Effectiveness of Online Learning Relies on the Dynamic Between Teachers and Students

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ABSTRACT

Since the outbreak of covid-19 pandemic, schools around the world are forced to switch from traditional face-to-face schooling to online learning. School teachers face immense stress during the process due to lack of online teaching experience and relevant training. Different research has been conducted in reviewing the effectiveness of online learning; factors such as self-efficacy and motivation of students are the two most referenced amongst research. This research argues that the digitalised delivery of knowledge is dynamic and it relies on the efforts from both students and teachers. By integrating the typology of interactions developed by previous scholars, this research proposes the 'teacher-content-students dynamic' as a tool to comprehend how teachers and students interact in an online learning environment. Using narrative analysis, the online teaching experiences during the pandemic of three secondary school teachers are reviewed. The aim of this research is to identify how the interactions between students and teachers in the virtual classroom play an important role in effective online teaching and learning. Since there lacks unified guidance regarding the implementation of online teaching, the delivery of online teaching varies in which schools each informant teaches. Owing to this, the difficulties and challenges faced by each individual are unique, yet their narratives have coincidentally pointed to how teacher-student relationships and interactions play an indispensable role in effective online teaching. Symbolic interactionism is used in the analysis.

Keywords: narrative analysis; online learning; symbolic interactionism; teacher-content-students dynamic; teacher-students interaction

1. Introduction

Education across the globe has undergone disruptions and drastic changes as a result of the covid-19 pandemic. In-person schooling became difficult as school suspension was employed as a strategy to control the spread of the pandemic; emergency remote teaching (ERT) became the initial response across educational contexts. As the pandemic prolonged, remote learning/ online learning became the 'new normal'. However, this also implies changes to student-teacher relationships, which has been found as a key factor to students' learning motivation and learning efficacy by many scholars (Pennings & Hollenstein, 2020; Omar et al., 2021).

Teaching is an art and is complex in nature (Gage, 1978; Pennings & Hollenstein, 2020); it is more than imparting knowledge and bears the ability and hence the responsibility of inspiring the young minds in societies. Therefore, quality teaching embeds influences that extend beyond students' learning in school, it even accounts for the mentality and minds in their life journeys. For years, research has reached consensus that student-teacher-relationship is important in the learners' experience (Sousa, 2021); while effective communication is established as a determinant factor of good and meaningful student-teacher-relationships (Blizak et al., 2020;

Tang et al., 2021), it is crucial that the interaction within such an effective communication is dissected and delineated to enable more positive student-teacher-relationships.

Since the pandemic outbreak, ERT has been implemented across educational contexts regardless of the schools', school teachers' or students' readiness as we are engulfed by the public health crisis. This adoption of online teaching has brought a new kind of ecology to schooling and its impacts on students' learning are still uncertain. While scholars' work on the effectiveness of online education seems to arrive at the conclusion that it is a feasible substitution, or even better version of traditional schooling (Khalil et al.; Mahmood, 2020; Hu et al., 2021), a number of studies have also concluded that online education could be detrimental to students' social skills development and emotional management (Kapasia et al., 2020; Sun et al., 2021). Therefore, this research aims to understand how school teachers can play a role in reducing or even diminishing such negative impacts. Through studying three cases of secondary school teachers in Hong Kong, this research examines and analyses the interaction between students and teachers in an online learning environment. Through the lens of symbolic interactionism, this research argues that emotional capital exchanged between teachers and students accounts for positive and meaningful interaction, effective communication and ultimately bringing positive impacts on students' learning.

In fact, this research finds that the effectiveness of online learning heavily relies on dynamic and effective communication between teachers and students; in other words, good student-teacher relationships are key to teachers' teaching, it determines students' response in class and ultimately affects the overall online learning experience. This study has also found that these teachers often experience frustration when there lacks effective communication between them and their students. These informants reported feeling more like an entertainer than a teacher during online teaching. Using the theory of symbolic interactionism and the concept of emotional capital, a shift in teachers' roles manifested through student-teacher interactions will be analysed.

2. Literature Review

2.1. Emotional Capital

Emotional capital generally refers to emotional resources in the form of support, patience and commitment built within families (Allatt, 1993; Reay, 2000; Zembylas, 2007). The term was first coined by Nowotny (1981) who theorised it as a type of social capital which is generated through affective relations. The concept is an extension of Bourdieu's concept of capital, which he explains, operates in various forms namely economic, cultural and social (Bourdieu, 1977; Zembylas, 2007) and each form can be transformed into another since they are the products of exploitable resources. The concept of emotional capital was not coined by Bourdieu, but Zembylas (2007) has threaded the concepts together and applied it to education research by taking temporality and dialectics of history into consideration. According to Zembylas, he described emotional capital as a crucial element amongst social groups, and plays an important role within classrooms and schools. By incorporating that with Bourdieu's (1977) view, emotional capital can be transformed into social and cultural capital, thereby bringing empowerment in the school (Zembylas, 2007). In other words, empowerment is enabled in the communities of both teachers and students through the exchange and circulation of emotional resources, hence it is important that emotional capital be recognised as a constructive asset that circulates the habitus experienced by teachers and students. In an online learning environment, the usual practices between teachers and students have changed and transformed, implying transformations in the habitus in the schooling community as well. There is no doubt that ERT

has caused disjuncture (Mezirow, 2009; Eschenbacher et al., 2020) to the usual teaching/learning atmosphere in the classroom; for instance, the establishment of Gemütlichkeit, which denotes the harmonious and trust-embedded mood/ atmosphere conveyed and created through one's heartful and mindful engagement, temper and feeling, (Salvador et al., 2020). Communication in an online classroom is restricted by digital tools available in the meeting software that the school relies on such as chatbox, raise-hand functions, webcam and audio, etc. (Chen et al., 2022); effective communication therefore becomes bundled with computer literacy of both teachers and students. This form of digitalised communication has henceforth brought upon another level of communication barrier and even distance that teachers need to overcome in achieving the same level of trust and/or closeness with their students in a traditional classroom. From this perspective, effective communication in both teaching and learning has become even more challenging. Therefore, there is a pressing need to delineate how effective communication and Gemütlichkeit-building have been altered in an online learning environment. To do so, symbolic interactionism is used in the analysis of student-teacher interaction.

2.2. Symbolic Interactionism

Symbolic interactionism was first posed by Blumer (1969) with three premises: i. human beings act upon the world based on what 'things' mean for them; ii. these socially constructed meanings change according to and based on one's interactions with others; iii. the meaning of the world changes based on these interactions and is reinterpreted by these actors in the world. Vrasidas (2001) pointed out that the traditional approach to educational research has a tendency of ignoring how meaning, interaction and interpretation of actors shape behaviours, while this illustrates the necessity of interpretive inquiry, it is also postulated here that Bourdieu's theory of field and habitus, which is generally known as "the rules of the game" also be taken into account to reach a holistic view of the interactional ecology in an online classroom. Habitus and symbolic interactionism share similar underlying ideology in a sense that both consider contexts as socially and historically constituted (Zembylas, 2007). Bourdieu defines habitus as "*predisposed by its range of historical uses to designate a system of acquired, permanent, generative dispositions*" (1990, p. 53). In other words, these "rules of the game " apply to different fields, (or social arenas) accordingly, meanwhile, these fields are "structured systems of social positions" (Jenkins, 1992; Zembylas, 2007), thereby restricting the form and content of interactional exchange between actors who share the field. The interactions of school teachers and students in a face-to-face environment do not apply to an online learning environment; although the agents remain unchanged, the field is no longer the same and therefore changes occur in accordance.

Using the framework of symbolic interactionism, the three premises can be applied and contextualised as follows. Action is defined as one's "observable behaviours plus the meaning attached to it by the actor" (Vrasidas, 2001, p.3). Therefore, first, teachers and students exhibit "socially appropriate" behaviours based on the meanings that those actions have for them in a particular field. Simple gestures such as maintaining eye contact when students speak with teachers, or the 'morning greetings' ritual performed by the whole class, are actions that show respect towards teachers; On the other hand, teachers pacing through corridors and passing by rows of students in the classroom is a gesture that exerts teachers' power over students. The interactions are deemed socially appropriate and acceptable, both teachers and students are used to these actions as habitus in the school. Second, these gestures and behaviours are socially constructed, and are restated and reinforced through repeated practices. Third, the meaning of these gestures is processed again each time they are enacted and in each enactment, these actions are interpreted once more. Due to the change of field, these socially appropriate

behaviours that teachers and students have been used to are no longer applicable owing to technical and spatial restrictions. According to Blumer (1969) and Vrasidas (2001), "meanings are used to form action through the process of interpretation" (Vrasias, 2001, p.6) and hence, the continuous flow of interaction is social interaction *per se*. Teachers and students behave differently in online and offline settings, since ERT is adopted abruptly as a response to the public health crisis, there is no doubt that teachers and students have developed new sets of protocols and social interaction accordingly.

2.3. Types of Interactions

Student-teacher relationships have been discussed and researched by many scholars. A wide range of factors has been found to have an effect on which especially during the pandemic outbreak; for instance, teachers' teaching style (Coman et al., 2021); students' personalities (Zheng et al., 2020); students' learning efficacy (Al-Nasa'h et al.; Heo et al., 2021); teachers' teaching experiences (Kim et al., 2021). There lacks, however, an investigation of the reverse effect of student-teacher relationships on the interactions between teachers and students, which is fundamental to the achievement of effective communication as well as effective online learning. According to Graham (2016) and Oviatt et al., (2018), there are four types of interactions in an online learning environment, namely online human interaction, digital content interaction, in-person interaction and non-digital interaction. Since in-person interaction and non-digital interaction are no longer possible in the context of ERT, "interaction" between teachers and students in this research focuses on the first two types. Online human interaction can be understood as real-time communication between actors through the use of technology, for instance, softwares like Zoom, Google Meet, etc. (Graham 2016; Hu et al., 2021). Digital content interaction broadly refers to the use of digital learning resources and displaying those content using softwares such as Google classroom, Moodle, etc. As for non-digital content interaction, it refers to the digitalisation of learning materials without engaging students in the process, an example would be uploading worksheets in a platform. Tang (2021) on the other hand, approaches interaction in an online learning environment using the interaction equivalency theorem, under which an unlimited number of learners could be reached at the same time. Two key types of interactions, namely learner-instructor interaction and learner-content interaction are distinguished. In this research, learner-instructor interaction is the main focus while learner-content interaction has been found to be an influence that could affect learner-instructor interaction. Owing to the shared features under these two theories, they will be integrated as a "teacher-content-students-dynamic" mediated by technology. This research argues that this dynamic can assist the building of positive student-teacher relationships, such dynamic is not unidirectional, but is influenced by both students and teachers' actions and responses in the interacting process.
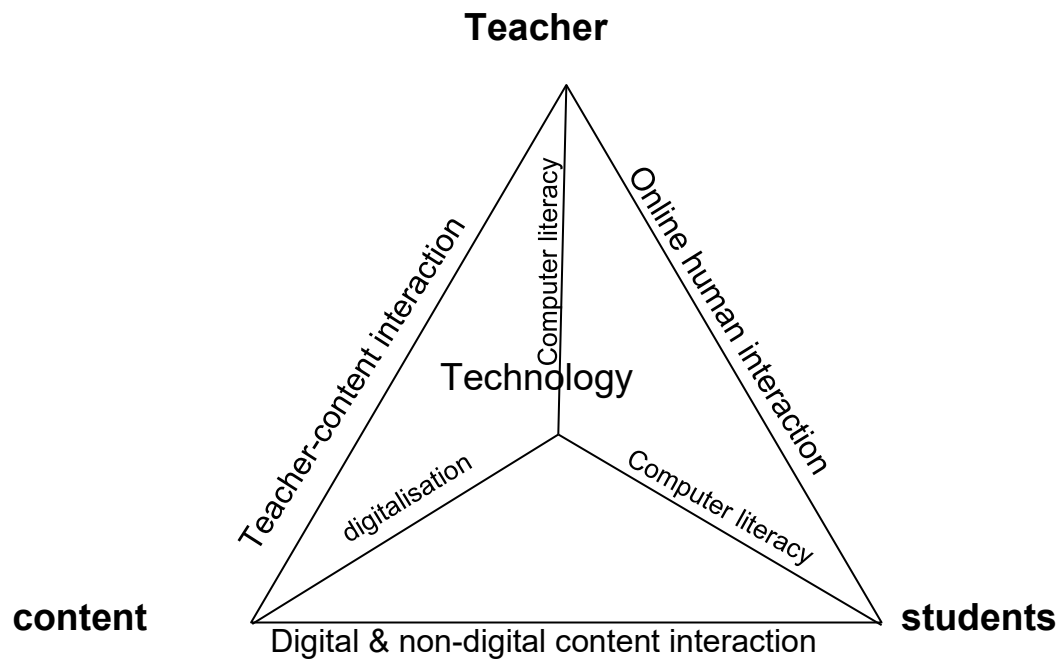
Teacher

Technology

content   **students**

Digital & non-digital content interaction

Figure 1. Teacher-content-students-dynamic

3. Research Questions

This research asks three research questions based on the concept of "instructor-content-learner-dynamic".

1. How is the building of Gemütlichkeit done between teachers and their new students in an online environment?
2. How is effective communication maintained between teachers and students in an online classroom?
3. How do teachers maintain their power over their students whilst overcoming the drastic differences between offline and online environments?

4. Methods

This research uses case studies and narrative analysis and it is qualitative and exploratory in nature. The research is an interpretive research (Erickson, 1986), implying the emphasis on interpretation of participants' meanings in action. The purpose of this research is to investigate the nature of interaction in an online learning/teaching environment and how it differs from traditional, face-to-face schooling from the perspectives of school teachers. The focus is on how these individuals make sense and/or meanings of the online teaching experiences; owing to this, case studies are employed since it allows me to focus on understanding how these school teachers make sense of the "new normal". On the other hand, broad generalisation is not the aim of the research, but the capturing of specific social phenomena is the research focus (Hammersley et al., 2000). These selected cases provide in-depth detail and information to delineate the interactions between teachers and students in an online learning environment, which also better suit the application of symbolic interactionism and discussion of emotional capital in the research.

In addition, since this research adopts symbolic intercationism as an analytics framework, interactions could only be studied while considering how it is within and at the same time, affecting the broad context (Vrasidas, 2001). In other words, actors are bound within a dynamic

relationship— in this case, the interactions between teachers and students are not unidirectional, both actors in the field have the ability to affect the dynamic. To understand these, semi-structured interviews were conducted with the teachers, the data was transcribed and analysed using thematic analysis and narrative analysis.

Memo writing has also been adopted in the data collection process since it enables the adoption of thick description while filling the gaps during the interpretive analysis. Thick description is coined by Clifford Geertz (1973), the theory can be understood as a detailed account of field experiences by the researcher and unfamiliaring, in such an account, the patterns of cultural and social relationships in context which has often been taken for granted, or is known as in Erickson's (1986) words, 'the invisibility of everyday life'.

Triangulation of data is conducted by constant comparison of fieldnotes, transcription and casual conversation between these informants and myself; cross-case comparison is also conducted in search of similar patterns in data analysis. Moreover, the factual details given by the informants are also verified and cross-checked by searching for relevant news and announcements made on school websites corresponding to the schools that these individuals work at. These three cases are selected since they are from different age groups and have reached different levels in their careers. To better illustrate, a table is included in the following to summarise the characteristics and background of these three informants.

Table 1.
Summarisation of informants' background

Informants (pseudonyms)	Years of teaching; subjects; current school's characteristics	Experience with online teaching
1. Tom	12 years; Science; band 2 co-educational school	None before Covid
2. Aidan	3 years; Economics; band 2 co-educational school	Blended learning
3. John	5 years; Maths; band 1 Catholic girls school	Online real-time classes before Covid

The three cases: Tom, Aidan and John are educators who are passionate about teaching, all three of them work in Secondary schools in Hong Kong. They have different levels of exposure to online teaching, rasonsing partially why these cases were selected. Tom is a veteran teacher who has been teaching since 2010. He is experienced and skillful about bonding with students, yet he has not been exposed to online teaching before Covid and hence, his efforts in establishing Gemütlichkeit with his students in an online classroom is one of his biggest difficulties. Aidan, on the other hand, is a novice teacher, despite this, he has spent his teaching practicum in an online environment. He has experienced difficulties in filling the gaps between the theoretical knowledge acquired in his studies and the practical and applicable ones in his actual teaching. John has been striving for a promotion and has taken advantage of Covid, he was promoted as the technology-enabled-teaching headteacher for his leadership and familiarity in online classes delivery. In-depth and semi-structured interviews were conducted face-to-face, each lasting for about 1 hour. The interviews were recorded and transcribed; they were sorted into different themes and thematic analysis was used. 4 themes protrude and they correspond with the three research questions asked in this study: i. Breaking the ice with students & gaining their trust; ii. Ways to maintain frequent contact and communication with students; iii. Challenges unique to online teaching environments. The analysis will be conducted in the next session.

5. Data Analysis

In-depth, semi-structured interviews were conducted with three secondary school teachers in Hong Kong. The transcripts were sorted into 36 initial codes, they were then refined into 22

codes supporting 4 major themes; these themes were selected based on the frequency of occurrence, significance and the mutuality amongst my three informants. Narrative analysis was conducted on the interview, the analysis is especially useful in helping the researcher comprehend how the informants make sense of the lived experiences. As pointed out by Clandinin & Rosiek (2007), "narrative inquirers study individual experience in the world, an experience that is storied, both in the living and telling that can be studied by listening, observing, living alongside another, writing and interpreting texts" (p.42-43). The process of thematic analysis follows the six-phase framework proposed by Braun & Clarke (2006); the application and the process of how the framework has been applied in this research will be illustrated in the following session, in which phase 1-5 are discussed in one section; and phase 6, the writing-up will be separated in the session that follows. In phase 6, several excerpts have been included in Table 5; they were selected and extracted from the transcripts since they are especially significant and powerful in conveying the relevant themes.

6. Thematic Analysis- Phase 1-5

Adopting the six-phase framework of Braun & Clarke (2006), thematic analysis is conducted by first generating the initial codes and then searching for themes.

Table 2.
Braun & Clarke's six-phase framework in thematic analysis (2006)

Phase 1: Familiarising with the data
Phase 2: Generating initial codes
Phase 3: Searching for themes
Phase 4: Reviewing themes
Phase 5: Defining themes
Phase 6: Writing-up

To achieve phase 1, the interviews have been listened to repeatedly, the interviews were conducted in Cantonese with the occasional use of English; they were first transcribed, and were then translated into English. Each interview lasted for about one and a half hours; the interviews were audio-taped and transcribed. To ensure accuracy of the translation, back translation was also done on top of contextual and literal translation. As the transcription and translation were conducted, early impressions were jotted by rough notes; cross comparison with the notes jotted during memo-writing in the interviews was also conducted.

Initial codes were then generated as the analysis proceeded onto phase 2, in which the data was systemised and organised in a meaningful manner. Based on the three specific research questions, a theoretical thematic analysis was conducted based on the data's relevance to the research questions. Open coding was used in the process and a total of 36 preliminary themes were generated under such principles. In each translated transcript, each segment of data which was seemingly relevant to or specifically addresses the research questions were coded.

Research questions:

1. How is the building of Gemütlichkeit done between teachers and their new students in an online environment?
2. How is effective communication maintained between teachers and students in an online classroom?
3. How do teachers maintain their power over their students whilst overcoming the drastic differences between offline and online environments?

Table 3 illustrates an example of how initial coding was generated based on the above principles. Cross comparison was conducted between the translated transcript and the original

transcript to ensure accuracy and consistency in contexts; comparison was also conducted amongst the three translated transcripts in search of comparable aspects, important overlaps and interesting findings such as items that were in direct contrast. Microsoft Excel was adopted to organise the data as the soft copies of the transcripts were examined and highlighted line by line.

Table 3.

An example illustrating partial generation of initial codes based on data relevance to research questions

Research Question	Segment of data identified in transcripts	Relevance to RQ (1 [low]; 2[high]; 3[specific])	Codes
RQ1	- *I wish to know more about my students -how to assist them even better* - *I use chat box and Kahoot to engage them & I share my stories with them and encourage them to do the same too in the lesson* - *I save 5-10 minutes at the end of the lesson, to let my students ask questions or just to mingle a bit with them*	3; specific actions were mentioned as ways for Gemütlichkeit-building, with the aim to understand students better and ways to assist them	● know more about students; ● assist students; ● chat box, Kahoot; ● share stories;
RQ2	- *As a teacher, you need to figure out a way to make students feel entertained, if you bore them out, you lose them* - *It is indeed a challenge for me, name any softwares... Kahoot, Quizlets...etc..* - *I am quite close with them, once my student told me on Whatsapp,"Mr. John, we've played the same online game for three lessons already, can we do something else?"*	2; Contextual relevance is high, informant pointed out consequences of boring students and gave an example of how his communicated their thoughts about the repetition of the online game in class	● ways to engage students; ● softwares like Kahoot, Quizlet; ● consequences of losing students' attention; ● exchanging personal contact
RQ3	- *I encourage my students to challenge what I say in the lesson and I deliberately teach them something with flaws and have them correct me on the board.* - *It is a shared screen, so that gives my students a bit of pressure since his/her work is under the spotlight now*	1; Teaching method encourages critical thinking and reflective thinking in students, the informant integrated the characteristic of Zoom screen-sharing function with enquiry-based teaching	● Enquiry-based teaching; ● shared screen to create pressure; ● instant feedback;

As these initial codes are generated using the three research questions as the main framework, theoretical thematic analysis is conducted. The process involves triangulation of the data, in which the interviews were repeatedly listened to; the transcripts, both Cantonese and English were repeatedly reviewed and casual conversation records were also examined; the codes were also modified in preparation for the search for meaningful themes. The codes were modified and a total of 22 codes were kept after refinement, with the omission and/or combination of overlapping content.

Phase 3 is approached with the aim to capture significant and interesting perspectives to the research questions. According to Braun & Clarke (2013), the contribution to a theme depends on the research itself and has no basic ground rules to follow. Owing to this, this research has adopted the strategy of grouping the codes in phase 2 and sorting them into different aspects with response to the research questions. Although the basis of the data in this research is limited, the length of the interview, the reflective nature & open-ended questions used during the interview, as well as the trusting relationships between the researcher and the informants have ensured the quality, validity and reliability of the data. Initially, the 36 codes were placed under the following themes:

i. Gemütlichkeit in an online-learning environment;
ii. Tracking students' learning progress online;
iii. Anxiety of teaching online;
iv. Ways to overcome difficulties in online teaching;
v. Difficulties in an online teaching environment;
vi. Maintenance of relationship with students.

It is noteworthy that as the informants narrate their online teaching experience during the pandemic, often different aspects might overlap. This insinuates that a 30seconds-1minute excerpt from an informant could contain two themes at the same time; the dominant theme is hence determined by the context, tone and proportion of the data.

Then it enters phase 4, in which the six themes were placed in an organised manner; and I reflect on whether the themes are strongly correlated to the research questions; whether the data truly supports the themes and whether the codes were placed under the most suitable theme. Other reflective points include if any seemingly separate theme is indeed subtheme; and too much has been placed under the same theme. Table 4 in the following shows a brief illustration of how the themes were reviewed and reorganised.

Table 4.
An illustration of how initial themes are laid out and reviewed

Research Questions	Themes	Codes
RQ 1	1. Gemütlichkeit in an online-learning environment	RQ 1.1 ● Kahoot; Quizlet; Shared screen ● Want to understand students' difficulties ● Encourage students to share daily events
	2. Maintenance of relationship with students	RQ 1.2 ● Exchange personal contacts ● Facebook, Instagram, School Forum ● Different approach in teaching senior and junior year students ● Allowing time in the class for mingling
RQ 2	1. Ways to overcome difficulties in online teaching	RQ 2.1 ● Requiring students to turn on cameras ● Pop quizzes ● Making use of different applications and softwares ● Keeping the teaching materials updated
	2. Difficulties in an online teaching environment	RQ 2.2 ● Cannot tell if students are really 'present' ● Existing learning differences & catching-up with packed syllabus ● Accessibility to stable wi-fi

RQ 3	1. Tracking students' learning progress online	RQ 3.1 ● Group work and break-out rooms ● Calling on class numbers ● Private messages sent to students in chat box ● Encourage students to send direct messages via social media
	2. Anxiety of teaching online	RQ 3.2 ● Parents' scrutinisation ● Not familiar with Zoom and Google classroom ● Internet safety concerns ● Widening learning differences in class

As reflected in Table 4, the preliminary themes were adjusted since the idea repeats itself and overlaps with the other theme. The reconsideration, refinement and adjustment of themes contribute to phrase 5. Centering at the three research questions, for instance, theme 2 under RQ1: maintenance of relationship with students was omitted, since it is the ultimate purpose of the bigger conceptual term 'Gemütlichkeit''. It is noteworthy that all three informants have highlighted the differences in teaching junior and senior form students, in which the more mature students might have already known and are used to the teaching styles of the informants; but the junior form students might not know my informant at all, implying that extra efforts need to be paid by my informant to overcome the distance/ to 'break the ice'. Another adjustment made is in RQ 2, theme 2, in which only theme 1 is retained at last, owing to its direct relevance to the research question. Effective communication is achieved by two steps: identifying the communication barriers; and overcoming them. On that account, it seems more appropriate and logical to group them together as one theme. As for RQ 3, the maintenance of teachers' power over students comes down to the reflective account of the fundamental roles of teachers. Therefore, tracking students' learning progress indicates their role of imparting knowledge. As a matter of fact, teachers are not simply there to fulfil epistemological purposes; since they spend so much time with their students; their emotional exchange also plays an indispensable role in their interaction with students. Owing to this, their anxiety of teaching online is categorised under RQ3, as it addresses the issue of how my informants negotiate and assert their teaching & leading roles for their students despite their self-doubt and uncertainties. Figure 2 in the following showcases a thematic map which defines the themes, correlations with the research questions as well as a general view of the aspects which the research questions are examining in the dynamic of teacher-student interaction in an online setting, as opposed to a traditional classroom. Finally, Table 5 highlights the particularly important quotes extracted from the transcripts, which illustrate the themes especially well.

Figure 2. Thematic map showcasing relationships between research questions, themes, and the significance of themes

Table 5.
Excerpts from interview transcripts

Themes	Excerpts from informants
Gemütlichkeit in an online-learning environment	*Especially during these two years, online teaching has kind of worsened the problem [learning gap amongst students]. I feel like even more has to be done, I wish to know more about my students and exactly how to assist them even better. I use functions like chat box and Kahoot to engage them, I share my stories with them and encourage them to do the same too in the lesson. I also save 5-10 minutes at the end of the lesson, to let my students ask questions or just to mingle a bit with them.* —-----------------Tom *I can imagine that… if the same software is used in every single lesson for school… I would be annoyed too. As a teacher, you need to figure out a way to make students feel entertained, if you bore them out, you lose them. It is indeed a challenge for me, name any softwares… Kahoot, Quizlets...etc. Every teacher has used these platforms before, it's just a matter of time before students find it lame. So I tell my students to just tell me directly. I am quite close with them, once my student told me on Whatsapp, "Mr. John, we've played the same online game for three lessons already, can we do something else?"* —-----------------John *Being a male teacher working in a girls' school, I'd describe my relationship with my students as a game of chess. I can't be too close with them but I can't be too distant either. Just like e-learning and online teaching, everyone was figuring things out, through trials and errors, we find our paths. In the previous two years, that was mostly my motto, it's what I believe in. Everyone has a certain capacity in learning I think, it is trust from my supervisor that brings the most out of me, and it is also trust that brings the best out in my students. I encourage my students to challenge what I say in the lesson and I deliberately teach them something with flaws and have them remind me. That keeps my students engaged and knowing that they are learning is what keeps me going.* —-----------------John
Tracking students' learning progress online	*My students have developed different and new learning habits, bad ones, during online schooling, those habits are difficult to change. For example, they relied on online information to complete their homework, they only care about getting the answers, but Maths is a process of logical training, my extra work was to find out if they got those*

answers from private tutors or sources online. Some students simply look at the printed answers at the end of the book, and try to deduce the steps backward but this is not how Mathematics works.

—----------------John

It's actually very common, some students don't even turn on their cameras and you don't and won't even know if they're there, and for some students, you just know that they are not, but there's nothing you can do! Some students even turn off their lights in the area which they had lessons in. Also, online education actually favours those with better academic standing; the weaker students usually have less self-discipline, they engage less and so fall behind even more.

—--------------Aidan

I did notice the differences between students with higher and lower socio-economic status. Sometimes it can be difficult, for both my students and me. One of my students shares a computer with two other siblings, so often she had to use her phone for our lesson, then she couldn't respond in the chat box or annotate on the board. Her monitor was very small too and her learning is jeopardised since she's unable to participate in activities that require students to use several applications simultaneously. It's harder to track whether she's really participating in the online classes, it all comes down to what I know about this student before COVID, luckily she's always been hard-working and was my student before.

—----------------Tom

Anxiety of teaching online	*Most teachers in my school don't want to do online teaching, they think it's too difficult to deliver knowledge effectively remotely and technical issues can come in the way as well. Most of us are anxious about students' progress during COVID, we can't be sure that students are learning as effectively as they did in a face-to-face situation.* —--------------Aidan *Well, you can't just give a lecture in an online environment, you need to arrange and organise activities to engage students in the lesson. In an online classroom, it's not like you can just walk over to a student when s/he is distracted, you can only engage them through applications and games like Kahoot...etc. It's how I engage my students for online lessons, but nothing too innovative nor mind-blowing, I really am not sure if it works well.* —----------------John *At first, it was difficult because teachers also had to get used to the fact that the learning outcomes might not be as good as having lessons face-to-face. Learning through a monitor is difficult because teachers can no longer tell whether students understand something by body language. These learning feedbacks are missing in online classes. It's kind of scary actually when you don't receive feedback from students, you don't know whether they really understand it, actually it's very scary. In face to face lessons, you can just wake up those who have fallen asleep, but online teaching is scary, because you really have no idea how they perform. There's a sense of voidness/ emptiness in online lessons.* —----------------Tom *I can only see my students' presence, as in their names in the screen, our school does not obligate students to turn on their cameras, but often those who don't turn on their cameras on are exactly those whom need you the most, they are usually weaker or have special needs that require your extra attention in a usual class setting. For those students, when teaching them, I feel very anxious because I don't know who I am teaching. I know it's an issue about their privacy but still, all I want to know is that they are actually listening and are really learning and engaging. But of course, if they insist on not turning on their cameras, there really is nothing I can do. Those are the students whom I worry the most about, the academically better ones are different, even if they don't turn on their cameras, you know that they are engaged and that they are really learning.* —----------------Tom *I think another issue is that some parents have lessons with their children at home, and so as school teachers, we have to be extra mindful and careful about what we say and do, how we teach, etc. You really have to be very careful with what you think, say and act; choice of words and even for class content, source of information or you might get into serious trouble.* —----------------John

Difficulties & ways to overcome difficulties in online teaching	*For teaching tools, teachers have become more careful when selecting the types of tools to use because they need to be effective in engaging students. Even after making the appropriate choice, you need to use it well, if not, it might create chaos in an online classroom. For example, I once had students take photos of items with symmetry and upload them onto the platform within a given time. You need to engage them, instead of just treating it as an online element.*
	—--------------John
	I try my best to interact with my students through online lessons, for instance, I call out their class numbers randomly and have them answer questions, and meanwhile I would calculate their marks and jot down their performances, it kind of provides them an incentive to answer and to give responses. I also make use of other softwares to do instant quizzes with them, and I would use that to test and see how much they understand. I actually do these to bring a sense of security to myself, you know, because once they give me feedback, it is very reassuring and it motivates me to keep going; when they don't give you feedback, you really don't know if they are really catching on.
	—--------------Aidan
	I understand those who refuse to turn on their cameras, maybe they don't want to show their homes to everyone, so I don't force them. Instead of making them turn on their cameras, I change my strategy to having them turn on their cameras showing not their faces, but their notes, at least that makes me feel like they are actually jotting things down, and that makes me feel much better and much more assuring.
	—--------------Tom

7. Thematic Analysis- Phase 6

7.1. Gemütlichkeit in an Online-Learning Environment

The four selected themes are: Gemütlichkeit in an online-learning environment; tracking students' learning progress online; anxiety of teaching online and ways to overcome difficulties in online teaching. These themes are selected based on their commonality in the three cases; Gemütlichkeit concerns the friendliness and trusting environment/ atmosphere created by teachers in an online learning environment (Salvador et al., 2020). Owing to the pandemic, the usual skills and routines that teachers go through on the first week of meeting students were no longer probable; during ERT, the first week of school involves teachers greeting students on Zoom and could only afford very limited time for ice-breaking. Syllabus and schedules have always been tight in Hong Kong, and in an online context, schools expect teachers to help students catch up and to limit the negative effects of online learning to a minimum level. As a result, the teaching schedules of teachers are very tight, making it even more difficult to bond with students. According to my informants, a good student-teacher relationship is very important to students' learning; therefore, these teachers establish Gemütlichkeit with other methods such as using Whatsapp, chat box and voting functions on Zoom, so as to engage and interact with students.

"You can imagine that… if the same software is used in every single lesson for school… I would be annoyed too. As a teacher, you need to figure out a way to make students feel entertained, if you bore them out, you lose them. It is indeed a challenge for me, name any softwares… Kahoot, Quizlets...etc. Every teacher has used these platforms before, it 's just a matter of time before students find it lame. So I tell my students to just tell me directly. I am quite close with them, once my student told me on Whatsapp,"Mr. John, we've played the same online game for three lessons already, can we do something else?""

John

One of the informants, John, has established a trusting environment for students to communicate their thoughts freely by his truthfulness. John is empathetic towards the online

situation that his students are forced to face, and being a master's student himself, he understands the frustration and tiredness that online learning could bring. Therefore, he chooses to introduce more stimulating and two-way interactive elements in the delivery of his online classes so as to keep his students engaged. By doing so, John's students are provided a platform to communicate their needs directly and most importantly, John makes adjustments in the lessons accordingly, forming a healthy relationship. He also encourages his students to correct him in the lesson by deliberately including flawed teaching resources in the lesson so as to ensure his students pay close attention to the lesson and that they understand the delivered content thoroughly.

7.2. Tracking Students' Learning Progress Online

According to my informants, their utmost concern is the learning progress of their students, and they are concerned that their students might not learn as well in an online classroom. Without the physical presence and observable body languages exhibited in students, online teaching and learning challenges teachers as they need to create activities that could reflect the engagement of students in the lesson. Often, these are determined by factors such as whether students' cameras are on, or whether they engage in the activities accordingly.

"It's actually very common, some students don't even turn on their cameras and you don't and won't even know if they're there, and for some students, you just know that they are not, but there's nothing you can do! Some students even turn off their lights in the area which they had lessons in. Also, online education actually favours those with better academic standing; the weaker students usually have less self-discipline, they engage less and so fall behind even more"

Aidan

As narrated by Aidan in the interview, when students choose not to turn on their cameras, it is frustrating for teachers when they are not given immediate feedback from their students. Teachers are worried about their students' falling behind in class, since my three informants teach mainly secondary 4-6 students, these students have to face their public examination very soon, which is partially why my informants' anxiousness when they are not certain about their students' learning progress.

"I did notice the difference between students with higher and lower socio-economic status. Sometimes it can be difficult, for both my students and me. One of my students shares a computer with two other siblings, so often she had to use her phone for our lesson, then she couldn't respond in the chat box or annotate on the board. Her monitor was very small too and her learning is jeopardised since she's unable to participate in activities that require students to use several applications simultaneously. It's harder to track whether she's really participating in the online classes, it all comes down to what I know about this student before COVID, luckily she's always been hard-working and was my student before".

Tom

On the other hand, Tom has also pointed out the issue of digital divide, which has made tracking students' learning progress even more difficult. Students' accessible resources depend on the socio-economic status of their family, on one hand, not every household can afford a digital device and the environment needed for an online lesson to go smoothly. On the other hand, since ERT is conducted abruptly, school support might be unprepared to provide support for these students. The outcome, according to the observation of all three of my informants, is that students who have had high academic achievements are even more hard-working than before,

since they have more time to learn at their own pace, and they have more rest as well because travelling time is saved. Meanwhile, the weaker students are suffering under online education.

7.3. Anxiety of Teaching Online

Under the effects of Covid, many teachers are worried and scared about the public health crisis (Boer et al., 2022). Since not many teachers have prior knowledge or experience of online teaching, my three informants have faced a range of difficulties in the delivery. As noted by Aidan in the interview,

"Most teachers in my school don't want to do online teaching, they think it's too difficult to deliver knowledge effectively remotely and technical issues can come in the way as well. Most of us are anxious about students' progress during COVID, we can't be sure that students are learning as effectively as they did in a face-to-face situation".

Most teachers in Hong Kong are resilient about online education, although the digitalisation of teaching materials and blended learning have become compulsory under requirements of the EDB. Since online teaching is not part of the required course during teachers' training, all my informants coincidentally described the process as a kind of constant "trial-and-error". Part of the anxiety comes from the lack of knowledge of online teaching; on the other hand, the anxiety also comes from how different online teaching and face-to-face teaching are. As noted by Tom,

"At first, it was difficult because teachers also had to get used to the fact that the learning outcomes might not be as good as having lessons face-to-face. Learning through a monitor is difficult because teachers can no longer tell whether students understand something by body language. These learning feedbacks are missing in online classes. It's kind of scary actually when you don't receive feedback from students, you don't know whether they really understand it, actually it's very scary. In face to face lessons, you can just wake up those who have fallen asleep, but online teaching is scary, because you really have no idea how they perform. There's a sense of voidness/ emptiness in online lessons"

Tom

Tom describes the lack of interactions between teachers and students as a type of teaching that gives him a sense of voidness and emptiness; it even makes him feel scared of not knowing whether his students are facing any difficulties in the lesson. The way Tom describes his feeling is very direct, straightforward and with words with strong emotional connotations. For instance, "it's very scary"; "have no idea how they perform", from these phrases, a strong sense of frustration is hinted, thereby pointing to the importance of interactions between teachers and students. On top of this, another challenge was also brought up by John.

"I think another issue is that some parents have lessons with their children at home, and so as school teachers, we have to be extra mindful and careful about what we say and do, how we teach, etc. You really have to be very careful with what you think, say and act; choice of words and even for class content, source of information or you might get into serious trouble"

John

Hong Kong has experienced drastic socio-political changes in the last two years and it has savagely robbed many locals of their trusts towards one another. My informant, John, has indeed been in trouble before for discussing issues related to politics with his students in the lesson; in spite of the fact that he was merely stating the facts based on news reports and was only mentioning that because his student brought up the question, John was still penalised as he was complained by one of the parents of his students. Under the effects of the pandemic, many parents have to work from home while their children learn from home; in some cases,

those parents would be present the whole time to observe their children's learning online. For teachers, this is certainly a new condition that they have to deal with since they are literally "watched" by students' parents. As mentioned by John, he and his colleagues felt that they have to be extra careful and mindful regarding what they say in the lesson, for fearing that the parents might be under the wrong impression and take legal actions against them, especially with the enactment of National Security Law in Hong Kong.

7.4. Difficulties & Ways to Overcome Difficulties in Online Teaching

Despite the different types of challenges that teachers face when teaching online, they do have their ways of coping and overcoming them with hopes to reduce the gap between face-to-face classes and online classes. From the choice of online platforms to the softwares and applications to use in each session; from engaging students by calling upon their school numbers randomly to the provision of reward and punishment system; from encouraging students to voice out their needs directly to coming up with activities that require students to give immediate and regular feedback, my informants have also introduced and invented their own ways of overcoming the challenges they face in an online classroom. John especially noted that the trick to successful online teaching is to engage students fully with the help of technology, therefore, it is essential that teachers understand the importance of engaging students in an online learning environment and that these tools are more than just a part of the online situation.

"For teaching tools, teachers have become more careful when selecting the types of tools to use because they need to be effective in engaging students. Even after making the appropriate choice, you need to use it well, if not, it might create chaos in an online classroom. For example, I once had students take photos of items with symmetry and upload them onto the platform within a given time. You need to engage them, instead of just treating it as an online element"

<div align="right">Aidan</div>

Other practical ways are also mentioned and highlighted by Aidan and Tom, for Aidan, he gives pop quizzes at random times during the session to ensure that his students are paying attention in class and to check their understanding and concepts. It is interesting that Aidan narrates the action as a way to "bring a sense of security to himself". At the same time, this narration parallels what is mentioned by Tom, as he also noted how his class rule of having students turn on their camera, showing their hands and notes but not their faces is a type of feedback for him and that it pacifies him when he teaches.

"I try my best to interact with my students through online lessons, for instance, I call out their class numbers randomly and have them answer questions, and meanwhile I would calculate their marks and jot down their performances, it kind of provides them an incentive to answer and to give responses. I also make use of other softwares to do instant quizzes with them, and I would use that to test and see how much they understand. I actually do these to bring a sense of security to myself, you know, because once they give me feedback, it is very reassuring and it motivates me to keep going; when they don't give you feedback, you really don't know if they are really catching on"

<div align="right">Tom</div>

It is noteworthy that both Aidan and Tom consider teaching without two-way communication and feedback is the "scariest" part of online teaching. At the same time, they both came up with creative ways to ensure that their students are engaged in the lesson. Furthermore, this type of

engagement has made them feel assured in the delivery of knowledge, since they have some clues about how much their students have understood, or the parts that need further explanation.

"I understand those who refuse to turn on their cameras, maybe they don't want to show their homes to everyone, so I don't force them. Instead of making them turn on their cameras, I change my strategy to having them turn on their cameras showing not their faces, but their notes, at least that makes me feel like they are actually jotting things down, and that makes me feel much better and much more assured."

<div align="right">Tom</div>

8. Discussion

During the last two years, teachers in Hong Kong have been under immense stress as they had to face both socio-political changes on top of a global public health crisis. According to de la Fuente et al. (2021), both teachers and students have roles to play in the creation of an effective learning environment; teachers ought to plan and design the class content, as a process known as regulatory teaching-learning. On the other hand, students ought to self-regulate their behaviours and learning by staying with school schedules and objectives set in class. Although both teachers and students are expected to play a part in creating and maintaining a positive learning environment, this research has found out through narrative analysis of three local teachers' stories, that an interactive dynamic between teachers and students is a determining factor of an effective online learning environment. As proposed in the session above, the narrations of Aidan, Tom and John have exhibited traces of the teacher-content-students-dynamic.

Teacher-content interaction is seen in teachers' selection of platforms and means to use in the online class. In these three cases, Google classroom was used for uploading assignments and teaching materials for students; the platform is chosen because it is believed to be more user-friendly than the school intranet, making non-digital content interaction possible and more easily accessed by students. On the other hand, teachers' preparation for the lessons and their delivery of lessons are found to be highly dependent on their computer literacy. In Tom's case, as he is less experienced in online teaching as compared to Aidan and John, the method that he has employed include requiring his students to show their faces and notes in the lesson; while Aidan and John had made relatively better use of the software by utilising the chat box functions as well as the voting functions to deliver pop quizzes during the lesson.

Online human interaction was the most challenging for the three informants, as they struggled to make sense out of the experiences. Tom and Aidan felt insecure about online classes since they are not certain about whether their students are catching on in the lesson. They both compared the face-to-face lessons with the online one, and mentioned how easy it was for them to engage their students since body language was obvious and visible in-person, while limited and blocked by remote teaching and learning. The habitus that they are used to is no longer available, and has caused them to feel insecure and anxious when making sense of the new experience. By contrast, it seemed slightly easier for John, as he is quite experienced in terms of online teaching and learning. Not only was he able to utilise the functions of the softwares fully, he was also able to engage students by integrating real-life activities with the online platform, such as the activity of photo-taking and uploading it to the online platform. In addition, he was also able to engage his students by using Whatsapp and establishing Gemütlichkeit despite being in an online classroom.

At the same time, students' feedback is found to be a determinant factor that affects teachers' emotions as well as their quality of teaching. Emotional capital is exchanged between teachers and students in the online human interaction; when students are not able to provide feedback

for teachers, the emotional exchange includes insecurity, anxiety and frustration. Students' learning might hence be jeopardised since individuals "*learn best through relating new materials with lived experiences, questioning premises and contents of their practices and experiences*"; in other words, negative capital exchange might bring negative effects on the collective capacity in between (Nolan et al., 2020). On the contrary, when students are able to demonstrate to their teachers that they are engaged in the lessons; such as when Tom's students turn on their cameras and show their hands jotting down notes to Tom; or when Aidan's students respond correctly in those pop quizzes, these yielded positive emotions such as "reassurance"; "motivation" and Tom even described it as "the thing that keep him going".

Furthermore, as revealed by the interviews with these informants, online human interaction is also dependent on students' accessibility of resources. The issue of digital divide not only creates problems and presents itself in the widening learning gap in a classroom, but when students do not have access to appropriate digital devices; such as how John mentioned that some of his students had to use their mobile phone to attend online classes, could bring detrimental effects to the planned activities of teachers. Those students were not able to participate in class activities which required them to use multiple devices simultaneously; nor were they able to annotate on the board virtually, and this could generate insecurity and anxiety for teachers as "there is nothing they can do".

9. Conclusion

This research has discussed the issue of online learning using the theories of emotional capital and symbolic intercationism. In addition, this research has proposed the model of "teacher-content-students dynamic" and has used narrative analysis to argue that it is the dynamic between teachers and students in the lesson that matters. Although both teachers and students have their roles to play in the establishment of a positive learning environment, students' responses and feedback matters not in terms of the content, but its presence. In ERT, teachers face levels of anxieties due to unfamiliarity of online teaching; the global public health crisis and socio-political changes in Hong Kong; therefore, students' feedback are especially important as it affects the emotions that teachers have towards online learning. Owing to this, this research is significant as it has postulated the essence of effective online learning, which is very likely to be the future trend given the chaos that the pandemic has created.

This research, however, does have its limitations as well. The first limitation is that classroom observation was not possible as schools have become more prudent and tend to avoid invitations like this to protect their school, school teachers and students ever since the national security law has been enacted. Triangulation was done by references to conversation records between myself and the informants, since they have also expressed their feelings and worries with me personally. The second limitation is that students were not interviewed and only the perspective of teachers are taken into account in this research since the research focus is partially on teachers' emotions. However, since narrative analysis is used, the stories narrated by these informants often include their students' views as well, therefore, students' perspectives have not been entirely left out in the research. It is recommended that further studies be done in testifying the proposed model in the research, perhaps by quantitative analysis so as to extend its usage to a broad level. Moreover, future research could look into the possibility of including students' voices to investigate the reverse effects of emotional capital exchange between teachers and students.

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