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Part III: Teaching Creativity

Revealing Obscurity: A Linguistic-conceptual Analysis of English Academic Writing by Chinese Learners

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Abstract: Logical linguistics is core to the mastery of academic writing. Unfortunately, it often flies under the radar of what most English teachers are on the lookout for. In Hong Kong, English classes in the tertiary sector are concerned with grammar, professional writing, and presentation skills. Yet, thinking methods, which include linguistic-conceptual analysis, logic, scientific methodology, and fallacies analysis are seldom compulsorily incorporated into the formal curriculum of undergraduate English writing courses and postgraduate research method courses. With the objective of raising English teachers' awareness towards the learning and teaching of thinking methods in writing classes, this small scale study collected twenty-five 500-word students' English essays from a university writing class delivered for local undergraduate students studying arts and social sciences at a university in Hong Kong in 2019 - 2020. With a special focus on clarity and precision in reasoning, a linguistic-conceptual analysis has been conducted for the writing samples. Alongside grammatical mistakes and weak coherence, various degrees of obscurity in meaning and argumentation recur persistently in all the students' essays. The results of the observational study suggest that there is an urgent need to introduce logical linguistics in writing modules and subject courses for students who are learning English as a foreign language (EFL).

Keywords: Linguistic-conceptual analysis, obscurity, academic writing, learning English as a foreign language (EFL)

1. Introduction

Crucial to critical thinking, logical reasoning is mainly about checking the consistency of statements and detecting the validity of arguments (Nosich, 2009). That said, since logical reasoning is presented in language, Cooper and Patton (2010) and Barnet and Bedau (2005) assert that logical thinking is made possible through essay writing. In the same way, "[p]ractice in dealing with reasoned argument will also help students in their essay writing, since in most subjects a requirement of good essay writing is that ideas should be presented in a clear, coherent and well-argued way" (Thomson, 2009, p.3). Indeed, only statements that are grammatical, complete in meaning, and free of obscurity are worthy of logical discussions. For example, "All humans are mortal." and "All humans are immortal" are valid propositions that are capable of holding a truth value. Readers can make a judgment of whether such claims are true or false. Likewise, "This man is both dead and alive" (Dodigovic, p. 59), though contradictory, is a statement which can at least be tested for validity. On the other hand, expressions such as "Swans is is bird." (ungrammatical), "All swans are… [blank]" (incomplete), and "They

[unknown subject] are birds." (ambiguous) are not qualified as statements in logic. Due to their ungrammaticality, incompleteness and/or obscurity in meaning, meaningless and obscure sentences carry no logical entities, not to mention any truth values (Lee, 1992, p. 78). To help EFL students formulate sound and solid arguments in their academic writing, English teachers should not only teach grammar, but also impart to students the knowledge of logical linguistics, which is core to all disciplines. Likewise, subject teachers are also responsible for teaching reasoning in thinking and clarity in writing. At any rate, room for cross-disciplinary application of logic in writing, be it initated by teachers or students, should be explored. Despite its significance, logical linguistics is seldom formally taught in university courses. Alidmat and Ayassrah (2017) pointed out that in Middle East, mechanical writing skills rather than critical thinking are featured in the ESL programme's writing tasks. Tso and Chung (2016) also stated that in Southeast Asia, oftentimes university students "were only trained to write summaries, to paraphrase, to write essay plans and essays on general topics" (p. 55). Most students were found to be deficient in critical thinking skills (Flores et al, 2012). This lack of training in critical thinking and logical linguistics causes the recurrent problem of obscurity in tertiary students' writing, especially those written by EFL students.

2. Background of The Study

With the aim of identifying the most typical kinds of obscurity in EFL university writing, this observational study collected twenty-five argumentative essays from a freshmen English writing class offered for year one EFL students studying arts and social sciences at a university in Hong Kong in the autumn term of 2019 - 2020. Just like any other university freshman, the twenty-five students who took part in the study had passed the standardized public English exam for entering university. They had also passed the public exam on liberal studies, a core compulsory subject in Hong Kong's New Senior Secondary School Curriculum which is supposed to foster students' social awareness and nurture their "critical thinking through issue-inquiry learning approach" (Ip, 2010, p.1). However, they had not taken any formal courses on logic and critical thinking, not to mention logical linguistics. The textual analysis of the students' English essays reveals that a majority of the EFL students in Hong Kong have difficulties in articulating their thoughts and arguments clearly without ambiguity, vagueness and incompleteness in meaning. With examples found in the twenty-five students' essays, the most common obscurity issues in EFL academic writing, namely (1) lexical ambiguity, (2) syntactic ambiguity, (3) referential ambiguity, (4) vagueness, and (5) incompleteness in meaning, will be discussed in the following.

3. Ambiguity in EFL Students' Essays

According to Crystal (1988), ambiguity is a linguistic matter. It occurs when a word, a phrase or a sentence expresses more than one meaning (p. 15). While it is not always possible for a writer to avoid linguistic ambiguity in one sentence, the issue of unclear meaning is often easily solved when a given context is provided. However, should the intended meaning remains unclear even after the context is provided, the ambiguity will become a major obstacle that interrupts the logical flow of an argument. In the EFL writing samples of this study, all three types of ambiguity, namely lexical ambiguity, referential ambiguity, and syntactic ambiguity can be identified. This indicates that Hong Kong students are not alert about the importance of avoiding ambiguity in academic writing.

3.1 Lexical Ambiguity

"Words with multiple meanings" (Hawel, 2008, p. 71), also known as lexical ambiguity, often cause confusion to readers. In academic writing, it is the important to make sure that whenever there are two or more possible meanings for a single word or phrase, the writer's intent should be spelled out. From the students' essay samples collected, it is observed that lexical ambiguities in the adjectival form often occur in students' writing. Below are two typical examples showing lexical ambiguities in adjectives:

> (a) Some people go vegan because of religious reasons. Meat is not allowed because they think that it is **dirty**.

(b) Vegetables contain high fiber content. It may be hard to digest. It is not **good** for our intestinal function.

In sentence (a), the student has not explained clearly why "meat" is thought to be "dirty". Can "dirty" be referring to the aesthetic qualities of surfaces of meat, such as being "messy", "unclean", "sloppy", "filthy", "disordered", "cluttered", "blemished" and "unattractive" (Leddy, 1995, p. 259)? Or has it got something to do with the standards of food hygiene? Or can "dirty" be related to 'sins' in religion, such as inflicting intolerable pain when slaughtering animals? All the unknowns are left unanswered throughout the essay. Likewise, in sentence (b), it is unclear what the adjective "good" means. How is "good" food defined? Is "good" food defined by its digestibility? If that is the case, then fiber-rich vegetables such as artichokes and beetroots are defined as "bad" food. The student's claim will then be contrary to dietitians' advice, for it has been proven that a high fiber diet can stimulate peristalsis and prevent constipation, which is "good" and essential for the human intestine. Moreover, the intake of fiber-rich vegetables can lower cholesterol and reduce the risk of heart disease, which is "good" and healthy for humans. Confused by the lexical ambiguity, readers can only make guesses about the author's claim.

3.2 Referential Ambiguity

Besides lexical ambiguity, unintentional referential ambiguity also occurs quite often in English essays written by Hong Kong students. A responsible writer is expected to employ a consistent point of view when writing an academic essay. Failure to use appropriate referential pronouns in writing can create misunderstanding and confusion. Unfortunately, the academic essay samples collected from the participants reveal that university students in Hong Kong are relatively weak in using personal pronouns. Together with an inconsistent point of view, awkward referential ambiguity is frequently created in their writing. Below are two excerpts showing typical referential ambiguity in Hong Kong students' academic essays:

<Excerpt 1>

A person must be constantly vigilant day after day, month after month, and year after year to ensure **he or she** is getting enough of these nutrients. **They** need to take fortified foods or supplements, critics say, should be seen as a red flag. Otherwise, it will stifle **your** health if **you** do not receive enough key nutrients.

As shown in excerpt 1 above, at the beginning, the essay author mentions "a person" to refer to any human being regardless of age, race, gender and class. Third person pronouns like "he or she" are used to refer to the unnamed person. In the second sentence, however, the subject turns plural all of a sudden. Inconsistent to sentence 1, the plural pronoun "they" is used, and it is unclear whether "they" is used to refer to the vegans, or the people who want to get "enough…nutrients". Worse still, in the third sentence, the point of view changes again. Now the subject becomes "you", which refers to the reader. Such referential ambiguity makes it hard for the reader to follow the passage, let alone the logical sequence that the author means to articulate.

Likewise, in excerpt 2, it is unclear why the essay author uses such inconsistent pronouns as "our body", "they" and "them" to refer to the "vegans":

<Excerpt 2>

Vegans only eat legume products as the main way to get proteins. However, many legume products are processed food. In the long run, it may get harm to **our body**. Processed food such as tofu, soy milk, soybeans is the main source for vegans to get proteins. However, legume products can harm **our body** because they contain high anti-nutrients. Also, it is hard for **them** to eat meats to get proteins. Therefore **they** can only rely on legume products. In the long run, it may affect **our body health**.

In the first sentence, the author infers that legume products are harmful to human health. Then, starting from sentence 4, the author uses "they" and "them" to refer to the vegans, claiming that vegan diet is harmful to the vegans' own health. Strangely, in the concluding statement, the author suddenly assumes that all readers are vegans. Readers are warned that the in the long run, their vegan diet can harm their own health. The confusing use of pronouns has created layers of referential ambiguity which no one, including the author, can explain.

3.3 Syntactic Ambiguity

Similar to lexical ambiguity, syntactic ambiguity refers to the presence of two or more possible meanings within one sentence or a sequence of words. In numerous essay samples collected from this study, it is noticed that many EFL students have difficulty using coordinating conjunctions. As shown in examples (a) to (c) in the following, syntactic ambiguity is often created when students misuse coordinating conjunctions such as and, or, but, yet, etc.:

(a) Not eating **meat or seafood products** is known as a vegan diet.
(b) In the book of **diet and nutrition therapy**…
(c) **Going vegan** not only brings better health to humans, but also animals.

In example (a), the syntactic ambiguity makes it unclear what a vegan diet truly means: does it mean "not eating meat and not eating seafood products"? Or does it mean "not eating either meat or seafood products"? Similarly, in example (b), it is hard to decide whether there is a book written about "diet and nutrition therapy", or that there is "a book about diet" plus "a therapy for nutrition intake". As for example (c), readers are uncertain who are going vegans, thus the sentence can be understood in at least two ways: one interpretation is that humans go vegan, and that brings benefits to the health of both humans and animals; the alternative interpretation is that both humans and animals go vegan, and both enjoy better health.

Amongst lexical ambiguity, referential ambiguity and syntactic ambiguity, referential ambiguity appears to be the most common in the twenty-five writing samples collected, while all three types of ambiguity disrupt the logical flow of essays, making the comprehension process annoying and irritating to readers.

4. Vagueness in EFL Students' Essays

Apart from ambiguity, vagueness is yet another writing problem of which EFL students in Hong Kong do not seem to be aware. By definition, vagueness refers to the lack of precision. As Bowell and Kemp (2010) point out, the actual meanings of many "rhetorically powerful or emotionally provocative words in public (and private) discourse" (p. 141) are vague. This is particularly obvious when it comes to such abstract concepts as "love", "rights", "politics" and "ideology". When such vague terms are used and details are not given in the description, it can be hard for readers to follow the argument that the author means to convey. In the collected essay samples, over half of the EFL students have shown various degrees of vagueness in their writing. Below are a few examples of vagueness excerpted from the students' essays:

(a) The vegan diet brings a lot of benefits to **people's** health.
(b) People turn vegan to defend **the value of life**.
(c) For people who want a better body shape, rather than going vegan, it is more efficient to keep fit in a **normal** way.

Example (a) is the most typical kind of vagueness to be found in students' term papers. Scientific studies have proved that not everyone, especially children and pregnant women, can benefit from the vegan diet. It is therefore necessary to state explicitly exactly which kind of "people" (e.g. those of high cholesterol or heart disease) can benefit from the vegan diet. The vagueness in examples (b) and (c), on the other hand, involves abstract concepts that cannot be explained easily. For example, philosophical topics like "the value of life" in example (b) are hard to explain and understand. The "value of life" may also change across different people, cultures and time periods. Sometimes, "even the speaker himself

may not know precisely what he intends to convey" (Cooper, 1978, p. 225). The meaning of "to defend the value of life" is therefore deemed vague and close to meaningless. By the same token, the so-called "normal way" in example (c) is vague in meaning. Why is going vegan considered abnormal? What are the criteria of "keeping fit in a normal way"? If EFL teachers can provide students with logical linguistics training in the writing classes, further elaborations in detail can be made to clear the vagueness.

5. Incomplete Meaning in EFL Students' Writing

In addition, meaning incompleteness is also highly commonly in EFL essays. Different from vagueness, the obscurity does not come from abstract terms. Instead, obscurity is created because the author fails to provide readers with the full and accurate information in understanding the complete picture. In other words, meaning incompleteness causes obscurity, just as the following:

> Refusing to eat meat can also cause health problems. Vegans cannot absorb enough nutrients such as iron, zinc, iodine, calcium and vitamins to maintain healthy life. Some professionals are worried that without those nutrients, vegans may suffer from health problems such as fatigue, poor concentration, a decrease in brain volume and irreversible nerve damage.

While it is true that people who fail to absorb sufficient nutrients may suffer from health problems, the author has not revealed the complete picture to readers – health problems will only occur if people go on a pure vegan diet for a long period of time. Also, nutrient deficiency is unlikely to occur if vegans have supplement intake to refill the missing nutrients from their vegan diets. The incompleteness in meaning not only confuses readers, it may also lead to wrong interpretations. To check for completeness in meaning, it is suggested that one should always look for what is missing in the given data (Diyanni, 2016, p. 33).

6. Conclusion

While it is known to all that organizing "facts in logical order" (Kalb, 2012, p. 3) is important for academic writing, the first and foremost concern is that there should be "[c]larity, preciseness and no ambiguity" (Tso, 2016, p. 3). In other words, academic writing must be understandable and free of obscurity. Obscure sentences are not qualified as statements with any truth value, and they are unworthy of logical discussions. As BonJour (2002) remarks, "if a statement has no real content and hence could not be false, one does not need any further reason in order to be justified in accepting it as true" (p. 44). In this observational study, numerous obscure words, phrases and expressions of various kinds are frequently found in the twenty-five academic essays written by the local university students in Hong Kong. While the scale of study is small (n=25), the findings do raise concerns about the learning needs and difficulties of some EFL students, if not all. In fact, numerous recent studies have also discovered that besides language problems such as grammatical mistakes, EFL students do find it challenging to produce "a piece of writing where the vocabulary is carefully chosen, the sentences are logically related, the ideas are clearly expressed, and the paragraphs are coherent."(Badi, 2015, p. 69). The logic in coherence and cohesion is what students find they lack most. EFL teachers have expressed concerns about students' difficulty in mastering logical thinking and clarity in writing (i.e., logical linguistics) as well, "everybody knows introduction, body part, and then refutation, and then the conclusion. They [the students] have those rigid structure in mind, and they do it in a way, but the organization in this content is more about the logic-the internal logic flow within." (Li and Ngai, 2018, p. 110). In alignment with the existing studies, this paper suggests that EFL teachers, together with subject teachers, should consider helping their students' enhance their understanding of logico-linguistics and mastery of critical thinking. Good academic writing means way much more than just taking care of mechanics such as grammar, vocabulary, and punctuations.

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Appendix: Essay topics for students

Read the following three source materials and take notes in your own words. Write an essay of five paragraphs for <u>one</u> of the following topics:

(1) Why do people go vegan?

(2) What are the health risks of being vegan?

Source material 1:

Book title: *Vegan Diets*

Author: Don Nardo

Year of publication: 2014

Place of publication: Farmington Hills, Mississippi, U.S.

Publisher: Cengage Learning

Pages: 45 (The paragraphs in the above box is from page 45.)

NUTRITIONAL SHORTFALLS

A vegetarian diet is defined as one that does not include meat (including fowl) or seafood, or products containing those foods. In regard to key nutrients for vegetarians including protein, n-3 fatty acids, iron, zinc, iodine, calcium, and vitamins D and B12, a vegetarian diet can meet current recommendations for all of these nutrients. While it is possible for a person to adopt a vegan diet and get enough of the substances that make up the classic vegan nutritional shortfalls, some medical professionals emphasize that, although this is possible, it is not necessarily easy. A person must be constantly vigilant day after day, month after month, and year after year to ensure he or she is getting enough of these nutrients. The need to take fortified foods or supplements, critics say, should be seen as a red flag. One such critic is Dew Ramsey, a professor of psychiatry at Columbia University. Worried that a vegan diet can adversely affect the human brain, he warns that clinical research finds that people on vegan diets commonly suffer from a variety of nutritional deficiencies. One study, for instance, showed that more than half of the vegans tested were deficient in vitamin B12, putting them at risk of mental health problems such as fatigue, poor concentration, decreased brain volume with aging, and irreversible nerve damage. Ramsay suggests that it would be better to modify the vegan diet with a minimal amount of animal nutrients from responsibly raised, high-quality sources, perhaps local seafood or grass-fed lamb. Those with ethical objections to killing animals can meet all their animal-nutrient needs with dairy products from grass-fed cows [that are allowed to die of natural causes], organic eggs from cage-free chickens, and occasional servings of mussels or oysters.

Source material 2:

Book title: *Nutrition and Diet Therapy: Self-instructional Approaches*

Author: Peggy Stanfield and Y. H. Hui

Publisher (Place): Jones and Bartlett Publishers (Sudbury, Massachusetts, U.S.)

Year of publication: 2010

Page: 40

VEGETARIANISM: DIET EVALUATION

There are many reasons why individuals eliminate animal foods from their diets. The most common reasons are economic concerns, religious guidelines, health considerations, and concern for animal life. Generally, the more restrictive the vegetarian's diet is, the more likely it is to be deficient in one or more major nutrients.

Problems with protein quality and quantity often occur among vegans. If vegetables and cereals are the only sources of protein, not only will they be of low quality but the digestibility factor is often low. Because of high fiber content, many nonmeat sources are not well digested. Beans are especially difficult for children. Although soybean protein is fairly similar to animal protein, its low digestibility and a lack of favor prohibit its consumption as such. Soybeans are usually consumed in a highly processed and value-added form, for example, tofu or soy milk.

Soy products are derived from soybeans; they are not soybeans. Also, soybeans contain a trypsin inhibitor that interferes with the function of trypsin, a major enzyme for digesting protein. Some vegetarian children tend to be smaller and show symptoms of undernutrition. Children should not be put on a vegan diet unless medical and nutritional expertise is available to monitor their health. When foods are chosen wisely, a vegetarian child can meet his or her nutritional needs.

Vegetarianism, when properly managed, can be a healthy way to eat. Children are especially at high risk of failure to thrive if they are not supplemented with fortified foods containing essential nutrients missing from their diets. Vegetarians may be at lower risk for gastrointestinal disorders (such as constipation, diverticulitis) and colon cancer because of the high fiber content of the diet. On the other hand, osteoporosis, which affects three out of five women over the age 60, is a high risk factor among many vegetarians.

Source material 3:

Book title: *The Advantages of Being a Vegetarian*

Author: Randy Richards

Year of publication: 2018

Place of publication: Scotts Valley, California, U.S.

Publisher: CreateSpace Independent Publishing

Pages: 55

ELIMINATE ALL MEAT AND ANIMAL PRODUCTS FROM YOUR DIET

It is actually quite easy to eliminate red meat and poultry from our diets. When you give any thought whatsoever, the reasons are so compelling to stop eating them. Your reasons may be physical, because you need to lower your cholesterol or blood pressure. You may want to reduce your risk of cancers that may run in your family, and eliminating red meat from your diet is an important way to do this. You may also find that the way we mass-produce meat and poultry for consumption is repugnant to you. If we really thought about the way meat and poultry is raised, we would never eat the stud again. We are consuming flesh that has been produced from enormous pain and suffering. Even the smallest life has value on this earth; mass producing these animals to slaughter and eat them degrades their lives and degrades our own in the process of eating them.

It might feel like it is carrying things too far to eliminate something as elemental as a shrimp or a scallop, but think about what we dump into the ocean where this food comes from. All our waste and trash gets hauled into the ocean, if it does not go into a landfill. Think of the millions of gallons of oil that have been dumped from oil tanker accidents. Think of the impact that the erosion of the ozone layer in the atmosphere has had on every living thing on the planet. There are toxic levels of mercury in fish and seafood, so much so that of you are a woman contemplating getting pregnant, you most definitely should not eat fish. Your risk of producing a baby with birth defects is extremely high if you do.

About the Author

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Developing Critical Readers

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Abstract: Despite its importance, critical reading is a skill that is rarely overtly taught. This article describes the design, development, and delivery of a tailor-made elective course to develop critical reading. An online course for undergraduates majoring in computer science was developed, covering 108 critical and logical thinking concepts. Armed with this knowledge, students evaluate the soundness or cogency of conclusions, based on their truth value, validity, reasoning, assumptions and supporting evidence. The early units of the course focus more on acquiring knowledge and technical terminology while the later units focus on the application of the acquired knowledge and terminology to analyze arguments. In the knowledge acquisition phase, concepts are presented in multiple modes (e.g. verbal, graphical, algebraic and numerical). To evaluate the efficacy of this course, students (n = 43) took pre- and post-tests in which they critically analyzed and annotated persuasive fallacious arguments. There was a significant substantial improvement between the pre- and post-test scores, showing that explicit tuition of logic and critical thinking enhanced their ability to analyze and describe arguments.

Keywords: critical reading, argumentation, logic

1. Introduction

To entice prospective customers and persuade voters, advertisements and political propaganda frequently carry messages that "bend" the truth (Effron, 2018; Gelfert, 2018; Jack, 2017; and Lazer et al., 2018). In a similar vein, writers of research articles use rhetorical devices and language to support their arguments and convince readers of the validity of their claims (Kuhn, 1970; Hyland and Jiang, 2019; and Rice, 2019). The bar for truth is far higher for research articles, but that does not necessarily mean that the conclusions are cogent or sound. Critical reading is therefore necessary not only to see though manipulative arguments made by advertisers, but also when reading textbooks and research articles in educational settings (Manarin, Carey, Rathburn and Ryland, 2015; Wallace and Wray, 2021). Although some researchers (Cargas. Williams and Rosenberg, 2017; Davis, 2013) argue that teaching critical thinking across and through the disciplines is a viable approach, this case study focuses on developing critical readers through a discrete course that follows an Aristotelian first principles approach (Irwin, 1988) and draws on the rhetorical appeals of ethos, logos and pathos.

In order to analyze arguments, readers need to be able to identify claims (or conclusions). Once a claim is found, the evidence upon which it is based needs to be uncovered. For deductive arguments the soundness of the conclusion is assessed, while for inductive arguments its cogency is evaluated. The evidence may be in the form of a series of premises forming a deductive argument, each of which can be evaluated for truth value, and the structure of the argument verified for validity. Alternatively, the strength of the evidence in inductive arguments can be assessed to judge the likelihood of the claim. The underlying assumptions and values of the writer and the historical context in which the text is situated

also need consideration (Eisenschitz, 2000). Meaning is extracted from texts and decoded by readers and so as meaning is constructed, the idiosyncratic interpretation of the reader needs to be considered (Kendeou, McMaster and Christ, 2016; Scholes, 1985). Take for example, simple concepts such as mountain and house. The concepts of mountain and house in the mind of the reader are based on personal experience and assumptions. For example, for readers who live at high altitude in log cabins, mountains are snow-capped and houses are log while for people living in the New Territories, houses may be three-storey villas and mountains covered in trees and shrubs.

This paper describes the development of a web-based open-access course that aims to develop critical readers through systematic introduction of logical concepts and application of those concepts to short texts. The new format of this course was piloted with one cohort of students in April 2020. Based on increases in scores between pre- and post-tests, the mean level of attainment increased dramatically over the duration of the course. The most probable cause of the increase is that students became more critical readers during the course. Although causality is not proven, the likelihood that the increase stemmed from the course itself is very high.

The remaining sections of this paper are arranged as follows. The next section defines and introduces the importance of critical reading and raises the issues of truth, facts and fake news. description of ways in which readers can develop the necessary skills. Section three describes the development of a critical reading course, detailing the context, syllabus and approach. Section four discusses the course content and the pedagogic concepts adopted and introduces an interactive tool, the argument visualizer. The background, method and results of the case study are given in section five. This paper concludes with six lessons learned in the final section.

2. Critical Reading

Critical reading has been defined in multiple ways. Critical discourse analysts are more likely to define critical reading with reference to the individual and institutional power relations realized in texts (Fairclough, 1989; Fairclough, 1995). Walz (2001) defines critical reading as an investigative critique of the validity of arguments contained within a text. Manarin, Carey, Rathburn and Ryland (2015, p.4) advocate the importance of identifying textual patterns, discriminating between ideas, evaluating their credibility and argument structure as well as making inferences in academic situations for critical reading in academic contexts. Tengberg and Scheller (2016, p.635) define critical reading functionally as being able to identify, analyze and evaluate arguments. Larking (2017, p.50) named identifying rhetorical devices and questioning the assumptions of the author as the two critical reading strategies needed for advanced learners of English. Carillo (2019) eloquently sums up the central problem: learners have been trained to extract meaning embedded in texts but the role the learner plays in co-constructing and evaluating that meaning is often ignored.

Undergraduate students in Hong Kong, Thailand, the United Kingdom and Japan have all failed to notice basic flaws in texts presented to them in classes. Judging on personal experience there appears to be a passive acceptance that texts are correct. Yet, this is not the case. To provide a concrete example, the short text shown in Figure 1 is one of the many texts I have used to encourage learners to think critically. It should be noted that users of English as an additional language may have to focus more carefully on the grammatical structures and words to deduce the meaning than native speaking readers who tend to read for meaning rather than analyzing the grammatical and lexical components of a message.

> Polar bears are most at home on the polar sea ice. The main food source was seals. However, due to global warming, polar bears now rely on penguins as their primary source of food.

Figure 1. Reading Text

When asked whether polar bears eat more or fewer penguins, almost all students answer “more” and provide “global warming” as the justification. Given that polar bears live in the Northern hemisphere

and penguins in the Southern hemisphere, it should be obvious that regardless of any global warming, polar bears cannot feed on penguins. Yet, very rarely do any students point out that real-world truth. This is in line with Bao (2019) who asserts that "[Chinese] students are more often than not, trained to accept the standpoints presented in a text without any analysis, discrimination, judgement or criticism" (p. 129). The default reading approach appears to be non-critical with little to no evaluation of the credibility of the content. One explanation could be that students are playing the game of suspended reality when teachers ask questions to which they know the answer. Another could be simply a lack of world knowledge; students may have never studied basic biogeography and almost certainly have no first-hand experience of such remote locations.

School children are not expected to read critically and are taught reverence for and primacy of knowledge in the texts. School history curriculums and sanctioned textbooks tend not to include falsities on purpose, but frequently fail to deal with atrocities and controversies in any depth. Institutional power is clearly reflected in the selection of which content to include and whose story to represent (Fairclough, 1989). This institutional sanitization of texts helps to build national identities, but in doing so raises citizens who are ignorant to events that affect international relations. The conspicuous absence of detail of the Nanjing Massacre in 1937 and the issue of comfort women in the Japanese government approved texts are cases in point (Oi, 2013).

Newspapers also need to be read critically since their content may also be misleading. The custom of playing practical jokes on April fool's day is embraced by anglophone newspaper press running fake news stories. Some of the earliest reported news stories include a story in the New York Graphic, 1878 about a machine invented by Thomas Edison that makes food from soil and wine from water. In 1931 the Los Angeles Times reported a germ that brings good health to those infected (Stairiker, 2019) and more recently the Daily Express ran a news story about supermarkets installing trampolines so customers can reach products on top shelves (Reynold, 2015).

Newspapers and political propaganda frequently mislead the public on purpose. Leaders of countries, religions and political parties have used fake news for hundreds of years (Soll, 2016). One of the most egregious newspaper stories was the Great moon hoax in which a New York tabloid reported that aliens had invaded the moon to boost sales (Soll, 2016). The use of ambiguous and misleading headlines is a frequent tactic of the tabloid press. This purposeful misdirection is purely aimed at increasing readership. Forward-referencing click-bait headlines, such as "Shocking story" aim at enticing readers by appealing to emotion. The Black Lives Movement narrative has led to newspapers, particularly in the United States, including details on the colour of victims of police shootings in news headlines; yet the colour of perpetrators of crimes is omitted in headlines. Similarly, the headlines of police shootings tend to focus on portraying the victim as a father or a son; but neglect to mention the presence of a weapon, resisting arrest or failing to follow police commands. Uncritical readers may jump to conclusions based on the headline and hook.

The rise of opiniated news delivered digitally rather than objective news (Marchi, 2012; Guess, Nyhan and Reifler, 2020) has been driven by social media news feeds that harness sophisticated algorithms (DeVito, 2017; Hosanagar, Fleder, Lee, and Buja, 2013) resulting in filter bubbles in which readers receive news based on their online behavior (DiFranzo and Gloria-Garcia, 2017; El-Bermawy, 2016). With decentralization and digitalization of news delivery, there has been a concomitant rise in fake news (Lazer et al. 2018).

Donald Trump used the term fake news to refer to stories that portrayed him or his administration in a negative light. Fake news is a vague term that can be broadly defined as describing information that is not true which is presented as news. Fake news, therefore, covers completely fabricated, partially false or distorted news stories and distorted or deceptive news sources. Deceptive news stories could incorporate ad hominem attacks on individuals, groups or organizations, such as describing peaceful protestors as rioters when there was no violence. In this post-truth era of fake news asserting that real news is fake, citizens need to read critically to filter out the actual fake news. To be able to see though bare-faced lies, notice weasel words and not fall victim to fallacious arguments, it is necessary to become a critical reader.

Facts and truth take a central role in any argument. Yet, as Nietzche (1910) notes that "there are no eternal facts, as there are likewise no absolute truths" (p.15). There are eight planets in our solar system, but prior to the downgrading of Pluto to a dwarf planet in 2006 there were nine. Some facts change. To understand the relationship between facts and truth, it is necessary to understand more about truth.

The two most common theories of truth are correspondence and coherence. Simply put, the correspondence theory of truth is when the truth reflects reality (David, 2015). For example, for people living near the equator daytime is light and nighttime is dark. This statement, however, is not true for those living in the polar regions. The coherence theory of truth is when a proposition does not contradict other known true propositions (Young, 2018). For example, Albert Einstein is dead. He no longer invents. The italicized proposition is true and does not contradict the first statement about his death. The above is a gross oversimplification of these two theories. However, for the purpose of critical reading it shows learners that truth value can be evaluated using both coherence and correspondence theories of truth. Coherence theory relies on world knowledge and given that each person's experience of the world differs, world knowledge varies. Education can greatly affect the depth and breadth of knowledge and this in turn affects subject-specific knowledge that, at times, may be necessary to evaluate the truth value of propositions (Nieuwland and Martin, 2011). In short, each individual may judge truth differently, particularly when other belief (e.g. religion), ideological (e.g. Black lives matter) and value (e.g. collectivism) systems come into play. Given the vested interests of the stakeholders involved in text production (e.g. financial backers, editors and authors), readers need to be able to discern logical arguments from illogical ones. This is the underlying motivation for the development of a course to develop critical readers.

3. Course Development

Courses do not exist in a vacuum and so the context at national and institution levels need to be considered (Turner, 2012). This course was developed in a small bilingual public university in northern Japan for undergraduates majoring in computer science and engineering. Despite the official bilingual nature of the institution and the requirement to take subject-matter courses in English, the English proficiency of students varies greatly from those who are proficient to some who struggle to comprehend simple sentences. This two-credit elective course aims to develop critical reading. The course is offered within the language curriculum and is primarily taught in English although, at times, some examples are provided in Japanese as well. The course comprises two 100-minute sessions held twice a week for seven weeks.

The primary focus of the course is to develop critical readers. The specific course aims are to enable students to identify arguments, the type of reasoning, the presence of formal or informal fallacies; and to evaluate whether the arguments are sound or cogent. The course is divided into three blocks: identifying arguments, identifying fallacies and evaluating arguments. A syllabus was created based on the course objectives. The syllabus is cyclical (Murphy, 2018) and so concepts are introduced and revisited multiple times. This enables a concept to be introduced in simple terms and then over the course additional levels of complexity added. An eclectic approach was adopted incorporating various concepts, such as flipped learning (Bergmann and Sams, 2012) and active learning (Bonwell and Eison, 1991).

In line with Bloom's taxonomies early units of the course focus more on acquiring knowledge and technical terminology while the later units focus on the application of the acquired knowledge and terminology to analyze arguments. Learners therefore progress to the cognitively more demanding levels of Bloom's taxonomy and move along the knowledge dimension. In the knowledge acquisition phase, concepts are presented in multiple modes (e.g. verbal, graphical, algebraic and numerical) to help address the needs of learners based on their learning preferences and styles. Critical reading is developed in the same way as reading: through practice. The first step is to develop learner awareness of the concept of critical reading. The next step is to raise their awareness of the techniques and strategies to use to identify and evaluate arguments. Students armed with a thorough knowledge of argumentation, reasoning and fallacies both formal and informal should be in a strong position to read critically.

A list of 108 concepts (Blake, 2020) to be mastered was created and sequenced into concept chains or lexical sets. As an illustrative example of concept chain, the following terms are introduced together: true, false, truth value, and declarative statement. Since only declarative statements carry truth value, and there are only two values namely true or false, these four concepts lend themselves to be taught together.

Learners are encouraged to engage with the course materials. In many cases this involves students reading or listening to source material, and then thinking about the content. This may involve activities, such as identifying, categorizing and analyzing. As an illustrative example, a simple reading task can be "activated" using an idea from Salmon (1984). Students read an excerpt from an argument such as Adventure of Blue Carbuncle (Doyle, 1992) and then discuss the claims, evidence, reasoning, validity and truth, etc. within each sentence before reading the subsequent sentence.

Reading and listening activities are eminently suited to individual study, and so the course was originally designed to follow a flipped learning approach so that face-to-face class time could be used to discuss the content of the reading and listening activities, to consolidate the knowledge of argumentation and fallacies and to practice applying the knowledge. During class, students would normally work in pairs or small groups to solve problems posed and answer questions set.

4. Course Content and Materials

This critical reading course adopts a systematic approach, with a strong focus on propositional logic. Students are expected to master the 108 concepts. Table 1 shows an extract from the mastery list. Although the mastery list contains 108 concepts, some of these concepts may be further subdivided. For example, inductive reasoning could be further subdivided to itemize seven types of inductive reasoning, such as simple induction, prediction and argument from analogy. However, based on the level and duration of the course, the number of concepts covered and assessed is limited to this number.

Table 1. Extract from Mastery List

Category	**Items**
Types of reasoning	deductive, inductive, abductive, causal
Valid propositional forms	modus ponens, modus tollens, hypothetical syllogism, disjunctive syllogism, constructive dilemma
Syllogistic fallacies	fallacy of four terms, illicit major, illicit minor, affirming a disjunct
Types of causes	root, common, rival, proximal, distal, necessary, sufficient

There are a number of critical thinking frameworks, such as the Paul-Elder Critical Thinking Framework (Paul and Elder, 2007) and the ten questions framework (Browne & Keeley, 2011) which are shared with students. However, a tailor-made twelve-step indicative guide shown below was provided to help readers critically analyze and evaluate texts. This guide enables learners to apply the knowledge gained through the course in a systematic manner.

Indicative guide to evaluate arguments

1. identify the conclusion
2. identify the premises
3. identify any assumptions
4. identify the reasoning
5. evaluate the truth of each statement
6. identify any vague or ambiguous terms
7. evaluate the strength of evidence
8. identify the presence of any formal or informal fallacies
9. name the fallacies (if any)
10. evaluate the validity of deductive arguments

11. for valid deductive arguments name the valid propositional form
12. evaluate the soundness or cogency of the conclusion

A number of pedagogical concepts were built into the course materials. An open-access course website was created to house the course materials (Blake, 2020). Previous iterations of the course were paper-based. The move away from paper-based texts enabled online resources to be hyperlinked, and video and audio clips embedded directly into the course website, meeting students' expectations for online materials to be multimodal (Hafner, Chik and Jones, 2015).

Based on access logs for the learning management system (LMS), students were found to access course materials in the evenings. To reduce eye strain, a dark theme (dark grey background with light text) was chosen for the website. Additionally, the website was designed using a mobile-first approach to ensure that users can access the content on their mobile devices. Emoticons are used to indicate the type of activities so that students can scroll down and quickly understand what they are expected to do without having to read the instructions. When students need to access resources, links are provided for convenience.

Each unit has a dedicated webpage with activities sequenced in the recommended order of completion. Each webpage begins with a section describing the learning outcomes and ends with a review section, in which learners have to check their mastery of concepts or answer questions. This review section includes a running tally of the 108 logical concepts that students have covered at that point in the course. The tally helps to show students not only how much material has been covered in the course, but how much of the course content they are expected to have mastered.

Where possible, students are engaged in a variety of receptive (reading, listening and watching) and productive activities (analyzing, speaking and writing). Figure 2 shows an example of a reading activity in which students need to evaluate five arguments.

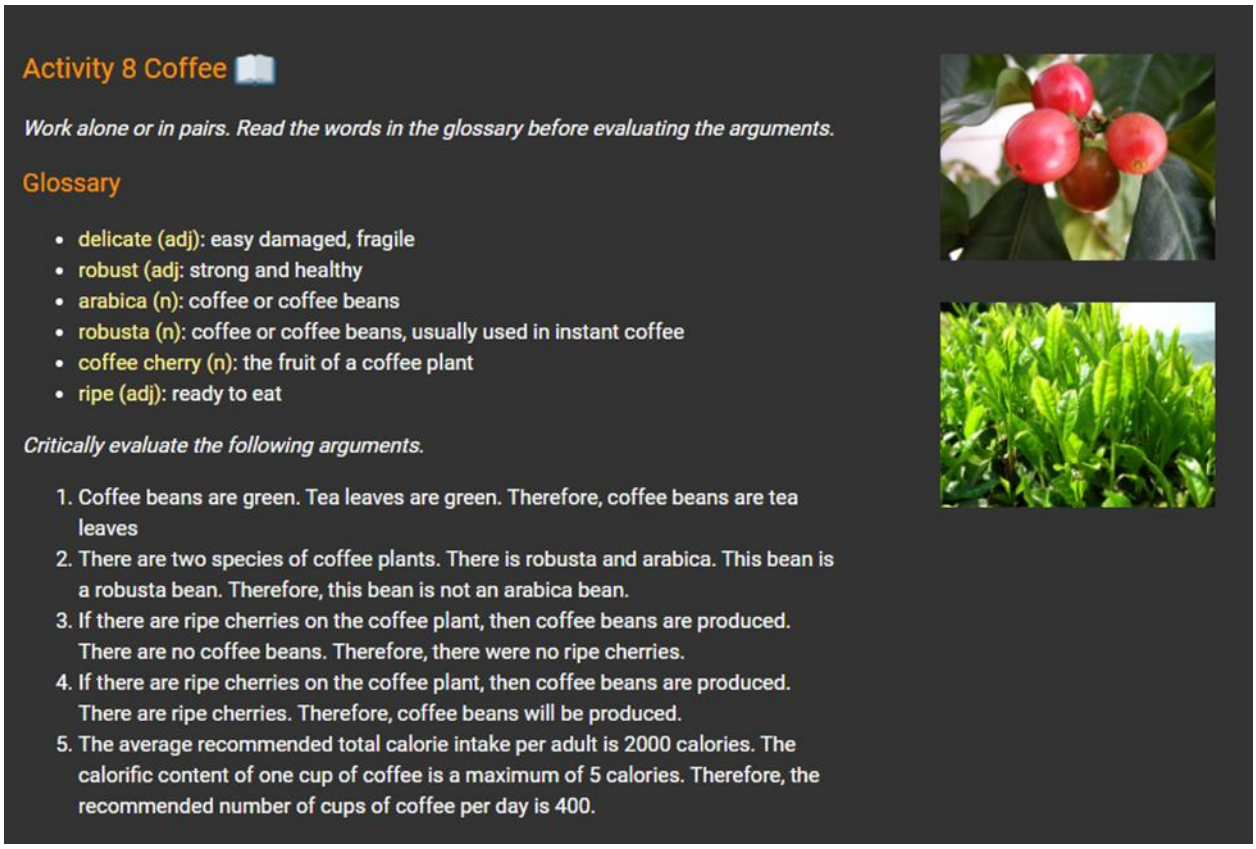

Figure 2. Reading Activity

Each unit requires students to produce a digital artefact. The artefacts may be written texts, sound files, live action videos, screencast videos or annotated texts. Video artefacts have been shown to be effective teaching and assessment vehicles (Chewar and Matthews, 2016; Hansch et al., 2015). Figure 3 shows an example of a recording activity in which students need to submit an audio file describing and exemplifying one of the five valid propositional forms. The warning icon shows students that this activity is mandatory.

The footer of each webpage gives a quote related to logic and critical thinking. One example is the title of a book by Ben Shapiro (2019), an American conservative political commentator: "Facts don't care about your feelings". The quotes aim to inspire learners to read more widely and think more deeply about concepts that are only dealt with briefly during the course.

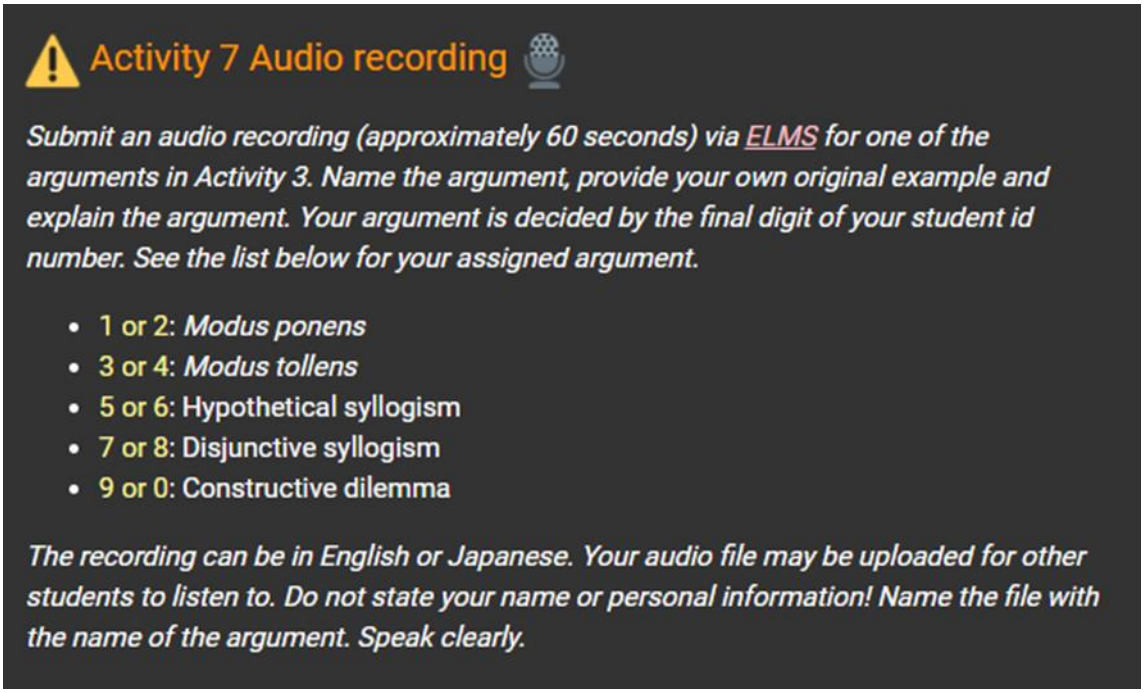

Figure 3. Audio Recording Assignment

This course makes use of the Argument visualizer (Blake, 2019), which is an online tool developed to visualized annotated arguments. The analyzer can show arguments, reasoning, formal fallacies, informal fallacies and causality in pre-annotated texts. Users can annotate their own texts or access a bank of annotated arguments via the LMS. Figure 4 shows a screenshot of the submission screen for the Argument visualizer while Figure 5 shows the output for annotated text. When the cursor is placed over an emoticon, further details are displayed in a pop-up window.

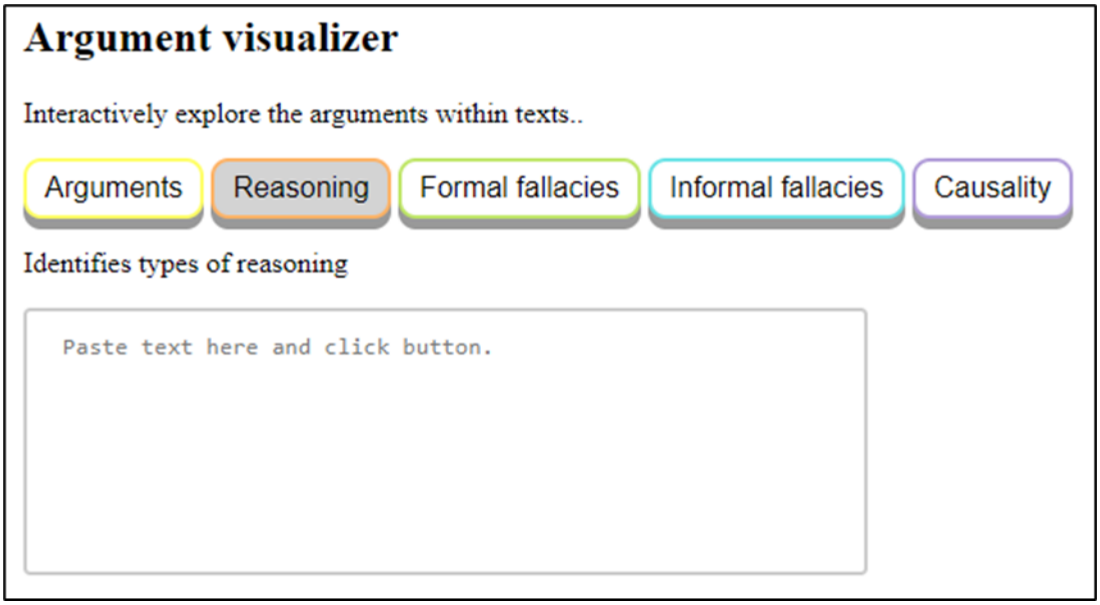

Figure 4. Screenshot of Argument Visualizer

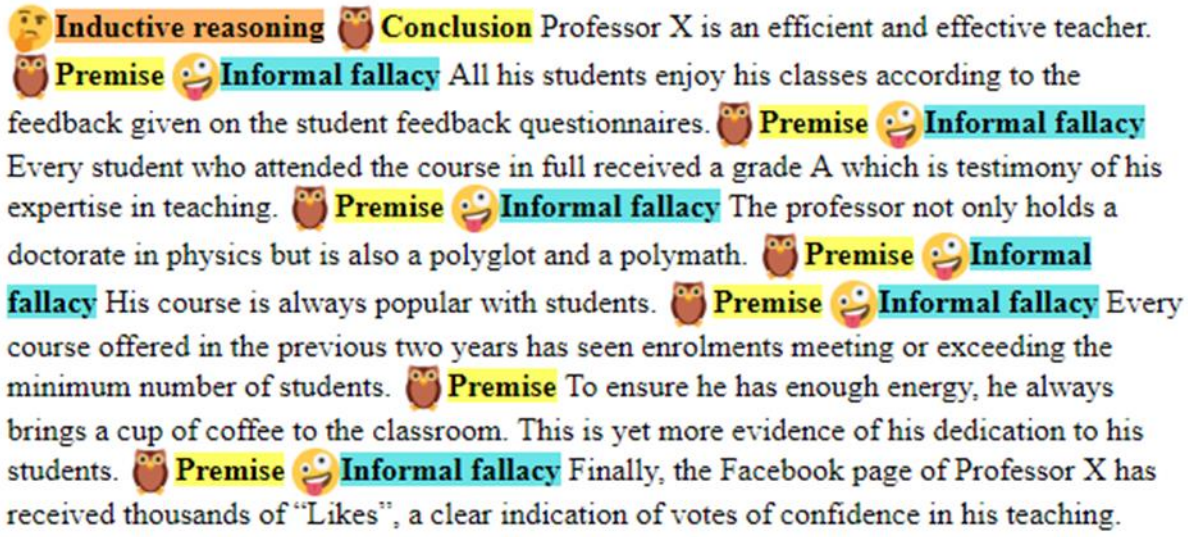

Figure 5. Output Generated by Argument Visualizer

5. Case Study

Forty-eight undergraduate students were registered for the critical reading course in the first quarter of the Japanese academic year. All enrolled students were Japanese nationals. Almost all were in their third year of studies and had full academic schedules. The corollary of this is that students tend to dedicate more of their self-study time to compulsory core computer science courses rather than language courses.

The course delivery was abruptly switched to fully online in response to the coronavirus crisis just before the first class. Video conferencing was not used, but students were encouraged to communicate directly with the teacher via discussion forums or chat on the LMS. Many students live together in dormitories on campus and so those students chose to work face-to-face. Students working in pairs or groups selected their preferred social network service (SNS) for communication. The official LMS provided discussion forums and a chat feature, but these were used far less than Line, the most popular messaging app in Japan.

A test-teach-retest approach was adopted. Should there be an increase in the mean scores when comparing the results of the pre- and post-tests, it can be deduced that there has been an improvement in the ability to critically analyze a text. If only a few students increase their scores, it could be argued that the increase may not be due to the course. Axiomatically, "correlation does not imply causality" (Kornbrot, 2005); but a lack of correlation may rule out causality. However, if many students increase their scores, the likelihood that the course is the primary reason increases. Additionally, since the course is so intensive that there is just a seven-week window between the pre- and post-tests, this also decreases the probability of the role other any confounding factors.

For both the pre-test and post-test, students critically evaluated an argument. In both cases the arguments were flawed for numerous reasons. Both texts were comparable in terms of the number of concepts to identify. Figure 6 shows the exact text given in the pre-test. The evaluations were submitted online via the official LMS.

> Professor X is an efficient and effective teacher. All his students enjoy his classes according to the feedback given on the student feedback questionnaires. Every student who attended the course in full received a grade A which is testimony of his expertise in teaching. The professor not only holds a doctorate in physics but is also a polyglot and a polymath. His course is always popular with students. Every course offered in the previous two years has seen enrolments meeting or exceeding the minimum number of students. To ensure he has enough energy, he always brings a cup of coffee to the classroom. This is yet more evidence of his dedication to his students. Finally, on the Facebook page of Professor X has received thousands of "likes", a clear indication of votes of confidence in his teaching.

Figure 6. Text Used for Pre-test

Forty-three out of four-eight students took both the pre-test and post-test. On the pre-test only three students (approx. 7%) were able to identify any fallacious reasoning in the pre-test and no students were able to name any specific fallacies. Forty students (approx. 93%) were convinced that Professor X is an efficient and effective teacher. None of the fallacies were mentioned. In fact, almost all submissions mentioned evidence in the text to support the conclusions. Students fell victim to appeal of popularity, red herring arguments, appeal of authority and misleading statistics. Thirty-five students (approx. 81%) argued that as the teacher is popular and classes are enjoyable, the teacher must be efficient and effective while five students did not substantiate their evaluation.

On the post-test one out of forty-three students (approx. 2.3%) incorrectly concluded that the conclusion was true and valid. The same student was unable to describe the argument using logical terminology or identify the presence of any fallacies. Forty-two students (approx. 97.7%), however, correctly concluded the text was fallacious and the conclusion was false. The accuracy and detail in the evaluation varied considerably with twelve students (approx. 28%) being able to label most of the fallacies present accuracy and describe the arguments using logical terminology. Thirty students (approx. 70%) identified the flaws in the argument but were unable to label them accurately. This may be an indicator of the difficulty to absorb the knowledge needed and learn how to apply that knowledge within such a tight timeframe. Most students in their third year, study between 10 and 15 credits in the first academic quarter and so only a small percentage of their total study time is dedicated to this elective course.

In the pre-test only 1/43 students were able to identify fallacious reasoning while in the post-test 40/43 students could do so. In the pre-test no students could use logical terminology to name the type of argument, reasoning or the fallacies while in the post-test 36/43 were able to use some logical terms to describe and evaluate the argument. There was a sea change in the ability of students to read critically. The initial naïve uncritical reading approach transformed over seven weeks into a more rigorous critical approach.

To sum up, forty-three students took pre- and post-tests in which they critically analyzed and annotated persuasive fallacious arguments. There was a substantial improvement between the pre- and post-test

scores, showing that explicit tuition of logic and critical thinking enhanced their ability to analyze and describe arguments.

6. Lessons Learned

Six lessons were learned from the development and delivery of this web-based critical reading course. Each of the lessons are detailed below.

Lesson 1: Cost-benefit calculation
The upfront time cost in terms of planning, preparation and creation of materials is high, and so it is essential to consider whether it is worthwhile to invest such time in course creation. If the course is only going to be delivered once for a small cohort of learners, cost-benefit is unlikely to be achieved.

Lesson 2: Course website simplifies transition to fully online delivery
Like many educational institutions, we were required to convert all courses to be delivered fully online with very little notification. It was an easy switch to transform a flipped learning course into fully online. The input activities were already online, and so most development time was dedicated to creating output activities and ways to encourage interaction with materials and between students. Extensive use was made of wikis, discussion rooms and chat forums.

Lesson 3: Benefits of quantifying course content
In terms of course approach, breaking the course content down into concepts to master was extremely time-consuming. However, despite this, the benefit far outweighed the effort. Because each concept has been identified and named, specific teaching materials and activities can be created to help students with each individual concept. Prior to the creation of the mastery list, both students and teacher were unaware of exactly how many concepts students were expected to learn.

Lesson 4: Importance of aligning aims, activities and assignment
During the early stage of development of the course, it became clear that the aims, activities and assignments were not always aligned. Over the course incremental changes were made to reduce the gaps. One way of ensuring the aims and activities relate to the assignment is by providing detailed assessment criteria. If the criteria do not relate to the aims, then the assignment may need revising.

Lesson 5: Multifarious pedagogic uses of digital artefacts
When students create a digital artefact (e.g. a text or video file) and give permission for its use, that artefact can serve many purposes. For example, a text containing a simple argument can be used as: (1) a model of an argument, (2) a practice activity for students to identify the elements with the argument, or (3) a practice activity for students to evaluate the cogency of soundness of the argument. If the digital artefacts contain logical or critical thinking errors, students can complete tasks, such as identifying, describing, explaining or correcting the errors.

Lesson 6: Adopting a standard file naming convention for digital submissions
With approximately 500 digital submissions, renaming files became a laborious task. Prescribing an easy-to-follow naming convention for all submissions is advised. Digital files were submitted via the LMS and so regardless of file name each submission is associated with its submitter. I choose to use a system which named the unit, content and language, e.g. 1_rainbow_jp This made repurposing and comparing artefacts more manageable.

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About the Author

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Pedagogical Integration Today for Language Teachers of Tomorrow

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Abstract: Digital tools and learning management systems have been incorporated at all educational levels. These tools allow teachers to transform their instructional activities, while giving learners the opportunity to engage with virtual communities. In the field of English language education, the use of technology-enhanced learning and diverse pedagogical practices continues to grow. Research has shown that integrating multimodality and technology can improve students' engagement and participation in their English language learning. However, some students can experience anxiety, disorientation, or misunderstanding when engaging with computer-assisted or digital-mediated learning. Language teachers have to consider the advantages as well as the disadvantages of using technology-integrated pedagogical practices. This paper discusses the growing presence of technology and multimodality in language classrooms and their impact on teachers' pedagogy in the Australian education context. How can ESL/EFL courses be designed to make effective use of these new ways of learning? The study sheds light on how pedagogical integration today may offer a way forward for language teachers of tomorrow.

Keywords: Critical media analysis, Teaching critical thinking, Language and digital world, Language teacher education and technology, Multiliteracies pedagogy

1. Introduction

The use of educational technologies first appeared as early as the 1960s, with drill-based exercises used mostly in a small number of universities. Later on, as computer laboratories became more widespread and common, Computer Assisted Language Learning (CALL) was introduced in educational institutions. CALL is now also used on a larger scale, moving in sync with today's society where almost all facets of life have become increasingly driven by technology. As a relatively new teaching trend used in Australian schools, digital-mediated pedagogical approaches and practices enable early-career modern language teachers to discover new potential and possible ways to teach English as a Second or Foreign Language (ESL/EFL) or as an Additional Language (EAL) at all educational levels.

While the shift to digitalised learning continues to increase, teachers too are transitioning from traditional teaching practices to multimodal pedagogical approaches that incorporate a wide variety of technology and mediums of learning into their lessons. As language educators, encouraging novice teachers to involve multimodal literacy instruction through a wide range of educational technologies in second language education should be embedded in course design, development, implementation, and evaluation. This paper describes how the author set out to design a language and technology unit as well as syllabus features for the Master of Education program in her home institution. It explores how

pedagogical principles and strategies using an adopted theoretical framework were integrated to scaffold learner engagement. It then continues with a discussion of the benefits and challenges that have arisen throughout the module evaluation process.

2. Study Context

This paper is situated in a postgraduate course on language and technology for domestic and international master's students of TESOL teacher education at the University of Newcastle (UON), Australia. The Master of Education program in TESOL was established in the School of Education at UON about twenty years ago. It has been innovated periodically during this time and continues to be delivered to this day. The program is designed for students who wish to become teachers of English as an international language. The current program consists of eight courses, covering four major areas: linguistic structure of English, second language acquisition, language curriculum and innovative teaching methods, and socio-cultural context of teaching and learning. To align with the ever-changing landscape of education and teacher education, the course underwent a re-design and was updated by the author, who has also been the course coordinator of this within the TESOL program since 2018.

In the field of second language education, the use of technology-enhanced learning and teaching continues to emerge. Research provides evidence that early intervention in multimodal learning and technology within classrooms can improve students' engagement in learning both literacy and technology (e.g., Hobbs, 2010; Sit & Guo, 2019; Tso, 2020). This shift has existing potential; however, the conceptual linkages between language and technology has to date drawn limited attention, particularly in the area of literacy pedagogical approaches and scaffolding strategies within contemporary English language teaching and learning. The nature of pedagogical work has become complicated further by teachers' personal values, beliefs, and the ways in which these interplay and compete with school goals and demands. Yet, the integration of digital literacies in language classrooms and the possibilities they offer in enhancing learners' learning outcomes remain overlooked. Whilst technology and multimodal learning is certainly the way of the future for education, ESL/EFL/EAL teachers are often faced with the predicament as to whether implementing these newer ways of learning is in fact beneficial or disadvantageous to their learners. This course was therefore designed with a particular focus on transformative learning and innovative teaching.

3. The Importance of Multimodality in Course Design

Course development goals are typically set up in order to address the pressing trends in the literature futures report for Australian local schools. The conceptual linkages between literacy and technology within the field of literacy education (Finger et al., 2007, p. 168) are summarised below in Table 1.

Table 1. Conceptualised Literacy Transformation

Linkages between Literacy & Technology	**Attributes and Practices**
Literacy as communication technology	Writing, the alphabet, typographic print and the "book" are actual communications technologies, dominant and with long traditions and practices. Literacy education itself is actual mentoring, in Vygotskian terms, in social practices with the technologies of writing
Literacy teaching via communication technology	New communication technologies, more specifically, computer-assisted, digital-mediated instructions, apps and weblearns, are being used to teach people print literacy and how to be literate
Multiliteracies with new communications technology	Life and work in contemporary cultures require one's ability to utilise a range of multimodal texts that engage simultaneous and blended uses of traditional print literacies and other kinds of representations.

This overview of conceptualised literacy transformation signals the importance of multimodality in course design and development. From literacy to multiliteracies, traditional print practices are no longer merely associated with how well a person reads and writes. Rather, modern messages are carried through multiple forms of meaning-making such as written language, visual presentations, sound and music effect, and other modes of transmedia resources (The New London Group, 2000). Siegel (2012) also defines multimodality as "the social practice of making meaning by combining multiple semiotic resources" (p. 671). Being literate today has evolved to include understanding how the different modes of literacy and communication intertwine to convey meaning and carry ideas to the masses, which is a contributing factor to the promotion of multimodality in the 21st century classroom (Sit & Guo, 2019; Tso, 2020). For instance, the new language syllabus for public schools in New South Wales (NSW), the most populous state in Australia, has mandated that each year, students must study examples of media, multimedia, and digital texts that are appropriate to their needs, interests, and abilities (NSW Department of Education and Communities, 2012). Language teachers and educational policy makers are encouraged to embrace multimodal instruction to prepare students for the workforce qualifications needed to thrive in this ever-changing world so as to keep up with the demands of an increasingly growing global community. In spite of this, there are no clear instructional guidelines on how multimodal pedagogy can be implemented effectively so that students may benefit from its use.

Today's young students are assumed to be digital natives. They have been raised in and with technology to the extent that they are familiar with it from a very early age. The National Association for the Education of Young Children (NAEYC) report states that the best classroom practices with "effective technology tools connect on-screen and off-screen activities with an emphasis on co-viewing and co-participation between adults and children and children and their peers" (p. 7). It further recommends that teachers build digital portfolios to record, document, and share a child's accomplishments and developmental progression with families through communication and social media tools and digital platforms. In NSW, mandatory curriculum requirements in relation to learning technologies also outlines those areas "where computational thinking can be applied within the existing NSW K–8 syllabuses… with suggested activities and links to online resources" (NESA, 2014, p. 1).

This language and technology course was thus designed to develop students' understanding of educational technology, its theoretical underpinnings, and its application/integration in ESL/EFL/EAL classrooms. Topics include: theoretical foundations for information communication technology (ICT) related practices, the existing multimodal approaches used in language teaching both within Australia and overseas, as well as current research findings and new trends in the use of information technology in language teaching and learning. The changing roles of ESL/EFL/EAL teachers in the technological environment of education are also discussed within the course.

4. Course Syllabus and Theoretical Framework

Students enrolled in the language and technology course are expected to integrate educational technologies into their learning and teaching contexts in their home countries. As the first official set of technology standards in ESL/EFL teaching and learning (Hubbard, 2009), the TESOL technology standards framework was adopted to help guide the design of the course syllabus whilst serving the following purposes for both teachers and students of English (see Table 2). The TESOL technology standards focus on how English language teachers and teacher educators can and should use technology in and out of the classroom and, as such, it is highly relevant for ESL/EFL/EAL settings and for those who are involved in on-campus, online, or blended teaching modes (TESOL International Association, 2008).

Table 2: TESOL Technology Standards (TESOL International Association, 2008, pp. 4–5)

For Teachers	For Students
• to know what is expected of them in terms of knowledge, skills, and curriculum implementation; • to prepare students in the effective use of technology for language learning and for	• to know what is expected of them in terms of technological knowledge and skills • to know what is expected in terms of appropriate patterns of technology use to assess students' technological knowledge and

digital literacy; • to assess students' technological knowledge and skills; • to provide activities and tasks that appropriately integrate the students' progress in meeting the standards while pursuing language learning objectives; • to serve as a springboard for ideas about creatively and effectively integrating technology into teaching.	skills; • to evaluate course options, when feasible, to decide which one's best support standards development.

In a nutshell, these standards provide the English language teaching community with an opportunity to clarify expectations regarding the integration of technology in the teaching and learning of English as a second language. As Hubbard (2009) suggests, the standard framework can:

- lead teachers to learn to use digital technology appropriately and effectively for language learning and ensure their students can do likewise;
- lay out a clear set of targets for judging technology competencies for language learning; and,
- motivate teacher educators and teacher education programs to integrate technology training and use it in their curricula (p. 7).

Student teachers are encouraged to familiarise themselves with the TESOL technology standards, which are utilised to navigate target setting throughout this course and beyond, as demonstrated in the below course syllabus.

Table 3. Course Syllabus

Key Themes	Key Contents	Success Criteria
Introduction to multiliteracy, CALL/ICT & new trends, and pressing issues	• Fundamental concepts of CALL/ICT, multiliteracies and multimodality; • The impact of involving multiliteracies and multimodal learning in school language curriculum;	Assignment 1: Literature review
Technologies, new literacies and skills	• TESOL technology standards and normalization; • A principled integration of technologies into the course design and development;	AT2: Case study
Implementation, application and evaluation	• Blended approaches and multiliteracies; • Design CALL lesson plans and programs and implement digital-mediated materials and activities.	AT3: ICT program demonstration

The 13-week course schedule entails weekly topics that cover the three key themes shown in Table 3, such as technological change and the future of CALL, multimodality in second language education, TESOL technology standards and normalizations, implementing transmedia in language education programs, integrating strategies for second language teacher education, assessing theories of evaluation for L2 learning media, lesson design, and ICT program demonstration. In particular, the assessment tasks are aligned with Hobbs's (2010, p.18) pedagogical digital and media literacy, which emphasizes five-part communication competencies involving a process of Access, Analyse and Evaluate, Create, Reflect and Act.

As the Common Core State Standards Initiative (2010) states, to prepare students for their college studies, future workforce training, and life in a technology-advanced society, students are encouraged to develop "the ability to gather, comprehend, evaluate, synthesize, report on, and create a high volume and extensive range of multimodal texts…The need to research and to consume and produce media is embedded into every element of today's curriculum" (p. 1). Highlighting the need to innovate teacher education programs, Hobbs (2010) notes "the importance of preparing future teachers to be skilled in digital and media literacy" (p. 18). This five-part process is considered fundamental to how we learn and communicate in the digital era and, for teacher educators, how we integrate strategies to support students' literacy development. These literacy practices are now part of learning across all key learning areas including second language as a subject area. To achieve the intended learning outcomes, the assessment task design also needs to be aligned with the pedagogical framework. Table 4 below shows the detailed descriptions and adaptations of this process model.

Table 4. Pedagogical framework adaptation for the course

Dimension of digital and media literacy	Essential competencies (p. 19)	Integration scaffolding strategies
Access	Finding and using media and technology tools skilfully and sharing appropriate and relevant information with others	Demonstrate and scaffold how to find, comprehend and use symbolic resources
Analyse & Evaluate	Comprehending messages and using critical thinking to analyse message quality, veracity, credibility, and point of view, while considering potential effects or consequences of messages	Develop capacity to analyse messages and evaluate how they are effective for use
	Assessment task 1 (AT1) Literature review	
Create	Composing or generating content using creativity and confidence in self-expression, with awareness of purpose, audience, and composition techniques	Develop capacity to create content in various forms with new digital tools and educational technologies; to express/communicate new literacies in multiple modes
Reflect	Applying social responsibility and ethical principles to one's own identity and lived experience, communication behavior and conduct	Encourage to reflect on one's own conduct/practice; interpret multi-perspective thinking and consider about helpful strategies to support students' new ways of literacy development
	Assessment task 2 (AT2) Case study	
Act	Working individually and collaboratively to share knowledge and solve problems in the family, the workplace, and the community, and participating as a member of a community at local, regional, national, and international levels	Encourage to connect the culture and classroom to the actual teaching and learning environments
	Assessment task 3 (AT3) ICT program demonstration	

Curriculum guidelines, including those developed for the Australian context (Australian Curriculum, Assessment and Reporting Authority [ACARA], 2009-10), specify that teachers must support their students' interpretation and creation of multimodal texts. However, English subject curriculum guidelines are yet to provide a detailed metalanguage that supports teacher and student discussion of the meaning-making dimensions of multimodal texts. Theoretical work on the development of multimodal metalanguage is in its early stages, lacking ready application for use in diverse classroom contexts. An

appropriate framework can help teachers add depth and breadth to teaching and learning about multimodal meanings through development of a metalanguage.

5. Course Assessment

As shown above in Table 4, this course consists of three assessment tasks (AT) which were developed using Hobbs's (2010) pedagogical framework for digital and media literacies. Assessment task 1 (a 1,500-word literature review) is aligned with the Access, Analyse, and Evaluate dimensions of the framework. It serves the dual purpose: (1) to assess students' ability to access literature/resources that demonstrate their understanding of the development of CALL and the impact of involving multimodal learning in school language curriculum; and (2) to assess students' critical literacy and synthesis skills. To do so, students are required to: (1) choose one of the teaching areas of ESL/EFL/EAL such as listening, speaking, reading, and writing to review; (2) choose at least five references to summarise how CALL/ICT is used in the chosen teaching area; (3) analyse and discuss the main ideas of those references; and (4) provide a critical commentary on the use of CALL/ICT in teaching ESL/EFL/EAL and evaluate the impact that multimodality has had on English literacy development. The assessment criteria cover the following competencies: (1) ability to identify and access CALL/ICT-related resources associated with the instruction of one macro-skill; (2) ability to research widely and critically; (3) ability to analyse and evaluate key issues related to the implementation of CALL/ICT to ESL/EFL teaching; and (4) academic literacy requirements. Below is an example which provides a visual representation of the scaffolding design (Figure 1).

The example shown in Figure 1 demonstrates how "reading" now requires a different set of literacy skills in the context of technology and digital media. Walsh (2012), who examined digital and multimodal learning in an English language classroom, has discussed how the requirements of traditional reading are different to those involving digital and multimodal texts. Below is a clickable Behind the News (BTN) website image (Figure 2), which provides an interactive example of the types of digital texts that can be used to challenge students' digital literacy skills. This is a popular ESL/EAL resource recommended by language educators in the Australian educational context. Browsing the web page, students shall discover and analyse how the visuals work with the text to create meaning for the viewer.

Figure 2. BTN Interactive Example of the Types of Digital Texts
(NSW Department of Education and Communities, 2012, p. 10)

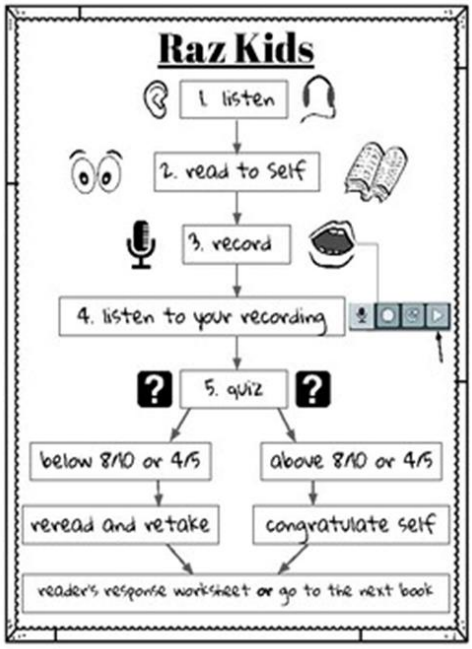
Students can then consider how their skills and understandings might be applied to reading or how digital literacy texts use different conventions. Visual literacy, for instance, requires "more than the ability to decode images (what images mean)" as well as the "ability to analyse the power of the image and how of its meaning in its particular context" (Johnson, 2000, p. 13). For example, the reviewed four resources model, which was originally developed by Freebody and Luke (1990) and has been incorporated into the literacy teaching toolkit in Australia (Victoria State Government Education and Training, 2018), enables students to become a text decoder (break the code of texts), text participant (participate in the meaning of text), text user (use texts functionally), and text analyst (critically analyse and transform texts). Another theoretical model discussed by Serafini (2012) is also used to support students' literacy development. She encourages teachers today to play four important roles to guide their students. These are navigator (how readers interact with multimedia texts), interpreter (how readers understand what is written by the author or depicted by the artist), designer (how meanings are constructed from what is depicted or represented; how readers design the way the text is read and construct a unique experience), and interrogator (how readers interrogate what is read and viewed in relation to historical and cultural contexts to comprehend its meaning). By doing this task, teacher trainees have the opportunity to: understand that every day we encounter multimodal texts in many forms; analyse the teaching of multimodal texts, which is a different process from the reading of traditional print-based texts; and appropriately evaluate responses to the text.

Assessment task 2 (a 2000-word case study/problem-based learning report) is concerned with the Create and Reflect dimensions of digital and media literacies. It serves the following purpose: (1) to assess students' knowledge and skills using CALL/ICT-related practices; (2) to assess students' critical and creative thinking skills of how to promote the application of CALL/ICT in second language teaching and learning; and (3) academic literacy requirements. This assignment consists of two parts. The first part is to develop a case study on a school or university in their home country. The second part is to write a proposal for promoting CALL/ICT in that school or institution.

To do so, students need to choose a school or an institution in Australia or overseas. This school or institution can be a place where they have learned or taught ESL/EFL/EAL (if not, another second language can be opted). The case study or scenario analysis report should include: (1) background information about the selected school or institution; (2) the school or institution's current usage of CALL/ICT in language teaching; and (3) any major issues that currently impact on the promotion and use of CALL/ICT (e.g., educational technologies, technology support, teachers' computer literacy, students' ICT competence, etc.). Based on the report, students are encouraged to write a proposal to the school or institution, making a suggestion of CALL/ICT use to support and improve current ESL/EFL/LOTE (Language Other Than English) teaching. They need to use the learned theory and rationale to justify their proposals and support their arguments in a clear and convincing way. The proposal should include a plan of how to use some CALL/ICT programs they already know or have been using and wish to recommend to the school or institution for their consideration. The assessment criteria are as follows: (1) ability to source useful CALL/ICT resources and discuss the critical application of these resources to teaching; (2) ability to research widely and critically, presenting strengths and weaknesses of these resources and possible modifications; and (3) demonstrate academic literacy requirements. Figure 2 is a representative scaffolding example.

Figure 2. Interactive E-library Raz-Kids Program for Online Teaching and Learning

Raz-Kids, a comprehensive leveled reading resource for primary students, is an awarding-wining teaching product with hundreds of eBooks offered at 29 different levels of reading difficulty. Kids are motivated to engage with their leveled text and have access to an interactive learning portal in online and mobile formats. This teaching resource can be used either in the class or at home with a pack of scaffolding strategies to encourage students to access/listen to books, to read at their own pace, to record themselves reading, and to send the recording to teachers for assessment. Students then complete a corresponding e-quiz to test their reading comprehension and determine future instruction needs. Once students have read ten or more of the leveled eBooks and passed the assigned corresponding e-quizzes, they advance onto the next reading level where they have access to lengthier and more difficult texts (Learning A-Z, 2020). Here are proposed suggestions from teachers to help integrate Raz-Plus into the English language classroom:



Strategies to enhance both receptive and productive language skill

1. Listen to a favourite, right leveled e-book
2. Read-aloud the story online
3. Record students themselves reading a book online or from electronic devices
4. Teachers assess recordings to determine student accuracy and readiness to move to the next level
5. Students complete the corresponding e-quizzes to check reading comprehension. Or for a challenge task, students are encouraged to write/dictate the high frequency words, drill sentence pattern for practice.

Figure 3. Strategies to Enhance Both Receptive and Productive Language Skills

Assessment task 3 (a 2,000-word ICT program demonstration/presentation) reflects the final Act dimension of the pedagogical integration framework. It serves the following purposes: (1) to encourage students to look more closely at the existing CALL/ICT for second language teaching and learning; (2) to assess students' ability in analysing and evaluating CALL/ICT application; and (3) to assess students' oral and written ability to show how to use ICT applications. This assignment consists of two parts. The first part is to examine students' skills to establish a CALL/ICT resource profile. The second part is to check their ability to demonstrate the use of a CALL/ICT program. The assessment criteria are as follows: (1) apply key theories regarding CALL to the chosen context; (2) describe the challenges and benefits of CALL implementation in the chosen context; and (3) demonstrate academic fluency.

For the first part of the assessment task, students need to identify five resources that can be used for computer-assisted language learning. These can be, for example, websites, learning software, or online language courses. Students are required to describe each item and justify why these resources are useful for ESL/ EFL/EAL teaching and learning. Using a variety of literature, this essay covers the advantages and disadvantages of multimodal teaching and technology use in the ESL/EFL/EAL classroom and explains how they impact on pedagogical practice and the learning process for students. Figure 4 provides a representative scaffolding example.

Name of the Digital Lesson Resources	Advantages of using this resource	Limitations of using this resource	How it works to support student literacy development/competencies
Kahoot	• **user-friendly and promotes engagement/motivation** This website provides an online platform for teachers to create quizzes, surveys and discussions in any subject areas (Mu & Paparas, 2015). It also engages students to learn in a more flexible mode. Students can answer questions through a variety of devices (i.e. mobile phones and laptops). There are differentiated colours, shapes and music for students' enjoyment when responding to answers (Afreen, 2014). This web program is one of the successful forms of incorporating multimodal texts to engage learners to learn. • **Effective feedback and positive competition** It can encourage participants to compete against each other in a pleasant manner. Top responders for each question are revealed and the overall winner(s) will be displayed at the end of the Kahoot session without revealing students' identities. This advantage is consistent with the finding by Burguillo (2010) that the majority of students can be motivated by competition. "The suspenseful music also adds to the competitive mood of the game, which is preferred by most students" (Mu & Paparas, 2015, p.6). Therefore, the use of online games and completion can be considered to successfully stimulate students' motivation.	• **Internet-based or wife access** A successful game-based online activity is greatly dependent on internet or access (Alacena, Matthews & Matthews, 2015). Students cannot join the Kahoot session without internet. • **Competitiveness** Since Kahoot is competitive, students may be put off. The major concern about using Kahoot as formative assessment tool is that it could not simplify complex subjects (Ismail & Mohammad, 2017). Therefore, those who find the subject challenging might not be interested to participate.	Research shows that Kahoot is one of the emerging game-based learning platforms frequently used in education institutions. It is a real-time, freely available web program that has gained great popularity and wide acceptance with more than 30 million global users (e.g., Afreen, 2014; Mu & Paparas, 2015; Ismail & Mohammad, 2017). As a customizable web-program that integrates various visuals like video and photography, Kahoot can be used as an alternative to textbook-based reading or listening activities. For example, teachers can encourage students to read/listen to a portion of a text and ask them a question in Kahoot, get students to support the correct answer with a passage from the text, and then ask them why incorrect answers are incorrect.
2nd resource	•	•	

Figure 4. Media and Digital Teaching and Learning Resource Portfolio

The second part requires students to write about how they would use a selected CALL/ICT program. Students choose one item from their resource profile for a 15-minute demonstration/presentation, in which they are required to evaluate the advantages and disadvantages of using this item in teaching, specifically in an ESL/EFL/EAL context.

Part 2 Demonstration

As a digital resource, Kahoot is selected to be adapted to English as an Additional Language or Dialect (EAL/D) for designing new literacy teaching and learning activities and two activities are designed through this resource.

The activities are linked to EAL/D Stage 6 syllabus outcome: Reading and Responding. Level 2 Language and Cultural Understandings: 2.6 shows understandings of differences between narrative and expository texts which relate to own knowledge of experiences; and Level 2 Language Structure and Features: 2.7 Reads texts using knowledge of basic convention of print, a developing sight and oral vocabulary and a developing knowledge of structures of English (BOSTES, 2016). The activities will involve students to read a text "Sailing around the world" first and then get students to join Kahoot quizzes. The aim of the lesson is to teach students past tense as a grammatical feature and vocabulary relevant to the type of text when responding to and composing texts. The expected learning outcome will include: 1) Explore differences in words that represent happenings and state – verbs; and 2) forms of past tense verbs.

Activity One is created via Kahoot. For more details, please visit the Kahoot link [insert the link for quizzes]

Activity two, please visit the kahoot link [insert the link].

Figure 5. Sample Demonstration Guide

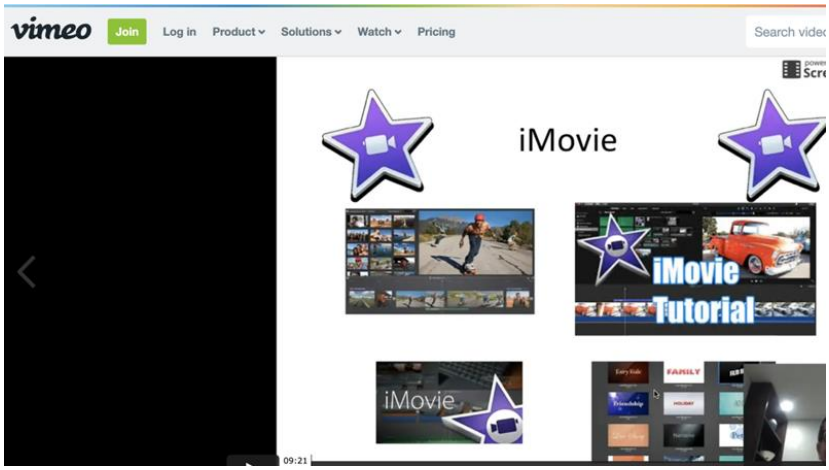


Figure 6. A Screencastify Presentation Describing the Use of iMovie in an ESL Context

Figure 6 provides an example of an excellent screencastify presentation (with the presenter's ESL students who volunteered to participate in this film) that uses a range of multimodal texts, such as visual, audio, gestural and spatial modes. The presenter used the iMovie editing suite to create a movie of Advanced General English classes focusing on a unit topic, 'Celebrity and Advertising.' Collaborating with the presenter, they created a learning environment with three Stations during which students were filmed:

- Station 1 – Hollywood Red Carpet. Students dressed as Hollywood superstars and walked the red carpet. Students reacted to media questions and photographs.
- Station 2 – Rock Star interviews. Students dressed as rock stars and were interviewed by media.
- Station 3 – Imaginatising. Students were given an unrelated piece of equipment and imagined it to be a product they had to advertise. They wrote a script and acted out a television commercial while being filmed.

The students' peers enjoyed watching the iMovie video example, which was uploaded onto the Vimeo website. These digital resources provide students with the opportunity to gain an understanding of appropriate technologically mediated resource design. They also allow students to explore classroom opportunities for collaboration and problem solving. This example successfully demonstrates an innovative way of using a resource with highly engaging examples.

6. Module Evaluation

End-of-course evaluation is conducted routinely. By 2020, of the total number of teacher students enrolled in the Master's degree offered by the School of Education, 32 had selected this language and technology unit as part of their TESOL program. In this section, two sets of course evaluations are presented through student feedback on courses (SFC) from 2018 to 2019 and Course Evaluation Survey (CES) in 2020.

On the one hand, two SFC questionnaires were organised for around 22 students (11 weblearn and 11 on-campus participants) enrolled in this language and technology course at postgraduate level from 2018-2019. 14 students returned the survey, giving a response rate of 63.6%. The survey items covered a range of topics including students' expectations about the course, teacher support, learning and teaching activity favourability, course structure, resource organisation, learning outcomes, challenges, assessment task and assessment criteria, feedback and relevance to the course content, as well as general satisfaction and evaluation regarding the course (see Table 4 for details).

Table 4. Student Feedback Survey Items

Question	**Detail**
Expectations	I was clearly informed about the learning objectives of this course.
Support	The teaching staff were available to assist me with my learning.
Learning Activities	The activities of this course motivated me to learn.
Teaching	The quality of teaching in this course helped me achieve the learning objectives.
Structure	The various components of this course were linked in ways that supported my learning.
Organisation	Overall, this course was well organized.
Resources	The resources for this course helped me achieve the learning objectives.
Outcomes	My knowledge and skills have developed as a result of studying this course.
Challenge	This course challenged me in ways that extended my learning.
Assessment	The assessment items were clearly related to the learning objectives.
Criteria	The criteria for all assessment items were made clear.
Feedback	I received feedback that was helpful to my learning.
Relevance	I am able to apply my learning from this course to my wider goals.
Satisfaction	Overall, I am satisfied with the quality of this course.
Self Evaluation	I made a consistent effort to succeed in this course.

Students were encouraged to respond to the questionnaire by rating their level of disagreement or agreement on a five-point scale. The possible responses are: 1 = strongly disagree, 2 = disagree, 3 =

uncertain, 4 = agree, 5 = strongly agree. The mean scores range from 1 to 5. A higher score represents a more positive outcome. Below are the SFC results (see Tables 5 and 6 and Figures 7 and 8):

Table 5. SFC Weblearn Results by Term

Question	Mean		Variation
	Semester 2, 2019	Semester 2, 2017	
Expectations	5.00	5.00	→ 0.00
Support	5.00	5.00	→ 0.00
Learning Activities	5.00	4.00	↑ 1.00
Teaching	5.00	4.50	↑ 0.50
Structure	5.00	5.00	→ 0.00
Organisation	5.00	5.00	→ 0.00
Resources	5.00	3.50	↑ 1.50
Outcomes	5.00	4.50	↑ 0.50
Challenge	5.00	4.50	↑ 0.50
Assessment	5.00	5.00	→ 0.00
Criteria	5.00	5.00	→ 0.00
Feedback	5.00	5.00	→ 0.00
Relevance	5.00	4.50	↑ 0.50
Satisfaction	5.00	4.50	↑ 0.50
Self Evaluation	5.00	5.00	→ 0.00

Note. Variation indicators:
↑ Mean (Semester 2, 2019) minus Mean (Semester 2, 2017) > 0
→ Mean (Semester 2, 2019) minus Mean (Semester 2, 2017) = 0

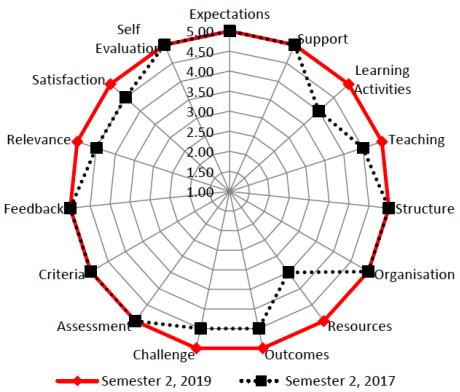


Figure 7. SFC Weblearn Results (Mean) by Term

Table 6. SFC On-campus Results by Term

Question	Mean		Variation
	Semester 2, 2019	Semester 2, 2017	
Expectations	5.00	5.00	→ 0.00
Support	5.00	5.00	→ 0.00
Learning Activities	5.00	4.86	↑ 0.14
Teaching	5.00	4.86	↑ 0.14
Structure	5.00	4.57	↑ 0.43
Organisation	5.00	4.71	↑ 0.29
Resources	5.00	4.57	↑ 0.43
Outcomes	5.00	4.71	↑ 0.29
Challenge	5.00	4.29	↑ 0.71
Assessment	5.00	5.00	→ 0.00
Criteria	5.00	5.00	→ 0.00
Feedback	5.00	5.00	→ 0.00
Relevance	5.00	4.86	↑ 0.14
Satisfaction	5.00	4.71	↑ 0.29
Self Evaluation	5.00	4.86	↑ 0.14

Note. Variation indicators:
↑ Mean (Semester 2, 2019) minus Mean (Semester 2, 2017) > 0
→ Mean (Semester 2, 2019) minus Mean (Semester 2, 2017) = 0

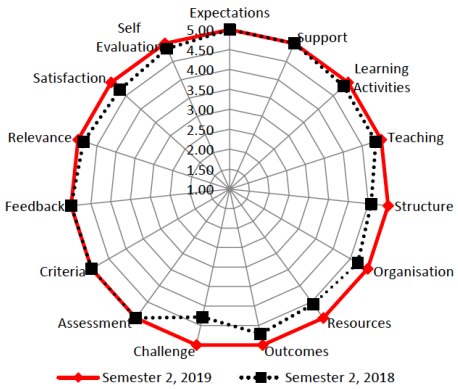


Figure 8. SFC On-campus Results (Mean) by Term

Qualitative feedback in the SFC was requested under 'Course Comments' as a separate category. If no comments were provided, no feedback will appear in this SFC report. Here are a few representative comments to the question, "Do you have any further comments about the teaching practice of this teacher?" which were given by three students who were enrolled in the course in 2018 and 2019:

- I believe that teachers like [the course coordinator] are like a blessing for international students. (2018)
- YES, She is a very cooperative teacher and always teaches with interesting methods, which is very helpful for me. She is a very helpful teacher. She explains everything very clearly to students. (2018)
- This teacher is very upfront. Make the lesson interesting and also very interactive. It can be completed online but you do gain more understanding face to face. It can be

> completed online as she makes things very easy to understand. Doesn't take it for granted that people have knowledge over the subject so it helps greatly to achieve the outcome that everyone wants. I would highly recommend this teacher for a acknowledge of their helpful ability to other students. I have had 2 subjects with this teacher and I am at ease with my learning as I know I don't have to worry about not having enough information. I receive the information I need to understand the topic and it adds me in my study and gives me inspiration to follow more in this area to know more and become better in this topic so I can relate it to my field." (2019)

On the other hand, due to the global pandemic in 2020, students enrolled both on-campus and online in 2020 were grouped to attend real-time lectures and tutorials via Zoom or Blackboard Collaborate. The course experience survey (CES) was firstly used to replace SFC in the official module evaluation. The five point likert scale including 1 = strongly disagree, 2 = disagree, 3 = uncertain, 4 = agree, 5 = strongly agree are used to provide the mean scores range from 1 to 5. A higher score represents a more positive outcome. In total 7 students answered the survey and the response rate was 70%. Below are the CFS results (see Figures 9 and 10):

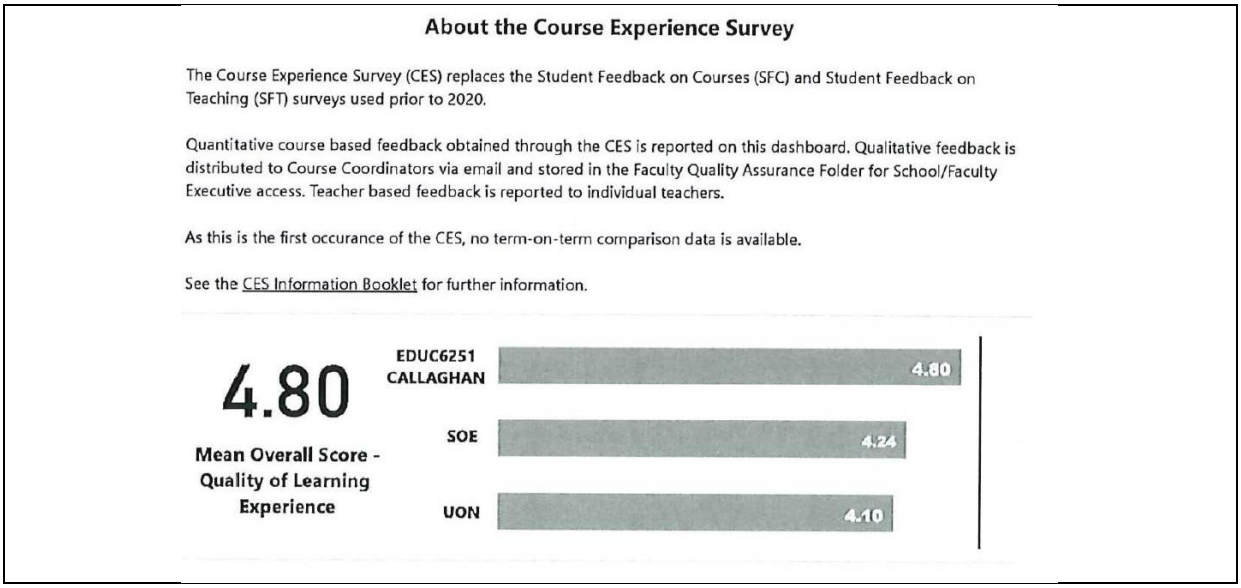


Figure 9. CFS On-campus Results (Mean) by Term

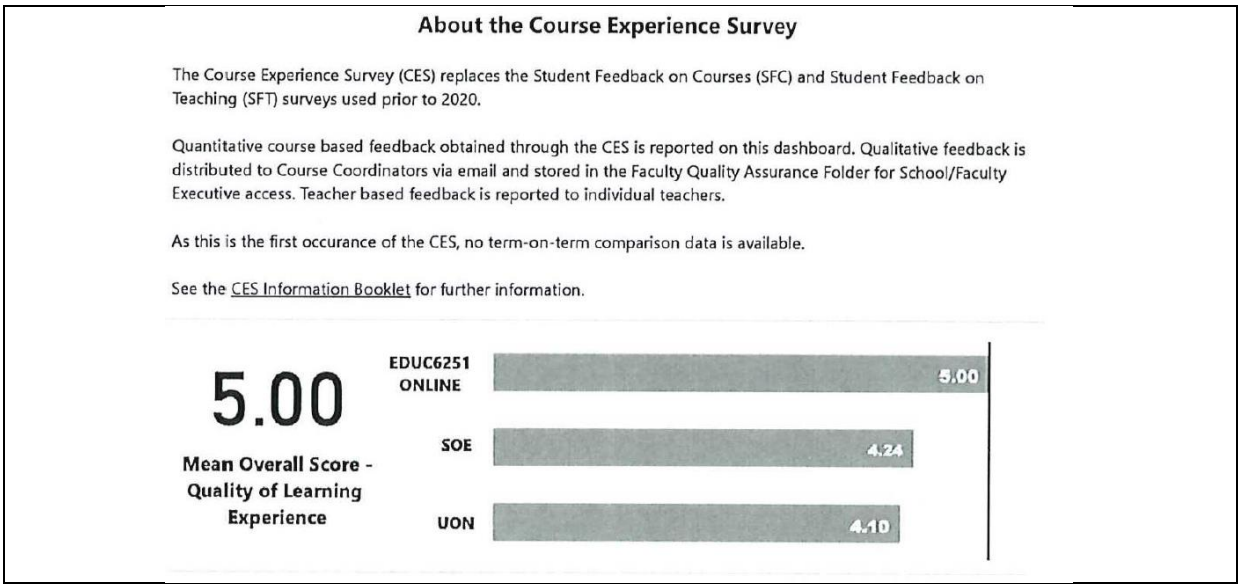


Figure 10. CES Online Results (Mean) by Term

In addition to the CES quantitative results, the qualitative course evaluation was also carried out through online student feedback via Survey Monkey. Ten students enrolled in this course volunteered to complete the additional online short-answer questions: (1) What is your general feeling about the ever-changing educational change in terms of multimodal learning modes used to enhance ESL/EFL/EAL literacies? (2) What kinds of benefits and/or challenges do you see for today's students in English language education, given such educational change? (3) What are some take-away messages regarding the use of media literacy and educational technologies in English language education, e.g., the five-part process model for digital and media literacy that emphasizes five communication competencies through Access, Analyse & Evaluate, Create, Reflect, and Act (Hobbs, 2010), that you have learnt from this course? A selection of typical comments from the 2020 cohort is provided below.

1) General feelings about multimodal learning mode in the changing education context:

More than half of the students expressed they had a great learning experience when adapting to a new changing teaching environment. It supports diverse learning styles by stimulating the functions of learners' both left and right brain with audio and visual aids. In this way it engages learners and captures their attention and critical thinking. For example:

- Multimodal learning mode is the popular phenomenon in ESL/EFL literacies nowadays which I think should be researched and integrated widely in classroom.
- I think introducing multi-media texts, and computer-assisted resources reflects what is happening in the real-life contexts of our students, so it's vital to experience
- I like this course because it is very necessary to adapt to a new changing teaching environment.

2) Benefits and/or challenges in such an educational change for today's ESL/EFL/EAL students:

Students stated that benefits included (but were not limited to) students' active learning and more open access to global educational, especially with Massive Open Online Courses (MOOCs) and even Small Private Online Course (SPOCS). Multimodal learning together with the appropriate use of educational technologies can enhance students' language literacy. More student autonomy is enhanced and the role of an active shaper is formed. Here are some of the views most commonly expressed by the students:

- I am generally excited about multimodal learning and the use of technology in language education because there are so many resources that can enhance ESL literacy learning. The use of technology has really engaged a lot of students and given them more ways to demonstrate their understanding and assist their comprehension…
- …the students are given the opportunity to become "active shapers" of their own knowledge which allows them to have more freedom within a class…the incorporation of technology also allows for more student autonomy as teachers and students both become learners, allowing for students to have more of an input in what and how they learn.

However, challenges were also identified. One of these is that of teachers' roles, which students felt needed to change in order to adapt to emerging technology. The transformation from pedagogy to technology may challenge teachers who are not very tech-savvy. Questions such as how to stay up to date with new technologies, development of critical literacy skills, and how to address educational inequality were mentioned as follows:

- The perils of students using inappropriate or inauthentic resources, I believe that facilitating the expansion of students' critical literacy is key here.
- Within the classroom, the challenge is having one-to-one device access for students when teachers would like to use technology (as they have to share the resources around the school and they aren't always available). At home, there have been issues with students not even having devices to use or there are siblings also needing to share technology (the family may just have a smartphone or one computer, or their internet can only handle one device on a video conference). Another challenge has been getting

EAL/D students up to speed in regards to digital literacy in a short period of time just to access resources or simply participate in online learning.

3) Take-away messages from the integrated pedagogical model:
The feedback was positive as students indicated that they are willing/have adapted to the pedagogical integration strategies shared in the course; this in itself can be considered as one of the most valuable parts of the course. The integrated model empowers students to process printed materials and other symbolic codes of images and sounds. Based on student feedback, it can be seen as a guide for teachers of 'tomorrow.' Typical comments from the students included:

- My take-away message for media literacy in English language education is the tool to support evaluation of multimedia learning resources of Mhouti et al. (2013) which focuses on 4 main dimensions academic, pedagogical, didactic, and technical quality.
- It aligns with the UNESCO ICT Competency Framework for Teachers (https://www.oercommons.org/hubs/UNESCO). By applying Hobbs' model, teachers can control their quality of their teaching process in the cycle of preparation-delivery-reflection. Reflection is believed to empower more critical thinking. Thank you very much for your sharing with us that model.
- I learn how to access information, analyse it during the group discussion, create my own, as well as reflect it by having feedback from the lecturer and friends. I also learn how to act what I have learnt in my future class.
- I think the most valuable part of the course was the introduction of a range of resources that we will be able to take to the classroom.
- Very effective and I love using this model as a good guide to my work.

7. Discussion and Future Directions

Having gauged the course module design, syllabus features, assessment tasks, pedagogical integration approaches and strategies, and module evaluation, it is necessary to consider these emerging points: (1) the impact that growing educational technologies have had on TESOL syllabus design and materials development; (2) the effect of the multimodal/digital revolution on the processes of second language learning; and (3) the identification of good pedagogical practices of integrating CALL/ICT into ESL/EFL/EAL teaching and learning activities.

Whilst technology and multimodal learning is certainly the way of the future for education, language teachers now face the predicament as to whether implementing these newer ways of learning is in fact beneficial or disadvantageous to learners. For successful incorporation of educational technologies within multimodal classrooms, a multidisciplinary approach is vital to gain an understanding of the social, cognitive, neurological, cultural, and linguistic variables required for successful multimodal discourse (Farías et al., 2007). With the advent of technology, the internet has allowed students to become more in control of their learning. As a result, there has been a dramatic shift in teacher-student roles within the teaching and learning space. The shift from students as passive recipients of knowledge to active creators of knowledge is a significant factor that has the potential to make teachers who use more traditional pedagogies nervous. In this contemporary context, teachers must act as facilitators of learning and guide their students on the most effective paths of learning, rather than seeing themselves as front of all knowledge.

Teachers need to ensure they stay up to date with new technologies as this assists students in developing critical skills that allow them to use ICT to its maximum potential, and in order for this to be successful, teachers need to train their students to do this. Echoed by Nguyen (2008), blended teaching and/or purely online course delivery has dramatically influenced foreign languages and the dynamics of the syllabus; it has the potential to change the role of the teacher and that of students. The use of multimodal technology within a language classroom allows for a small amount of power and authority to be transferred over to the learner. Whilst this is a very effective way of teaching, it is only effective when the students have a strong grasp on how to use the proposed technology. Therefore, teachers are encouraged to assist interaction among students through an 'access and motivation' stage where

guidance and navigation of the specific technical tool are provided in course syllabus design and material development (Paxon, 2003).

Second, language teachers and educators should realise that while most students would have a language teacher education background due to their TESOL specialisation, there is still a need to consider those who have had no exposure to the TESOL field and who have no prior language background other than English. These teacher trainees unfamiliar with the field of TESOL, prior to enrolment, managed to learn new terminologies and the contexts behind them. For example, key words and theories such as literacies in multimodal discourse, ICT-related teaching principles and design, and the ways they are implemented into the curriculum and methods would be new for them. However, due to the impact of the multimodal/digital revolution on the processes of second language learning, students would gather that there have been great advances of technology infused into the teaching practice of ESL/EFL/EAL. When engaging with CALL/ICT, multimodal learning should be understood as not only using technology itself, but as encouraging students to be more active shapers of social change and designers of futurists (Levy & Moore, 2017). As Salmon (2000) suggests, teachers should be encouraged to facilitate students to learn through 'socialization and information exchange' to enhance their participation and engagement. Online discussion forums or breakout room discussions can be organised with defined topics or unstructured procedures allowing students to freely express their issues and ideas. However, "discussions whether they are structured or unstructured will not automatically happen. Students unfamiliar with their classmates and new to the online environment will need some assistance before being able to contribute in a meaningful way" (Macquarie University, 2013, p. 16). After all, literacy education itself is actual mentoring in social practices with the technologies of listening, reading, speaking, and writing.

In relation to the perils of students using inappropriate or inauthentic resources, it is key for teachers to consider facilitating the expansion of students' critical literacy. Most contemporary definitions of literacy include multiple literacies and involve dynamic processes. One of the key skills students can develop in Australian schools is that of critical literacy, so that they are themselves able to assess the appropriateness and authenticity of a source. This is where the socio-cultural pillar of language teaching also becomes essential. Students must understand the lenses through which they see resources and also the lenses through which resources were created. Whilst the internet provides us with endless realia, it also therefore provides us with endless opportunities to be critical in our assessment of each new resource. As teachers of language, we can embrace such opportunities to develop critical literacy in our students.

Third, ever-evolving technological advances have impacted school communities dramatically, and the modes of delivering content now include altered versions of cognitive and social interactions through digital online communication (Farías et al., 2007). In every area of schooling, the growing presence of technology and multimodal learning is having a large impact on pedagogy, as well as on how classes operate in order to implement these new ways of learning. Using ICT is not merely for the sake of fun, it should be used for promoting all the possible ways of engaging students to learn in this digital era. The ICT world has most definitely redefined and innovated the way in which language is taught and communicated. An initial/on-going information technology teacher and student training ensures the required level of computer literacy. One issue that will arise is the level of computer literacy of both teachers and students alike. This is particularly important to TESOL because many English learners will be coming from education backgrounds that do not emphasise computer literacy to the degree that we take for granted in Australia.

The students' ICT program demonstrations show that they have achieved a great deal with the use of learned/shared apps, websites, online language educational resources, and so on, which allow them to learn and achieve at their own pace under no pressure whatsoever. For instance, resources such as Kahoot!, Raz-Kids, Duolingo, Busuu, and Babbel also provide instantaneous results, corrections, and explanations from native speakers, allowing for self-teaching and constructivism. This incorporated into their current or future TESOL syllabus greatly modifies the teacher-student dynamic. Salmon (2000) also suggests that teachers act more like a guiding mentor, rather than an authority figure when supporting students' 'knowledge construction' and 'development' stage. This liberates the student and

allows them to perceive and nurture their own knowledge acquisition and, in turn, creates critical thinking. Being mentored through the learning process rather than being told how one must progress will appeal to many language learners.

8. Conclusion

This paper discusses the growing presence of educational technology and multimodality in language classrooms and their impact on teachers' pedagogy, and explores scaffolding strategies to help design effective English language courses in an ESL/EFL/EAL environment. Educational technology in a multimodality discourse can offer the potential to greatly enhance the student learning engagement in an ESL setting. By reviewing the language and technology module, it can be concluded that there are many benefits for students and teachers when incorporating multimodal and technological practices into pedagogy. Though technology and multimodal learning certainly have their benefits, implementing these into pedagogical practice is not without its challenges. Nevertheless, with carefully designed scaffolding resources and strategies to facilitate student learning, teachers will be able to achieve the expected learning outcomes in a variety of areas. Information technology application cannot be ignored and neither can computer literacy. This study has shed light on how pedagogical integration today may offer a way forward for language teachers of tomorrow.

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Teaching Creatively: Case Studies with Synchronous English, Mathematics and Music Learning in a Summer Programme

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Abstract: With the rise of online schooling amid the COVID-19 pandemic since 2020, educators shift from face-to-face teaching to online learning environments. The teaching materials have been converted into an online format to support students' home learning with diversified e-learning strategies creatively. During the class suspension period, attending after-school activities becomes a life of luxury to students, which may constitute non-academic barriers to learning, especially social needs and mental health. Thus, this article overviews a case study with the use of social media tools among primary teachers and students. Based on our multiple case analysis, this research analyzed the data collected from semi-structured interviews, online lesson observations, together with artefacts including lesson plans and teaching and learning materials, with 3 teachers from various disciplines such as language, mathematics and music from an extracurricular activity (ECA) project involving around thirty-nine P1-P3 low achievers for one summer. These teachers' experience and perceptions towards transforming the ECA activities from offline to online are investigated. It is found that teachers have adopted diversified video-conferencing tools, gamification and cognitive annotation tools to build an online face-to-face environment. We suggest that these creative teaching practices in social media and other blended technologies in an informal setting have potential to help students strike a balance between their academic and non-academic life even after school resumption.

Keywords: COVID-19, extracurricular activities, social media, blended, gamification

1. Introduction and Background

When the COVID-19 pandemic first hit the education communities, educators were forced to shift their traditional schooling and delivery method to an online mode creatively. It is widely agreed that the prolonged class suspension from February to May 2020 constitute potential threats to students' physical, mental and social health without after-school activities (Crawford et al., 2020; Kong, 2020). In fact, what happened to student interactions and learning outcomes in a primary school classroom during the above-mentioned period?

Invited by a local primary school in Hong Kong, our research team assisted to organize a 4-week summer programme for the low-achieving students to seize the time to learn effectively and happily. The primary learning goal of the programme was to assist the low-achieving learners to revise the content that they had already learned online at home during class suspension before the summer. Given that low-achievers tended to be less motivated and with worse performance, the teaching team planned to use creative, cognitive and social synchronous learning strategies to help students visualize and make sense of those connections as the knowledge they have learned before.

The content of the project is:

(1) Due to prolonged class suspension for half a year, these low-achieving children lagged behind in academic learning and generally lost interests in learning via online teaching mode. Our programme aimed to offer intensive training on English and Mathematics.

(2) Leisure activities are required for students to learn informally in the summer vacation. Our programme designed a series of fun music performance and song creation activities via a digital keyboard mobile applet.

This research explores how teachers redesign the teaching and learning activities in an informal online learning setting throughout our summer programme in response to the sudden shift to online and distance learning during the 2020 COVID-19 pandemic. We focused on adapting a blended synchronous learning environment for students and teachers to teach and learn remotely and creatively. This redesign centered on using the Zoom, a web-conferencing tool to help students connect with one another to learn languages, mathematics and music in an interesting and engaging way.

2. Literature Review

2.1 Online Learning

Online learning has become a "new norm" in different education institutions around the world (Dhawan, 2020; Ng et al., 2020). Since the unexpected COVID-19 outbreak forced educators to move from face-to-face to online teaching within a relatively tight timeframe, educators creatively developed an array of teaching methods in order to engage their students and sustain their learning journey during the challenging period. Since then, robust and reliable video-conferencing software such as Zoom, Google Meet and Microsoft Teams have been offering educators a timely support for us to teach and learn together. Educators may not be aware that the synchronous meeting tools have being used to create a positive social learning environment for nearly 20 years (Henning, 2001; Reushle & Loch, 2008; Mayer, Lingle & Usselman, 2017). In the past, basic features such as face-to-face verbal and non-verbal communication were common. However, nowadays, with technological affordances, latest features like web annotation, whiteboard and "breakout" room were implemented in online classrooms. Moreover, the sharing screen features enable teachers to further incorporate mobile applets and other web-based resources into the Zoom learning environment (Mayer, 2016).

In this study, we used Zoom to connect teachers and students across desktops and mobile devices with the use of numerous communicative and collaborative features that create an online extracurricular learning experience (Ng & Chu, 2021a; Ng, 2021). Zoom teaching can be regarded as an effective approach to initiate meaningful discussions with "more knowledgeable others" (e.g., teachers and classmates) who play prominent roles in facilitating learners to maximize their ability to reach higher levels of learning accomplishments and connection with others. The focus of this project was to investigate how teachers redesign their lessons happily and effectively using the web conferencing software with other digital tools such as web annotation and gamification. The following digital technologies can encourage their students to complete the online tasks to build knowledge and interests (bin Rosawi, 2020):

- online face-to-face interaction (e.g., real-time verbal discussion, questioning),
- non-verbal communicative features (e.g., giving likes, raising hands, instant messaging, file sharing),

- web annotation tools (e.g., freeform drawing, whiteboard, text box, highlighting) and
- gamification (e.g., e-quiz, badges, points, game elements).

The first two among the above four strategies have been widely discussed in prior studies on synchronous learning. We are interested in using emerging practices such as web annotation tools and gamification in online face-to-face settings. The next session will review how the previous studies creatively design their lessons with the use of these digital tools

2.2 Web Annotation Tools

With web annotation tools, learners can make creative drawings and writings on a whiteboard, highlight a specific portion of the text and insert a comment (Gao, 2013). This facilitates teachers and learners to discuss and learn via the interactive whiteboard collaboratively. Recent researchers showed that web annotation tools can support English, mathematics and music learning activities.

For example, Chen, Wang and Chen (2014) demonstrated that the English reading annotation ability of learners was significantly correlated with achievement of reading comprehension by highlighting the structures of paragraphs. Mendenhall and Johnson (2011) applied a web-based annotation to foster university students' development of critical thinking skills and reading comprehension. Yang et al. (2007) evaluated how a personalised annotation system can enhance knowledge sharing in online group reading activities. Hwang et al. (2011) designed a playful and useful multimedia web annotation system to improve students' English as foreign language writing and speaking performance significantly in English. Chen and Huang (2013) proposed that web-based reading annotation system is an effective assistive system that supports digital reading because it allows readers to add annotations, and underline and high-light text to enhance students' reading comprehension via autonomic learning through web-based environments. These studies indicated that web annotation tools effectively provide mechanisms to support effective English language learning and promote learners' self-regulated learning abilities.

Second, several studies demonstrated that using web annotation tools can effectively enhance mathematics. Hwang et al. (2011) found that annotations play more important roles in learning achievement than homework since learners can actively and voluntarily create their texts and present their solutions. Ng, Shi and Ting (2020) explored how visual representations of geometry in an computer application can produce a positive learning outcome to simulate methodical thinking especially with the support of 3D printing technologies. Escudero-Viladoms and Sancho-Vinuesa (2010) reflected that the web annotation system allows learners to add, modify and improve the contents of a web-based platform or website. It serves as a collaborative tool and a medium for artistic or social criticism in mathematics online learning. Ng et al. (2019) used cooperative problem-based learning and peer assessment to implement using an interactive online whiteboard to increase students' mathematical conceptual understanding and graded assignment performance in a first-year calculus class in Hong Kong. These studies reflected that web annotation tools can successfully provide a collaborative and more creative environment for learners to learn mathematics concepts such as geometry, calculus and present their mathematical solutions on the whiteboards.

In music learning, teachers can incorporate interactive whiteboards with digital pens through singing with lyrics and pictures (e.g., identifying the underlined and circled rhyming words, picking the pictures for the song from clip art), teaching notation and composition, and interpreting music through drawing phrases (Nolan, 2009). Another offered opportunities for K-12 students to embrace different music software such as Auto-accompaniment software, mobile applets, audio recordings, electronic instruments, music notation software and interactive whiteboards to teach clap and sing with rhythm and play with varied rhythm patterns (Bauer, Hofer & Harris, 2012). Ng et al. (2021) found that students will enhance their music creation abilities and interest through learning Shubailan, a form of music folk-talk-singing, with a mobile instrument application called muyu in an online flipped classroom among 122 secondary school students. Another study Lee and Jen (2015) adopted interactive whiteboards in music learning activities among preschool children to improve their attitudes in the

classroom, and acquire musical skills and theory. Their finding showed that children are able to increase their level of engagement and achievement during individual and peer play with the whiteboards. These prior studies provided evidence for web annotation tools and interactive whiteboards to improve students' collaborative learning, learning engagement and attitude in the online classrooms to acquire skills and concepts in language, mathematics and music learning.

2.3 Gamification

As should be self-evident, gamification involves the use of game elements in non-game scenarios for students to create enjoyable, fun, and motivating learning experiences with game elements such as e-quizzes, badges, competitions and simulation games (Baptista & Oliveira, 2018; Ng & Chu, 2021b; Zainuddin et al., 2020). Prior studies demonstrated this pedagogical approach can effectively enhance students' learning, engagement, motivation, and satisfaction. Dehghanzadeh et al. (2019) reviewed 22 published papers to use gamification to support learning English as a second language in which developing content language learning, being enjoyable, engaging, motivating and fun were positive learning experiences in this environment. Moreover, it arouses students' curiosity, stimulating them to learn as they play and compete against other players (Huotari & Hamari, 2012; Chen et al., 2018). Jagušt et al. (2018) examined 54 junior primary school students in Mathematics gamified activities that increase student performance levels in basic operations practices. In music lessons, Gomes (2014) used a music guitar mobile applet to enhance their learning motivation in groups with rich multimedia content in a case study. These studies supported that such 'fun', 'interactive' and 'challenging' gamified learning experiences can enable students to proactively solve problems they see (Hanus & Fox, 2015). In addition, the gaming features can effectively bring about that proactivity in terms of learning challenges, competitions, scoreboards and badges and as such, learners are able to absorb the knowledge faster, understand easier, and improve their logical reasoning skills (Chen et al., 2018; Zainuddin et al., 2020)

3. Research Method

This section will detail our experience of undertaking a research in which lesson observation and semi-structured interviews featured as the two major data collection methods. Multiple-case studies are adopted to explore how educators in their English, mathematics and music lessons creatively employed various annotation and gamified strategies to offer online learning and teaching through Zoom, a well-established web-conferencing software. Online interviews and online lesson observations were conducted. During the period of 3-28 Aug which is the summer vacation, a primary school in Hong Kong invited our research team to conduct this summer learning programme with their school teachers for their junior primary students. In this programme, 39 low-achieving students (19 boys and 20 girls) were involved in 40-minute/session activities from Mondays to Fridays in 4 consecutive weeks.

To ensure all teachers were familiar with the software settings and got to know how to redesign their learning materials for the digital mode, three sessions of teacher training and meetings were conducted before the online teaching. More than that, teachers could plan their lessons with reference to their revised teaching schedules and teaching contents in each subject. Nine teachers (three from each subject) were involved to teach their students languages and mathematics, and had some fun music playing activities. Students were allocated in four to five of a group (in a series of small group activities). When the lessons were shifted to a fully online format in response to COVID-19, it was decided that our use of Zoom was extended to the full four-weeks programme and the teaching team investigated how the collaborative learning support can be created in this summer programme.

After the lesson implementation, semi-instructed interviews were conducted to evaluate the lesson design and strategies used by the teachers. Teachers shared how to redesign their lessons creatively and transformed the context to an online platform. To evaluate the course satisfaction by teacher observations, an interview guide (Appendix 2) is designed for two follow-up meetings at the end of the whole learning programme. "The…general interview guide, compared with the detailed interview schedules normally used in structured interviews, implies a sense of flexibility...research design as an

ongoing process, and so the interview guide for the informants were amended at various stages of the research" (Ho, 2019, p.227). All the questions were semi-structured and were hosted in, and focusing on the issues such as "How do you redesign the course into a more interactive approach with the use of Zoom", "What strategies do you employ in the lesson" and "How do students respond throughout the lessons", etc. By interviewing the school teachers, we summarize the teaching strategies in four aspects: online face-to-face interaction, non-verbal communicative features, web annotation tools, and gamification. The following table (Table 1) presents the teaching content in the summer learning programme.

Table 1. Teaching Content for English, Mathematics and Music Lessons

Lessons	**Teaching content**
English	1. Simple present tense (Verb + s/es) (P.1) 2. Identify the use of "is" and "are" (P.1) 3. English vocabulary (activities and days of the week) (P.1) 4. Subject agreement (do/does/have/has) (P.2) 5. English vocabulary (food) (P.2) 6. Identify the use of "there is" and "there are" (P.2) 7. Regular/irregular verbs (P.3) 8. Connectives (so, because) (P.3)
Mathematics	1. Addition of single digit number (P.1) 2. Time and hour (P.1) 3. Addition of single digit number (P.2) 4. Direction (P.2) 5. Introduction to fraction (P.3)
Music	1. Practice on playing piano and identify notes in digital keyboard mobile applet. 2. Left and right hand playing with melody and rhythmic training in the song "Mary has a little lamb". 3. Perform this song together in an e-Concert.

4. Results and Discussion

4.1 Before Lesson: Supporting Teachers and Students to Transform Online

Throughout the summer learning programme, all teachers and students used Zoom with their webcams and digital devices with a stable Internet connection at home. Stand-by devices were prepared by the school technical support team for teachers and students in case any technical problems arose. If teachers or students met some problems using their devices at home, they could call for technical support or even request to borrow a school-owned device for a few days. In each session, teachers used a school pre-registered account to schedule their online lessons so that students joined the meetings by using their ID and password. Since the participating students were basically from primary 1 to 3 and they are too small to use the web conferencing software and other e-learning tools, parental support was required to facilitate students online learning.

Apart from the technical support from school, experienced teachers with at least ten teaching years and novice teachers with less than five teaching years were classified into groups to discuss and share their pedagogical approaches. They brought up creative ideas which could effectively help students to construct knowledge and interact with their classmates, which were effective IT-related measures to facilitate teachers to conduct three lessons online smoothly. The following three cases may suffice to illustrate.

4.2 Case 1: English Lessons

During the English lessons, three English teachers adopted synchronous 45-minute lessons twice a week for five to seven primary 1 to 3 students in a group. Students were encouraged to turn on their cameras to facilitate face-to-face online interaction. Teachers observed students' reactions, gestures, facial expressions to check their understanding. Second, teachers used Zoom's screen share function to present the teaching materials via PowerPoint and videos. Teachers also used the annotation tools to draw on the screen to highlight the important points (see figure 1) in order to indicate why they used certain grammar, tenses and sentence structures with examples. Annotations such as arrows and circles were used to demonstrate the relationship between phrases.

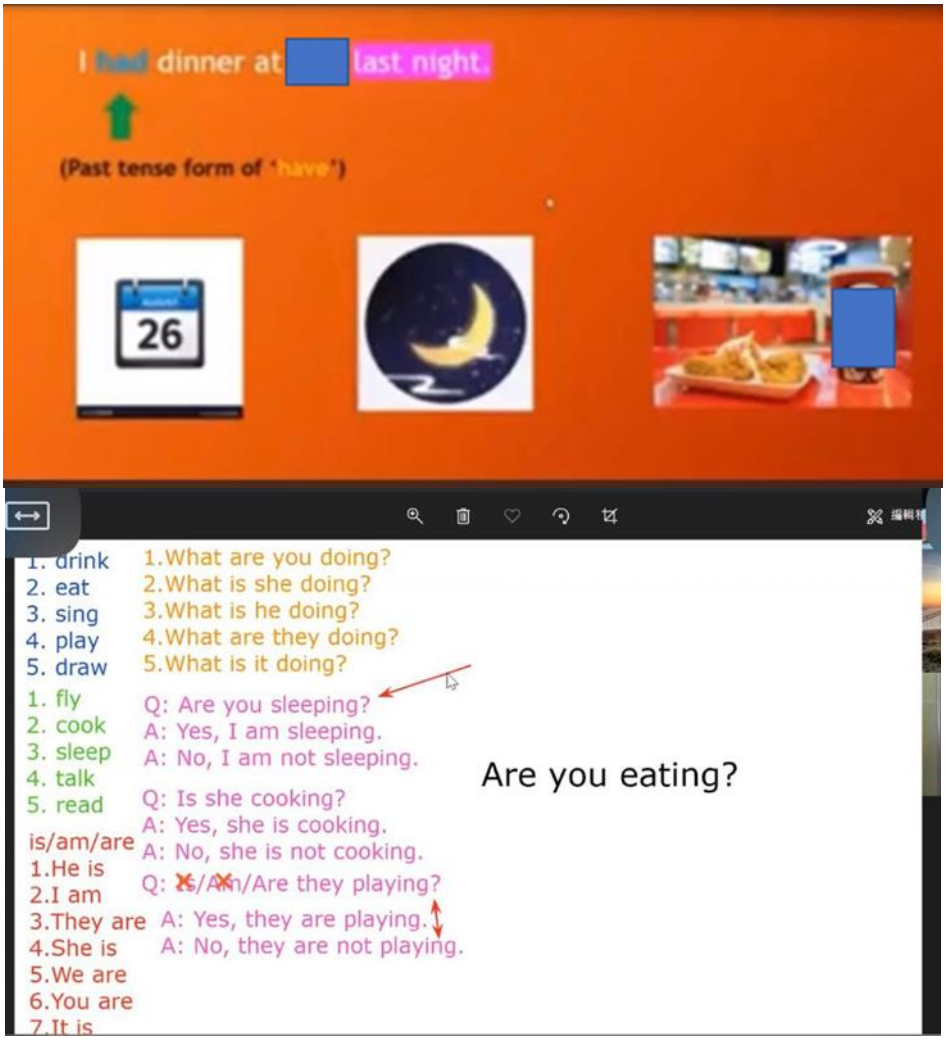

Figure 1. Annotation Tools Used in English Lessons

Taking turns to read aloud was another effective strategy to ensure all students stayed focused throughout English lessons so that every participant was able to practise their speaking. However, sometimes background noises at students' homes may have affected their lessons. Students were not encouraged to turn on their microphone without gaining permission from teachers or before their turns to read the sentences. In case students would like to speak up, they needed to "raise their hand" virtually through Zoom or physically. As there might be time-lagging to transmit the sound at the same moment, when the teachers required students to read together, the teachers muted all students' microphones to assess their learning through lip reading.

Gamified approaches like predesigned e-quizzes can effectively engage students to learn English grammar (see figure 2). Teachers used either voting virtually through zoom or showing their fingers ("one, two, three and four") in front of the cameras to indicate their choices. Therefore, teachers could assess students' understanding towards a topic and explain their choices with misconceptions. A sample lesson plan is described in Appendix 1.

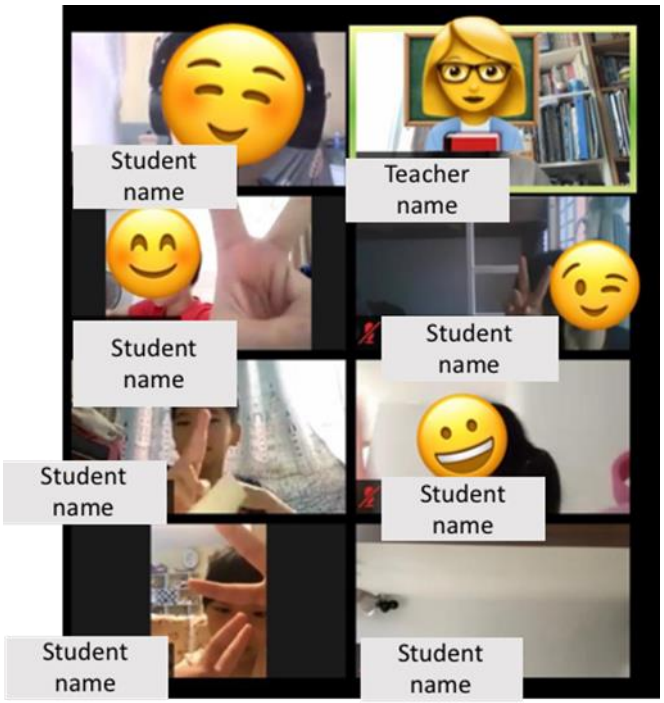

Figure 2. Students Show Their Fingers in an English E-quiz Activity

4.3 Case 2: Mathematics Lessons

Unlike face-to-face classroom teaching, it was reflected that teachers were not able to instantly feedback students' working steps by patrolling in the classroom. In mathematics class among junior primary students, fundamental procedural skills, such as four basic algorithms, and the application questions were essential. One way for teachers to check students' working steps is to virtually patrol around the classroom. In the Zoom session, teachers invited students to tell or show the teachers what they have written verbally, or via webcam. Students also took photos quickly and sent them to their teachers via zoom chat box although this is quite time-consuming. Some students were asked to present their solutions and show their steps with the use of a whiteboard. At the end of the lesson, students were required to submit their classwork to their learning management system (like Google Classroom). As Gillen and Ho (2019, 47) write: "A community of practice is no longer confined to physical participation but can be extended to the digital settings".

Visualizing concepts and procedures was important in mathematical learning. Strategies like pictorizing the question scenarios, highlighting the relationships between objects, and using some simple annotations and animations to visualize the concepts were useful for students to cognitively understand different maths ideas. Gamified approaches like Kahoot! and quiz games effectively motivated and engaged students in Mathematics learning. Students might feel bored completing the drilling exercises alone and they managed to interact with classmates to have some fun during the lesson through the e-quizzes. Further, the collaborative whiteboard and gamified approach effectively engaged the low-achieving primary students with the support of visual cognitive aids and exchange knowledge from their partners in the Zoom environment.

4.4 Case 3: Music Lessons

In Music lessons, Perfect Piano, a digital keyboard mobile app, which included different types of musical instruments (e.g. piano, guitar, violin, drum) was introduced. The lesson objectives were to enhance students' practical experience to explore piano learning via music-related technologies. Throughout the song playing processes, students learned some music theories (e.g. rhythms), as well as having more ensemble experiences. Before the first lesson, Miss Ng created WhatsApp groups for

parents so that information and lesson notes can be sent to parents and their children and they could download the application beforehand. Two 5-minute videos were sent before the lessons to explain the functions of Perfect Piano and how to play keyboard properly. Teachers use annotation tools to mark comments or provide their explanations to improve their music performing skills using the digital keyboard (see figure 3).

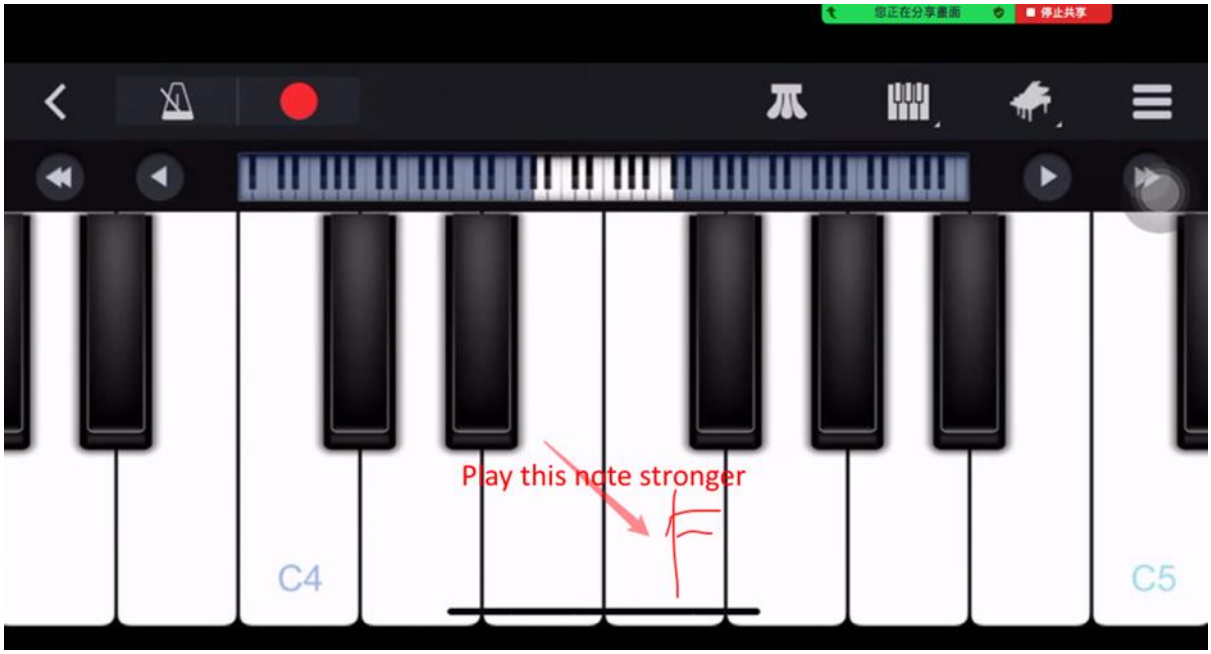

Figure 3. Annotation Tools to Comment Students' Music Performance

Parents' active involvement was important in case there might be technical issues arose. Teachers contacted the parents to remind the latter to engage in the music performance of students. For example, parents were encouraged to download and study the lesson videos with children so that parents and children could enjoy playing the music. Throughout the music lessons, an e-concert was held in which every student had the opportunity to perform a song in front of the classmates and admire other classmates' performance. At the same time, parents were also invited to the e-concert and have a good family time.

Since music Zoom lessons were new to students. An interview was conducted among students to evaluate the students' perception after the lessons. Here were some of the responses:

- "*Although I know how to play [Perfect Piano], it is hard to play the piano keys on the iPad because they are narrow*." (design of mobile app) - Student 1
- "*I enjoy learning a new instrument [e.g., drums and piano] quickly, which is not that difficult*!" (music learning interest) - Student 2
- "*ZOOM is hard for students to perform as there is always a delay...also, it is not easy to play piano [through digital keyboard] …but I can try my best to play it*." (technical concern) - Student 3
- "*Although sometimes I can't catch the lessons, I can watch the video clips taken by the teacher*." (pedagogical approach) - Student 4
- "*I tried to ask my parents to stay with me to have lessons, but they are busy…I feel uncomfortable when they are not here; I can't find the buttons*." (parental support) - Student 5

As can be seen from the above responses, the music e-learning activity was engaging though students might meet different types of technical challenges. For instance, students were not familiarised with the interface of the mobile app and there might be time delay while performing the music. Solutions include pedagogical approaches such as recording the lessons for students to review, taking some pre-lesson videos for students to grasp some concepts of the next lesson, and receiving parental support.

5. Conclusion and Recommendations

To conclude, the three teaching cases generally demonstrated interesting and creative approaches to engage their students to learn effectively and happily despite the limitations of online teaching and learning. As most web-conferencing software products serve with the online face-to-face interaction and non-verbal communicative features. In this article, these two features were not the major focuses; instead, we were interested in how teachers conducted their lessons creatively and interactively with the use of web annotation tools and gamification. Based on teachers' semi-focus group interviews, it is shown that that experienced and novice teachers were a good combination that could exchange their skills and knowledge, thus bringing up creative pedagogies such as gamification, annotation, digital keyboard mobile apps and e-concerts.

By studying these case studies, a summary of how teachers incorporate web conferencing software in online or distance classes to engage their students throughout the summer learning programme was created (Table 2). This article presented the creative use of web conferencing tools with web annotation and gamification to process domain-specific knowledge, support argumentation and inquiry, improve literacy skills, support instructor and peer assessment.

Table 2. Effective Practices to Incorporate Web Conferencing Software in Online/Distance Classes

Lessons	**Practices**
English	• Observe students' reactions, gestures, facial expressions to check their understanding. • Use the share screen function in Zoom to present the teaching materials via PowerPoint and videos. • Use the annotation tools to draw on the screen to highlight the important points to indicate why they used these grammars, tenses and sentence structures with examples. • Annotations such as arrows and circles were used to demonstrate the relationship between phrases. • Taking turns to read aloud to practise their speaking. Reading together to assess their learning through observing their mouths. • Employ gamified approaches like e-quizzes to engage students to learn English grammar. • Use voting through Zoom or showing their fingers in front of the cameras to indicate their choices in quiz competition.
Mathematics	• Check students' working steps through virtually patrolling around the classroom (e.g., showing the teachers what they have written verbally via webcam, taking photos quickly and sending them to their teachers via Zoom chat box). • Present students' solutions and show their steps with the use of a whiteboard. • Submit students' classwork in their learning management system. • Visualizing concepts and procedures via pictorizing the question scenarios, highlighting the relationships between objects with the use of simple annotations and animations. • Employ Gamified approaches like Kahoot! and quiz games could effectively motivate and engage students in Mathematics learning.
Music	• Enhance students' practical experience of song playing via music instrument mobile applet. • Create WhatsApp groups for parents so that lesson materials can be delivered to parents and their children could download the mobile applet beforehand. The functions of Perfect Piano and how to play keyboard properly are explained. • Involve parents to assist students in case of technical problems and play music

instruments together to have a happy music time.
- An e-concert could be held so that students could have the opportunity to perform a song and admire other classmates' performance.

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Appendix I: An English Synchronous Lesson Plan

Time (minutes)	**Teacher Activities**	**Student Activities**	**Remarks**
10	Warm-up activity 1. Take a roll call in students'/ parents' WhatsApp group or email. 2. Ask students to get ready for the lesson (textbook, dictionaries…). 3. Introduce myself and get to know their classmates. 4. Invite students to share their favorite food by using 'I like...'.	• Introduce themselves • Listening and speaking: share their favorite food	Teachers should check multimedia, Zoom settings and attendance of students.
30	Introduction of countable food: (6 min) 1. Show pictures and texts of countable food 2. Read each item with students. 3. Invite students to read aloud the singular form of each item (a xxx/ an xxx). 4. Invite students to read aloud the plural form of each item (xxx-s/	• Listening and speaking: • Read aloud together	Remind students when they should add -s or -es

	xxx-es).		
	Introduction of uncountable food: (6 min) 1. Show picture and text of uncountable food 2. Read each item with student 3. Explain why these items are uncountable 4. Ask students to decide whether water is uncountable	• Listening • read together • answer question: water is uncountable	Remind students not to add -s or -es after uncountable nouns
	Assessment (identify countable or uncountable food and correct grammar): (5 min) Ask student to vote whether option 1 or option 2 is correct example 1. Showing a picture of cheese • op1. cheese • op2. cheeses example 2. Showing a picture of 2 sausages • op1. sausages • op2. Sausage	• Vote and explain the answer	
	Descripting countable noun (There is…/ There are…): (7 min) 1. Show examples of using ‘There is’ with singular nouns and explain the use of this. 2. Explain to students that we can use ‘a/an’ or ‘one’ to descript singular nouns. 3. Show examples of using ‘There are’ with plural nouns and explain the use of there are 4. Explain to students that we can use ‘some’ or number to descript plural nouns. 5. Ask students to fill in the blanks with ‘is’/’are’ for singular or plural nouns.	• Listening • Answering questions (fill in the blanks by verbal) in the discussion room.	Remind students ‘there’s’ is equal to ‘there is’
	Descripting uncountable nouns (There is…): (6 min) 1. Show examples of using ‘There is’ with uncountable nouns. 2. Explain to students that we would not add a/an or number before uncountable nouns but use some. 3. Ask students to fill in the blanks with ‘some’ or ‘There are’ for uncountable nouns.	• Listening • Answering questions (fill in the blanks by verbal)	Remind students cannot use ‘there are’ for uncountable nouns
5	Closure 1. Read and classify (countable/uncountable) the vocabs with students. 2. Conclude the use of ‘There is’ and ‘There are’.	• Listening • Read together	

	3. Ask students to finish the tasks in their (e)textbooks.

Note. For more details about lesson activities for English and Mathematics, please refer to this

- English: https://drive.google.com/drive/folders/1wfakA_kDlBG5gr7kzqa7I1XN1PChiEls?usp=sharing
- Mathematics: https://drive.google.com/drive/folders/1uYmGualRCR1y1h7qe7ybO2_C4II_0O2J?usp=sharing

Appendix II: Interview Guide

1. How was the overall online informal teaching experience?
2. What strategies do you employ in the lesson?
3. Did you set your learning goals and re-design the activities to an online mode?
4. Did the online learning approaches cater to your students' learning needs?
5. Did you have any challenges during the online teaching?
6. How do students respond throughout the lessons?
7. How do you provide feedback to your classmates?
8. How do you refine your learning content if there is another round of activity?
9. How do you think the course can be further improved?
10. How do you redesign the course into a more interactive approach with the use of Zoom?

About the Authors

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Teaching Creatively in Hong Kong Higher Education Sector: Transition from the Teacher-Centered Approach to the Creative Teaching Approach

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Abstract: The higher education sector in Hong Kong has been expanding tremendously in the past decade and educators of higher education strive to enhance personal teaching skills and strategies. This study aims to examine Hong Kong higher education educators' conceptions of "teaching creatively" and their creative engagement in teaching and learning. The main research question is "What are the experiences of educators of higher education in Hong Kong with teaching creatively?" and the research questions are shaped around the experiences of educators planning and conducting a creative lesson. To explain and understand the role and responsibilities of higher education educators, the teaching presence of Community of Inquiry (CoI) by Garrison, Anderson and Archer is used as the theoretical framework. Basic qualitative study is used to conduct the study and the participants comprise five educators from local universities in Hong Kong. Study findings reveal that Hong Kong higher education educators recognize the effectiveness of teaching creatively and they were adopting student-centered approach during the course. However, the lack of knowledge in teaching and the constrains by school policies were identified as obstacles affecting educators teaching creatively. The findings of this study provide new perspective in understanding the potential gap between belief and practices of Hong Kong higher education educators toward "teaching creatively" in class.

Keywords: Hong Kong, higher education, teaching creatively, effective teaching approach, student-centered approach, community of inquiry, teaching presence

1. Introduction

We are now in the 21st century when different innovative teaching approaches in higher education are being positioned (Lee, 2014). Traditional teacher-centered teaching approaches are becoming less effective and are less welcomed by students. Educators in higher education are therefore always seeking ways to put students at the center of learning and improve their overall learning outcomes. (Ferreri & O'Connor, 2013; Kay, MacDonald, & DiGiuseppe, 2019). In fact, many research studies have shown that student-centered teaching approaches such as inquiry-based learning, problem-based learning, and

e-learning are effective in promoting problem solving, communication, creativity, and critical thinking across many disciplines (Ding & Helene, 2006; Garrison, Anderson, & Archer, 2010; Kirschner et al., 2006). The National Advisory Committee on Creative and Cultural Education (NACCCE) of the United Kingdom (1999) defined "teaching creatively" as "using imaginative approaches to make learning more interesting and effective" (p. 89). Jeffrey and Craft (2001) added to this definition by emphasizing that teaching creatively may be interpreted as a greater concern for effective teaching. Educators in the higher education sector need to prepare their students for an uncertain future, as well as respond rapidly and flexibly to the necessity for new kinds of abilities in new ways and through creative practices (Barak & Levenberg, 2016; Vidergor & Sela, 2017). While previous research has focused on investigating the effectiveness of different teaching approaches from the students' perspective, the purpose of this study focuses on the views of higher education educators, investigating their conceptions of teaching creatively.

2. Literature Review

2.1 Higher Education in Hong Kong

Higher education institutions, including public universities, private universities, and self-financing schools, play an important role in contributing to education of Hong Kong (Lee, 2014). In the past decade, the local higher education sector has seen various expansions and changes (Lee, 2014); for instance, the Hong Kong Institute of Education (HKIEd) and Hang Seng Management College (HSMC) were both awarded "university" status, becoming The Education University of Hong Kong (EduHK) and Hang Seng University of Hong Kong (HSUHK) respectively. Formed by the merger of five teacher training colleges in 1994, EduHK is the only University Grants Committee-funded (UGC) institution dedicated to professional teacher education in Hong Kong. On the other hand, HSUHK is a non-profit private university-level institution that was restructured in 2010 to pioneer post-secondary programmes in business and related areas. According to a Hong Kong government press release (2018), in order to obtain university status, tertiary institutions need to prove that they can achieve and excel in research capabilities, financial sustainability, programmes diversity, and most importantly quality assurance.

The quality of higher education is believed to not only affect students competitiveness but also world university rankings, which play a fundamental role in fuelling global competion among universities (Bikse, Rivza, & Ieva, 2013; West, 2012; Wit, 2016). According to Komotar (2019), university rankings have become a global phenomenon, with both students and institutional leaders using them as an informative tool for various purposes such as study programme selection and admission decisions. Many people perceive global university rankings simply as an indicator for assessing the level of internationalization achieved by higher education institutions, a phenomenon that has been observed in the higher education sector of Hong Kong. To actively construct an international network and compete for global university rankings (Lee, 2014), local tertiary institutions now have an growing preference for recruiting non-local students and teachers to enhance the proportion of internationalization. The renaming of HKIEd and HSMC as universities are two good examples that indicate the trend of internationalization and diversity among Hong Kong universities and colleges (Lee, 2014). As both publicly funded and self-financing tertiary institutions in Hong Kong strive to increase their reputation by competing for higher rankings, in addition to providing more programmes ranging from diploma certificates to doctoral degrees (Lee, 2014), it is essential that their teaching staff offer high quality teaching as well as a robust research output. Because of the tremendous expansion in the local higher education sector, it is worth further exploring how educators' teaching approaches meet student requirements and fit the current role that universities play today.

2.2 Teaching Approaches in Higher Education

2.2.1 Teaching Approaches in Higher Education

Apart from institutional changes in the higher education sector, teaching approaches have also been transforming with the times (Mishra & Henriksen, 2013). One major purpose of higher education

teaching is imparting academic knowledge and pragmatic skills to students, enabling them to engage with our dynamic world (Lee, 2014). The traditional teaching approach focuses on recitation by memorizing hard-core course content, including activities such as lectures, tutorials, essay writing, and examinations (Graeme, 2003). This approach unilaterally instils knowledge in students, ignoring the interactions present in teacher-student communication. Some evidence even indicates that traditional teaching approaches are now generally viewed as antiquated and associated with numerous detriments, such as students rapidly losing attention and forgetting materials when placed in a passive situation (Schwerdt & Wuppermann, 2011). Although different approaches are being promoted and adopted in higher education, various studies have confirmed that higher educator teaching remains teacher-centred (Charlton, 2006; Ferreri & O'Connor, 2013; Kirschner, Sweller, & Clark, 2006). This teacher-centred approach is based on the teacher's input and assessment of how well students learned the material; it is thus commonly referred to as an outcome-based approach, given that it expresses what students are expected to achieve at the end of the scheduled learning period (Schreurs & Dumbraveanu, 2014). Under the teacher-centred approach, the educator exercises full control of the classroom in a unidirectional means, whereas students remain silent and have fewer opportunities to develop their team building and critical reasoning abilities. According to Kompa (2012), teacher-centred approaches neither encourage nor reinforce a student's self-ruling study aptitudes and later learning abilities. Lecturers may even ignore differences in student abilities, subconsciously presuming that the capabilities of each student are all the same

2.2.2 Modern Teaching Approaches

Modern teaching approaches focus on interactivity by adopting activity-based strategies and using technology, which include role-play, group discussion, mobile phone audience response systems, and augmented reality (AR), among others (Branch, Hayes, Horsted, & Nygaard, 2017). According to Schwerdt and Wuppermann (2011), the modern, interactive approaches focus more on problem solving by adopting interactive teaching methods, which can positively influence student performance in learning outcomes. In recent years, modern teaching approaches have been more readily adopted in higher education classrooms because of their emphasis on critical thinking. Furthermore, these approaches emphasize improving students' skills all around, not just testing their memory as an ultimate purpose (Boumová, 2008). The exploration of alternative teaching approaches, such as the flipped classroom, and active learning approaches in the higher education sector has already begun, with educators seeking ways to improve their teaching practice in order to assist students in achieving learning objectives (Kay et al., 2019).

Teaching creatively, as well as discussions regarding effective and creative teaching approaches, has rapidly emerged as a significant issue in the higher education sector in recent years (Mishra & Henriksen, 2013). In Hong Kong, recent social movements and the spread of the COVID-19 pandemic have significantly affected learning and teaching at local institutions, profoundly transforming established norms of higher education teaching. Lecturers have been expected to adapt to these changes and completely adjust to online teaching modes, which complicates the implementation of creative teaching strategies. Unlike face-to-face classes, lecturers cannot observe students' immediate responses in online classes, making it challenging for them to promptly adjust their teaching approaches (Dumford & Miller, 2018). This challenge is compounded by a lack of concentration and a reduced degree of collaborative learning in online classes (Dumford & Miller, 2018). Higher education educators are hence striving to learn strategies in order to make teaching and learning effective. The study of teaching creatively in high education thus becomes essential in the current era of online learning

2.3 Concepts and Definitions of "Teaching Creatively"

Different people may understand the concepts and definitions of "teaching creatively" differently. In the following discussion, it is worth focusing on how educators can teach creatively, which includes cultivating student innovation and enhancing student critical thinking skills—thereby preparing them to become future global citizens—rather than just focusing on how to make students themselves creative

(Cardoso de Sousa, 2011). Considerable research has been devoted to the theories of creative teaching in higher education institutions. For instance, Torrance (1995) stated that teachers who like to manipulate students through creative self-expression may not necessary produce significant development in student creativity and overall achievement. Likewise Stein (1994) observed that student achievement remained largely the same regardless of whether they had creative teachers. Stein (1994) also suggested that a creative person may not necessarily learn from a creative teacher, and that maintaining a good student-teacher relationship is even more likely to promote learning.

The concept of creativity is subjective, as people tend to have their own definitions that may not align with the literature (Mishra & Henriksen, 2013). Nevertheless, it is possible to seek criteria related to "teaching creatively" with different approaches. For instance, Mayer (1989) referred to creative teaching as instructional techniques that can help students learn new knowledge effectively. On the other hand, Bozik (1990) emphasized the classroom environment, claiming that creative teaching relates to how teachers create a learning atmosphere that is stimulating and inspiring. Other scholars have mentioned that teaching creatively implies the adoption of innovative, fascinating, attractive engagements in teaching and learning (Cardoso de Sousa, 2011; Hui et al., 2015; Kay et al., 2019). Regarding creativity itself, still other scholars describe it as a visionary behaviour designed to generate outcomes that are novel or valuable, including seeing, thinking, and innovating (Mishra & Henriksen, 2013; Saebø, McCammon, & O'Farrell, 2007). Being creative in teaching can also mean helping students have a better learning experience and enjoyment for an advance to accomplish both the learning objectives and learning outcomes (Mishra & Henriksen, 2013). Compared to a teacher-centred approach, students should be more interested and motivated to learn in creative lessons because of the interactive atmosphere in either the physical or the virtual classroom (Hui et al., 2015). Sometimes, creative teaching can be objective-based by adopting a purpose to delivering messages, perhaps about the teaching materials, which can promote more concentration and the accomplishment teaching objectives by drawing attention from the students (Hui et al., 2015). Still, Ramsden (2010) suggests that teaching creatively usually refer to student-centred approaches and that teachers in higher education should consider students' needs and ideas while adopting various interactive teaching approaches. Yet Ramsden (2010) argues that unfortunately, teaching in higher education classrooms is still dominated by outdated theories that focus on the teacher's perspective. For instance, many university teachers still define teaching as the transmission of authoritative content or the demonstration of procedures, while some perceive it as strategies used to make the transmission of concepts possible. These outdated perspectives prevent university teachers from viewing teaching as making learning possible, hindering them from thinking about how to teach creatively and effectively (Ramsden, 2010).

3. Conceptual Framework

Research has shown that a relationship exists between how lecturers teach and how students perceived their own learning in higher education (Arbaugh et al., 2008; Richardson et al., 2017). Given that the present study only focuses on the teacher's perspective, the teaching presence aspect of the Community of Inquiry (CoI) framework is adopted to understand how higher education educators evaluate the design of their teaching (Garrison et al., 2010). Within the CoI framework, an educational community of inquiry is "a group of individuals who collaboratively engage in purposeful critical discourse and reflection to construct personal meaning and confirm mutual understanding" (Garrison, 2011, p.2). The community aims to create conditions to encourage higher-order cognitive processing. The CoI framework thus represents a process of creating a collaborative-constructivist learning experience through the development of three interdependent elements—social presence, cognitive presence, and teaching presence. Here "presence" means a sense of being, which is created through interpersonal communication (Akyol & Garrison, 2008). Among these three elements, teaching presence forms the main framework of this study. Teaching presence is defined as the design, facilitation, and direction of cognitive and social processes for the realization of meaningful learning. This involves the instructional design and organization of the course and its activities, the facilitation of the course and its activities, and direct instruction by the lecturer (Garrison et al., 2010).

4. Methodology

Research has shown that higher education educators strive to search for ways to enhance their personal teaching skills and strategies; however, they experience challenges when trying to teach creatively and effectively (Ramsden, 2010). This study therefore aims to examine conceptions of "teaching creatively" that educators have in the Hong Kong higher education sector, in addition to their creative engagement in teaching and learning.

To understand how educators interpret their teaching experiences and what meanings they attribute to these experiences, the present study employs the basic qualitative research approach (Merriam & Tisdell, 2016); after collecting qualitative data, the investigator performs data analysis and merges the results into different themes (Merriam & Tisdell, 2016). The study collected qualitative data through participant interviews and a review of the course progressions that participants provided. Participants were teachers in Hong Kong working at self-financed or publicly funded local universities. The study recruited teachers from different academic disciplines to obtain diverse views. Five subjects took part in the study; their experience in higher education teaching ranged from 6 to 9 years.

4.1 Data Collection

Basic qualitative research requires a data collection approach that encourages participants to provide detailed first-person accounts of their experiences and self-perceptions of phenomena. Interviews can gather direct quotations from participants about their experiences and opinions; the present study therefore conducted one-on-one, in-depth interviews with each participant. A semi-structured interview approach was chosen as on one hand, the approach is considered suitable for in-depth personal discussions, and on the other hand, the investigator can easily manage questioning while also giving participants space to think, speak, and be heard (Creswell, 2013). Interview questions were focused on obtaining information regarding participant conceptions of "teaching creatively" and investigate how they create creative lessons. A set of interview questions was drafted prior to conducting the interviews to keep the research focused on the research questions (see the Appendix). Additional follow-up questions were asked according to participant responses during the interviews to obtain more information.

The present study also reviewed five course progressions provided by the participants. Through reviewing such documents, the investigator can collect data regarding events that are no longer observable, as well as details that participants may not have recalled during interviews (Bowen, 2009; Patton, 2015). These course progressions provided background information and evidence supporting the participants' interview responses, as they show how participants organized their respective course content and what teaching strategies they adopted for each lesson. For instance, participants specified the use of lectures, video viewings, role-play, discussions, and many other strategies in their course progressions. In other words, reviewing course progressions can help us understand how creative the participants were when they were teaching. Using both interviews and document analysis therefore helps to ensure that the present qualitative research is comprehensive and critical.

The investigators first transcribed all the raw data from the interviews and the course progressions. Then, the investigators listened back to the audio recordings of each interview to recall the interview process, which helped to generate a more complete analysis. Afterwards, the investigators made initial notes and developed emergent themes. Following exploratory coding, the investigators found connections, patterns, and interrelationships between the notes; and relevant themes began to emerge. The investigators repeated this process for each of the five interviews. Lastly, the investigators examined the five course progressions, which provided the data needed to understand how the participants planned their respective lessons and what elements they included in each lesson.

5. Research Questions

The principal research question of the present study is: "What are the experiences of educators of higher education in Hong Kong with teaching creatively?" The present study also explores the following four subsidiary research questions:

- What are the conceptions of "teaching creatively" as understood by the educators?
- How do the educators design and organize creative lessons?
- How do the educators execute creative lessons?
- What are the educators' perceptions of the challenges/obstacles of adopting a creative teaching approach in their classrooms?

6. Results

Each of the five participants provided detailed information through three semi-structured interviews regarding their perceptions of and experiences with teaching creatively. They also provided a total of five course progressions for review. Table 1 lists general information about the participants.

Table 1. Participant Information

Pseudonym	**Teaching experience (years)**	**Institution type**	**Academic discipline**	**Courses taught per academic year**
Adam	7	Self-financed	Accounting	5
Betty	7	Publicly funded	Early Childhood Education	8
Carlos	9	Self-financed	Language	8
Daisy	6	Publicly funded	Psychology	4
Eliza	9	Publicly funded	Counselling	9

Based on the analyses of the interview transcripts and the course progression samples, four superordinate themes and nine sub-themes emerged. These themes represent how the participants view "teaching creatively" and how they conduct a lesson creatively. Table 2 presents the emergent themes from each of their accounts.

Table 2. Themes of Qualitative Data

Superordinate Themes			
#1: Educators' conception of teaching creatively	#2: Lesson design and organization	#3: Execution of creative lessons	#4: Factors affecting creative teaching
Sub-Themes			
Teaching creatively is similar to teaching effectively	School policies and norms provide guidelines on lesson design and organization	Educators' own learning experiences in higher education institutions affect their execution of creative lessons	Lack of knowledge and training in teaching creatively in the higher education field
Teaching creatively is related to a student-centred approach	Effects of peer consultation	Educators solidify the conception of teaching creatively through actual practice	Educators are limited by school policies
Teaching creatively is not related to the use of technology			

These superordinate themes and sub-themes will be elaborated and summarized in the following sections. The findings were supported by verbal quotations from the interview transcripts and the information obtained from the course progressions provided by the participants.

6.1 Educators' Conception of Teaching Creatively

To understand how higher education educators in this study view and define "teaching creatively," all participants were asked to describe and define what it means to teach creatively at the beginning of their respective interviews.

6.1.1 Teaching Creatively is Similar to Teaching Effectively

All participants related teaching creatively to teaching effectively, stating that it was important to achieve course objectives, as they were an indicator that showed whether students were learning well and that their teaching was effective. They all thus expected that students would focus on lesson content and that the lesson objectives should be achieved; teaching creatively was perceived as helping the latter aim. Betty shared, "In order to achieve the course objectives, I have to apply some innovative and creative teaching strategies in my class such as making use of drama and group games." Eliza expressed a similar notion, "I found that students learn best when I use some creative methods to teach." Participants also shared some of their experiences that showed creative teaching leading to effective learning. For instance, Adam recalled using Facebook Live to review accounting examinations with his students. He realized that students asked many meaningful questions during the live chat, a phenomenon that he had never seen before. Every participant also mentioned that teaching creatively is similar to teaching effectively and that adopting creative strategies helps to achieve learning objectives. The course progressions they provided supported this focus on achieving learning objectives, as every document stated three to five clear learning objectives for the respective course.

6.1.2 Teaching Creatively is Related to a Student-Centred Approach

Not only all participants related teaching creatively to effectiveness of teaching, they all believed that those who apply creative teaching skills in class are actually adopting student-centered approach. Adam shared, "It is easy for me to just talk, talk and talk in class. I can then finished teaching everything on time; however, this is not creative teaching as that is very much teacher-centred." Carlos emphasized in his interview:

> "*When I decided to conduct the lesson creatively, I have to think constantly about what students like and what I can do to attract them. For example, I am sure that students hate it when I just talk for good three hours; therefore, I would think what I can do in order to draw their attention*."

Betty realized that without understanding students' concerns and needs, it would be difficult to teach creatively. She believed that she was a creative teacher as she used a lot of creative and effective strategies in class. Betty did interim evaluations with students in order to understand what they liked and what they needed.

Whereas all participants reflected that it was essential to hear student views, their course progressions did not reflect how they would obtain these views. Although Betty stated that she did interim evaluations with students, her document did not list a specific date and time for doing the evaluations. Of the five course progressions, only three of them indicated that students would do course evaluations at the end of the course; however, obtaining student views at the end of the course would not help the educators adjust their teaching practices in time

6.1.3 Teaching Creatively is not Related to the Use of Technology

The course progression documents mentioned the use of technology, with all the documents mentioning online learning time. Conversely, although all the participants constantly mentioned the use of technology in their interviews, some specifically stated that it was not a must-have item for teaching creatively. For instance, Eliza said:

> "*My department encourages the staff to incorporate more technology in class. For example, we have workshops on using Padlet, Minimeters, Edpuzzle and many others. I attended some workshops but still find them very difficult to use. Plus, I think using technology does not [necessarily mean] that I am teaching creatively*."

Carlos made a similar comment, stating that technology is not the most important for his teaching:

> "*I can use technology in my class, but I don't want to. It just takes me a lot of time just to do all the preparation work. I think my teaching style is attractive and creative enough, and I do not need to use technology to draw students' attention. The key to teaching creatively is the teacher himself, not technology*."

Although all the participants did not consider the use of technology as a must, some stated that using technology helped boost student interest in learning certain topics. Daisy especially appreciated technology, sharing her positive experiences of using technology in class:

> "*I think it is a trend of using technology in class and, actually, students like it. I use Minimeters to draw students' opinions and views, and I always draw a lot more feedback. I think the use of technology can help those who are shy to voice out, which is good*.".

6.2 Lesson Design and Organization

Adopting the teaching presence element from the CoI framework, the participants were asked about how they design and organize a creative lesson when beginning a course. The course progressions provided clear explanations on how their respective courses were organized and what teaching strategies they used for each lesson. All the progressions clearly stated the course objectives, topics of discussion, and teaching modes for every week. Three out of five progressions also listed assessment deadlines and relevant grading criteria, while two progressions listed examination dates. In general, students could obtain information about the course objectives, weekly course plans, dates, and expectations for assessments or examinations by just looking at the course progressions.

6.2.1 School Policies and Norms Provide Guidelines on Lesson Design and Organization

All participants stated that they got their course progression documents ready before their courses started. All of them also emphasized that they could make changes to the progressions. Three of them stated that submitting a detailed progression was a departmental requirement; however they would just use templates and previous course outlines provided by the department to design their own courses. Two stated that their departments provided a general outline on what to cover in specific courses, and that lecturers were free to make changes. As the course progressions indicate what content is included, as well as what teaching strategies the lecturers would employ for each class, school policies and norms for developing course progressions would affect how creative lecturers would be during the planning stage. Regarding the writing and planning of course progressions, Adam shared the following opinion:

> "*I revise my progression based on whatever the previous lecturer provided me. As long as I get to achieve the objectives, I can add on or cut out anything. Regarding all the important dates like examination date, I just like to give students a heads up so that they can prep ahead. Of course, if I need to make adjustment, I can do so*."

Aligning with Adam's opinion, Carlos said:

> "*I am glad that I have control over my overall course planning. I never experience any difficulties changing my progression and plan. Sometimes I would make revisions based on the student feedback in class. Of course, my bottom-line is that I need to make sure the course objectives are achieved*."

Although all the participants had at least some freedom to revise and redesign their courses and lessons, four of them emphasized that they did not have adequate time and energy to put a lot of effort on planning, often passing over the planning stage because of the heavy workload at their respective institutions.

6.2.2 Effects of Peer Consultation

While most of the participants stated that the department provided them with a template on how to organize a course, all of them said that they did not design their course by themselves. Four participants said that they asked for course progressions from previous lecturers, or even the course coordinator, and then made revisions to the existing version to produce their own progressions. Betty even collected all the PowerPoints and teaching materials from the lecturer of a previous iteration of her course:

> "*My colleague was so nice. She shared everything with me and that saved me a lot of preparation time. I only need to update some data in the PowerPoints and then I am all good to go. I think it is really helpful, especially for those who first teach the course*."

Adam recalled that when he first taught his course, he sought help from a colleague, who let him conduct class observations a couple of times. Alex found this to be really helpful, given that he was a new staff member then. Getting peer comments enabled him to feel more confident when making changes to existing course outlines and progressions.

6.3 Execution of Creative Lessons

Aside from instructional design and organization, the other elements of teaching presence include facilitating discourse and direct instruction. Understanding how higher education educators executed a creative lesson would therefore provide insights into how they facilitate student discussions and keep such discussions on track. Of the five course progressions, three included details on what strategies the educators would adopt for each lesson. Lecture time was the primary strategy used in all courses, appearing in the plans for every single class. Other strategies that were used often included discussions, online forums, role-play, video viewings, and online learning activities.

6.3.1 Educators' Own Learning Experiences in Higher Education Institutions Affect Their Execution of Creative Lessons

While all the participants were born and raised in Hong Kong, they all obtained their higher education qualifications overseas. Given their learning experiences both in Hong Kong and overseas, they were able to compare and contrast the educational experiences of different cultures. The participants stated that learning experiences in Western countries differed greatly from those in from Hong Kong, and the more interactive learning approach they experienced abroad were suitable for higher education students. Eliza mentioned that she intentionally included a lot of discussion time in class, as she took part in many discussions while studying in the United Kingdom, finding it to be a meaningful activity. Daisy also mentioned one unforgettable learning experience in Australia that she wanted to adopt so that her students could have the same learning experiences that she did. Interestingly, Carlos had unsatisfactory experiences while studying in Hong Kong; he stated that he would not let his students go through the same experiences:

> "*I remember that the professor always asked me to do referencing and jotting notes. I seldom had any time to digest the knowledge and express my thoughts. I also found that professor very controlling and I did not really enjoy his class. I promised myself at that time. If I got a chance to teach, I would not do anything like him*."

Ultimately, all the participants were able to recall an episode when their teachers taught creatively. The general consensus was that creative teaching strategies involve a more interactive approach rather than a teacher-centred one.

6.3.2 Educators Solidify the Conception of Teaching Creatively Through Actual Practice

All the participants mentioned that they continually refined their teaching through actual practice. They then gained better understandings of what their students liked and what creative strategies could lead to effective teaching. For instance, Carlos said:

> "*Making use of technology is so popular these days and I tried in my class too. From students' reaction in class, I knew my [attempt] was not a successful one. What students like most in my class is my teaching style. They like it when I adopt a more friend-like approach*."

Daisy agreed that her actual teaching practices enabled her to think about what creative teaching meant to her, as well as realize that she needed to adjust her teaching style for every class:

> "*There is no one size fits all. Depend[ing] on the characteristics of different classes and students, I have to adjust my teaching style constantly*."

6.4 Factors Affecting Creative Teaching

All the participants held positive attitudes toward the creative teaching approach, as they believed that creative teaching equalled effective learning. They tried to teach creatively in higher education classrooms. In order to explore the factors that prevented them from incorporating creative elements into their teaching, they were asked about the challenges they experienced when trying to teach creatively.

6.4.1 Lack of Knowledge and Training in Teaching Creatively in the Higher Education Field

All participants obtained doctoral degrees in their respective disciplines and had at least six years of experience teaching in higher education; however, none of them had received formal training in teaching. Adam, Betty, and Daisy stated that their institutions provided training and workshops to teaching staff, but it was not compulsory; whereas Carlos and Eliza said that their institutions did not provide any training at all. Eliza said that she would love to gain new suggestions on teaching, but sometimes she was too busy to attend training sessions. Since none of the participants received proper training in teaching, all of them agreed that they lacked knowledge on teaching creatively and effectively when they began teaching. They believed that they knew more about creative teaching when they accumulated more teaching experience. Daisy recognized the importance of adopting the "right" strategies when teaching higher education students; however, she thought that the amount of training provided by her institution was insufficient and its content was irrelevant.

6.4.2 Educators are Limited by School Policies

Four participants reported that students were required to accomplish a lot of learning tasks in courses; they thus lacked time to do creative activities with students. In addition, they said that they had to follow the template and outlines provided by the department. Regarding the freedom to change the design and the organization of her course, Daisy said:

> "*Yes, I can make changes to everything but the procedure is annoying. I have to submit [a] relevant request with evidence in advance for departmental approval. All these extra paper work has stopped me from making big changes to the progression*."

Eliza shared a similar notion sentiment:

> "*I have no control with the deadlines of the assessments. All dates need to be approved by the department. Also, if I want to make any changes, I have to submit the request ahead of time. When the course was in progress, I cannot make big changes. Therefore, I don't think I have full control of the design of the course*."

Although all the participants stated that they could changes their course progressions, complicated procedures discouraged them from making timely revisions. Moreover, even though the general consensus was that creative teaching approaches had positive effects in teaching and the achievement of curriculum objectives, Adam and Carlos mentioned that such approaches were not an effective tool for teaching certain academic contents, such as their respective subjects of accounting and Chinese language. Eliza also agreed that it was difficult to incorporate creative elements in teaching every single subject

7. Discussion

7.1 Key Findings

The findings of this study provided insights into the perceptions of teaching creatively that educators have in the Hong Kong higher education sector, as well as on their actual teaching practice. The participants expressed their views on how to teach creatively in order to support and enhance student learning outcomes. Likewise, the participants mentioned the challenges they encountered in reconciling their perceived role in teaching in higher education with the reality of Hong Kong society.

7.1.1 Educators' Conception of Teaching Creatively

The results above suggest that the higher education educators who participated in this study agreed that teaching creatively can help students to learn effectively and that a student-centred approach should be adopted. Educators should then take responsibility to ensure that students achieve the best learning outcomes. The participants' descriptions of teaching creatively matched with what other investigators had found from their research. In general, people agree that effective learning and a student-centred approach are characteristics attached to teaching creatively (Boumová, 2008; Branch et al., 2017; Cardoso de Sousa, 2011; Ding & Helene, 2006). The results also aligned with research by Cardoso de Sousa (2011), which found that while college students focused on how creative the educators were, educators focused more on effectiveness. As Mayer (1989) mentioned, it is impossible to entirely agree on what "creative" or "effective" teaching means. A more commonly understood definition therefore rests on listing a series of behaviours, strategies, and approaches that characterize creative teaching.

To further understand how higher education educators define "teaching creatively," the present study reviewed five course progressions, focusing on the activities, delivery mode, and content of each lesson in these planning documents. Interestingly, while all participants include some use of technology when delivering course content, certain participants mentioned that the use of technology was not as important when teaching creatively. They admitted that if students enjoyed their lesson, then they would consider such lessons to be creative, effective, and successful. Mayer (1989) proposed that "creative teaching refers to instructional techniques that are intended to help the students learn new material in ways that will enable them to transfer what they learned to new problems" (p. 205). This perspective aligned with what the participants believed: teaching strategies received more weight than the use of technology. Ultimately, creativity lies not only in the educators themselves, but in the interaction between students and educators. It is then logical to assume that examining what the role of

an educator entails, as well as how an educator interacts with students, is more important than exploring creative strategies or ways to present subject matter to learners (Cardoso de Sousa, 2011).

Knowing how educators organized their courses provided understandings of their conceptions regarding teaching creatively. The use of discussions, roleplay, and other interactive strategies showed that these educators employed a student-centred approach, which they believed to be creative and effective. Although the progressions showed that technology was constantly used to enrich the lesson, the participants stated that it was not the most important. These perceptions match with research studies that find the teacher to be the key when conducting creative lessons (Charlton, 2006; Hui et. al., 2015).

7.1.2 Lesson Design and Organization

This study adopts the teaching presence element of the CoI framework, which refers to the shared responsibilities of all participants, and not just the educator, in the educational community to promote meaningful learning (Garrison, 2011). Teaching presence therefore encompasses more than just the role of educator in front of a class. The participants in this study were asked about how they decided the content, activities, and timelines of their courses. Understanding how they designed and organized their courses would provide understandings on current teaching practice in Hong Kong higher education.

According to Garrison (2011), the design and the organization of courses have to be flexible and open to change over time. Yet most of the participants stated that institutional policies restricted them and they therefore could not obtain student input before planning their course progressions. Furthermore, as the course progression pretty much framed what should be taught and done, there was limited room for the educators to be creative and include students in the design and organization stage. This finding aligned with Dumford and Miller's (2018) observations that although Hong Kong higher education is changing tremendously, sometimes school policies make it hard for educators to make adjustments promptly. Moreover, when participants were making teaching plans, their peers were valuable resources to them, serving as resources providers and consultants. In line with what Garrison (2011) proposes, teaching presence is never just about an individual educator; students and all other stakeholders should also be involved throughout the entire planning stage. The various strategies that participants adopted in their courses aligned with Cardoso de Sousa's (2011) findings that educators who could plan for establishing a teaching presence were those who could embed personal insights into course material and provide a framework on how the course structure helps the learners.

7.1.3 Execution of Creative Lessons

Investigating how educators conducted a creative lesson provided understandings on the two components of teaching presence–facilitation and direct instruction–in the higher education field. The facilitative responsibilities of teaching presence include encouraging discussions between students, in which educators should not be too involved. For direct instruction teaching component, educators should assume the role of keeping the discussion on track and making sure that they are achieving the course objectives (Garrison et al., 2010). The course progressions indicated participants included interactive activities in every lesson. The participants also stated that both their past learning experiences at higher education institutions and their current teaching experience impacted their beliefs and actual practice in teaching creatively. The participants claimed that they adjusted their teaching approaches every day to meet the responsibilities of facilitating discussion and providing feedback to students. This confirms the research by Richardson et al. (2010), which argues that an educator's role as a facilitator involves diagnosing misconceptions, providing information, and confirming understandings. Furthermore, the participants felt the need to review student comments and move discussions forward. As they had experience as both learners and teachers, they developed ideas on how to create an effective and creative lesson. The participants believed that students learned better and more effectively when educators adopted a more student-centred approach and respected student needs. As such, the participants' feedback actually contradicted certain literature that claimed many higher education educators are still only concerned with lecture delivery (Boumová, 2008; Charlton, 2006; Schreurs & Dumbraveanu, 2014; Schwerdt & Wuppermann, 2011). The participants' reflections in interviews and their course progressions showed that they were learning and employing certain new

teaching styles, and they were moving forward to create a creative classroom where students could produce better work.

7.1.4 Factors Affecting Creative Teaching

All participants claimed that they faced various significant challenges when incorporating creative elements into their lessons. One critical factor that affected their practice was their knowledge and training. They claimed that because they had not majored in teaching; they had knowledge in their respective subject areas, but not in making teaching effective and creative. Although they could obtain some training from their institutions, such training was not compulsory and often outside of their schedules. This finding echoes Schreurs and Dumbraveanu's (2014) claim that higher education educators lack opportunities to put theories into practices, preventing them from shifting to a learner-centred approach. The participants were not completely satisfied with the voluntary training workshops and seminars that their departments or institutions provided; aside from the fact that they were sometimes unable to attend those training sessions, they felt that they lacked opportunities to apply the techniques they learned to real classroom settings.

Anther constraint was that certain school policies prevented staff from proactively making changes. Some participants stated that complicated procedures discouraged them from making revisions after drawing from student ideas. In their opinion, the management cared much about accomplishing learning objectives, not providing enough time for staff to adjust their teaching approaches to help students to learn more effectively. This reaffirmed Ramsden's (2010) idea that educators need to constantly learn how to teach in higher education. Vidergor and Sela (2017) also support this stance, arguing that all stakeholders, including management staff, should support each other in using innovative strategies to promote lifelong learning in higher education.

7.2 Conclusions and Implications

Students perceive their studies in higher education institutions as a time uplifting their overall learning experience and efficacy. The continued use of teacher-centered pedagogical approaches that stress academic skills is becoming a critical concern in higher education. Different factors such as institutional and student expectations, along with course outlines that stress academic content, can create a pressurized atmosphere that affects educators' practices (Bligh, 2000; Brown & Race, 2005). Although educators who are creative may not necessarily influence students to be creative themselves, teaching creatively at any level can maintain the interest of educators in their teaching, as well as the attention of their students. For educators, there is always a need for devising novel ways to accomplish teaching goals; at the same time, it is essential to leave room for developing unplanned and unpredictable goals when teaching creatively.

By exploring and identifying how Hong Kong higher education educators perceive "teaching creatively" and their practice, we gain a better understanding of the current phenomena in Hong Kong higher education. Through this research, investigators can help to raise awareness for improving current higher education teaching practices to fit student needs. Management staff can better understand the difficulties that front-line educators face and can help by revising existing policies related to the development of course online. Management staff are also expected to be more understanding, sensitive, and supportive when front-line educators encounter issues. Front-line educators can recognize their own strengths and weaknesses, and make adjustments in their teaching accordingly.

7.3 Limitations and Future Research

Although the use of a basic qualitative research design facilitated the exploration of participants' lived experiences, there are several limitations attached to this study. First, the investigators' presence in the data collection process is unavoidable and influences participant responses. Moreover, investigator bias is a potential major limitation given that the investigators of this study are also currently lecturers in higher education. Second, the rather small sample size limits the generalizability and external validity

of the findings. Third, the absence of students' voice in this study makes it challenging to understand the complete picture of teaching approaches in higher education. Lastly, data was only gathered from interviews and the participants' lesson plans. Missing observations may affect how the investigators evaluated the educators' actual practices in their classrooms. Field observation is therefore recommended for future research.

While the present study focused on higher education educators' perceptions and actual practice with "teaching creatively," it provided answers to the central research questions and suggested possible directions for future research in the higher education sector. First, students' comment on higher educators' teaching approaches and their achievement in class are worth investigating, as students play an active role in their own learning. Student perspectives on how the class is being arranged may influence how educators adjust their teaching approaches (Cardoso de Sousa, 2011). Second, this study revealed the need for higher education educators to receive more training and support from their institutions, implying an urgent need for reviewing and revising the current support and training provided. Additional research can investigate the effectiveness of existing higher education training policies and workshops. Lastly, the participants of this study identified various teaching approaches they adopted as creative; however, the study only explored "teaching creatively" in a broad sense. Future research should therefore focus on specific types of teaching approaches in order to investigate the pragmatic use of creative elements in higher education classes.

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Appendix: Interview Protocol

General Questions:

What are the experiences of educators of higher education in Hong Kong with teaching creatively?

Sub Question #1: What is the conception of "teaching creatively" as understood by educators of higher education in Hong Kong?

Sub Question #2: How do Hong Kong higher education educators design and organize creative lesson?

Sub Question #3: How do Hong Kong higher education educators conduct a creative lesson

Sub Question #4: What are Hong Kong higher education educators' perceptions of the challenges/obstacles of adopting creative teaching approach in their classrooms?

Interviewee Background Questions (5-10 minutes)

- Where were you born?

- How long have you been living in Hong Kong?

- What kind of higher education institution did you attend?
- Why did you enter the field of education, especially higher education?
- Please describe your training in teaching in higher education field.
- How long have you been teaching in higher education?

Creative Teaching Approach Questions

The Conception of "teaching creatively":

- In your own words, how would you describe your understanding of what "teaching creatively" is?
- In your classroom, can you describe what creative teaching and learning look like?
- How students look like and learn when creative teaching approach is adopted?

The Planning of a Class When the Educator Adopted Creative Teaching Approach:

How do you structure your class by adopting creative teaching approach?

- Recall one time when you really felt you incorporate creative elements in your classroom.
    - Describe what exactly happened.
    - Describe what you did to prepare the lesson.
    - Describe what you were doing.
    - Describe what students were doing.

Benefits/Opportunities Questions:

- What do you think how students learn from creative classroom?
- How do you think adopting creative teaching approach promote…
    - Students' learning? Examples?
    - Students' engagement in class? Examples?

Challenges/Obstacles Questions:

- How does your lesson look like when you adopt a "Teacher-centred approach" and a "Creative teaching approach"?
- Can you describe how you adjust your teaching approach over time?
- Why do you need to make such adjustments?
- Describe any additional experiences that impact on how you adopt the "creative approach" in your lesson/classroom.

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Youthful, Knowledgeable and Compassionate: Analysis of Social Media Identities Performed by the Youth through Instagram

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Abstract: Taking advantage of the creativity and the freedom available on social media platforms, the development of social media literacy could expand the traditional definitions of media literacy (the ability to access, analyse, and produce media) to incorporate the promotion of civic engagement leading to social change. This study will analyse how a group of university students in Hong Kong performs their youthful and socially-conscious identities on the social media application, Instagram (IG). The Critical Discourse Analysis (CDS) is adopted to analyse the English version of the IG posts from the inception of TEDxEncompassHK's Instagram account, to its TEDx talk main event on 18 October 2020. The linguistic strategies commonly used in the posts are identified and categorized to show the prominent identities conveyed: youthful and playful, knowledgeable, and literate, compassionate and radical. The findings of this study can illustrate the important role played by social media literacy to support and encourage civic engagement through using and producing multimedia messages. While such a production is often considered informal learning, this research aims to suggest that a strategic and conscious incorporation of social media literacy development into formal education could encourage students' creativity and critical thinking, and also provide a new lens for understanding rhetoric in the prevalence of social media.

Keywords: Instagram, social media literary, creativity, civic engagement, identity, Critical Discourse Analysis (CDA)

1. Introduction

Given the current prevalence of social media, it is important to examine how one of its predominant user populations—young people—nurtures and shows social media literacies in a way that allows them to bear social responsibilities to their local community and also practice civic engagement in issues of a global interest and for the global audience. Social media not only allows users to share their multimedia materials, namely photos, videos, and texts, but also provides a free space for users to develop identities for themselves, or the causes they represent in a way they may not be able to do in real life.

The purpose of this study is to analyze a group of university students in Hong Kong who are identified as an Instagram (IG) account authors especially recruited to engage in a global initiative, a part of an international movement dedicated to putting the climate crisis and its solutions on the agenda. A wide range of linguistic strategies identified in this study exhibit the social media literacies developed by the young IG authors in ways, showing their awareness of the social and civic responsibilities that they bear while engaging in a local event built upon a global initiative targeting both local and global audiences. Through analyzing the linguistic strategies deployed and the corresponding images created, this study illustrates how educators and students can fully utilize the potential of social media to bear their social responsibility to their community and practice civic engagement in global issues.

2. Literature Review

2.1 Media Literacy

The definition of "media literacy" has changed over time, especially as media itself has been revolutionized, both in quality and in quantity, with the birth and growth of the Internet. Although various definitions exist, scholars all agree that the notion of media literacy has expanded from just describing a user's one-sided perspective, to encompassing a user's multi-faceted, interactive ability to access, analyze, evaluate, create, and act upon content across all possible forms of communication (Aufderheide, 1993; National Association for Media Literacy Education, 2019). This consensus is further reflected in the detailed definition of media literacy devised by the European Charter for Media Literacy in 2009, which aims to promote the importance of media literacy in education, culture, politics, and social and economic policymaking. According to the Charter, media-literate people are expected to:

- use media technologies effectively to access, store, retrieve, and share content to meet their individual and community needs and interests;
- gain access to, and make informed choices about, a wide range of media forms and content from different cultural and institutional sources;
- understand how and why media content is produced;
- critically analyze the techniques, languages, and conventions used by the media, and the messages they convey;
- use media creatively to express and communicate ideas, information, and opinions;
- identify, and avoid or challenge, media content and services that may be unsolicited, offensive, or harmful; and
- make effective use of media in the exercise of their democratic rights and civic responsibilities.

Based on this definition, being media literate is more than just being able to understand the surface texts, or even the sub-texts, presented across all forms of communication. Rather, media literacy is also about exercising one's critical and analytical abilities to demystify media messages; to counteract possible manipulations regarding the inclusion, exclusion, or stereotypes imposed by the media, whether intentional or not; and to actively create new meanings that maximize one's enjoyment and profit from media messaging (Buckingham, 2013; Cappello, 2017).

2.2 New Media Literacy

Digital media, also known as new media, is one of the most significant up-and-coming strands of media in the 21st century. Compared to traditional media, this new form of media has not only made information more accessible thanks to the Internet, but also further complicated the notion of media literacy. As a combination of an ever-growing number of organic socio-cultural environments where messages are digitally created and shared (Koc & Barut, 2016), and produced by network technologies, new media is characterized by a culture of convergence. Through new media, consumers or users become active media producers by interacting with other users, producing or reproducing their own multimedia messages (including texts, images, and videos), and sharing these messages with other users anytime and anywhere (Tugtekin & Koc, 2019). Therefore, on top of the multilayered definition proposed by the European Charter for Media Literacy (2019), a current definition of being media literate also includes new media literacy (NML), which entails acting and reacting as critical, creative,

and responsible digital citizens when receiving, sharing and producing media content across new media platforms.

The broadened scope of NML requires an updated—if not entirely new—theoretical framework and measurement instrument for the analysis of media literacy. The study by Chen et al. (2011) in particular has been one of the most significant, serving as the basis for studies by several other researchers, who have adapted its ideas to suit changing needs with regards to the time, the socio-cultural context, and the form of media communication. Chen et al. (2011) propose a NML framework comprising two continua, consuming and prosuming. While consuming focuses on users' consumptive abilities—namely reading and writing (Buckingham, 2003; Burn & Durran, 2007), prosuming highlights the ability to critically and constructively question and evaluate messages, in addition to the tools that deliver them (Tugketin & Koc, 2019). Each of the continua also has two aspects—functional and critical—as endpoints, yielding a total of four distinct NML dimensions: functional consuming (FC), critical consuming (CC), functional prosuming (FP), and critical prosuming (CP). Lin et al. (2013) further elaborated on the framework by Chen et al. (2011) through explaining the four dimensions using ten detailed indicators, assigning to each dimension two or three concrete indicators.

Table 1. Lin et al., (2013)'s refined framework of Chen et al. (2011)'s new media literacy (NML)

Critical Consuming: Evaluate; Synthesize; Analyze	Critical Prosuming: Create; Participate
Functional Consuming: Understand; Consume	Functional Prosuming Prosume; Produce; Distribute

Capitalizing on the contemporary and comprehensive nature of the theoretical frameworks developed by Chen et al. (2011) and Lin et al. (2013), researchers began to apply them in learning about NML formation among one of the largest new media user groups: students. For instance, hoping to develop a theoretically grounded New Media Literacy Scale (NMLS) in a similar Asian context, Koc and Barut (2016) surveyed 1,226 university students in Turkey with a 35-item NMLS consisting of the four dimensions proposed by Chen et al. (2011) and Lin et al. (2013). Following their own 2011 study, Chen et al. (2018) conducted another large-scale study on 4,577 Singaporean students, which represented one-seventh of schools in the country. Based on their own prior survey and Lin et al. (2013)'s refined NML theoretical framework, Chen et al. (2018) aimed to first reveal the current NML levels of Singaporean students and then examine the factors affecting NML formation, with the goal of facilitating new media education policies in Singapore. As the pioneering large-scale research study in an Asian context on this subject, Chen et al. (2018) point out that while the Singaporean students performed well in terms of NML technical skills, their criticality and creativity need to be addressed further.

Other small-scale studies on NML have been conducted across Asia and they share one similarity: the schooling context provides fertile grounds for the study of NML, especially the evaluation of NML education. For example, Shi (2012) explored the content and training for NML education programs aimed at 90s-generation university students. On top of student NML levels, Zhang (2015) revealed the countermeasures adopted by college counsellors. Lastly, Lau (2017) looked at the evaluation and promotion of NML by college teachers. Regardless of the studies' scale, they all point to one of the same findings that on top of the roles of a reader or a writer (the functional aspect of the NML framework), new media offers them opportunities to take up the producer role so they can interact with, share, and produce media messages instantaneously. This has significantly transformed the dynamics in a school context. Whereas teachers or similar authority figures would usually take charge of the curricula, with students being recipients, nowadays students can take initiative to utilize their cultural and social capital to make their voices heard. Given that widely-accessible platforms within new media formats include social media platforms such as Instagram, Facebook, and Twitter; the notion of social media literacy has consequently emerged, specifically referring to the competencies that social media users ought to be equipped with.

2.3 Social Media Literacy

Similar to the core values of new media literacy (NML), namely the multi-literacies of critically creating, sharing, processing, analyzing, and evaluating messages and meanings (Jenkins, 2006) demonstrated by users in any internet-related form of communication, social media literacy refers to such various literacies primarily shown and developed in social media platforms or social networking sites. While new media is any media in their digital form, such as online newspapers, blogs or streaming applications, the social practices adopted by users to communicate with each other on the social media can be considered relatively more interactive and more instant. Various definitions of social media literacy are similar in that they are never limited to just one kind of competency. For example, Vanwynsberghn et al. define social media literacy as "the technical and cognitive competencies users need to use social media in an effective and efficient way for social interaction and communication on the web" (2015, p. 85). While technical competencies are the skills for producing and sharing social media messages, cognitive competencies refer to how users analyze and evaluate such messages (Livingstone, 2004) to creatively and critically comprehend and (re)produce social media content, considering its context, relevance, and trustworthiness (Vanwynsberghe, 2014). On top of these competencies, social and ethical skills are also crucial for the critical evaluation of social media (Hobbs, 2010; McDougall, Berger, Fraser, & Zezulkova, 2015).

2.4 Social Responsibility and Civic Engagement

Considering the various skills that a social media-literate person is expected to have, particularly social and ethical skills, it is reasonable to capitalize on the participatory power of social media, as well as to incorporate social responsibility and civic engagement into the discussion and formation of social media literacy. Without the social and ethical responsibilities to act for social justice, social media users may become passive receivers of dominant social media content or even reproducers of mainstream ideologies. Without concrete actions aimed at embedding and engaging oneself in civic activities to entice social or political change, the fulfillment of social responsibility may just remain a theory. Media literacy scholars also support the notion that bearing social responsibility and engaging in civic action exhibits social media literacy. In defining digital media literacies, Hobbs (2010) stresses the importance of reflection and action. Reflection refers to "applying social responsibility and ethical principles to one's own identity and lived experience, communication behavior and conduct", while action is defined as "working individually and collaboratively to share knowledge and solve problems in the family, the workplace, and the community, and participating as a member of a community at local, regional, national, and international levels" (Hobbs, 2010, p. 19). This extended definition of digital media literacies significantly broadens the purpose of social media, from the satisfaction of individual user needs across different social media platforms to the mission of serving more people other than themselves. Focusing particularly on youth engagement and participation in digital culture, Mihailidis (2014) concurs with and expands the notion of the media citizen to include the five As: access, awareness, assessment, appreciation, and action. While the first four items in Mihailidis' (2014) 5A framework embody the need for social media users to bear social responsibility, the last item of action echoes Hobbs' (2010) emphasis of action in the concept of digital media literacies.

Since the 2000s, various studies have put theories of social media literacy into action, aiming to effect social responsibility and civic engagement among students. A study by Clark and Russell (2013) exemplifies Hobbs (2010)'s focus on reflection and action by first having their undergraduate students learn about various topics on social media literacy in a media literacy course, and then putting the students into teams to implement service learning across middle and high schools in rural areas. In designing unconventional counselling services for younger students, the undergraduates were asked to exercise their creativity and critical thinking to incorporate their media literary course content within their interactive activities. According to Clark and Russell (2013), the outcome of the course was satisfactory, as their undergraduate students gained civic engagement experience through experiential education. Their study also suggests that students can become more critical and creative digital media users when they have an audience (the rural school students in this case) for whom they are responsible.

Similarly, the pilot study by McLean et al. (2017) incorporated social media literacy into a formal curriculum. 64 girls, with a median age of about 13, received three social media literacy intervention lessons, while 37 other girls in the control group received regular classes. The pilot study revealed significant differences in awareness, where intervention group participants showed a relatively stronger awareness of body image, disordered eating, and media literacy, compared to the control group.

The formal social media literacy lessons in the studies by Clark & Russell (2013) and McLean et al. (2017) demonstrate that instilling social media literacies among the younger generation not only develops their consumptive abilities (Buckingham, 2003; Burn & Durran, 2007; Chen et al., 2011), but also, or more importantly so, their prosuming abilities (Chen et al., 2011; Tugketin & Koc, 2019) as they are encouraged to critically access, share, and produce messages on social media platforms. Even more importantly, the potential of the vast population of youth users, when coupled with the equally enormous potential of social media platforms, can be harnessed to use social media for civic engagement practices (MacArthur, 2006). For example, young social media users can establish networks with and for their like-minded peers, engage in mobilization activities (Jenkins et al., 2016; Lane & Dal Cin, 2018), or produce or engage in collaborative projects such as crowdsourced civic participation (Benkler, 2005; Papacharissi, 2010; Raby et al., 2018). Kiran and Manisha (2020) summarize civic participation on different social media platforms as "a discursive, innovative, personalized form of engaging with a civic cause from a localized perspective and in the presence of a larger peer group created by the individuals" (2020, p. 400). Civic engagement practices can be as simple as visiting websites through hyperlinks, as well as liking, sharing, or reposting any media messages; these practices can already make them civic actors performing discursive actions (Kiran & Manisha, 2020).

However, the authenticity of discursive actions performed on social media is still questionable. As Jenkins et al. (2016) contend, not all discursive participatory action can be categorized as civic engagement practices. Some discursive actions are even considered low quality or opinionated (Slimbach, 2005; Sustein, 2007; Keen, 2010). Moreover, according to a systematic literature review of 54 publications on digital literacy competencies, Manca et al. (2021) reveal that only a limited number of studies examined the skills specific to a particular social media platform, and only a few focused on the development of social media literacies through participation (also known as situated, context-dependent social media practices); most studies otherwise examined decontextualized practices in which such literacies are obtained. This research gap is echoed in the literature review above on the studies by Clark & Russell (2013) and McLean et al. (2017), in which social media literacies were being formally incorporated into the curriculum. Although a conscious move to incorporate social media literacies into teaching and learning practices can affect pedagogical advancement, how young people draw upon their own experiences and realities to make their public voices (Kiran & Manisha, 2020) heard in a natural setting or in a virtual public sphere where they feel more at ease, rather than in a formal educational setting, could be even more informative regarding how they perform and create their identities for not only local audiences, but also global audiences.

The current study, therefore, probes into the authentic voices made by young social media users outside an educational setting. It focuses on a group of young social media users who were intentionally recruited to participate in a global civic engagement project committed to accelerate solutions for the climate crisis. Their social media messages were created with the intention of being shared on their chosen social media platform, namely Instagram (IG). Taking advantage of the transformative and participatory power of social media to incorporate social responsibility and civic engagement, this study aims to uncover how a group of university students in Hong Kong demonstrate their social media literacy by constructing their identities on a social media application for local and global audiences.

3. Methodology

This study adopts Norman Fairclough's critical discourse analysis (CDA) as its methodology, together with its three-level textual analysis, namely description, interpretation, and explanation (Fairclough, 1992). Focusing on the role of language in society and the ways language is used to create power, CDA is a qualitative, interpretative, and constructionist strand of discourse analysis that especially examines

social phenomena (Hardy et al., 2004). As a research method for studying texts in relation to their social context (Bouiver & Machin, 2018), CDA is therefore suitable for analyzing a series of IG posts devoted particularly to promoting a global initiative on accelerating solutions to a major social cause, namely the climate change crisis. CDA also analyzes language as a vehicle of social practice in which power, inequality, and dominance are intricately reproduced or resisted (Janks, 1997; van Dijk, 2008). Looking at the production of social constructions of reality (Hardy et al., 2004), CDA can shed light on how the linguistic strategies adopted by the young authors of the IG posts in this study can contribute to the construction of their own identities and voices in the virtual public sphere provided by the IG platform.

In response to the prevalence of social media, the discourse studied under CDA is being expanding from traditional media texts to the multimodal nature of digital communication, while also considering the nonlinear nature of texts (Bouvier & Machin, 2018). This study, however, only focuses on the traditional texts because of the scale of this research. CDA could still prove its applicability to this study because its core objective, even when applied to social media, remains the same: to uncover how the different modes of digital communication are being described, interpreted, and explained in relation to power relations such as class, race, and gender (Bouiver & Machin, 2018).

This research studies the English posts of an Instagram (IG) account especially established to support and promote a local TEDx event, TEDxEncompassHK, organized by a social enterprise in Hong Kong called EncompassHK (Appendix I). This local event was organized in response to TEDxCountdown, an initiative of TED's especially for the year of 2020. This is a global movement endeavored to find ways to shift, more rapidly, to a world with net zero greenhouse emissions and tackle the climate crisis. With the main event taking place in early October 2020 in Norway, hundreds of satellite events were being hosted and organized by local communities around the world, upon a TEDx official license. TEDxEncompassHK was one of the four local events licensed by TED in Hong Kong, in 2020. The organizer, EncompassHK, is a licensed social enterprise advocating for the Sustainable Development Goals (SDGs) by offering training and consultancy services to educate and support organizations to be diversified and inclusive. With its extensive connections in the higher education sector in Hong Kong, TEDxEncompassHK managed to recruit over 20 students studying in both government-funded and self-financed universities in Hong Kong, assisting with this TEDx event in different capacities, such as managing its social media platforms, curating, communicating with TEDxEncompassHK's 10 speakers (Appenxi II). With EncompassHK's founder and her personal friends who are the working adults, TEDxEncompassHK was the only one Countdown event in Hong Kong which was predominantly engineered by a group of university students in Hong Kong, aged from 19 to 22.

The IG account houses 30 posts written in both spoken Cantonese style and English, together with a range of hashtags and emojis. They serve the purposes of giving backgrounds of this global and local intuitive, introducing speakers, endorsers, the MC and acknowledging the organizing team, with the first being posted on 11 August, 2020, and the last on 19 October 2020 (one day after TEDxEncompassHK's main event on 18 October 2020).

The corpus for this study is the 10 posts written in English featuring the 10 speaker introductions, consisting of 1,334 English words (Appendix IIIa-j), out of the total of 3,895. The original size (3,895) includes the 20 other English posts serving four other functions, introducing TEDx's backgrounds, this particular event's endorses, MC and organising team. The 10 speaker introduction posts are especially analyzed in this study because they share the same function, namely introducing the 10 speakers, and they were produced entirely by a team of three university students, in the social media team. Besides, these 10 posts of speaker introduction are the majority out of the total of 30 posts, while the other 20 posts introduce four other units of the event, namely TEDx's backgrounds, this particular event's endorsers, MCs, and organising team. The 10 speaker introductions, therefore, are the one theme that stands with the most number of posts. It should also be noted that while each post consists of texts written in both Chinese and English together with their hashtags and emojis, this study analyzes only the written text in English, due to the limitation of this research scale.

Based on the researchers' personal interactions with TEDxEncompassHK's organizing team, the researchers learned that TEDxEncompassHK was exceptionally being oriented with a youthful and

down-to-earth approach, to stand itself out of the other three similar TEDxCountdown local events in town, happening within the same two weeks. As a result, Instagram is a fertile ground for this study because it is a social media application primarily used by and popular among the young population.

After gathering the 10 speaker introduction posts, the researchers proceeded to analyze the linguistic resources by using CDA, through the use of vocabulary, terms, and many other rhetorical strategies identified. This study aims to take a critical stance in examining the linguistic strategies deployed by the young Instagram authors in the construction of their identities that constitute their social responsibility and civic engagement.

4. Findings and Discussion

The findings of the present study are organized based on the three emergent themes consistently located across the 10 IG posts studied, which respectively feature the 10 TEDx speakers for the event being promoted. Based on Fairclough's three-level textual analysis (1992), namely description, interpretation and explanation, this section first describes the linguistic strategies deployed by a group of young and active social media users, through interpreting their corresponding identities the strategies help create. Three major identities can be interpreted as the kinds of images as which the youth involved in this civic engagement would like the public to regard themselves.

The study will then proceed to the stage of explanation (Fairclough, 1992) in the discussion section.

4.1 Youthful and Playful

All 10 posts clearly target the youth audience. The linguistic resources found among all the posts collectively point to the assumption that they were written either by young people, or at least by authors intentionally adopting a youthful tone. A youthful tone, in this study, refers to the lighthearted and vibrant energy exemplified by linguistic strategies deployed to mimic how the young communicate themselves with each other, and with their readers on their own platform, namely the concerned Instagram account. For instance, all 10 posts featured imperative sentences beginning with a verb, such as "Let us bring you in-depth sights from Mr Lam Chiu Ying", "remember to join us at TEDxEncompassHK", "Stay tuned to her sharing at TEDxEncompassHK!", and "Want to know more about his story? Join our TEDx talk on 18 October. Instead of sounding like overbearing orders, the use of imperatives creates a different discursive rhythm similar to commonly found in youth texting culture, particularly given that the majority of sentences in a given post are written with a clear subject. The occasional use of imperatives in each post also reduces the formality of the tone, resulting in a conversational style.

The conversational style itself is also a consistent linguistic resource located in all 10 posts. The last line of each post typically includes second-person pronouns such as "you" and "your" to encourage readers to attend the promoted TEDx talk: "If you are interested in this topic, …", "If you would like to get some insights,…", "If you want to know more about Joanne, …" and "See you on 18 October, 2 pm to 7 pm". Together with the use of conversational and exclamation phrases such as "Oh wait!!", "Hey stop for a while!!", "Yes, for sure!", "What's more!", and "Let's hear what he has to say…"; the use of second-person pronouns reduces the distance between authors and readers, making the posts more like conversational pieces rather than informative texts.

Conversing with readers, and even positioning the post authors themselves as being part of both the readership and the potential audienceship, is achieved by the authors' use of inclusive first-person plural pronouns such as "we" and "our": "he will also be sharing with us how we, as individuals, could help spread this mission to the world by developing social consciousness…", "Come join us to learn and explore more about this topic", "Join us on 18 October!" and "… hoping to inspire you to look at our fashion consumption habits from a different perspective." The young authors presented themselves as the organizers of the TEDx event, inviting members of the public to join them as part of the global initiative. More importantly, in sentences such as "how we, as individuals, could help spread this mission…" and "…look at our fashion consumption habits from a different perspective", the use of

first-person plural pronouns appears to position the post authors on an even bigger, more glorified platform, in which the young shoulder the social responsibility to address the global issue of the climate crisis.

Lastly, the youthful, even playful, identity that the young authors constructed for themselves is also evidenced in the intentional and unconventional ways in which the posts are punctuated, such as "Oh wait!!", "Hey stop for a while!!", and "Now she finally could figure out the way to save Mr Earth!!". The frequent use of exclamation phrases represent traces of texting rituals that are commonly adopted in mobile networking applications, indicating the IG authors' intention to highlight their young and vibrant personalities.

While the use of imperative, second-person pronouns, first-person pronouns, exclamation phrases, and unconventional use of exclamation marks are not exclusive to the youth, such linguistic strategies collectively demonstrate the youths' desires to be identified as a group of versatile, social media-friendly people who are proud of their youth but also confident in communicating their socio-cultural and emotional sensitivity and knowledge to the world. This is similar to the concept of transcultural citizenship proposed by Shelat (2014). Transcultural citizenship refers to globally oriented citizens in the digital world, who are informed by their local experiences and lived realities while engaging with broader global audiences in global issues (Shelat, 2014). The local experiences and lived realities that the young IG authors draw on are reflected in the three major identities revealed through the findings of this study. The authors capitalize on, and even amplify, their youth through a range of linguistic strategies aiming to create a casual, conversational, text messaging-like vibe.

4.2 Knowledgeable

Throughout all ten of the speaker introduction posts, the young and vibrant TEDx organizers also constructed for themselves a knowledgeable identity, displaying their considerable knowledge about the speakers and how the speakers have contributed to the battle against the climate crisis in their individual capacities. In addition to the expected, needed information such as the speaker's name, title, and current and former prominent affiliations, the IG authors enriched the introduction posts with the content of the speakers' talks, and especially shed light on how each speaker could contribute to accelerating solutions to the climate crisis.

- "*… to share with us what lessons we can draw from COVID-19 pandemic in response to the climate change*" (Mark McGinley)
- "*… to share with us how pollution is related to wardrobe, hoping to inspire you to look at our fashion consumption habits from a different perspective*" (Ren Wan)
- "*… He's one of the most popular and loved professors in HKU! He can definitely give us other perspectives and ideas on how we can help save the marine life around us!*" (David Baker)
- "*You might have already seen it in eco-friendly shops and restaurants around the city. We are honored to have Devana to share with us her story, and how we all can reduce at source and through our daily actions, as little green steps, to make a difference!*" (Devana)
- "*Let's hear what he has to say about bringing a second life to Hong Kong's timber!*" (Ricci Wong)
- "*… he will also be sharing with us how we, as individuals, could help spread this mission to become changemakers. His talk will cover how he creates an inclusive environment for the students from 90 countries and generates 1.9 million from the scholarship programmes for its solar power system project, the largest of its kind in Hong Kong*" (Arnett)

The introduction post for the youngest speaker at the TEDx event—Kamakshi Bhavnani, the 15-year-old founder of Youth Ocean Alliance, is notable because it is the only one, among the 10 speaker introduction posts, with the most coverage on her diverse credentials as an environmentalist, highlighting her involvement and capacities in at least 8 different organizations and projects. Moreover, the post was the only one in which the phrase "young people" explicitly appears, twice: "Kamakshi believes that young people can change the world and seeks every opportunity to inspire young people to believe in themselves and take action."

The IG authors also detailed Dr Joanne Yeung's educational background ("After graduating from Stanford University…") and academic affiliations: "Upon her return to academia as a Research Assistant Professor in the University of Hong Kong, she led numerous international collaborations in projects…", "…has initiated interdisciplinary research projects, including…", and "…bringing experts from multiple disciplines and developing…". In two of the ten speaker introduction posts, the IG authors provided additional background knowledge from the speakers' respective lines of work, namely three ways to save the coral reef (David Baker) and the five most famous recycled materials (Ricci Wong).

The knowledgeable identity is being constructed by the young authors' showing their social media literacy in terms of synthesizing and creating meanings. In describing each TEDx speaker, the young authors exhibit all the dimensions of social media literacy considered in the NMLS developed by Koc and Barut (2016). First, the construction of the "knowledgeable" identity demonstrates their competencies in both functional consumption (being able to access media content and understand its meanings) and critical consumption (being able to analyze and interpret the meanings and consequences of media content). The young authors are also equipped with functional prosumption, being responsible for producing and sharing all of the IG posts.

4.3 Sentimental and Literate

Aside from portraying the young authors as youthful, playful, and knowledgeable, a range of literary devices were also being deployed to help build the authors' identities of being sentimental about the environment and other global issues, in addition to being literate.

Lyrics from "Imagine" by the legendary British band, The Beatles, were adapted, from the original lines "Imagine there's no heaven; it's easy if you try" to "Imagine there's no black coal; it's easy if you try. Imagine Hong Kong's eco-friendly, not burning coal in the blue sky" to begin the first speaker introduction post and feature the speaker considered the most prominent in the lineup: Mr Lam Chiu-ying, former director of the Hong Kong Observatory.

This kind of romantic narrative also features in another speaker introduction post, beginning with "Once upon a time, there was a healthy planet called Earth with lots of happy friends" (Joanne Yeung). The post tells how as a child, the speaker Joanne was first inspired by "The Story of Mr Earth". The post then proceeds with different short paragraphs, led by the topic sentences "But some people started to spoil his look, and poison the sea…", "Poor Earth is very sick. Can he recover…? Yes, for sure!" and "Protect the environment; save the earth" respectively. Together, the paragraphs form a coherent story documenting how Joanne grew to be conscious of the damage being done to the Earth and how she became engaged in different job positions and projects in academia to address pressing environmental issues. In this narrative, Joanne is described as a superwoman curing and finally managing to save Mr Earth.

The recreation of the legendary lyrics and the references of events, stories and pop culture familiar to Hong Kong citizens can be understood as a conscious attempt of the young post authors to resonate with not only the local but also global readers. This could also share their heightened awareness of their exercising their social medial literacies to participate in an international engagement that impacts a worldly issue, namely climate change. Shelat's (2014) concept of transcultural citizenship is also applicable to the young authors in this study, given that they are building an online community, within the particular digital space of Instagram, in which they can express their concerns about the climate crisis.

The sentimental identity is also constituted through a personal level of sharing by the young authors. One of the speaker introduction posts begins as follows: "I have good news and bad news… The bad news is our environment and globe is deteriorating every day. But… the good news is- WE HAVE INVITED DR DAVID BAKER TO BECOME ONE OF OUR SPEAKERS!!" (David Baker). In the same post, an affectionate emotion is also conveyed: "He's one of the most popular and loved

professors in HKU!" Similarly, another post starts with: "How sustainable is your household? A lot of my friends are renovating their houses right now" (Ricci Wong). Introducing the speakers through such a poetic narrative approach displays the young authors' intention of positioning themselves as storytellers, hoping to share and communicate with readers on a more personal, heartfelt level, instead of being merely informative and factual.

Other than this sentimental identity, the young authors also demonstrate their literate image and proficiency through writing using a variety of rhetorical devices. The repetition of sounds is observed in rhymes, such as "try" and "sky" in one post, and the use of alliteration in a number of posts, such as "burn" and "blue" in "burn coal in the blue sky" (Lam Chiu-ying). Puns also exhibit the linguistic efforts made the young authors in the IG posts: "We consider the monetary cost of buying the clothes, but do you also consider the cost to the earth?" (Ren Wan). The first instance of "cost" refers to the money needed to make a purchase, while the second refers to a sacrifice made.

Overall, the critical prosumption (Koc & Barut, 2016), the ability to produce media content, comprehend its social impact, and convey their personal values and beliefs while considering and negotiating others' ideas, is especially reflected in the young authors playing an active role in addressing topics such as gender and age inequality, in addition to effecting the concerned changes. For example, in her speaker introduction post, Joanna Yeung is positioned as a "superwoman" (the word being stylized in all caps) coming to rescue Mr Earth. The explicit gendering of the two characters can be understood as a conscious move by the young authors to challenge existing gender stereotypes, given that femininity and masculinity are likely to still be misrepresented in social media (Chen et al., 2020), with females still being predominantly portrayed as nurturing, sentimental, and submissive to or dependent on males (Chen et al., 2020; LeBeau, 2020). Similarly, another female speaker, Devana, is similarly introduced as "one of the coolest eco-warriors in Hong Kong". On the other hand, David Baker, a male speaker, is featured as "one of the most popular and loved professors in HKU". These collectively could point the deliberate attempt the young IG authors in this study have made to challenge the stereotypical gender roles. They capitalize on the social media literacy where individuals are given the opportunity to develop their participatory abilities, especially by challenging the existing systems that lead to discrimination and social equalities (Ranieri & Fabbro, 2016).

5. Conclusion and Implications

The description, interpretation and explanation of the Instagram posts written by a group of dedicated young social media users and writers demonstrate the multi-faceted linguistic strategies and the corresponding images they deployed and created respectively. The processes also point to their awareness of the social media literacies they equip themselves with. They are the digital population who actively and consciously produces, shares, and makes meanings through social media platforms. On top of deploying their existing social media literacies, this study, based on its findings and discussion, also hopes to facilitate the development of social media literacies through educational practices and research.

While incorporating the teaching of social media literacy into formal educational curricula is one way of developing it, to increase the authenticity of social media content and to encourage the creativity and critical thinking of young social media users, students should be encouraged to build their own social media literacies and competencies in experiential learning experience, learning to understand and identify quality and trustworthy sources or social media platforms for themselves (Gammon & White, 2011). Educators should also assess their own media literacy so that they can equip themselves for expanding students' media competencies. Most importantly, instead of being instructed to access certain authorized media sources or to produce media content according to institutionalized rubrics, students should be taught that they are accountable for their every action on social media. While they have the right to perform functional and critical consumption, they are also responsible for functional and critical prosumption such that they bear social and civic responsibilities to themselves, their peers, and even the greater communities on social media of which they are members.

The concept of transcultural citizenship (Shelat, 2014) can be further explored in research to take advantage of the participatory and transformative power that social media spaces offer digital users for creating sociocultural communities without any boundary limitations (Jenkins, 2006). This study bears the limitation of not being able to engage with the young IG authors through qualitative interviews to learn about their motivations, experiences and commitment. This should point to a possible direction for future research to explore how social media can be manipulated as a vehicle for local, regional or even global civic engagement.

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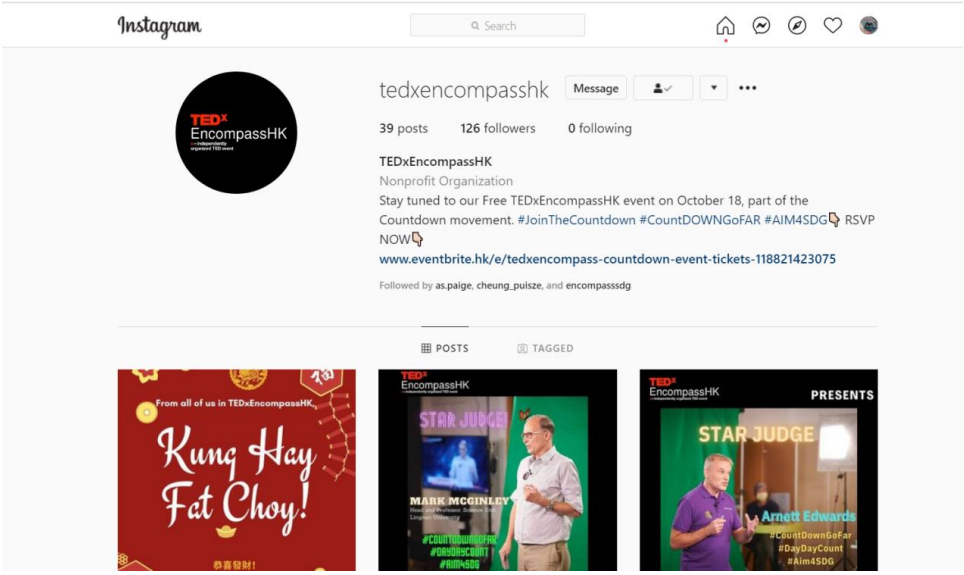
https://primoapac01.hosted.exlibrisgroup.com/primo-explore/fulldisplay?docid=TN_cqvip664699527&context=PC&vid=HSMC_NUI&lang=en_US&search_scope=Everything&adaptor=primo_central_multiple_fe&tab=default_tab&query=any,contains,%22new%20media%20literacy%22%20research&offset=0

Appendix

Appendix I. TEDxEncompassHK Instagram Homepage



Appendix II. TEDxEncompassHK List of Speakers

Appendix IIIa. TEDxEncompassHK Speaker: Lam Chiu Ying

Appendix IIIb. TEDxEncompassHK Speaker: Mark A McGinley

Appendix IIIc. TEDxEncompassHK Speaker: Kamakshi Bhavnani

Appendix IIId. TEDxEncompassHK Speaker: Ren Wan

Appendix IIIe. TEDxEncompassHK Speaker: Joanne Yeung

Appendix IIIf. TEDxEncompassHK Speaker: David Baker

Appendix IIIg. TEDxEncompassHK Speaker: Devana Ng

Appendix IIIh. TEDxEncompassHK Speaker: Ricci Wong

Appendix IIIi. TEDxEncompassHK Speaker: Andrew Tsui

Appendix IIIj. TEDxEncompassHK Speaker: Arnett Edwards

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Teaching Creativity and Pedagogical Practice

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Abstract: This research paper addresses the topic of creativity and pedagogical practice, proposing ways in which creativity may be successfully taught or inculcated within a classroom environment. This is achieved through a review of secondary literature on both the topic of creativity in terms of how it is defined and how it can be taught, before making recommendations as to future practices on the basis of this research coupled with case studies. In particular, how new technologies can be incorporated into the classroom towards this end is considered. The paper begins by offering an interdisciplinary theoretical framework for creativity derived from philosophical, psychological, and educational theories of the concept. The ways in which creativity may be taught or learnt within is then considered, with particular reference to research that has problematised the classroom as a suitable learning environment for creative skills as well as research that has proposed approaches to inculcating creativity using new media. Finally, utilising the example of several case studies, this paper proposes potential approaches to inculcating creativity within the classroom through a holistic approach to art education that incorporates new media such as communication technology.

Keywords: Epistemological pessimism, cognitive psychology, pedagogical model, deschooling, cross-fertilisation

1. Introduction

This research paper examines the topic of creativity and how it may be taught and inculcated through pedagogical practice in a classroom environment. This research is primarily undertaken through a review of secondary literature and is analysed from an interdisciplinary perspective, taking into account philosophical and psychological perspectives on the concept of creativity and how they may be utilised to improve teaching creativity and pedagogical practice. The research issues underlying this investigation can be summarised through the three following questions:

- What is creativity and how can it be defined?
- How can creativity be inculcated within a secondary/tertiary classroom environment?
- What methods of classroom teaching are most conducive towards teaching creativity?
- Using the case study of teaching creativity in Art, how can holistic teaching practices help encourage creativity in students?

The objective behind answering these questions is ultimately to make recommendations for future pedagogical approaches and teaching practices based on the research's findings that are applicable to secondary or university level education in Hong Kong. Furthermore, as a consequence of paradigmatic shifts towards teaching online precipitated by the COVID-19 pandemic crisis, the prospect for how new

technologies might be incorporated into the classroom towards teaching creativity is elevated in consideration of these recommendations.

To this end, the research project is undertaken using secondary research into the intersections between creativity and education, and consists of an extensive review and analysis of the theory and research behind the phenomenon of creativity and how it may be taught. The first section of this essay focuses on creativity as a phenomenon and how it may be defined. This takes into account the perspectives of cognitive psychology, as well as the philosophy of aesthetics as to the nature of creativity. The problematisation of creativity in terms of the flexibility of its definition is resolved through adopting a pragmatic perspective of creativity as involving the production of something valuable and novel. The second section of the research paper examines the perceived difficulties in teaching such a skill, focusing on challenges brought by educationalists towards the suitability of the classroom environment towards inculcating creativity in students. This challenge is resolved through reference to theory and research advocating for the incorporation of digital technologies into classroom environments in order to adopt new pedagogical approaches to the teaching of creativity. The final section of this essay then looks at how these technologies might be utilised to teach creativity in both physical and online classroom environments. Using case studies from art education, the research demonstrates how holistic approaches to contemporary art may be used to improve creative skills in learners, before offering recommendations as to how this approach might translate into practices in the physical and virtual classroom.

2. Theories of Creativity

The section establishes a theoretical framework from which the teaching of creativity may be approached, focusing on difficulties in defining creativity as a phenomenon and a skill that impinges upon the challenge of the teaching creativity as it pertains to educationalists. Much of this requires an interdisciplinary approach to the topic, as the primary debates regarding how best to teach creativity rely upon definitions of it as a skill that emanates from debates within psychology and philosophy. The problem with teaching creativity ultimately is in itself a product of previous educational approaches to the skill, insofar as it has historically been undervalued as a skill that is amenable to being taught, as is highlighted by philosopher Ian Jarvie:

> *The fundamental problem is, I believe, absorbed during our elementary education. We are taught that artistic, cognitive, and technical achievements are unique events, miracles, strokes of luck (or genius) which we should mainly be concerned to welcome and study. This fundamental epistemological pessimism seems to foreclose the problem: creativity is just an inexplicable 'gift'.* (Jarvie, 2009, p. 46)

The 'fundamental problem' that Jarvie describes is thus a chicken-and-egg scenario by which the lack of focus on teaching creativity in schools reinforces the belief that this is because it is an impossible endeavour. Refuting this belief in terms of demonstrating the theoretical and empirical possibility for teaching creativity – as is the subject of the second part of this essay – is predicated upon resolving the epistemological despite that Jarvie refers to.

This problem is not simply 'epistemological pessimism' as Jarvie puts it, but a lack of clarity as to the definition of creativity that is being discussed. In essence, in order to assess how best to teach creativity, it is first necessary to establish how creativity may be defined and measured. This problem is exacerbated by widespread disagreement across contemporary philosophy and psychology as to how creativity is to be defined. Larry Briskman (2009), for example, has highlighted disagreement across disciplines as to how creativity is to be identified, with typically measuring creativity by the quality of the creative product and others as defining it by evidences of creative processes. With respect to how this applies to education, creativity from the perspective of teaching art, for instance, may be evidenced by the quality of the creative product itself, whereas creativity from the perspective of teaching science may be more measurable in terms of the problem-solving activity that goes into research and analysis. This problematises both how creativity may be taught and how it may be assessed insofar as there are potential distinctions in how it is defined and how it is expressed in endeavour.

A synthesis of these definitions has been attempted by cognitive psychologists such as Matthew Kieran, who defines creativity as a process of thought that is evidenced by the creation of an end-product that is both 'novel' and 'valuable' (Kieran, 2014, p. 203). This approach to synthesising the definitions of creativity in a way that is practically amenable to being taught and assessed is affirmed by philosophers, such as Berys Gaut (2010), a professor of aesthetics. This understanding allows for the possibility of teaching creativity through the inculcation of creative thinking processes as justified by cognitive psychology, as well as permitting the assessment of creativity as a skill through the creation of products that are unique and contain value. Although the latter criterion may seem subjective, this allows the measurement of creativity some degree of flexibility and adaptability across disparate creative domains such as arts and sciences.

3. Pedagogical Approaches to Creativity

By allowing for the theoretical possibility of inculcating and assessing creativity, it is necessary to examine the ways by which this might be possible in practice. Although the above perspectives derived from philosophy and psychology affirm the theoretical potential to teach creativity as a skill, how this might be approached methodologically falls within the domain of education. This section of the research project examines what empirical research from the field of education (encompassing also educational psychology) has to say across the body of literature on teaching creativity. Importantly, this review of the literature considers whether classroom environments are generally conducive towards the teaching of creative skills, and to what extent new technologies may impact pedagogical approaches to this either positively or negatively.

The literature on current pedagogical approaches to instilling creativity in learners suggests widespread variations as to the approaches behind teaching creativity. Unlike across psychological and philosophical approaches to the subject, there is apparent consensus among educationalists that creativity is indeed amenable to teaching in some contexts (Lin, 2011; Amabile, 1996; James, Lederman, & Vagt-Traore, 2004; Jeffrey & Craft, 2004). Robert Sternberg (2019) has summarised some of the common extant methods towards enhancing creativity, including synectic approaches, DeBono's (2015) theory of lateral thinking, and other commonly used methods such as 'brainstorming'. All these tend towards certain creative processes with evidential products such as 'problem-solving' exercises, although research has demonstrated that 'redefining' problems is more conducive towards producing high quality creative products than problem solving within defined paradigms (Sternberg & Lubart, 1995). In other words, it is the challenging of assumptions as well as the overcoming of obstacles that is conducive towards creative output (Sternberg, 2019).

This is to say that there are potentially common creative thought processes that underpin creative endeavours across various types of tasks, without any clear distinction between creative enterprises across distinct domains. Creative skills – as a primarily cognitive process – may therefore be defined also as 'creative thinking', and this approach makes its teaching and study more applicable across various domains.

4. Creativity in the Context of Hong Kong

Naturally, much of the above literature pertains to research carried out within Western institutions and pertains to European or English-speaking education systems. Historians of creativity such as John Baer and James C. Kaufman (2006) and Weihau Niu and Sternberg (2002) have identified distinctions in approaches in Asian and Western schools of thought, making the context of Hong Kong a unique case because of its intersection between these cultural spheres. Yu-Sien Lin has examined pedagogical approaches to creativity in the context of their application within classrooms in Asian schools, and has found that a high degree of variation in pedagogy is precipitated by the lack of 'consistent rhetoric' as to the correct approaches (Lin, 2011). However, others have found some degree of congruence in approaches across Chinese societies. In research comparing approaches to teaching creativity across China, Taiwan, Hong Kong and Singapore, Niu concluded that these societies 'share the same cultural tradition and the same fate in terms of nurturing the creativity of their people; that is, creativity is no

longer devalued in Chinese societies' (Niu, 2006, p. 390). However, Niu (2006, p. 389) also notes that creativity has been comparatively undervalued in Hong Kong until relatively recently, utilising statistics that demonstrate a lack of research output from psychological and educational perspectives in Hong Kong in comparison with other Chinese societies.

However, despite the lack of a strong and distinct body of research pertaining to teaching creativity in the context of Hong Kong alone, the shared cultural traditions across Chinese societies make them potentially amenable to the production of a pedagogy applicable across all the above educational systems. According to Niu, this is a result of the cultural hangover from shared Eastern Religions that foster the notion that creativity is a skill which is amenable to being taught and learnt: "Even though Taoism and Confucianism offer entirely different approaches to nurture creativity, it is apparent that Chinese culture fosters an incremental mindset of creativity, viewing creativity as something people can develop throughout their lives" (Niu, 2019, p. 450). As a result, there have been several attempts to develop pedagogical approaches to teaching creativity in East Asian contexts.

For example, on the basis of research carried out in China, Taiwan, and Hong Kong, Yu-Sien Lin (2011) has developed a pedagogical model potentially applicable to the context of teaching in Asian contexts. According to Lin, research on creativity from the perspective of education typically falls within three categories of concern: teaching, that is, the ways in which the actual process of teaching itself can be utilised to bring about more creative skills in learners; environment, meaning the contexts within which creativity may be instilled as a skill, including the classroom but potentially expanding beyond this into broader social contexts for learning; and teach ethos, which might be more broadly described as the pedagogical approach that underpins the actual teaching practices that constitute the first area of study above. This model is naturally far from definitive or exclusive, but it demonstrates how researchers in education have typically determined the teaching of creativity to depend upon three interrelated factors: overall pedagogical approach, the learning environment, and teaching practices.

Lin (2011, p. 152) utilises their tripartite model based on teaching, environment, and ethos to demonstrate how these interconnected elements should guide how teaching creativity is approached, arguing that pedagogy is ultimately defined as a combination of these factors in consideration.

The eschewal of traditional, top-down, linear approaches to teaching are replaced with a dialogic approach towards teaching that considers the needs of learners and the learning environment rather than deciding upon a set array of effective teaching practices applicable under all circumstances:

> *…It is argued that the creative endeavours of both teachers and learners in an effective teaching/learning process are indispensable. In other words, the three elements of creative pedagogy interplay and contribute to each other, forming a dialogic and improvisational process with creative inspiration, supportive teacher ethos, effective inquiry-based strategies, and learners' creative and autonomous engagement*. (Lin, 2011, p. 153)

Lin's model therefore arrives at certain factors that are crucial to foster in terms of instilling creativity among learners: improvisational process; creative inspiration, 'supportive' teaching approaches; inquiry-based strategies; and autonomous engagement of learners. Importantly, this pedagogical approach describes to some degree an ideal learning environment conducive towards creative learning. However, the degree to which a traditional classroom environment is in itself amenable to these conditions remains to be established.

5. Creativity in Schools

Given the above pedagogical approach to instilling creativity, it may be asked whether school classrooms provide a suitable environment amenable to teaching given these criteria. Indeed, this query has provoked a considerable amount of debates within education as to the suitability of school classroom environments to teaching creativity. For example, Porandokht Fazelian and Saber Azimi (2013) have observed the potential for traditional schooling to erect 'barriers' to creative learning, in terms of the hierarchical nature of the classroom, but also because of broader cultural trends of learning.

Sternberg (1985) argues that the problem is not simply a cultural or institutional tradition, but in terms of the actual teaching practices that are utilised in classrooms. For instance, if the goal is to instil or enhance creative thinking through problem-based exercises, there is little evidence that problems with clear, definable, measurable answers encourage creative thinking in any way. This, he argues, is more of an issue within scientific subjects than the artistic:

> *On the one hand, most mathematics, physics, and chemistry problems presented in schools are well-structured problems. So are the majority of problems presented in programs for training critical thinking. On the other hand, so called insight problems tend to be ill structured. For example, consider Darwin's insights that led to his theory of evolution. Clearly, no well-structured steps could be formulated to lead to such an insight*. (Sternberg, 1985, p. 196)

The issue is not simply one confined to scientific subjects – although it may be pronounced here – but is one regarding how teaching practices and particularly assessment typically rely upon the creation of products that are not 'unique' and certainly not valuably unique, but predictable and consistent. As Sternberg points out, the types of problems that require creative and critical thinking 'generally have no one right solution, and even the criteria for what constitutes a best solution are often not clear' (Sternberg, 1985, p. 197).

These concerns have led some such as Itir Rogoff (2008) to recommend the 'deschooling' of education in order to encourage creative and critical thinking in learning. This draws on the theories of education put forward by Ivan Illich (1971) and Lev Vygotsky (Shiyan, Bjorklund, & Samuelsson, 2018), although it may be argued that what is argued for (particularly in Vygotsky) is the unsuitability of teaching practices, environments, and ethos rather than the unsuitability of learning institutions towards creative learning altogether. As Ronald Beghetto (2019) argues, it is the pedagogical obstacles to creative learning that must be addressed rather than anything intrinsic about schools as institutions or classrooms as environments:

> *Familiarity with classrooms can mask various socio-psychological, material, political, and historical features that influence creative expression in nuanced and surprising ways. Failing to take these features into consideration can result in misattributing research findings about creativity in classrooms to overly simplistic causes (e.g., "schools kill creativity"; "teachers do not like creative students").* (Beghetto, 2019, p. 587)

The classroom as an environment to creative learning is to some extent mediated against by certain typical features, such as: 'sameness' across classroom environments; the prioritisation of non-distracting sociomaterial displays; discouragement of noise, movement, and physical interaction; the prevalence of predetermined roles and learning outcomes; and an emphasis on evaluative assessment. According to Beghetto, these classroom paradigms often serve as barriers to many necessary criteria for following creative teaching ethos, such as encouraging creative expression, providing students with 'autonomy support' (as opposed to authoritative teaching), and creating opportunities to view topics from different perspectives and possibilities (Beghetto, 2019, p. 596).

It may be noted that the barriers in traditional classrooms to learning identified by Beghetto likewise conflict with the necessary criteria for creative learning as identified by Lin as applicable in the context of Hong Kong (improvisational process; creative inspiration, 'supportive' teaching approaches; inquiry-based strategies; and autonomous engagement of learners). Therefore, it is necessary to theorise and formulate an appropriate approach to teaching in the classroom that sufficiently incorporates this pedagogical approach to creativity.

6. Teaching Creativity in the Classroom

This part of the essay utilises the approaches to teaching creativity entailed by the discussion of pedagogies above in order to arrive at recommendations for how creativity might be taught in classroom environments. This makes use of research that suggests the utility of a holistic approach to teaching creativity which is also implied by the literature reviewed above. An example of how classroom

teaching practices might be transformed according to this pedagogical approach is given through the case of art education, which is discussed both theoretically and with reference to case studies. It is argued that holistic approaches to interpreting contemporary art may well be conducive towards teaching creativity within classroom environments. In addition to this, recommendations as to how new technologies might be utilised to this end are offered in light of the shift towards online teaching as precipitated by the COVID-19 pandemic crisis.

7. Holistic Approaches to Teaching

The above criteria for teaching and learning creativity as described by Lin (2011) – that is, improvisational process; creative inspiration, 'supportive' teaching approaches; inquiry-based strategies; and autonomous engagement of learners – broadly describe an holistic approach to teaching and learning. This is entailed by the emphasis on improvisational rather than instructional or rigid learning processes; the necessity for 'creative inspiration' ahead of textbook-based or mundane topics or case studies serving as objects for study rather than as prompting creative inspiration; a supportive teaching approach to students' autonomous engagement with learning materials, as opposed to teachers taking an authoritative or overly guiding and contextualising hand; and the implementation of inquiry-based strategies, such as encouraging criticism and open interpretation of phenomena. As argued above, these criteria in conjunction conflict with traditional classroom settings and pedagogical approaches, and it is argued that they are more conducive to holistic strategies in the classroom.

The positive impact of holistic learning approaches on well-being and learning progression has long been observed by researchers (Patel, 2003; Abd Majid, et al., 2018), but there is likewise a body of literature advocating for its success in instilling creativity among learners. Some researchers argue that improved creative thinking is a byproduct of a learning environment more conducive to the enhancement of pupil wellbeing (Kroflic, 1998), whilst others view it as a product of the open environment for learning in holistic approaches not otherwise permitted within traditional approaches to teaching (Beghetto, 2019). With respect to teaching ethos within the holistic environment, research has demonstrated the utility of teachers acting as a guiding hand rather than as an epistemic authority. As Sternberg observes, "students best develop creativity not when they merely are told to be creative but rather when they are shown how to be creative" (Sternberg, 2019, p. 98). This is undertaken through encouraging interdisciplinary or interperspectival viewpoints on various topics, an approach sometimes known as the cross-fertilisation of ideas. This can take place in an individual's approach to a specific problem or object of study but may also take place across individuals through fostering creative collaboration among students (Sawyer, 2017). The utility of group projects is not simply in the sharing and synthesis of ideas but in the creation of a creative learning environment in which individuals are engaged in collaborating towards creatively approaching endeavours as a matter of course. Ultimately, it is the fostering of such a culture of open investigation that is the environmental prerequisite for creative learning in a holistic environment insofar it is the student's autonomous approach to learning that constitutes one of the essential pedagogical criteria as outlined by Lin (2011).

Some educationalists such as Berg, Taatila, and Volkmann (2012, p. 6) have attempted to systematise the implementation of holistic frameworks for teaching creativity through creating planning and diagnostic criteria for the successful implementation of holistic approaches conducive specifically to instilling creative learning.

These criteria serve four main purposes: sensitising for creativity in a way tailored towards learners; enabling learners to act creatively as individuals as a group; teaching the use of creative techniques and instruments; and giving adequate freedom for reflection upon and repetition of creative processes (Berg, Taatila, & Volkmann, 2012, p. 7).

Ultimately, such models can best serve as guides for implementation rather than providing designs in themselves: as Lin (2011) has observed, pedagogical approaches must be tailored towards learners and involve bottom-up as well as top-down input into learning. However, the actual practicalities of devising lesson plans and practices to some extent require a deal of forethought as to how to structure lessons and creative materials for students to autonomously explore. The following section describes

how this might be undertaken utilising a holistic approach to interpreting contemporary art, as exemplified by several case studies across holistic art education.

8. Contemporary Art

The utility of contemporary art towards providing a suitable focus for a holistic approach to fostering creativity is to some extents brought about by the nature of art as a subject and phenomenon. Beyond the production of art typically requiring creative endeavour in its production – a factor which is typically judged when assessing artistic products – the specific educational value for art is in terms of the creative processes required in its interpretation. As Stuart Richmond (2009) has observed, engagement with the visual world and the interpretation of the assemblages of meaning carried in artistic products specifically requires creative labour on behalf of the viewer. This is because engaging with art as a product involves creative interpretation in order to draw meaning. The particular utility of contemporary art towards this end is its lack of clear meaning despite its apparently deliberately semiotic intent: there are a variety of potentially valid interpretations available to the observer.

This is in effect the argument in favour of art's educational value put forward by John Berger (2008), who famously argued for open engagement with contemporary art as a means of enhancing critical and creative thinking skills through the demands it places on interpreting the empirical world in new ways. Likewise, Päivi Venäläinen (2012) has argued that engagement with contemporary art necessarily requires a holistic approach in circumstances where contextualisation is either sparse or non-existent. The individual is required to interpret the art product on the basis of their existing schema, synthesising the semiotic content they attribute to representations in order to arrive at possible meanings contained in what is apparently totally abstract but allegedly imbued with meaning:

Art leads the individual to establish, among other things, a perceptual, investigative, observing and experiential relationship with his or her environment. Art makes one alert to the use of different senses and leads to the discovery of the things. A relationship with oneself forms through the capacity of art to train thinking and other skills. Art involves intellectual deliberation and thinking in new ways. Studying within the context of art means the acquisition and creation of knowledge. The relationship with the self is also constructed through by the art encouragement of individual solutions, an analytical approach, different interpretations and creative activity (Venäläinen, 2012, p. 460).

In other words, holistic engagement with contemporary art is in itself a creative exercise in meaning-making. It is also a dialogic process insofar as the interpreter not only imbues the object with meaning through this process but exchanges these interpretations with others in a classroom environment, leading to creative syntheses of ideas at a group level (Venäläinen, 2012, p. 462).

Although this is to some extents described as a naturalistic process – assuming the autonomous engagement of the learner in meaning-making – there is still a role for the teacher in this. Indeed, this is the 'supportive' role as devised by Lin (2011), by which teachers do not instruct students on how to interpret contemporary, nor evaluate how correct their answers are, but rather to guide the student into interacting with the creative material and assessing the use and development of creative thinking processes in their interpretation. As above, the learner is not solving a problem, but defining and redefining the artistic material on the basis of the problem of interpretation, both at an individual level and in terms of subjectivity across the group. Importantly, the creative skills being developed are transferable rather than subject-specific, demonstrating that there is potential broad utility in the development of creativity through the methods used within art education.

Although the exact plan and design for teaching creativity through holistic pedagogical approaches to art education will depend largely on the class itself, there are extant programmes that may be used as case studies for the successful implementation of such a strategy. An example is the 'SciArt' programme at Welling School in Kent, England, which introduced a contemporary art programme to the science department (Ward, 2014). This interdisciplinary class utilised contemporary representations of art related to scientific concepts in order to encourage creative engagement with said concepts. Although the programme was originally teacher-led, the faculty fostered student engagement and

involvement in its direction and organisation, leading to a bottom-up approach with respect to what topics were to be studied in the class. This transformation in teaching ethos was not deliberate but was a gradual and natural result of encouraging students to engage with art autonomously (Ward, 2014). The teacher's role became one of sourcing the materials on the topics that the students wanted to study, as well as prompting class discussion through various open-ended questions. This demonstrates how very simple changes to teaching practices can transform the demands for creative thinking placed upon learners. Of course, there are naturally circumstantial challenges to implementing such practices, especially given the recent shift of education and both secondary and university levels to online teaching across Hong Kong. Given the likelihood of sporadic and perhaps more permanent trends towards online teaching moving forward, it is necessary to consider the applicability of the above teaching methods to the online classroom.

9. Online Classroom Implementation

The transformation of classroom teaching as precipitated by the COVID-19 pandemic crisis requires some addition to the above comments in terms of how a holistic approach to art education can be fostered in the online classroom environments where much of teaching is now taking place. Computers have long been considered amenable platforms for teaching creativity, dependent largely on the types of software being utilised and how it mediates interactions between teacher and students or between learners and creative material (Clements, 1995). The possibility for interactivity and especially visual communication now provided by new technologies and software now allow for interactions with creative materials that have previously only been theorised about in terms of online environments (Dicks, 2004).

In effect, the COVID-19 crisis has brought about recommendations that proponents of virtual deschooling such as Petar Jandric (2014) have been advocating for since the advent of the internet, and potentially removes many of the institutional problems regarding classroom teaching strategies and institutional cultures by necessitating the development of new pedagogies in accordance with the establishment of a new virtual teaching environment. Some desired outcomes – such as an end to the teacher as the authoritative interpreter of creative material – is effectively brought about by the shift online due to the extraction of teaching from the classroom. Models for how holistic approaches to learning can be fully realised in online environments must to some extent take their lead from extant long-distance learning courses at higher education levels, developing new creative practices in order to foster the holistic interpretation and collaboration of artistic materials possible in a classroom environment.

Developing lesson plans for online teaching of creativity therefore depends highly on the software being used and its potential applications. Inarguably, it relies upon visual communication being possible and the potential for class or group discussion through programmes such as Zoom or Teams. The teacher's role in planning lessons should utilise both a set of culturally relevant criteria for creative teaching such as that set forth by Lin (2011), and likewise utilise a diagnostic model for lesson plans such as that of Berg, Taatila, and Volkmann (2012). Beyond this, teachers need to source and present students with creatively inspiring visual materials along with some tasks or queries that prompt open-ended meaning-making on behalf of students. Through these means, students may be prompted to engage creatively with artistic products and enhance their creative thinking skills both autonomously and in collaboration with other learners.

10. Conclusion

This research project has examined pedagogical approaches to teaching creativity and how this may be implemented in physical and virtual classroom environments. It is argued that literature from philosophy and psychology defines creative endeavours as the production of something that is unique and valuable and that this is primarily undertaken through creative thinking processes. This provides a working definition for creativity that may be used to flexibly define the ways in which creativity applies across various taught subjects in ways which are measurable and/or testable. Research from within the domain of education and educational psychology contends that these skills are best enhanced through

utilising a holistic approach to teaching ethos in an environment appropriately structured to encourage creative thinking, especially through the redefining of concepts. In effect, creativity may therefore be instilled through encouraging critical and creative thinking across a variety of academic domains. A way in which this may be designed is through the example of meaning-making in the interpretation of contemporary art, a process particularly conducive towards creative meaning-making. Such approaches may be easily utilised in classroom environments through the structuring of lessons to encourage students to autonomously approach, interpret and reinterpret creative materials. However, new developments and research are required in order to produce definitive guidance as to how this pedagogical approach may be designed for implementation in online environments given the evolution of teaching practices brought about the COVID-19 pandemic crisis. Although the pedagogical approach theoretically transfers into online teaching environments – and may indeed thrive in such environs – its application to the new classroom environments as defined by specific softwares may require study. In particular, the ways in which this might be undertaken within local education systems and their provisions for online teaching – such as that of Hong Kong – will likely prove conducive towards allowing for the continuation of instilling creativity in students in the post-coronavirus era.

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Creative Teaching and Communication: A Study of Creative Teachers' Traits and Skills as Perceived by Primary School Students

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Abstract: This is a survey study using a questionnaire to find out what creative teachers' traits and skills are as perceived by primary school children. The sample school is in the New Territories in Hong Kong. The 265 respondents are 5 – 6 graders of 149 boys, and 116 girls. The analysis method is to use simple computation of the 5-point Likert scale. The questionnaire is designed for twenty questions about the teachers' performance in class such as the use of body language, humor, questioning, the use of ICT, as well as their affective behavor. After the presentation of data, the results are analyzed. Among the 20 questions, 9 questions of higher scores are relevant to the elements of 'creative teachers' as perceived. From this study, a model of six domains of "Creative Teachers' Traits and Skills" is developed.

Keywords: Effective teaching, creative teachers, creativity, communication, positive thinking

1. Introduction

Tao Xing Zhi (陶行之), a Chinese education philosopher, (1939) once advocated that creativity is the liberation of children's "brain, hands, eyes, mouth, space, time……, everybody can create, everywhere is the place for creation, everyday there is a chance for creation." (Zhang & Wang, 2019, p. 66)

Much research has been done on creativity, and creative teaching. In recent years, one of the dominant themes in curriculum reform is the shift from focusing on acquisition of knowledge to competence in applying knowledge learnt to solve problems (OECD, 2012). Under the competence-based curriculum, schools need to balance the focus between knowledge transmission and competence development. They need to provide learning opportunities for skill development (Lee, Chan, Xu, & Chun, 2017). In Hong Kong, among the nine generic skills proposed, the Curriculum Development Council (CDC) identified creativity, critical thinking, and communication as core skills, "Answer(ing) the question "What is worth learning?"…the actions to be taken include trimming obsolete or less essential content, restructuring school subjects, infusing critical thinking, creativity, and communication into the learning and teaching of existing subjects…" (CDC, 2000, p.19). In this study, instead of the aforementioned critical thinking, I focus on positive thinking because it is more relevant to primary school children as they may not be able to understand the concept of critical thinking, one of the higher order thinking skills, at this stage. So positive thinking, creativity, and communication are taken holistically. That means they are not three separate entities but are interrelated. For instance, once engaged in positive thinking, one is also engaged in creativity—generating new ideas from the thinking process, and in

communication—representing and presenting the ideas in an appropriate manner and context. In turn, once engaged in representing and presenting the ideas, creativity and positive thinking are needed to make the process effective and precise.

Many experts think of creativity as a set of skills and attitudes of which anyone is capable: tolerating ambiguity, redefining old problems, finding new problems to solve, taking sensible risks, and following an inner passion (Davis, 2018). It is essential for teachers to remember that creativity is not only a quality found in exceptional individuals but is also an essential life skill through which people can develop their potential to use their imagination, to express themselves, and to make original and valued choices in their lives (Nikolopoulou, 2018).

1.1 The Purpose of this Study

The purpose of this study is to find out the traits and skills of effective teachers as identified by primary school students, rather than the perceptions of teachers or parents. Effective teaching is the common goal of every lesson. However, effective teaching means different things to different people. There are a whole range of factors influencing the effectiveness of a given lesson. Among these factors, motivation to learn in the lesson occupies the most critical position. That explains why, for any teacher writing a lesson plan, the first part will be "learning motivation", i.e., using different means to arouse students' interest and motivate them to learn in the lesson. Thus, this study defines "effective teaching" from the students' perspective: "the teachers they like and the lessons they feel motivated to learn" (Questionnaires used in this study). This study aims at finding out the characteristics, traits, and skills that effective teachers possess as identified by primary school students. It explores the relationship between teaching effectiveness and creativity at large.

Since students in primary schools are too young to identify features of creative teachers and their traits and skills, this study started with asking them to identify the teachers they deemed effective in motivating them to learn willingly. They enjoyed the lessons of these teachers and were willing to spend time doing homework and studying course materials. Once identified and reminded to keep them in mind, the students would complete the questionnaire with 20 questions on the performance of these teachers.

2. Literature Review

There is a distinction between teaching creatively and teaching for creativity in its characterization of creative teaching. According to the National Advisory Committee on Creative and Cultural Education (NACCCE, 1999), the former is defined as "using imaginative approaches to make learning more interesting and effective" (p. 89). Teaching for creativity is defined as "forms of teaching that are intended to develop young people's own creative thinking or behavior" (ibid). In this study, we focus on teaching creatively, not teaching for creativity.

Torrance (1965) defined creativity as "the process of becoming sensitive to problems, deficiencies, gaps in knowledge, missing elements, disharmonies, and so on; identifying the difficulty; searching for solutions, making guesses, or formulating hypotheses about the deficiencies; testing and retesting these hypotheses and possibly modifying and retesting them; and finally communicating the results."

Creativity, as interpreted by Howard Gardner, is a process of developing the eight-multiple intelligence (1983), using all the senses of students to solve problems in the teaching and learning. It is concerned with human learning in stimulating creative thinking and activities. Gardner (1998) stated, "Creativity must be humane, must acknowledge the whole". In humane creativity, the teaching and learning process will be harmonious as students become the center of interest and they interact positively with their teachers.

In studying teaching effectiveness and creativity skills, the teachers' characteristics and traits are set into the twenty questions in the survey. These traits and skills are grouped under six domains, namely:

(i) communication; (ii) integrity and trust; (iii) playfulness and liveliness; (iv) patience and empathy; (v) positive thinking and attitude, and (vi) peace of mind. Below is an elaboration of the six domains and how each of the six domains is related to creativity and teaching effectiveness.

(i) For communication, Aristotle once said, "The man who can live alone is either an animal or a god" (Cited in Vu, 2016). Human beings are social animals, and they need to get along with one another through communication. The communication of human beings is like a net, knitted to construct a society. However, human communication is flexible, changeable, and unpredictable (Yam, 1982, p.49). Every day, we communicate, communicate, communicate. In fact, are we truly communicating with "intent, affection, feelings, opinion, ideas, meanings or an attitude" when engaged in our conversations? Or are we using questioning to arouse interaction in the learning and teaching process? Do we consider the "receiver's" field of experience (Schramm, 1954, p. 4-8) with reference to their perception (Yam, 2012, p. 85-89)? The elements of body language/non-verbal communication also play an important role in the communication process (Yam, 1994; Yam & Tso, 2013, Unit 9 & Unit 10). If we are not communicating or not telling the truth, the "true intention" will be revealed; our body language will betray us. Freud (1933) said, "He that has eyes to see and ears to hear may convince himself that no mortal can keep a secret. If his lips are silent, he chatters with his fingertips; betrayal oozes out of him at every pore" (p. 77-78). Our messages are being detected non-verbally as a "lie".

In fact, our messages in face-to-face or in verbal/oral/listening communication are a "personalized, one sided view of thought" favoring our own values, and "convenience, interest, and needs". With this comes the phenomenon: "Why we see what we want to see" (Pogosyan, 2019). It is in the eye of the beholder.

Since the turn of the Millennium, Information Communication Technology (ICT) has been popularly used in education. We have to differentiate human communication from information and technology communication. The adequate use of ICT is based on human communication. In education, there is a pressing need in designing and cultivating creative use of technologies to increase teaching effectiveness. School children, generation after generation, will enjoy the ever-improving ICT. However, we have to pay attention to how students and the public use the technologies.

To me, without human factor, information communication and technology or media used in teaching and learning can only be a dead object, no matter what form it takes. Therefore, when using technology, we have to set goals and learning objectives, and closely knitted strategies in the creative teaching and learning process. We need to have unshakable confidence and positive attitude to "humanize technology" in order to make technology serve teachers and students. We cannot do it the other way round and make mankind the slaves of technology. In short, effective teaching without communications is something like a jewel box without the key to unlock its treasures.

(ii) For integrity and trust, making promises and keeping secrets from friends and family members would be a very respectful responsibility. Integrity is a key to creativity, according to Gabriel Bar-Sawme (2019). He said, "Keeping your integrity works in your advantage in the long run: it will make you more trustworthy to others, help you to know yourself, keep your energy within yourself which will make you more creative and feel better about yourself." (ibid.) I did not foresee that when I was the formulating question on integrity (i.e., Question 13), the score is the highest among the twenty questions. After careful analysis, I think besides so many traits and skills that creative teachers require, according to this study, being trustworthy and preserving your honor of integrity would be one of the most important traits and skills for any teacher to observe. Integrity will make people trustworthy. By practicing integrity, keeping your promises, and fulfilling your responsibility as you promised, it will make you more creative and feel more joyful. You will practice the virtue of integrity honestly.

Having integrity is a positive character trait where you are regarded as being respectful and truthful. Creative and effective teachers should be honest, impartial, fair, and should keep their promises, especially when personal secrets are revealed by students. Creative teaching is an interactive process,

both the students and the teachers should share their views and feelings truthfully to foster mutual trust. "Mutual trust: in the practical meaning, is very significant for the success of the project and leads to increasing creativity" (Bidault & Castello, 2009). In short, effective teaching without integrity and trust would be something no better than quick sand, where no foundation cane be built on it.

(iii) For playfulness and liveliness, Greeks and Chinese in ancient times used "play" -- drama and theatre performance -- to celebrate special or religious festivals to honor their gods as entertainment. Today, psychologists and therapists would use play, drama therapy, or music to heal people with mental stress, anxiety, or depression.

Play is beneficial throughout life. It is an intrinsic motivated approach and exploration to use different kinds of forms to develop children's creative mind and perceptive vision of the world around them (Whitton, 2018).

It is a human instinct. When a baby is born, he/she starts to play with his/her mouth, fingers, and hands. As an adult, he/she may play the piano or musical instruments to enjoy themselves. At any rate, this "playful behavior" may induce a kind of hormone called dopamine to generate happiness which will make the players lively and joyful.

Lieberman (1976) once stated, "the more you play, the more creative you become in later life, in that playfulness ultimately becomes a personality trait". When a player is deeply involved in the "play process" enjoying the fascinating moment, he/she will experience a "flow" feeling as if he/she is "losing" himself/herself. The feeling is amazing and tremendous.

In creative teaching, children start exploring knowledge as a form of playful learning. In creative dramatics, or playmaking (Ward, 1957), children use miming, pantomiming, role playing, storytelling through games to deliver their imagination, curiosity, and script writing. Teachers with lively, humorous, and expressive dispositions will cultivate a creative and imaginative learning motivation (Keller & Yam, 1999). Playfulness and liveliness teaching takes different forms. You can design a lesson as if it is an "exciting drama". You create a lesson full of humor, "suspense, surprise", a lesson that is "suspicious, intriguing, interesting, inspiring, contrasting, comparing" in the "climax" (Yam, 1991, p.375-376). It is a montage to indulge the students' attention, curiosity, imagination to foster a creative and dynamic learning experience.

There are lots of teaching methods which can motivate students to learn livelily and creatively, like games, role play, drama, collaborative reading aloud, recitation, etc. Above all, teaching is relaxing, full of playfulness and a lively process of interaction between the students and the teachers. Whitton asserted, "The job of a teacher is to teach students to see liveliness [and playfulness] in themselves" (Whitton, 2018). In short, creative teaching situation, playfulness and liveliness are relational and they complement each other.

(iv) For patience and empathy, one said, "When patience comes to creative work, patience is truly a necessity" (Rasmussen, 2019). Being patient when you are in in an impulsive and agitated mood, you can keep your nerves calm and drive away your frustrations. Then you will take control of yourself first and take a deep breath. You will stay in the serene mood (Argandona, 2019), and enjoy peace of mind, strengthening your confidence and positive attitude. Patience enriches your human relationships and benefits your mental health. More importantly, it is a virtue that cultivates a pleasant, creative, and positive personality.

Patience is the art of listening, observing the body language of the person or student with whom you are communicating. To share an unfavorable or adverse situation that the person/student is being confronted with, a creative and effective person or teacher would express sympathy and empathy to the person or student. As Pradham said, "Empathy is another fantastic source for creativity" (Pradham, 2016).

In Pradham's words, "Gratitude plays the perfect part in building creativity" (2016) which is evidently connected to empathy. Gratitude is a kind of behavior connected to creativity, to appreciate whoever grants you timely help in need or a favor or blessing, that you feel obliged and happy (Yam, 2018). Empathy requires an understanding of "putting yourself in others' shoes," how you see and perceive the way he/she is thinking, feeling, and their perspectives. As the person acknowledges their sympathetic and empathetic response, they will appreciate his/her behavior and in return, the person expresses gratitude.

In education, we express our gratitude to the teachers who demonstrate their lively, creative, and positive attitude, based on "human-centered" learning (Yam, L.P.K., 2009). It is expected that our children will enjoy the "competence-based curriculum……which needs to provide learning opportunities for skill development, in the hope that the Curriculum Development Council will develop the "nine-generic skills……, creativity, critical thinking, and communication as core" (Lee et al., 2017).

Patience and empathy are virtues which foster creativity. A teacher should try to explain pleasantly in detail the problems the students encountered using different kinds of teaching methods until they understand. Having a "never give up" attitude can create valuable inventions. For example, Thomas Edison failed hundreds of times to create the first practical and affordable electric light bulb. He must have the tolerance to accept what is being confronted in adversity (Stoltz, 1997, p.6-13). With this example, the teacher can enlighten those students who did not do well. In practicing the virtue of patience without haste, teachers may avoid mishandling problems. A creative teacher is effective if he can have self- control.

To practice patience and empathy, we have the following words of wisdom to observe:

> "But the fruit of the Spirit is love, joy, peace, patience, kindness, goodness, faithfulness, gentleness and self-control."
>
> ---- Galatians: 5:22-5:23

This divine message enriches the main theme in this study. In short, creative and effective teaching, and patience and empathy, are inclusive and it takes time for creative and effective teaching to emerge.

(v) For positive thinking, James William (1842-1910), an American philosopher and psychologist, in his words of wisdom: Power of Positive Thinking, asserted, "The greatest discovery of my generation is that human beings can alter their lives by altering their attitude". Too many negative feelings and emotions make the existing problem or situation too heavy for anyone to carry. Negative feelings will reduce the quality of thinking and the state of tranquility. It also affects the management of one's emotional intelligence and adversity response. Think positively, and your brain will induce a kind of hormone—dopamine--which serves as a "neurotransmitter" to cultivate your creativity.

Being positive, your mind is active and clear, making things easier to handle, and to be solved. You become more appreciative, grateful, encouraging, and motivating in your study, business, and life. According to Brian Tracy, a person having a positive attitude is full of hope and confidence to "handle what is tough, along with remembering that nothing is at all negative all the time" (2014). The power of positive thinking is so dynamic that negative thoughts can be removed.

Tracy further reinforces that the power of positive thinking helps individuals to develop creativity. It is apparent that creativity nourishes the teacher's creative teaching attitude. Positive thinking needs logical planning and a mindset on an affirmative goal/aim. Without discreet planning and a fixed goal, you will not be able to stick to the directed channel to fulfill your "want", or "aim". Tracy (2014) asserts that "positive thinking can help you gain inner peace", a tranquil mind. In Chinese classical literature, The Great Learning (大學), it illustrates:

> "When you have stability, you can be tranquil; when you are tranquil, you can be at ease; you can deliberate, when you can deliberate, you can attain your aims." (Muller, 1992)

In a creative teaching situation, the most essential principle is to cultivate positive thinking. Your positive attitude will encourage you to go forward, enjoying a "playful, lively and imaginative" learning atmosphere. It will lead to a "Happy, Healthy Optimistic—H2O", and positive mentality. For instance, even if you say "Good Morning" joyfully in a positive voice and an expressive tone, you will delight your students. Positive attitude is contagious. In short, positive thinking is the spark that ignites the flame of creative and effective teaching.

(vi) For peaceful mind, teachers during the past months have been struggling against the "virus" cautiously and nervously about their well-being, besides worrying about their teaching jobs, and the health conditions of their students and family members. Together with other adverse factors, the mental stress is tremendous. The cultivation of AQ (Adversity Quotient) and EQ (Emotional Quotient) needs to be strengthened (Stoltz, 1997).

With a peaceful mind, people can reduce their anxiety, nervousness, and stress. The ability to concentrate on creative work, studies, and learning will be achieved. However, the peacefulness agent is the prerequisite of a calm mind, a solitude and tranquil inner peace. Zhuge Liang (諸葛亮) (181-234 A.D.), a respected statesman and strategist in ancient China, in his admonition to his son, said, "If you are not indifferent, you cannot understand your aspirations. If you are not quiet, you cannot go far. (非淡泊無以明志，非寧靜無以致遠)" So, a peaceful mind is needed to cultivate morality. In addition, cultivating a peaceful mind could enable you to facilitate harmonious interpersonal communication. Through these self-actualization efforts, creativity emerges.

In a school situation, no matter how "disorderly and disturbing" the class is, the creative teacher, in a calm and peaceful disposition, would manage the situation positively. People with a high AQ can control their anxiety and maintain a peaceful mind to handle conflicts. AQ and EQ are the foundation for cultivating creativity engagement. AQ and EQ are interconnected to complement each other resiliently. Together with Creative Quotient (CQ), they develop "Creativity Triangle/Creativity Incubation" (Yam, 2012, p.376-394), which will be transformed into the enlightenment of illumination. Wallas (1926) proposed one of the first complete models of the creative process. It consists of the four-stage process of preparation (or saturation), incubation, illumination and verification (or implementation). This illumination, the spark moment that suddenly pops up, is the result of the enduring struggle of 'flight or fight' efforts. With the balance of AQ and EQ and a peaceful mind, the energy of creativity is unleashed. In short, peace of mind liberates the energy of creativity in effective teaching.

3. Research Design

This study uses a survey to identify the traits and skills of a creative teacher who can motivate students to learn readily. I, the author, am aware of the fact that primary students may not realize what creative teaching is because the concepts of creativity and creative teaching may be beyond their cognition. So the survey would first ask students to identify the teachers they like and the lessons they feel motivated to attend. Then students were asked to do the questionnaire composed of twenty questions. These questions described the teachers' performance in class. In analyzing the teachers' performance in class according to the survey results, the traits and skills of effective teachers are identified. In turn, these traits and skills are compared with traits of creative teaching. I, the author, infer that effective teaching is also creative teaching and effective teachers are creative teachers.

The sample school is a primary school in Hong Kong. Participants were 5-6 graders; 265 students (149 boys and 116 girls) participated in the study. The questionnaire was set in Chinese. The analysis used the simple computation of the 5-point Likert scale. The survey was composed of two parts. In part one, students were asked to identify teachers who can motivate students to learn readily: "Think about the

teachers who deliver lessons you like to attend. These teachers may have taught you or you may imagine one. You would like to spend more time and effort to meet your teachers' demand." After that, students were asked to do the questionnaire composed of twenty questions. These questions described the teachers' performance in class. See the questions in the Appendix 1. Among these questions, some of them are related to creative teaching, positive thinking, and communication traits and skills, including the use of body language, humor, questioning, the use of Information and Communication Technology (ICT)/media, such as Zoom learning and teaching, IT communications, augmented reality, virtual reality, etc.

Results:

Q.1: Teachers often allow students to speak out in class without prior permission or according to order. They let students express their thinking freely and respond to teachers' questioning (54.3%).

Comment: "Openness" is a crucial element to cultivate creativity whatever the dimension is. Openness facilitates creativity and understanding. In teaching and learning process, being open and promoting freedom of expression enriches imaginative and critical thinking, as well as problem-solving skills. Studies (Kaufman & Gregoire, 2016) show that cultivating creativity needs an open mind to new experience in art and science: "openness to experience---the drive for cognitive exploration of one's inner and outer worlds---is the simple strongest and most consistent personality trait that predicts creative achievements."

Q.2: Given that students do not intentionally disrupt the class, teachers do not mind whether students strictly follow school regulations in class. For instance, students are allowed to discuss in low voice in class (55.5%).

Comments: Patience and empathy would be appropriate to calm down a hectic situation. Patience can allow room for improving the situation as long as the students are not restless.

Q.3: Teachers often use Information Communication and Technologies, both hardware such as computers, iPad, or mobile phones, and software such as PowerPoint, Zoom, and AR/VR, to arouse students' imaginations to understand better the subject matter contents. Effective teachers not just keep on lecturing (69.4%).

Comment: For the past two decades, students have welcomed the sophisticated development in ICT. Yet, discreet and appropriate use of ICT in the cultivation of students' critical mind, imagination, and engaged actively in learning is needed; otherwise, harmful effects will be resulted.

Q.4: When students encounter difficulties, such as in mathematics or languages, teachers will try to use different teaching methods to make students understand clearly and will not neglect the students and keep on lecturing (66.4%).

Comments: Patience is a virtue. A teacher should be persistently trying his/her best to explain in detail the problems the students encountered, using different kinds of teaching methods until the students understand. People with the 'never giving up' spirit and a positive attitude can create valuable inventions. A creative teacher is an effective teacher, who should have a positive mind and tolerance to accept what is being confronted in adversity.

Q.5: Based on the course contents, teachers will often find ways to expand the contents by telling stories about famous people, stories that cultivate morality, scientific inventions, healthy living, and the natural world, to inspire the students to think positively (65.3%).

Comments: Creative teachers would enrich the subject matters in the class and outside the classroom by telling and sharing the successful persons' fine deeds, including stories, morality, adventures, inventions, their wonder of the nature, and healthy lives. This enables them to think positively. These

are examples of life education aiming at broadening the horizon of students and making them aware of how to live a meaningful life.

Q.6: In class, the teacher always expresses his/her opinions on current affairs, popular television programs or movies (59.3 %).

Comment: Teachers have their own ways of thinking and perspectives. They have their own perceptions and values. During the lesson, they may mention current news or social issues. They may hold on to their aspiration persistently and their own viewpoints without accepting or listening to other points of view. Research studies show that students do not favor teachers to prevail their own thoughts or beliefs (O'Neil & Reid, 1985). In the communication process, the interactive, sharing behavior and positive attitude should be observed to attain effective teaching and learning. Teaching is not to profess knowledge or sell commodities. In my words, I call this, "The teacher is like a porter of information".

Q.7: Teachers are often engaged in teaching and often have so many things to teach us. It seems they have endless things to teach (52.4%).

Comments: When a teacher or anybody keeps on talking and talking about his/her own ideas, the receivers would not lend their ears to these "empty" messages. In didactic teaching, it is like a "fountain of knowledge" spreading water to nowhere.

Q.8: Teachers use different methods in teaching us. They require us to think first before answering the questions. Correct answers will be given after that (63.4%).

Comments: Questioning is a way to stimulate thinking, deepening imagination, inspiring curiosity, and fostering creativity. Creative thinking is divergent thinking. Questioning encourages the brain to think. A Chinese scientist scholar, Li Zheng Dao (李政道) (The Mirror, 2010) remarked that, "To innovate, you need to learn: Learn just to find answer is not learning. To innovate, you need to learn: The more you ask, the more you innovate!" Creative teachers should encourage students to discuss the questions and answers through brainstorming. Many teaching methods, such as debating and discussion, are good for questioning training. Questioning is the art of asking. Effective teachers can formulate the right question at the right time. The guru of management science, Peter Drucker asserted, "The question is more important than the answer."

Q.9: Teachers often praise and motivate students to raise questions for discussion. Through discussion, communication is deepened, and resonance nurtured (63.4%).

Comments: Welcoming students to ask questions motivates students to think positively and to attract attention to listen attentively to the teacher. Some puzzling ideas may be cleared and facilitating resonance. As a matter of fact, through the communication process of asking and answering, students will delight teacher's appreciation and encouragement. They can connect the whole learning process through interactive communication, transforming a very inspirational and motivational discourse. John Keller (1999), one of the advocators in motivational learning, devised a model of motivational learning — "ARCS" (Attentions, Relevance, Confidence, Satisfaction).

Q.10: In classroom teaching, teachers only use oral communication and seldom make use of computers or ICT to assist teaching and learning (41.1%).

Comments: It is apparent that students would not like a lesson without any ICT to enrich the subject matters. Using AR/VR and e-learning is fun and more interesting. At this present moment, Zoom learning is unavoidable and flipped classroom learning is challenging and flexible.

Q.11: In class, the tempo and pace, the voice intonation and expression of the teachers do not help us to pay attention to the course contents (44.9%).

Comments: During the past fifty years, I have done a few studies on body language/non-verbal communication, most of the students showed great interest in the teacher's voice, gestures, and facial expressions. But in this study, about half of the respondents were not agreeable with these areas.

Q.12: During class teaching, the teacher seldom flexibly uses body language, such as hand signals, facial expressions, or eye-contact to communicate. Furthermore, lacking the lively flow of the lesson, the voice level, intonation, and pace can hardly make students enjoy learning (49%).

Comments: Body Language and non-verbal communication more often than not have been welcomed by students in other studies. However, this study shows that most of the respondents may not show interest. They do not think body language/non-verbal communication are so motivating in learning. Some of the students might be too concentrated in the lesson.

Q.13: Teachers value students' privacy and never reveal any secrets that teachers have promised to keep. They will not openly tell individuals' secrets such as his or her family matters and illness (75.9%).

Comments: Integrity and trustworthiness are commonly acknowledged as the essence of morality. The concern of punctuality of class time and keeping students' secrets are welcomed by students (O'Neil & Reid, 1985).

Q.14: Teachers often do not accept students' answers or points of view that are different from theirs (49.4%).

Comments: Clearly, students would not accept any teacher's prejudice, ego- centeredness holding on to his/her ideas, or vantage points without approving their answers. Again, in the communication process, the attitude of empathetic listening and open sharing is essential. It is all because the teacher has a strong subjective consciousness of his own.

Q.15: Whenever a student breaks the school regulation, the teacher will not openly scold him/her. On the contrary, the student is often given a chance to explain his/her misbehavior. The teacher shows his/her love and respect towards the student and guides him/her to understand why such a behavior is made (63.1%).

Comments: To show empathy is basically the ability to understand others' emotions. It is a trait considered to be developed like other interpersonal skills. The behavior of empathizing comes naturally to most people who show concern and sympathy to those friends needed psychological and empathetic support in time.

Q.16: The teacher is tirelessly finding out the reasons why certain students are not motivated to learn in class (53.5%).

Comments: Patience is a very positive attitude in solving problems. You can stimulate motivation if you can have a positive mind. However, if the students are not in the mood, you have to try out some other strategies to remedy the situation. Patience, positive thinking, and possibility attitude may help; at least, you can eliminate stressfulness and anxiety.

Q.17: The teacher keeps on talking about the contents of the subject matter until the class ends without caring about the students' responses or feelings (37.4%).

Comments: The students' reaction to this question is not favorable. The score is the lowest in the study. The problem is the lack of interaction, and active communication showing concern to their presence. The talk, talk, talk is a one-man show only. Non-verbally the students are isolated.

Q.18: There are many group discussions in class and team-spirit is cultivated among students (53.6%).

Comments: Teamwork is one of the most essential skills in fostering a collaborative spirit. Meanwhile, small group discussion in learning is favorable. However, the skill in facilitating effective communication in team building is very significant. Virtually, collaboration is connected to creativity.

Q.19: The teacher keeps a ready eye observing students' reaction in class. He/she would eagerly try to understand students' performance in class. Consequently, he/she seldom keeps his/her eyes on the teaching materials or the ceiling. It is fun to attend his/her lessons as interesting topics are often raised to make us laugh. We do not feel bored in his/her lesson (69.1%).

Comments: Playfulness is made up of spontaneity, manifested joy, and a sense of humor. Anna Craft (2000) suggested that "where the teacher was playful, children are more creative. Divergent thinking did occur in the students when the teachers were playful (p.167)." In a classroom situation, playfulness and liveliness, in due course, can be considered as a motivational activity, whereby, it makes students learn readily. In fact, playfulness is regarded as a healthy personality trait.

Q.20: The teacher is often discreet and careful about his/her behavior. He/she may be a conservative and keeps a peaceful mind. He/she would not major on the minor in dealing with students' disciplinary problems (61.5%).

Comments: The study of cultivating peace - peace of mind in recent years has been moderately prevailing. The practice of mindfulness and meditation to secure inner peace has taken place in schools.

In a school situation, when undesirable disputes or conflicts occur, the creative teacher would manage such a state with discretion by keeping his/her peace of mind in fair and logical reasoning. Peace and harmony would be the goal of the situation.

4. Discussion

In my over 60 years of academic work in teaching, research, and publications, I realize in this study that "effective teachers", as perceived by the student respondents, possess a number of traits and skills. These traits and skills are, in turn, grouped and aligned into the six domains of effective teaching, namely (i) Communication; (ii) Integrity/Trust; (iii) Playfulnes/Liveliness; (iv) Patience/Empathy; (v) Positive Thinking/Attitude, and (vi) Peacefulness.

In the decades of teaching activities, I have been delightfully committed to teaching as a creativity and humanity cultivation. It is my perception that to attain effective teaching and learning, teachers should act upon and observe the above domains as reference.

In the analysis, I further discover that creative teaching is embedded in effective teaching. Davis (2018) states that "Creativity requires a safe environment in which to play, exercise autonomy, and take risks. As teachers, it's up to us to establish this kind of supportive classroom." I perceive that creative teaching is the use of ICT, having integrity, empathy, and a positive mindset. This will make students feel free, open, flexible, curious, imaginative, lively, confident in learning, making their minds refreshing and active (figure 1).

Figure 1. Creative Teaching: My Way

Creative teaching is effective teaching because it fosters learning by increasing students' motivation, as well as deepening their understanding of the subject matters. In turn, such academic attainment promotes creative thoughts and brings sense of joy to both teachers and students.

To foster creative teaching, teachers have to cultivate passion and a clear mindset in teaching. Their efforts will affect positively the Ethos of school, which is the promotion of positive culture and communication in schools, inter-schools and the community at large. As such, the school ethos would foster positive learning environment. However, ethical issues should be taken into account when school promotes its ethos. As Cropley (2014) stated that the ethics of creativity should not be ignored, and teachers must fulfill their moral responsibilities.

4.1 Implications

In pursuing effective teaching in my career, creative teaching emerges as my main concern. However, the creativity in teaching and learning that I have gone through is a journey of hardship, tolerance, adversity and mental stress. Nevertheless, the other side of the same coin is that it also brings forth "Happiness, Hope, Humanity and Satisfaction". Such teaching experience has been rewarding and fruitful. It is a payoff experience.

In the process of writing up this study, I missed a crucial factor in developing children's creativity. Rogers (1969) has a metaphor about cultivating a child's creative thinking: one cannot control "how the sun sets" as if you cannot control how children develop their creativity (p. 236). The connotation is that creative teachers should open children's minds to freedom of expressions, independent thinking, and cultivate creative thoughts and imaginative visions. Tao Xing Zhi reminded us that creative teachers are not born. It is a cultivation of personality. He proclaimed that "Everybody can create… Every day, there is a chance for creation." (Zhang & Wang, 2019, p. 66)

All in all, going through the difficult and joyful times in this study, I have come to realize that creativity, communication and other effective teaching traits and skills in education need further studies. It is mentioned in the Curriculum Development Proposal proposed by the scholars (Lee, Chan, Xu, & Chun, 2017).

5. Conclusion

In this study, when I drafted the questions, I only thought of what reactions or responses the respondents expressed, with respect to their perceived "creative/effective" teachers were. To my great surprise, my editor and I discovered that we have gladly created a creative teacher model ---"Creativity: A Perceived Creative Teacher" which covers six domains of traits and skills, (i) Communication; (ii) Integrity/Trust; (iii) Playfulnes/Liveliness; (iv) Patience/Empathy; (v) Positive Thinking/Attitude, and (vi) Peacefulness. They are holistically connected. In my research, rarely can I find these domains which are inter-related in the cultivation of a Creative Teacher. Among those 20 questions, "Integrity/Trust" got the highest score (75.9%). "ICT" came second, scoring 69.4%; "Playfulness/Liveliness" scored 69.1%, and "Patience/Empathy" scored 66.4% respectively. Other questions scored in the following manner, "Positive thinking" (65.3%), "Questioning: thinking" (63.4%), "Questioning: motivation" (63.4%), "Peace of Mind" (61.5%) and "Communication" (59.3%). This study enlightens me that a creative teacher, being lively, positive, trustworthy, patient, and creative with an open mind, is a life-long cultivation. Teachers should observe these traits closely and use them as guidance for their creative teaching.

5.1 Research Limitations

Some of my colleagues, and family members—except my son who is in Boston—advised me that I should not take this "intellectual" journey. I believe their reason is that they care about my health and didn't want me to have too much stress. Besides, I have been too ambitious to "dream" that I could put all my relevant experiences into this study. Twenty variables/questions for investigation is difficult to focus on the major theme—perception of a creative teacher to be analyzed profoundly and sound. Moreover, "personal experiences" may not be convincing in a research-oriented paper.

During the incubation period of the study, I tolerated myself for almost three months reviewing related literature, and bits-and-pieces of information on the web. However, I always maintain a positive mental attitude regardless of the epidemic situation in Hong Kong. Reality is reality, principle is principle. Rules and regulations must be observed. The show must go on. I hope the above Six Domains of Creative Teaching and Communication Model can be of use in your teaching journey. Although at my age, I may not be as vigorous as a young person, yet I still have a fervent heart, a mission and a goal to pursue cultivating creativity in communication and education. That is why I ventured to work on this paper. As a life-long educator, I educate, I make contributions; I make mistakes. I learn from these valuable experiences. I have a positive mind.

"Calling for Quality Creative Teaching"

Quality for academic excellence is your mission and goal,
Untiring enthusiasm for the love of creative teaching and learning to develop our young as a whole,
Assurance for quality service with a firm commitment so true indeed,
Learning how to learn and facilitate learning in the learners' interest and need,
Identification of instructional objectives falls in the domains of cognitive, affective, and behavior,
Total positive involvement with learners lights up the spirit of both the learners and the teachers,
Yearning for self-actualization day after day to rectify oneself in the pursuit of excellence,
"Quality pays, quality results" depends on the standards and requirements set for assurance.

Acknowledgement
This article is dedicated to Father J. O'Meara, S. J.

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Appendix. Survey Instrument

	Questions
1.	老師經常容許學生不按先後次序，或說話前先舉手規定，讓學生以開放的態度自由發表意見或回應老師的問題。 Teachers often allow students to speak out in class without prior permission or according to order. They let students express their thinking freely and respond to teachers' questioning.
2.	祇要學生不是故意搗亂，老師不在意全班學生是否嚴格遵守紀律。例如老師會容許學生間的細聲的討論。 Given that students do not intentionally disrupt the class, the teachers do not mind whether students follow strictly the school regulations in class. For instance, students are allowed to discuss in low voicein class.
3.	老師經常用教育科技工具（如 iPad、PPT 簡報、電腦、AR/VR、zoom……）引起學生想像力， 從而更明白所要學習的內容，而非單是口講。 Teachers often use Information and Communication Technologies, both hardware such as computers , iPad, or mobile phones and software such as *PPT*, *Zoom*, AR/VR, to arouse students' imagination to understand better the

subject matter contents, and not just keep on lecturing after lecturing.

4. 當學生有學習困難時，例如難明的詞語或數學題目，老師經常試用不同的方法，嘗試使學生明白，直到學生明白為止，而不會繼續教下去。
When students encounter difficulties such as in mathematics or languages, teachers will try to use different teaching methods to make students understand clearly and will not neglect the students andkeep on lecturing.

5. 老師經常找機會，根據教科書的內容，把有關知識融入講課內容，例如講述一些成功人士、良好品格的故事，以及科學發明、大自然和健康生活的例子等，以啟發正面思考.
Based on the course contents, teachers will often find ways to expand the contents by telling stories about famous people, stories that cultivate morality, scientific inventions, healthy living and the natural world, so as to inspire the students to think positively.

6. 老師經常在授課時不斷發揮自己對各種事物的觀點，例如新聞、電視台的劇集或其它節目，看到的電影等。
In class, the teachers always express their opinions on current affairs, popular television programs ormovies.

7. 老師經常能投入教學，有很多東西教我們，好像永遠都說 不完、教不完的情況。
Teachers are often engaged in teaching and often have so many things to teach us. It seems he/she hasendless things to teach us.

8. 老師經常用提問方法講授課文，要求學生思考後才回答問題，然後告訴學生正確的答案。Teachers use different methods in teaching us. They require us to think first before answering the questions. Correct answers will be given after that.

9. 老師經常鼓勵和讚賞學生提出問題，以引起討論動機，加深溝通和了解，從而產生共鳴。Teachers often praise and appreciate students to raise questions for discussion. Through discussion, communication is deepened, and resonance nurtured.

10. 老師講課時，經常口述所有內容，很少應用資訊科技輔助講解。
In classroom teaching, teachers just use oral methods and seldom make use of computers or ICT to assist teaching/learning.

11. 老師講課時說話節奏、語調聲音和表情都難以讓我們專心上課。
In class, the pace, the voice intonation, and expressions of the teachers do not help us to pay attention tothe course contents.

12. 老師上課時，很少靈活運用身體語言，如自然的手勢、表情和眼神等；另外，很少以流暢的說話節奏、語調和聲線等，吸引我們輕鬆開心的學習。
During class teaching, the teacher seldom flexibly uses body language, such as hand signals, facial expressions, eye-contact to communicate.

Furthermore, lacking the lively flow of the lesson, the voicelevel, intonation, and pace can hardly make enjoy the learning.

13. 老師重視學生的個人秘密，從來不會講出同學要老師守的秘密。又不會對全班同學講出不利某學生的事情(例如他們的家庭、個人的疾病)。

The teachers value students' privacy confidential and never leak out any secret that teachers have promised to keep. They will not openly tell individual student's secrets such as his or her family mattersand sickness.

14. 老師經常不接納學生的答案、或與老師不同的觀點。

Teachers often do not accept students' answers or points of view that are different from theirs.

15. 當學生犯了校規，老師不會當眾責罵那位同學。相反，老師經常給機會讓那犯錯的同學解說。然後以關愛的態度，引導犯錯的學生，與有關學生分析犯錯的原因。

Whenever a student breaks the school regulation, the teacher will not openly scold him/her. On the contrary, the student is often given a chance to explain his/her misbehavior. The teacher shows his/love towards the student and guides the student to understand why such a misbehavior is made.

16. 老師經常積極不厭其煩地找出學生缺乏學習動機的原因。

The teacher is tirelessly finding out the reasons why certain students are not motivated to learn in class.

17. 老師經常依書直說的講授課文、總之就是講、講、講，講到不停，直到下課。

The teacher keeps on talking after talking about the contents of the subject matter until the class ends without caring about the students' responses or feelings.

18. 老師經常進行分組討論學習活動，以培養學生的團隊合作精神。

There are lots of group discussions in class and team-spirit is cultivated among students.

19. 上課時老師經常觀察學生的反應，洞悉我們上課時的表現，不會祇望課本和黑板。他/她會用笑話或有趣話題，使學生發笑，使我們不覺得沉悶。

The teacher keeps a ready eye observing students' reactions in class. He/she can eagerly detect our performance in class because he/she seldom keeps his/her eyes on the teaching materials or the ceiling. It is fun to attend his/her lesson as interesting topics are often raised that make us laugh. We do not feel bored in his/her lesson.

20. 老師很多時都非常謹慎，以保守、息事寧人的態度處理學生紀律問題。

The teacher is often discreet and careful about his/her behavior. He/she may be a conservative and keeps a peaceful mind. He/she would not major on the minor in dealing with students' disciplinary problems.

About the Author

Leo P.K. Yam, the Founding/Honorary President of the Hong Kong Association for Educational Communications and Technology, obtained his Master of Science in Speech-Education, University of Wisconsin and his Doctor of Education at TC, Columbia University, where he directed the TV Research Studio. For over 25 years, he had developed tertiary teaching staff development programs for Lingnan College, Baptist University, Shue Yan University, and Chu Hai College of Higher Education; and his teaching interests include creative teaching, effective presentation, TV/Media, public speaking, theatre-arts, etc. He had also served as a visiting professor at The University of Pittsburg, headed the "China Program" of the School of Education at The University of San Francisco, and supervised the School of Education's Educational Communications Centre at The Chinese University of Hong Kong. His research interests range from education, communication, technology, creativity, to body language. At Lingnan College, he was awarded a UGC grant to direct a project on Tertiary Teaching and Technology, in which 13 videos (DVD) were produced. His book publications include Education, Communication, Technology, Communication: Poetry 300, The Power of Oral Communication, and Education, Communication, Creativity.

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Creativity and Pedagogy: Is It a Final Fantasy in the Age of Pandemic? 7 Lessons for Life on the Ground Floor

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Abstract: "Creativity is the new literacy; we cannot leave a whole generation of people behind." – Chase Jarvis (TNW, 2017)
"You can't use up creativity. The more you use, the more you have." – Maya Angelou
"If I can try to make it fun that for me is what being creative is about; it's having fun and looking at life through like a sort of the lens of a child really." – Taika Waititi (TED x Talks, 2010).

Keywords: Creativity, pedagogy, online teaching, e-learning, gamification

1. Introduction

> "*Creativity is the new literacy; we cannot leave a whole generation of people behind*." – Chase Jarvis (TNW, 2017)

The COVID-19 pandemic caught the world of education by surprise. As schools around the world were temporarily closed, the pedagogical paradigm shift from traditional face-to-face teaching to online teaching has accelerated considerably. To facilitate this change in teaching modes, schools have provided various e-learning tools in an attempt to compensate for the absence of face-to-face interactions. However, despite relevant training and applying a range of e-learning tools, many teachers have struggled to replicate their expected level of outcomes, be it interactivity, understanding, engagement, or simply response, let alone creativity. This raises the question: is creativity in pedagogy real or just a fantasy? In this article, I argue that creativity in pedagogy in this age of pandemic is possible by offering my views on creativity and its development, and by sharing my experience on how I realise creativity in pedagogy. This includes seven appliable lessons I learned from my four years of PhD research on creativity, 16 years of application of creativity in English language teaching, as well as from my experience in bank marketing, digital marketing, software development, and hospitality management.

As an applied linguist and 'creativist', I attempt to construct this article in a way that is unlike the ones in academic journals. It aims not to be a literature review written in formal language that no one reads (see Eveleth, 2014, for related studies on how rarely scholarly articles are read), but at the same time, also not one of those ubiquitous Top-Tips guides on the internet, which offers a buffet of 'solutions' without scientific evidence. Instead, it is a text type that lies somewhere in between the two poles. Inspired by the work of the founding father of systemic functional linguistics (SFL) Prof. M.A.K.

Halliday (1990), this article aims to be interpersonal, and easy to read, yet evidence-based, functional, and practical. Also unlike the Top-Tips guides, this article does not give suggestions to teachers based on the assumption that they have unlimited support from their organisations, but instead aims to inspire teachers to go creative when resources are severely limited. (How else should an article in this Special Issue on Creativity and Critical Thinking in Practice be written if not creatively?)

2. My Journey with Creativity

> "*You can't use up creativity. The more you use, the more you have*." – Maya Angelou

Before diving into my seven 'lessons for life on the ground floor', I shall take you through my journey to understanding and applying creativity. Prior to my bachelor's degree years, I worked as a part-time cards marketing assistant in Citibank Singapore and was given many chances to run creative promotions, including handling the graphic design for a giant helium balloon outside TANGS on Orchard Road. This eye-opening, fun, and creative marketing experience has greatly influenced everything I do ever since.

After completing my bachelor's degree in computer science in 2004 and learned about game development, I chose a completely different path and began my English-teaching career in Hong Kong. For most part of the following ten years, I worked multiple English-teaching jobs on the same day. In the mornings, I taught short English courses in over 20 primary and secondary schools in Hong Kong. In the afternoons, I taught 5-contact-hour-per-day at a local government secondary school as an English drama teacher. In the evenings, I taught listening and speaking classes to adult EFL learners at a local commercial English learning centre and business English corporate classes onsite in weekends, trained new EFL teachers and designed my own English course and materials. Because students of different ages from various backgrounds have very different needs, teaching them required a range of tailor-made creativity approaches and quick adjustment of the teaching mindset. It was this period that I gained the most experience in on-the-field teaching, and course and material development in a metaphorical 'time-compression' manner (see Fandom, 2019 for description of the term).

Upon attaining my master's degree in English language teaching 2014, I taught computer-mediated communication (CMC) courses as a visiting lecturer at the Hong Kong Polytechnic University (HKPolyU), and soon I began my Ph.D. study in creativity (Law, 2018) under the tutelage of Prof. Christian M. I. M. Matthiessen and Prof. Francisco O. D. Veloso, who are both renowned scholars in Systemic Functional Linguistics (SFL). I was also involved in several creative projects, such as joining a local electric vehicle (EV) association and handling its public education events, media interviews, and the production of all its social media posts and videos (see Charged Hong Kong, 2020, for a list of references); as well as creating my own open-accessed crowd-sourced EV-charging car park map and world's first APA 7th edition stylesheet for Microsoft Word on GitHub.

After I had attained my doctoral degree in 2018, I taught bachelor's degree courses offered by an American university at a local college. Half a year later, I decided to step outside my comfort zone and took up a position of Innovation and Public Relations Manager at a 4.5-star upscale hotel in Hong Kong. I had the opportunity to learn hospitality management from top hoteliers, propose innovative ideas, research in language in hospitality, teach business English to hotel staff, and be fully immersed in the world of digital marketing and public relations. Although I left hospitality management when a research position became available in the Centre for Applied English Studies (CAES) at the University of Hong Kong (HKU), I have transferred the knowledge and skills I picked up as a hotel's marketing manager to my current project. Notably, I have pioneered the adaption of research methods from business management and human resources development to the research of learning transfer of English for Academic Purposes (EAP) for undergraduate students (Law & Fong, 2020). In addition, I am using my research findings to inform my teaching of EAP to HKU undergraduates and contributing to the revamp of course materials and the refinement of EAP pedagogy in CAES.

3. The Ubiquitous Top 'n' Tips on the Internet: Do They Work Now?

> "*To raise new questions, new possibilities, to regard old problems from a new angle, requires creative imagination and marks real advance in science*." – Albert Einstein and Leopold Infeld (1938)

Having spent two decades with creativity in English language teaching and research, bank marketing, digital marketing, software development, and hospitality management, I have learned numerous lessons of creativity worthy of sharing. Most of these lessons are useful but rather commonplace and can be found as recommendations in many Top-Tips guides on the internet (see Clifford, 2012; Davies, 2015; Johnson, 2019 and Appendix for the list of general recommendations). While these recommendations should generally be welcome by teachers and students, they can be difficult to realise in practice. One main reason is that the 'creativity' involved is product-oriented and originality-based (see Starko, 2010). This means that both teachers and students are expected to, at the very least, produce something of originality and value – both concepts subjected to opinions of their superior others rather than their own. When this happens, when one's 'creativity' is judged by others who are more powerful – which is often the case – the parties involved (i.e., school, teacher and students) tend to be caught in a mistake-avoidance loop. Sir Kenneth Robinson (TED, 2007) expresses such concern about how children around the world are losing their capacity to be creative because of their fear of being wrong and how societies stigmatise mistakes. Eventually, it stands to reason that 'the less you do, the better'.

The other main reason is that there is a general assumption in the recommendations about the parties collaborating within a receptive, non-hierarchical environment. The reality of our education systems, Robinson argues, is hierarchical in structures and dichotomised in notions of organisation of the school curriculum. A report published by The National Advisory Committee on Creative and Cultural Education (NACCCE) (1999) identifies "an explicit hierarchy of subjects" as a major cause for the decline in young people's creative capability (p. 85), and urged for "a new balance in education: in setting national priorities; in the structure and organisation of the school curriculum; in methods of teaching and assessment; in relationships between schools and other agencies." (p. 9). It is hoped that this 'new balance' would neutralise dichotomies "as a choice between the arts or the sciences; the core curriculum or the broad curriculum; between academic standards or creativity; freedom or authority in teaching methods" (p. 9). However, twenty years later, how well are we doing with creativity in education so far?

In 2020, we enter a new decade greeted by a global coronavirus pandemic into a world that forces teaching, learning and human interactions behind computer screens and masks. Our reality has been impacted so dramatically and unexpectedly since November 2019 that few industries on this fragile planet of ours can be spared from disruptions. We are busy using Zoom or Google Meet for teaching and meetings, contacting students via instant messenger apps, asking students to type in Google Docs or live-chat apps as means of 'interaction' because students are not showing their faces on camera or speaking to the microphone. It is fair to say that creativity, in learning or pedagogy, is hardly most teachers' top priority. But those of us who still believe in creativity in education and are looking at the Top-Tips list may be asking, "how many of those recommendations still work?"

4. My 7 'Lessons for Life on the Ground Floor'

> "*If I can try to make it fun that for me is what being creative is about; it's having fun and looking at life through like a sort of the lens of a child really*." – Taika Waititi (TED x Talks, 2010)

I am fortunate enough to have studied both science and arts because the 'old imbalance' (as opposed to the 'new balance') I had experienced as a student helped me realise how important they both are to the development of creativity. I am even more fortunate to have worked, researched, and taught in different fields where very different mindsets and approaches to creativity are required. These experiences have equipped me with the essential mentality and skills to tackle some of the most difficult problems in the age of pandemic. In the following section, I shall share my seven appliable lessons on how I realise

creativity in pedagogy, based on the assumption that one is operating in a non-receptive, hierarchical environment with very little resources to work with.

4.1 Lesson 1: Turn Creativity into a Verb and Own It

Let's begin by defining the term creativity. Generally, the first step of defining a term is asking a related open-ended 'WH-' question, and 'what is creativity?' is presumably a popular choice. However, if we take one step further and also ask the question 'who/what has creativity?' We may see a wider picture. Starko (2014), for example, takes this approach and groups popular theories of creativity by the 'who'. Those that focus on individuals are generally psycho-cognitive-oriented, including psychoanalytic theories (see Jung, 1972; Kris, 1951; Kubie, 1958; Miller, 1990; Rothenberg, 1990), humanist and developmental theories (see Maslow, 1954; Rogers, 1962), behaviorist or associationist theories (see Mednick, 1962; Skinner, 1972), and creativity as cognition (see Guilford, 1959; 1967; 1986; 1988; Perkins, 1981; 1988, 1994; Weisberg, 1986, 1988, 1993, 1999, 2006; Ward, 2001). Those that involve more than a single individual are generally systemic, including sociocultural theories (see John-Steiner, 2000; Vygotsky, 1930), and systems theories (see Amabile, 1989, 1996, 2001; Csikszentmihalyi, 1988; Feldman, 1993, 1999; Sternberg & Lubart, 1991, 1993; Gardner, 1993; Gruber, 1981; Simonton, 1999, 2004; Law, 2018, 2020b). This 'who has creativity' categorisation allows us to infer 'what creativity is' as defined by various theories: theories involving single individuals tend to see creativity as innate or learned; theories involving multiple individuals generally consider creativity as collaborative or a combination of the three (see Rhodes, 1961). For instance, the classic Big-C/little-c creativity (Simonton, 1977, 1994, 2004) and the Four C Model of creativity (i.e. Big-C, pro-c, little-c, mini-c) (Kaufman & Beghetto, 2009) both consider the Big-C creativity as an innate ability that only an elite few in the human history possess, but that everyone is capable of lower-level creativity which can be developed through interactions with people and the environment. At the same time, these two models exemplify 'what creativity is' in the western culture – creativity is largely defined by its products and their originality. In this case, creativity is measured by the degree of impact of one's work on the human society at some point in time.

But there is still one part of the proposed question yet to be answered, 'what has creativity?' This, in fact, is the key question that defines what creativity is in this article. By asking 'what has creativity' instead of 'who has creativity', I intend to provide another perspective for our discussion. Specifically, are we humans the only species on this planet that is capable of demonstrating creativity? We know that sea otters use hard objects as tools to crack seashells open; research shows that world-renowned western lowland gorilla Koko had the ability to use learned American Sign Language (ASL) to create new signs for untaught or non-existed vocabulary (Ahamo, 2015; Patterson, 1979; Patterson & Cohn, 1990); and the list of examples continues. So if creativity is not the sole property of human beings, then determining creativity based on human-experiential concepts such as originality (in the history of human inventions) or impact (on a culture in the history of human civilisation) would seem unfair or unreasonable. If we posit that creativity is not the ability to be creative (as measured by a range of subjective human standards), it follows that creativity should be the ability to create (which is relatively more objective). Therefore, 'creativity is the ability to create' is the definition I emphasise in this article.

Defining creativity as 'the ability to create' rather than 'the ability to be creative' is crucial and beneficial to the development of creativity for teachers as well as for our students. For one, the emphasis of creativity is not on products and their quality as perceived by others, but on the mental and physical process of creating. Linguistically, the idea is to move away from the noun creation (i.e., a product) and the adjective creative (i.e., a standard) to the verb create (i.e., actions). This should help to alleviate psychological stress from both external (e.g. peers and public opinions) and internal (e.g. self-inflicted) sources and focus on what truly matters – you, me, ourselves. In my own research, I adapt Carter's (2004) hypotheses of creativity and consider the verb create to be an action (rather than a product or a standard) that involves the interplay between references and explicitness, generating both forming and reforming of patterns in the process (Law 2018, 2020a, 2020b, 2020c). In this context, creativity encompasses both individual and collaborative efforts that break away from existing norms, or form new (but not necessarily original) patterns from existing ones (Carter, 2004). In other words, the verb 'create' also encompasses verbs such as make, build, construct, produce, imitate, adapt, improvise,

co-create, form, and collaborate, all in the general sense. Using these words, teachers and students can focus on the dos rather than the don'ts.

4.2 Lesson 2: Think Creativity, Not Innovation

The word innovation has long been a popular term in the business world and is beginning to make its way into education. Interestingly, despite its similarity with the word creativity, innovation is found to be five times more likely to collocate with business (n=4049, span=20) than creativity does (n=782, span=20) in 1.9-billion-word Corpus of Global Web-Based English (GloWbE) (Davies, 2013). One possible reason is that innovation in business is more closely related to tangible products (Dodgson et al., 2002; Purcell, 2019; Startupr Hong Kong Limited, 2018), while creativity in business has a meaning closer to my definition, that it is focused on the mental or physical process of creating (including identification of opportunities) rather than the products (DeTienne & Chandler, 2004; Gundry & Kickul, 1996; Sarasvathy, 2001; Timmons, 1989).

There are two worrying messages for teachers and students that I can think of: the first is that education is likely to become more commercialised than it was and thus teachers and students' innovation would be quantified, measured and compared by Key Performance Indicators (KPI) of some kind; the second is that creativity (i.e., process-oriented) could be further marginalised while innovation (i.e., result-oriented) takes the centre stage. As inevitable as this may sound, there is in fact a way to overcome this trend. Educators will need to call for creativity instead of innovation in our field. Because "language does not passively reflect reality; language actively creates reality" (Halliday, 1990, p. 11), if there is a demand for creativity, there will be a supply of it, but the same applies to innovation.

This is not to say that innovation is an evil entity in education; quite the contrary, innovative products are always good inspiration for further development, but innovation should not precede and outweigh creativity in education. We should first think creativity (and not innovation) because it is where creations and innovations start to take form in our imaginations. If we are lucky, we produce innovations, but innovations are not to be taken for granted and most definitely not a prerequisite for creativity.

4.3 Lesson 3: Abandon Perfection and Embrace Failure

My experience with the management in the business world is that they often claim how much they embrace creativity, but at the same time, they prefer stability and aim for perfection in things they seek. The companies led by these leaders often revert to their conventional practices in operation and thus fail to create or innovate. Also, because most companies are hierarchical, this creates an environment in which subordinates fear of making even the smallest mistakes, be it missing a full-stop in a presentation slide, or not being able to instantly provide certain information when asked. It is this belief in perfection that kills creativity in an organisation. Robinson (TED, 2007) witnesses how this trend has permeated from the business world into education systems in the U.K. and said, "we run our companies like this, by the way, we stigmatise mistakes. And we're now running National Education systems where mistakes are the worst thing you can make."

We all know that it is important to be right because mistakes can be costly, but we must learn to accept that it is even more important to be wrong. This is especially the case when mistakes have minor consequences, because learning from these minor mistakes actually prevents more detrimental errors in the future. The two Boeing 737 Max plane crashes in 2019, for example, were highly preventable had the company learned from their minor mistakes. Had Boeing learned from the minor design flaw on their 737 Max aircrafts and decided to re-engineer the planes instead of reverting to a quick software 'fix' to the high angle of attack problem, or had Boeing mentioned the installation of the new software in the pilot's training manual and what the software was doing to the flight, or had Boeing listened to the eight pilots who complained that the 737 Max was "suddenly nosing down", two major plane crashes could have been prevented and a total of 346 lives could have lived (Yglesias, 2019). It is often because one's fear to be wrong and their belief in perfection cause fear to admit flaws and imperfection, which in turn, brings disastrous consequences.

Certainly, not all leaders in businesses believe in perfection. Elon Musk, founder/co-founder of multiple corporations such as Tesla, SpaceX, The Boring Company, Neuralink, and OpenAI, is well-known for his disbelief in perfection. In an interview with Fast Company (Reingold, 2005), Musk elaborated on his attitude towards making mistakes at SpaceX, "There's a silly notion that failure's not an option at NASA. Failure is an option here. If things are not failing, you are not innovating enough." His senior design engineer, Kevin Brogan, added that "the first time we had a major engine failure Elon was kind of excited. It gave him some street cred", to which Musk reacted, "If I had the option of not having it blow up, I'd rather not, but it was pretty cool." From this short dialogue, we can appreciate how much Musk values failure and creativity as an integral part of his companies' success. So maybe this is something we can learn from one of the world's most innovative entrepreneurs/engineers (see Glanville, n.d.)?

In fact, engineers generally understand well that perfection does not exist. That is because the belief in perfection implies that there was an end to engineering improvement, which violates the fundamental principle of engineering and is something that has yet to happen in the entire human history. If scientific evidence and facts matters to educators, and I believe it does, we should abandon the pursuit of perfection and instead embrace imperfect and failure and strive for creativity and continuous improvement.

4.4 Lesson 4: Just Start with What You Have, and Take Small Steps

Striving for creativity does not mean we have to create something amazing with huge impact every day, but we need to kick-start the process by creating something from what we already have and then take small steps day by day. I have been teaching English since 2004 and I have not written a single word on the board with a chalk or a whiteboard marker since 2006. If I need to 'write' anything, I type it on Microsoft Word and project it on the screen instead. Even students sitting on the last row in the lecture hall can read the text on the screen because a simple Ctrl + scroll on the mouse can zoom in the text up to five times the original size. After class, I save a copy of all the useful words and expressions I type onto my USB drive (and that was before we have internet cloud storage), and email it to my students for their note-keeping. Then for my own research, I use the saved texts for my own mini-corpus analysis to improve my teaching materials. Certainly, this is not something that can earn me an innovation award in pedagogy, but a simple typing-on-computer creativity has more benefits in terms of viewability, transferability, reproducibility and reusability than the traditional 'wipe and gone' writing-on-the-board method. It is taking these small steps that fosters bigger creative ideas.

Another example of how taking small steps in creativity can go a long way can be found in our young children who lend a helping hand during this time of great need. Eight-year-old Nahla from the U.K. (Batty, 2020) and 12-year-old Vince from the United States (Whitfield, 2020) and 12-year-old Quinn from Canada (World Scouting, 2020) are among the many creative young children who are using their 3D printers at home to print protective masks and ear guards, and donating them by the hundred and even thousands to hospitals across the country. Nahla said in an ABC interview that "the message that I'd like to give to other children that would like to help during this time is that no gesture is too small". I think that 'no creativity is too small' and 'no one is too young for creativity' either. We adults should learn a thing or two from our children.

4.5 Lesson 5: Think Fun, Fun, Fun!

In addition to thinking creativity, educators should also be thinking fun. Fun is a crucial motivating factor of creativity, which means if fun is the goal or product, then there is no lack of creativity. The global gaming industry is an exemplar of this, and it is set to reach a value of US$256.97b by 2025 (Mordor Intelligence, 2019). Yet, despite the importance of fun, there seems to be a negative correlation between fun (and thus creativity) and educational stage. My personal experience is that fun mostly appears in pedagogical discussions in early childhood education, but it is almost non-existent in higher education. Indeed, researchers have pointed out that "[t]he psychological literature on fun is very limited" and the three-letter word is mainly found in journal articles of education as a variable in

structural equation modelling (McManus & Furnham, 2010, p. 160), not as a component in a pedagogical framework. Whatever the reasons are, it seems that our education systems are not at all prepared to train fun-loving talents to meet the needs of the booming creative industry.

If we should call for creativity in place of the product-oriented innovation in education, we should also call for fun as a preferred product of creativity over innovation. One reason supporting this proposition is that brain-based research has long revealed benefits of joyful education to students' effective information processing and learning retention (Willis, 2007). Neurologist Judy Willis even comments that "when the fun stops, learning often stops too" (Willis, 2007). In fact, in the last decade, gamification has been gaining more attention in education, but because the development is still in its infancy, much work is needed to link up fun and play with learning and teaching (Klopfer et al., 2019; Whitton & Langan, 2019). This work, I argue, should come from teachers as well as students. Students should not be limited to solely following game rules prepared by their teachers; they should also be allowed to actively create the fun that they crave for. The goal is to use creativity to create fun (or maybe produce innovations) and achieve learning, which is similar to that in the gaming industry. For example, to promote the concept of learning transfer to all CAES students, both my team and a handful of HKU students are currently working hard to produce an animated video using Nintendo's Animal Crossing: New Horizons, the world's second best-selling game on Nintendo Switch (Nintendo, 2020) and The Game Awards' 2020 Best Family award winner (Nintendo, 2021). Hopefully students can produce their own educational videos using their favourite games in the near future.

4.6 Lesson 6: Understand the Relationship between Creativity and Learning

In order to effectively design fun and creative lessons, it is important for teachers to understand the relationships between creativity and learning. Adapting Halliday's (2013) three foci of language development, I consider three aspects of creativity development are learning about creativity, learning through creativity, and learning creativity.

Learning about creativity is the study of creativity. This refers to the study of relevant theories, models, frameworks, and concepts from a wide range of disciplines, which includes observing changes in the theoretical and methodological approaches, and examining empirical findings from research performed at different times and in different cultures. We study the history, the culture, the 'grammar' and the approaches to the analysis of creativity.

Learning through creativity is using creativity as a tool to learn subject knowledge across the curriculum. Through making creativity central to the teaching and learning of subject knowledge, or alternatively, embedding the study of creativity into the teaching process, students can have the freedom to create, question, debate, correct as they acquire knowledge from a specific discipline. The explicit teaching of creativity studies is optional and depends on students' needs.

Learning creativity is realising the creativity potential through actions in our everyday life, which includes observing and recognising instances of creativity, thinking about the construction of creativity (see Law 2018, 2020a, 2020b, 2020c), actively applying and analysing creativity, and learning from our mistakes. It is similar to what we do when we are construing the mother tongue, which occurs from birth and even before that (Halliday, 2013). One popular form of creativity production that has immense impacts on the reality is digital creativity on the internet, which is an area in urgent need for more related studies of creativity and critical thinking (Law, 2020c).

Understanding these three aspects of creativity development not only helps us "neutralize the difference between theory and application" (Halliday, 2013, p. 65), but also provides us with clear orientation toward addressing students' needs for creativity development.

4.7 Lesson 7: Know the Market by Asking the Right Questions

Another small step we can take is getting to know – in economics term – the market. Education, in modern times, resembles a service industry (if not already is), partly contributed by the needs of industrialism (NACCCE, 1999) and partly by the popularization of tutoring/'shadow education' (see Bray, 2013; Craig & Evers, 1981; Hurrelmann & Engel, 1989). Teachers resemble service providers; students resemble clients, and collectively, they make up the market. If we posit that one cannot provide good services without knowing what the market wants, it follows that one cannot teach well without understanding students' needs. The same applies to creativity in teaching.

Because creativity involves constructing and co-constructing meanings implicitly or explicitly using references, I must ensure I am familiar with the references that are popular among my students. I have two approaches to achieving this. My first approach involves spending a decent amount of time watching online videos. This indirect method includes randomly watching what is trending on YouTube, Twitter, and Twitch with my visual-creator wife, Cecilia, as well as kids' videos with my two daughters, Muse (seven-year-old) and Belle (three-year-old), who are all my inspirations. While I am watching these videos with them, I would observe and ask my ladies (and myself) what makes them laugh and enjoy watching these videos, which elements in these videos make them attractive to viewers, and what makes them think that these videos are fun or creative. These questions allow me to understand the mechanism involved in the construal and the construction of creativity.

My second approach involves directly asking my students, not just once but regularly throughout the academic year, what they enjoy doing and learning and in what ways they find doing and learning them the easiest. The reason is simple: they know what is trending, popular and enjoyable to them, and if I do not know the answers, I cannot create fun activities that will fit their learning style. Sadly, these are questions that few educators I know would ask nowadays, and even fewer would use the collected information to improve the creative aspect of their lessons.

During this pandemic, I have attended many online seminars and conferences, and watched speakers present many ways of conducting online teaching. Some worked for them, others less so. What really interested me is the pattern I discovered in the audience's questions. More than often, they are: "what is your pedagogy?", "what tools did you use?", "how to use it?", "how did you assess your students?", and "how did you engage your students?" Putting aside the fact that the speakers' students and the audience's students are very different in terms of background and demographics, the question is not so much about what you would do if the keynote speakers say certain pedagogical methods or tools are promising, but rather if they tell you that some methods did not work. Would you still dare to try them? In fact, what the audience really should be asking are questions such as "what is the demographics of the students in your classes?", "what (games) do they enjoy playing at their free time?", or "what kind of online videos do they like watching the most?" Methods and tools cannot make us more creative, but understanding what our students' perceive as fun can give us more references for creativity.

5. Conclusion

So far, I have shared my 7 'lessons for life on the ground floor' with the hope that all readers of this article can be inspired to practise creativity in a less supportive environment, but like most tech companies' press conferences nowadays, I have 'one more thing' to share. It is not so much of a lesson but a realisation in these challenging times of COVID-19.

To facilitate online teaching, schools around the world have provided additional software programs with an aim to enhance interactions and thus compensate for the absence of face-to-face interactions. As supportive as the initiative is, the application of these 'creative' tools are not eradicating camera-offs nor teachers' discomfort from talking to a blank screen and the lack of responses. Time and again I hear speakers and audience in online talks asking for possible explanations for the phenomenon, but few, if any, are able to offer a satisfactory answer. As this article comes to a close, I hope my 7 lessons have somewhat provided clues, but in case the lessons have not been explicit enough, I shall offer a couple of my views: 1) The application of a teaching tool (e.g. a software program) is not creativity, we are. We are the persons to inject our creativity into the content and give life and meaning to the activity we design, not the tool. We should use the tool, and not be the tool of a tool. 2) Neither creativity nor the

application of any teaching tools guarantees the kind of responses we receive during face-to-face teaching. Remember that we are teaching through digital means and therefore, it is natural that students' behaviour also follows the practice of netizens in the internet world. Ultimately, we all need to know the market. This includes knowing our students' situations and understanding difficulties they are facing.

The Covid-19 pandemic has exposed weaknesses in our societies, including the fact that our underprivileged students do not enjoy the same level of technological convenience as we teachers had originally thought (Law, 2020c; García et al., 2020; Whitacre & Gallardo, 2020; Yates, 2020). Not all students have a top-of-the-line laptop at home. Some students could be using their one-and-only 3-inch mobile devices with limited internet bandwidth and mobile data to attend our Zoom lessons during which we happily demand our students to switch on their cameras (in their very private space), use virtual background (which is a function privileging devices with high computational power), read our ultra-small texts (which is proportional to the size of device screen), and type essays in the chat boxes or editable cloud documents while looking at paragraphs on their already-diminished screens. In addition, we throw in even more 'interactive', graphics-heavy teaching apps during the online lesson that require session codes, logins, passwords and even multiple devices, all these just so we can collect evidence of their engagement (or for our assessing of their performance) or even tell ourselves that we are 'innovative'. Perhaps it is about time we go back to basics and rethink what creativity or innovation really should mean to us and our students. Allow me to give an example to illustrate this point by decrypting the title of this article.

The title of this article pays homage to Final Fantasy VII Remake (FF7R), which is the part one of a remake of the 1997 PlayStation classic action role-playing game Final Fantasy VII (FF7). This remake was first announced in 2006 (Sato, 2006), but was not until April this year that it was finally released (Wald, 2020). In order to ensure FF7R "feel[s] both new and nostalgic" for players of the original FF7 and those who have not, the game developers placed far greater emphasis on character development and storytelling in this new game (FINAL FANTASY, 2020). One of the newly added character is Marle, a grandmotherly leader-like figure who lives on the ground floor of an apartment block in the Sector 7 slums and shares her wise 'lessons for life on the ground floor' with the protagonists (Fandom, 2020). Among the lessons she has imparted, the one that left an impression on me is about the importance of human relationships, "it's not what you know, but who you know." The literal meaning is clear: Connections are important in business and job searches. However, for those who have known and followed the core team of creators for a long time (e.g. Hironobu Sakaguchi, Shinji Hashimoto, Yoshinori Kitase, Kazushige Nojima, and Tetsuya Nomura) and understand their creativity and the years of effort they have devoted to this game, there is an extra layer of meaning to this quote in the educational context: It is not what creative skills or pedagogical approaches you know, but who you truly understand when you are creating. Do we understand ourselves, our students, both, or none?

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Appendix

A list of general recommendations found in many Top-Tips guides on the Internet (see Clifford, 2014; Davies, 2015; Johnson, 2019):

Schools should:

1. give teachers freedom and space to be creative.
2. emphasise less on traditional formats of assessment and embrace new ideas.
3. provide training workshops for teachers on how to teach creativity.
4. welcome and promote candid feedback from teachers and students.

Teachers should:

5. stay updated about the latest creativity research in the field.
6. apply models of creativity into pedagogy and course design.
7. use different assessment criteria for creative assignments.
8. teach students the creative skills they need.
9. ask students open-ended questions that can provide a different angle, e.g. What if?
10. give students freedom and space to be creative.
11. show (students what is creative) but not tell.
12. allow students to collaborate with each other.
13. give students time to think and ask questions.
14. maintain a friendly and supportive environment.
15. be open-minded when challenged by students.

Students should:

16. be ready to think out of the box.
17. be critical with information provided.
18. be ready to question or challenge norms.
19. welcome collaboration and embrace teamwork.
20. be happy to share comments and feedback.
21. maintain a positive attitude when participating in activities.

About the Author

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