, frequency, percentage, and verbal category of participants' performance in the achievement test.

Table 3 Interval score, percentage, and category of achievement test

No	Interval	Freq.	%	Category
1.	85 - 100	27	69.23	Excellent
2.	75 - 84	1	2.56	Good
3.	50 - 74	6	15.38	Moderate
4.	25 - 49	5	12.82	Poor
5.	0 - 24	0	0	Very poor
Total		39	100	

In responding to the hypothesis, this study claims that significant enhancement exists in participants' cumulative score (P < .05).

Table 4 t-test of participants' cummulative score

CUMMULATIVE		Diagn.	Achie.
Mean		43.08	81.28
Variance		211.34	485.16
Observation		39	39
Pearson Corr.		.045	
Hypothesized Mean Difference		0	
Df		38	
t Stat		-9.23	
P(P<=t) one-tail		.00	
t Critical one-tail		1.69	
P(P<=t) two-tail		.00	
t Critical two-tail		2.02	

In regards to participants' scores on the language aspect, it is found that significant enhancement exists (P < .05). P-value, which is found to be lower than .05 statistically, means that there is a significant difference in participants' scores on achievement tests with participants' scores on the diagnostic test.

Table 5 t-test of participants' score on content

CONTENT		Diagn.	Achie.
Mean		45.64	76.92
Variance		272.60	516.60
Observation		39	39
Pearson Corr.		-.04	
Hypothesized Mean Difference		0	
Df		38	
t Stat		-6.84	
P(P<=t) one-tail		.00	
t Critical one-tail		1.69	
P(P<=t) two-tail		.00	
t Critical two-tail		2.02	

In regards to the mean score of participants on the language aspect, it is found that significant enhancement also exists (P < .05).

Table 6 t-test of participants' scores on language

LANGUAGE		Diagn.	Achie.
Mean		40.51	85.64
Variance		473.41	588.39
Observation		39	39
Pearson Corr.		.03	
Hypothesized Mean Difference		0	
Df		38	
t Stat		-8.80	
P(P<=t) one-tail		.00	
t Critical one-tail		1.69	
P(P<=t) two-tail		.00	
t Critical two-tail		2.02	

Based on the result of statistical calculation conducted in Ms. Excel, it is found that participants successfully enhanced both content and language.

The following table informs the data found through the questionnaire.

Table 7 Summary of Questionnaire Data on Learning Style

No	Interval	Freq.	%	Category
1.	85 - 100	7	17.95	Highly Appreciated
2.	75 - 84	27	69.23	Appreciated
3.	50 - 74	4	10.25	Moderate
4.	25 - 49	1	2.57	Less appreciated
5.	0 - 24	0	0	Unappreciated
Total		39	100	

Based on the information presented in Table 7, it is found that 7 (17.95%) out of 39 participants highly appreciate, 27 (69.23%) participants appreciate, 4 (10.25%) participants moderately appreciate, and 1 (2.575) participant less appreciate the fact that learning styles are crucial in the design and development of the speaking model. None of the participants opt unappreciated. The result emphasizes that considering how students learn best in the design and development of the speaking model is crucial based on participants' points of view.

Table 3 Summary of Questionnaire Data on hybrid CLIL-based Speaking Model

No	Interval	Freq.	%	Category
1.	85 - 100	8	20.51	Highly Accepted
2.	75 - 84	24	61.54	Accepted
3.	50 - 74	6	15.38	Moderately Accepted
4.	25 - 49	1	2.57	Less Accepted
5.	0 - 24	0	0	Unaccepted
Total		39	100	

As presented in Table 3, 8 (20.51%) participants highly accepted, 24 (61.54%) participants accepted, 6 (15.38%) participants moderately accepted, and 1 (2.57%) participant less accepted the implementation of the hybrid CLIL-based speaking model. None of the total 39 participants enrolled in this study opts unaccepted.

Therefore, this study supports the claim that speaking is teachable and developable through pre-recorded video (Arianti et al., 2018; Fu et al., 2021; Ismailia, 2021; Rokhayati & Widiyanti, 2022). In addition, this study also supports the claim that language skills – including speaking – can be assessed through video (Cowie & Sakui, 2021). Some recently-publish articles have examined the application of technology in speaking assessment (Nakatsuhara & Berry, 2021; Ockey & Neiriz, 2021; Xu et al., 2021). A 2021 publication examining face-to-face speaking tests with speaking tests conducted through video conferencing application mode of delivery concludes that there is no significant difference in terms of score (Nakatsuhara et al., 2021). Video conferencing application has even been considered eligible in terms of research data collection activity (Heiselberg & Stępińska, 2022).

While myriad studies support the claim that hybrid learning – which simply combines face-to-face meetings with the online meeting – gains more effectiveness in terms of learning outcomes (Hockly, 2015), this study can only support the fact that hybrid learning enhances students learning outcomes as this study did not compare hybrid learning mode with the traditional face-to-face method.

This study answers the introductory argument stating lack of evidence showing learning style influences performance (Knoll et al., 2017). After implementing the speaking model that applies to learning styles as the primary source of design and development of the speaking model, namely the hybrid CLIL-based speaking model, the mean score of participants' speaking performance enhances from moderately good to good.

Data from the interview addressed to the English lecturer indicate that considering students' learning styles in the design and development of the instructional learning model is innovative as the learning takes place based on students' preferences and suits the way they learn best. Logically, adjusting the instructional learning mat

In relation to the implementation of the hybrid CLIL-based speaking model, the English lecturer recruited as an interviewee for this study strongly claims that the implementation of the hybrid CLIL-based speaking model in his classes potentially leads the students to more active learning, which supports the pedagogical trend as encouraged by the Ministry of Education, Culture, and Higher Education. The argument is based on the fact that students tend to be active in asking questions and answering the lecturer's questions while the learning takes place. In addition, it stimulates students' curiosity toward both the content and language. At the primary school level, it is reported that the implementation of CLIL brings enjoyment to learning (Beaudin, 2021).

One of the challenging works faced by English teachers/lecturers in dealing with speaking is ensuring fluency and accuracy (Hunter, 2012). The importance of those two aspects has led scholars to set them as points to assess in speaking (Derakhshan et al., 2016) – see, for example, a thesis conducted at SMA Negeri 9 Gowa (Putri, 2020). However, not all scholars agree on the inclusion of fluency and accuracy as the standard of speaking rubric. In a 2021 publication, accuracy is absent in the rubric. The study sets pronunciation, vocabulary, fluency, and grammar as the points of assessment in speaking (Ismailia, 2021).

While myriad studies depend on the self-developed speaking test, some other studies apply the existing speaking rubric, such as what is indicated in a 2019 publication that applied IELTS speaking assessment to deal with speaking measurement (Taman, 2019). In dealing with the validity and reliability issue of speaking assessment, applying the existing rubric can be helpful as the validity and reliability have been defined (Read, 2022).

Although a 2021 study finds that non-native English speakers receiving high scores in TOEFL and IELTS tests are perceived differently by English native speakers (Dalman & Kang, 2021), indicating that speaking performance does not merely depend on the score, this study applies the speaking performance rubric as applied in IELT test to ensure the validity and the reliability of the assessment.

5. Conclusion

Based on the presented result of the study, the conclusion drawn is two-fold. First, considering how students learn best is crucial as it determines how the teaching and learning are presented for the students, which in turn will lead the students into meaningful learning that suit the way the students learn best. Second, this study has proven that the hybrid CLIL-based speaking model is effective, as proven by the enhancement of participants' speaking scores after learning through the hybrid CLIL-based speaking model. Further researchers are suggested to conduct a study examining the implementation of a hybrid CLIL-based speaking model to enhance the validity and reliability of the proposed speaking model.

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