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PROMOTING DOCTOR-PATIENT COMMUNICATION IN MEDICAL ENGLISH CLASSROOMS THROUGH VIDEO AS PRE-ACTIVITY

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Abstract

The three learning stages in a Flipped classroom have allowed the teachers to provide videos by creating them themselves or downloading them from other resources. Through multimodality, the present study explores a video that is considered suitable to apply in the pre-class activity stage. The multi-track analysis was adapted to seek verbal and non-verbal elements of the video for flipped classroom process. The result indicated that the doctor's semantics and gestures depicted the patient-centered model. Although minor errors existed, they became an unseen flaw of the video. Furthermore, it is suggested that medical English teachers use the video as a pre-class activity to show the ideal model for teaching doctor-patient communication.

Keywords: *Flipped Classroom, Medical English, Multimodal, Pre-Activity, Video*

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INTRODUCTION

The advance of technology has a positive impact on teaching and learning. One of the methods that emerged and became a trend is flipped classrooms. Further, the flipped classroom has been adopted in various types of teaching learning levels, from varsities to schools and natural to social sciences. One of the branches getting advantages from the implementation of the flipped classroom is language teaching.

The flipped classroom is defined as shifting a large learning group to individual learning by utilizing some technologies (Hamdan, McKnight, McNight, & Arfstrom, 2013, p. 4). It means that the learning process is individually done outside the classroom with the help of technology. The technology, in this regard, is a facility that enables playing videos (Gojak, 2012; Tucker, 2012; and Unal & Unal, 2017) to shift learning of new content and concept before class. Afterward, discussion and practice regarding the topic are conducted in the classroom for further comprehension.

One of the factors that contribute to the success of flipped classroom learning in language teaching is the activity stages. Unal & Unal (2017) summarized three stages of the flipped classroom. They are pre-class, in-class, and after-class activities. Pre-class activities include watching an instructional video, completing an online exercise, reading additional material, and engaging in online discussion. The second stage encompasses activities such as brief content review, short lecture, question and answer, group activity, individual practice, student presentation, and quiz. The last stage, after-class activity, is conducted by having self-evaluation completion.

The pre-class activity is considered the most crucial stage in which teachers should prepare a video as the learning starter. The failure to provide appropriate instructional videos may cause ineffective learning, as reminded by Lafee (2013) in Aycicek & Yanpar Yelken (2018). He said that the teacher who did not prepare an instructional video in pre-class might ruin the flipped classroom process because learners will come to in-class activities with minimum input. Regarding video preparation, Zainudin (2017) demonstrates how a teacher can use online video and post it on blogger as an attempt to have pre-class activities due to some limitations in creating their video. The trailer video he used is effective in bringing online exercise for students.

Concerning ESP, providing videos at the pre-class activity is substantial. Bonsignori (2018) reveals that video can help law, political, tourism, and medical students to construct meaning through multimodal cues.

Particularly on EMP, Franceschi (2018) highlights multimodal aspects for medical students to build an image of a patient-centered doctor. He fosters patient-centered communication by implementing teaching techniques emphasizing verbal and non-verbal elements.

In selecting materials for doctor-patient communication, EMP teachers should be careful in determining videos from YouTube since the video should represent how an ideal doctor is. In this study, a video from Youtube is analyzed to be used as a pre-class activity in flipped EMP class. The result of the analysis can be a reference for ready-to-use sources. Regarding the material selection, the current study will seek answers to the following questions.

a. What are the verbal and non-verbal elements of the video?
b. How does the video bring patient-centered communication samples?

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LITERATURE REVIEW

The multimodality, which is focused on in this study, consists of verbal and non-verbal elements. The verbal elements are the excerpt of dialogue between doctor and patient, while the non-verbal elements highlight the gesture functions. Brief information about the functions and relations of both elements is presented by adapting the taxonomy from Colletta et al. (2009).

Gesture Function

Seven function types can be identified when a speaker acts. The first is the Deictic function. It is annotated when the head or hand of the speaker points to an object, interlocutor, body, or part of the body. The second function is Representation. This type of function occurs when the pointing is to denote a virtual object or abstract concept. The third is the Performance function. It happens when a speaker does a non-assertive speech, for example, nodding his head as a *yes* answer or shaking his head as *a no*. The fourth is Framing. It arises when assertive speech acts are done during an explanation. It also indicates the emotional or mental state of the speaker. The fifth function is Discursion. It covers the body movement that highlights specific linguistic units, such as beat. Another function is usually accompanied by gazing toward the interlocutor to give or ask attention. Such a gesture is categorized as an Interactive function. The last function is known as Word Searching. This frowning-like function includes staring above and tapping fingers. After knowing the various functions of the gesture, the next step is to understand the relation between the semantics produced by the performer in the video and the gesture.

Gesture and Verbal Relation

Gestures and verbal are semantically related to each other. The semantic relationship between the two concepts is classified into six distinct appellations. The first is Reinforcement. It is a situation when the speaker says “I don’t know,” followed by a shaking head. Such a relation is known as reinforcement, as the information brought by the gesture is identical to the verbal information. The second is called Complement. This type of relation arises when the gesture aids incomplete verbal messages. The third semantic relation is known as Supplements. This relation eventuates when the gesture adds signification to the information stated by the speaker, for instance, a face showing amusement at a funny thing. Another relation is known as Integration. The gesture gives a precise impression of the information given by the speaker. As an example, drawing the shape of an object may, at the same time, provide information about the dimension. The following relation is a Contradiction. Such a relationship mainly emerges in ironic expression as the gesture contradicts what has been said. The last type of relation is Substitution. It occurs when a speaker nods in response to “yes” without giving verbal messages. In short, this type of relation is annotated.

RESEARCH METHOD

This study used a conversation analysis using a multimodal approach (Kress, 2010) to analyze a video for teaching-learning purposes. The material of the study was a video created by Edmonton Guide Channel on YouTube. The video was chosen purposively due to the clarity of information about the expert who performed as the doctor. The channel posted nine videos performed by the same expert as a doctor, dr. Vijay Daniels, MD, MHPE, FRCPC. He has expertise in internal medicine and OSCE at the University of Alberta, Canada. Set like the real OSCE, the video utilized a standardized patient (SP). The patients worked cooperatively based on the role shown in the thematic video. The video Communication Sleep Apnea OSCE was chosen because the focus was history-taking conversation. The SP in the sleep apnea video is a middle-aged man who acted as if he had faced the problem.

The analysis was executed through a multi-track framework (Colletta, Kunene, Venouil, Kaufmann & Simon, 2009) or quantitative and qualitative (Gerwing, Marie & Dalbie, 2014), focusing on both verbal and non-verbal elements. The verbal element was retrieved from the transcription, which is available on YouTube. The transcript was checked thoroughly to determine whether or not there were errors. Subsequently, the non-verbal analysis was focused on the gesture of the doctor. The gesture is identified based on the form, function, and relation with verbal element/semantic. Colletta et al. (2019) stated that a gesture form describes the gesture. The gesture function applies Kendon's analysis (2004), and the gesture relation with semantics refers to the gesture which comes with or without utterances.

An annotation software was used in the analysis, namely ELAN (http://tla.mpi.nl/tools/tla-tools/elan/). This software was built by Max Planck Institute for Psycholinguistics, The Language Archive, Nijmegen, the Netherlands, to ease multimodal analysis. The annotation of a video can be done from transcription to kinesics and paralanguage. However, the study's annotation was done through transcription and gesture.

The research procedure began by downloading the video and its online transcription. The video was exported to ELAN software. The transcription was integrated into the video on ELAN by matching them. After the transcription and video were matched, the following process was creating controlled vocabulary. The controlled vocabulary was created based on the taxonomy in Colletta et al. (2009), related to gesture function and its relation to utterances. In addition, the gesture form was explained only in the selected part. The two research questions in the present study could be answered from these process layers.

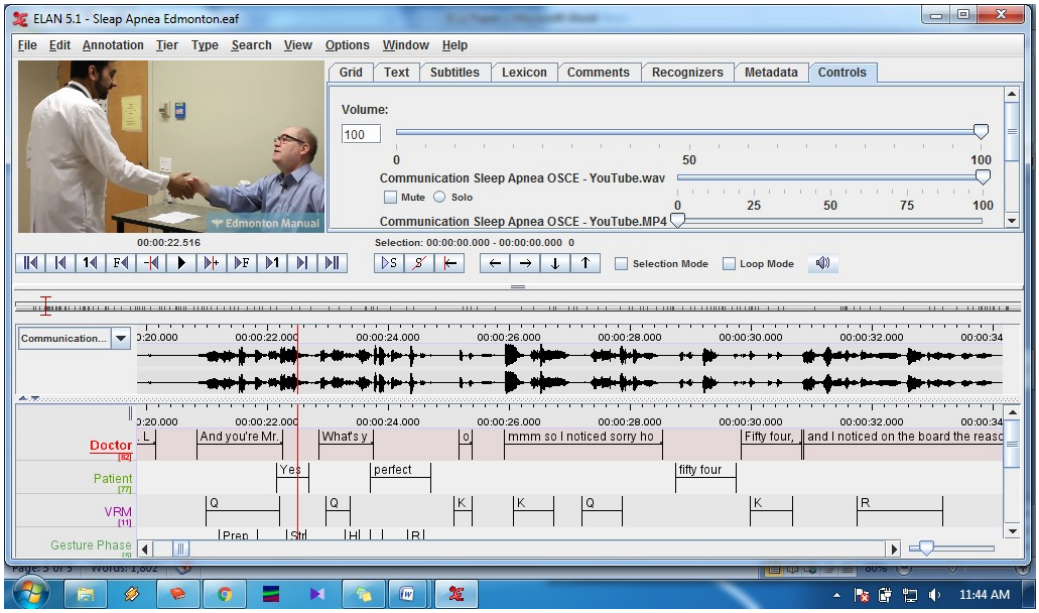

Figure 1. Annotation process on ELAN

FINDINGS AND DISCUSSION

The video transcription showed that the doctor produced 1,305 out of 2,090 words. Even though the doctor's words outnumbered the patient, it did not imply that the doctor failed to perform patient-centered communication, as shown by the gestural communication (see Table 1). The doctor made sixty-four gestural forms during the consultation. Regarding the gesture, the function was dominated by interactive (28%). The prolonged sentences produced by the doctor occurred on special occasions, such as when explaining. They are depicted in excerpt 6. Additionally, concerning gesture and semantic relation, the doctor did not contradict what he said and what he did (0%). In contrast, he made more reinforces and substitutions during the conversation to develop effective communication.

Table 1. Gesture functions and semantic relations

Gesture Function	(%)	Gesture and Semantic Relation	(%)
Diectic	14	Reinforcement	39
Representational	15	Complement	18
Performative	18	Supplement	14
Framing	14	Integration	8
Discursive	7	Contradiction	0
Interactive	28	Substitution	21
Word Searching	4		

The image of an ideal doctor was presented from the beginning until the end of the conversation. The following excerpt shows how the doctor initiated a communication.

Excerpt 1.

Doctor : Hi there
Patient : Hello
Doctor : I am Vijay Danieles, I am the doctor of heart clinic. Let me just clean my hands
Doctor : And you're Mr. Hanson? Is that right?
Patient : Yes

Figure 2. Cleaning hands before shaking hands
Source: https://youtube.com/@edmontonmanual197

In the first thirty seconds, the doctor came into the room and said a greeting. He tried to build an engaging atmosphere through an ice-breaking by saying hello to the patient. After that, the doctor introduced his name and asked permission to clean his hands as the clinical procedure before making any contact with people in the hospital setting. Subsequently, the doctor asked questions about the patient's identity, such as name, age, and current condition. The patient answered the question with short answers indicating that the patient had little motivation to talk. After the doctor asked for clarification of why the patient had come to the clinic, the patient started to talk longer by describing his problem, as depicted in the following excerpt.

Excerpt 2.

Patient : I I .. I'm not sleeping well a..... it's affecting my work and my marriage. I'd like to get it looked at.. it's.. I hope I'm not being foolish but I I I got alarmed
Doctor : Okay, you know, like if it's affecting you that's absolutely great reason to be here and I'm glad that you've come in because we want to talk about this and figure this out
Patient : Okay

In one minute, the patient began to talk a lot. He explained that the problem had been ruining his health state. He told the doctor that the sleeping problem had affected his life, especially working and marriage. As a good doctor, dr. Daniels gave appreciation to the patient for unveiling his problem to him. This was acknowledged as a strategy used by the doctor to show acceptance to his patient. This acceptance resulted in the patient recounting many things he faced without hesitation, as depicted in the following part.

Excerpt 3

Patient : Oh yeah
Doctor : Okay okay all right at night, does your wife ever tell you, you do anything different in terms of snoring?
Patient : Obviously, I snore everybody knows that everybody in the family knows it's a family joke I snore.
Doctor : Okay
Patient : and I've done that for years. but lately my wife has started nudging me because she thinks I stopped breathing.

Unveiling about personal bad habits mostly happens only in a rapport relation. After showing acceptance, a personal taboo of the patient is revealed. Dr. Daniels asked the patient whether there was a problem, such as snoring when he slept. The patient instantly answered that snoring is a horrible habit during sleeping. Then, he revealed that the uncommon problem was that his wife woke him up at night because he had stopped breathing. On the other side, while listening to the patient, the doctor stated exclamations such as *okay*. This was considered a way that the doctor triggered the patient to keep explaining his problem by showing approval.

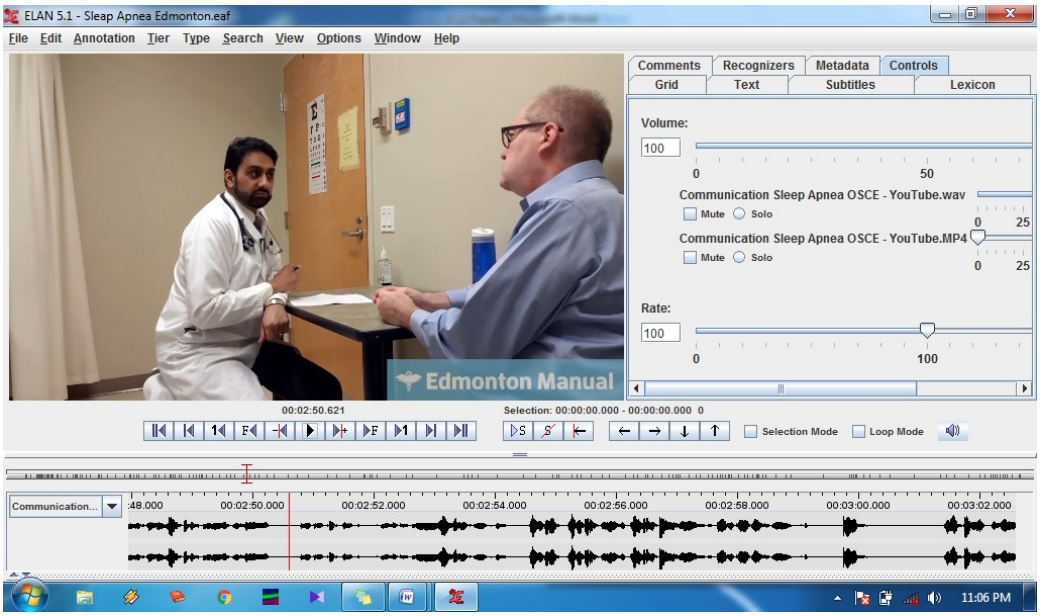

Figure 3. An interactive gesture made by the doctor

After getting enough information, the doctor tried to make the diagnosis. The sickness that disturbed the patient was sleep apnea. The doctor needed extended sentences to elaborate on the medical term sleep apnea. These long explanations were vital to make sure that the patient understood the problem he faced. Excerpt 4 showed how the doctor made representational together with framing.

Excerpt 4

Doctor : Okay yeah, no no, I understand that. um so what you're describing is something that we actually call sleep apnea. Have you ever heard of that?
Patient : No.
Doctor : Okay, it's a condition where people can often wake up at night choking, or wake up several times a night like sometimes almost every few minutes. Where the brain is asleep and slightly wake up to get their breathing going and they fall back asleep they wake up to get their breathing going, and fall back asleep.
Patient : Constantly?
Doctor : Constantly without noticing it.

The doctor combined two gesture functions simultaneously, which is essential for information clarity. The symbolic gesture indicated to give information about an abstract object, combined with a framing gesture for explaining something, was possible for the doctor to make the patient understand the concept of sleep apnea. The patient's wife realized the symptom that the patient encountered, indicating the seizure happened when the patient was unconscious. Explaining an abstract thing lets the doctor combine those two gesture functions.

The consultation was very smooth since the doctor and the patient cooperated in dealing with sleep apnea. However, in the middle of the conversation, there was a little part where the doctor created an interruption which was shown by the high intonation of saying *Maybe*. He tried to cut the patient's speech in order to reduce misperception. The patient told the doctor that he recently rarely did exercise. The doctor assumed that the cause of sleep apnea was weight gain related to rare workouts. The doctor emphasized that the weight gain caused stop breathing.

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Excerpt 5

Patient : but you have
*Doctor : **maybe** some of the recreational things like skiing and what not you're doing a bit less.*
Patient : Oh yeah, I used to play handball in my 30s and 40s but I don't even. I don't know, long time.

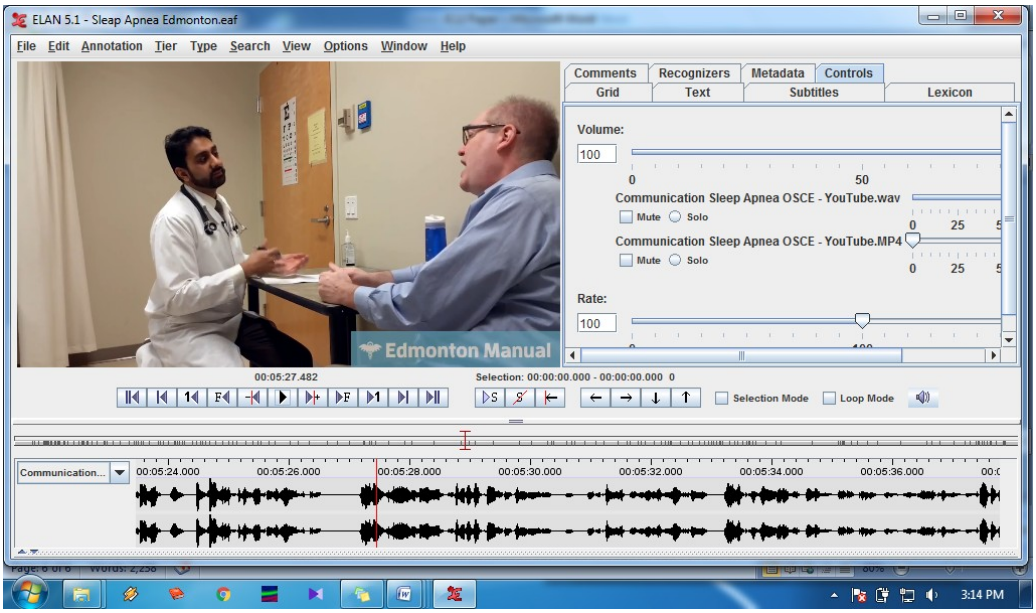

Figure 4. Interruption gesture

The doctor ventilated his conclusion after listening to some information from the patient. He used long and uninterrupted sentences to avoid misunderstanding. This is common in a medical context, and it has become one of the clinical standards; the doctor gives a detailed explanation to the patient. Moreover, as the doctor wanted to make a certainty of diagnosis and to seek the leading cause of the sleep apnea, the doctor would do a further investigation. Repeatedly, the doctor had to explain what and how the further investigation would be done, as shown in the following excerpt.

Excerpt 6

Patient : You can cure it ?
Doctor : We can fix it. okay?
Patient : Okay, how?
Doctor : So what you will do...
Patient : No
Doctor : There's no pill, but what I'm gonna do is first things first you should talk to your wife, maybe we should set a whole separate visit just to talk about weight loss strategies.
Patient : Okay
Doctor : But I'll set up at least a referral to our dietician to start I'm gonna send you to a lung specialist but it's not a problem with your lungs but the lung specialist is the one who would order a test to look at how your breathing is doing at night it's called a sleep study.
Patient : Oh
Doctor : So they're gonna arrange an appointment for a sleep study and then you'll see the lung specialist afterwards to get the results and decide what's the next step there's a few options a mask you wear at night that helps your breathing at night sometimes a surgery sometimes is the dental appliance but definitely weight loss is one of the best things that can help okay? So again to summarize I think what you have most likely I can fairly confident I know what you have and it's very treatable disease there anything else you wanted to cover today or any other questions you have?

The conversation showed that the doctor gave extensive information to the patient related to the investigation. The initial diagnosis made by the doctor is the key to where the next stage goes. Lung tests and diet treatment were attempts suggested by the doctor to cure sleep apnea. Furthermore, the doctor tried to rapport the conversation by showing unthreatening statements such as “I can fairly confident I know what you have and it's a very treatable disease.” In short, the doctor tried to make the patient optimistic.

Figure 5. The doctor demonstrated the breathing process during the sleep study explanation
Source: https://youtube.com/@edmontonmanual197

At last, the doctor tried to end the conversation reasonably. He gave praise to the meeting on that day. The doctor left the room with the relief-feeling patient. This situation is as follows.

Except 7

Doctor : Okay all right that was nice to meet you
Patient : Oh hey nice to meet you thank you very much
Doctor : Yes
Patient : I'm relieved that that it's something concrete rather than a figment of my imagination
Doctor : Alright so you have nice day
Patient : Thank you
Doctor : Well, see you!

Those findings were interesting to be presented in the medical English flipped classroom since various aspects of communication can be covered by addressing one material. Not only is the verbal element essential, but medical English students must master the non-verbal. The patient-centered approach to communication was depicted clearly.

As aforementioned, both verbal and non-verbal elements of the video supported the attempt to construct an image of a patient-centered doctor. The performing doctor in the video made several actions that can be used as a learning model in the medical English flipped classroom, as the video mirrors the spirit of the Helsinki Declaration, which emphasized that the information the patient receives must be understandable (Jenkins, Fallow, Souhami & Sawtell, 1999). The implementation of patient-centered influences doctors' and patients' decision-making (Diamond-Brown, 2016) to get the best care and treatment.

In addition, the doctor created function combinations to communicate better with the patient. The combinations are considered an attempt to construct meaning. As informed by Jenkins et al. (1999), patients will easily accept remedies from the doctor as long as they believe the trial will bring betterment to their illness. This is how a doctor persuades the patient to take the trial proposed by the doctor. Therefore, the doctor used combinations of gestures to construct meaning in the investigation or trial.

An interactive gesture indicated by extended gazing together and nodding with saying okay becomes one of the criteria of a patient-centered doctor. As indicated by Chang, Park & Kim (2013), doctors who apply active listening, reflective listening, supportive talk, emphatic listening, and partnership building have patient-centered strategies in communication with their patients. As these criteria aim to teach future medical doctors, the video can expose medical students to patient-centered characters.

Another essential aspect of doctor-patient consultation is the rapport established by the doctor. In listening to his patient's story, the doctor tried to show empathy. This value is depicted from the kinesics produced by the doctor. In this regard, empathy was achieved by combining what he said and how he acted. It is in line with Mazzi, Rimondini, Van Der Zee, Boerma, Zimmermann, & Bensing (2018), suggesting that a doctor should treat a patient as a person by listening attentively, being respectful, and having prejudice. This video, dominated by interactive gestures, extended samples of how a doctor acted adequately in front of a patient.

Finally, the doctor in the video performed the three core linking constructs that guide doctor-patient communication (Blakely, Karanicolas, Wright & Conn, 2017). The doctor reflected *understanding* by using plain language to make his description understandable. He articulated *trust* by occupying verbal and non-verbal communication to create comfort. Afterward, the doctor signified *hope* by making an optimistic explanation. At the end of the video, the doctor successfully gives an optimistic impression of the trial that will be given to the patient. It emphasized that being optimistic about the result of the treatment left the patient with relief. In summary, this situation is the primary goal of doctor-patient consultation.

CONCLUSION

The elements discussed above were essential aspects that medical English teachers must consider to select the online video for pre-class activity. The exercises related to the video can be given through both verbal

and non-verbal aspects. The teachers may discuss how the doctor demonstrated his behavior towards the patient. Questioning whether the doctor was ideal or not can be a meaningful topic to discuss during the in-class activity. Thus, the flipped classroom principle can be maintained by choosing the appropriate video for the pre-class activity.

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