

Legend: INT - Interviewer; CLG - College Student; SHS - SHS Student; JHS - JHS Student

[Introduction/s : Will omit *uhs*, *ahs*, and similar stall/stop words]

INT: Alright, so... This is the interview session- the FGD for students, regarding the effects of active listening in a virtual environment. For, like, a warm-up or icebreaker, can you state your names, age, course, and possible career path? First is Mr. [CLG]?

CLG: My name is [CLG], my age is 22 years old, and my possible career path is Quality Assurance, or Research Assistant or Research Head.

INT: What is your current college course?

CLG: Oh, my college course is BS Biology, po.

INT: What year are you in?

CLG: 4th year, po.

INT: Congrats if you're graduating.

CLG: Yes, po, sir.

INT: What about you, Mr. [SHS]?

SHS: Hello, I am [SHS], I'm 18 years old, and the path I'm going to take is Civil Engineering.

INT: So you're going through the STEM track?

SHS: Yes, po.

INT: Okay. What year are you in the STEM track?

SHS: I'm grade 12, po, right now.

INT: Congrats on passing high school. Okay, how about Miss [JHS]?

JHS: I'm [JHS], po, I'm currently a grade 10 student, and I'm planning to take HUMMS, po, for Senior High School then AB Psychology for College 'cause I want to proceed, po, to Law school.

INT: Oh, a pre-law... Oh God, that's hard... Anyway... What's your age by the way? For the demographics thing.

JHS: I'm 15, po.

INT: Alright, let's start with the actual interview questions. Or do you want a re-briefing about active listening first?

CLG: Can we have a re-briefing, po, sir?

INT: Okay. So, as stated in the previous testing... It's been a while before then so this is understandable.

(Interviewer re-briefs participants on what is Active Listening, like what was done in the testing phase.)

INT: Alright, so... Regarding, like, the previous experiment or, let's say, pilot study or whatever... You tried the application that tries to simulate a virtual classroom with more "physical" commands or functions, using a virtual avatar. Do you recall that? [JHS answers "Yes"].

INT: That point of that was to, like, see if there's a significant response in the physical process(?) of active listening in a more virtual or more remote operation/s. So, let's start with the interview proper...

[Set 1 - **Physical Aspects of Active Listening** : will omit extra *pos + sirs* & other verbal tics (e.g. , *like,*) onwards]

INT: First off, let's talk about the **Physical Aspects of Active Listening**. The leading question is this: Does the presence of simulated physical motions help in the virtual interaction? Why or why not? [...] Uh, any of you can go ahead. This is *Focused Group Discussion*, we need... it's better if you guys talk more and I listen more, so, if you guys can add on to each other's answers that would be, actually, more the better. And don't hold back on any critical or possibly negative feedback. It's all fine. It will help this paper greatly, whatever you say. [...] Uh, anyone want to volunteer to start the question? Or start off? [CLG: Can you repeat the question, sir?] Okay. **How does the presence of simulate physical motions help in the virtual interaction?** Like, see the **facial expressions**? And if they do, **how so?**

CLG: Mostly from my experience, sir, **it helps by somehow entertaining the students** as well as **showing their emotions** not just behind the camera, er **while they are behind the camera**. And it is **a new perspective for online students**, **for those students who are currently on an online-based situation**. That's it for me, sir.

INT: Alright, do you two have anything to add? Your feedback would be greatly appreciated.

JHS: Sir, I agree with his answer; it gives us **a whole new experience and it's very entertaining** since there are **different features** that we can use **while still learning**.

INT: Okay, how about Mr. [SHS]?

SHS: Sir, I agree [with] them. For me, the **presence of simulated physical motions- it enhances the virtual interactions** since the students would be **more focused** on the **discussion** since everyone in the room **can see their "movements"**.

INT: So, can you expand on how do the **facial expressions** help with the interaction?

CLG: Mostly, sir, **just like here in Zoom, we have reactions** like the joy, thumbs-up, or clap motion, while in that simulation that we've experienced it shows that **there are also new features, which is quite enlightening or quite good** specially to **interact with a student-&-teacher communication**. It has new features. That's it.

INT: Okay, 'cause personally I don't use the *reax* much, so I guess one of the more boring participants in classes... Can you expand on why the facial expressions, especially on a face avatar, help the teachers with the discussion more?

JHS: I'll answer [first]. For me, the **facial reaction helps the teacher know what emotions nafe-feel ng students-** **kung paano po nila ina-adapt yung naituturo** sa kanila while nakikinig sa teacher.

INT: That's a very good point, actually. How about you, Mr. [SHS]? How do you think it helps the discussion become more lively or the teachers adapt to the discussion?

SHS: Based on how their **faces react**, the instructor **may be able to tell if the participants truly comprehend the lesson or the idea** that the teacher is pertaining to **or if there are any misconceptions**.

INT: Ah, okay. So, on a- similar/like case, how do the **head movements**- you saw there's a, you know *FPS* games, *first-person perspective*? How does that help in doing the same thing? In virtual interaction?

CLG: **Head movement?** Mostly, sir, for me, it's **quite negative**, sir? Is that okay? (INT: Oh, sure.) I believe **the head movement is somehow distracting** because while I was trying the experiment, sir, **I was looking around and trying to see the whole place**, and **it is quite distracting** that **I can't listen quite attentively** to the head movement sir. Yes, sir, but I believe **there is also a positive thing about that-** the **head movement**, sir: **the teachers can see whether the students are really looking right at them**, or they are just **looking right at their classmates and trying to copy their facial expression as well**, which can [catch] them if they are really listening.

INT: I didn't think about the copying part, actually...

CLG: Mostly, that's what I do all the time in an online case- I'm just copying their reactions...

INT: [*Joke*] That's not good...

CLG: I'm sorry, sir... That's it, po.

INT: About that topic, too, can you expand on the way- 'cause what I thought about the head movements, like once you get used to it, it's not as/that innovative or something- it becomes very basic, so it becomes boring over time. What do you think about that?

JHS: Same with Kuya, ano- I find it distracting din po kasi while the discussion na nangyayari last week medyo ginagalaw ko rin po siya at hindi nakakapakinig nang maayos.

INT: I thought it was just novel since it's their/your first time doing it... But how about in a more interactive way? What does the teacher feel when he sees you moving, the copying, the nodding, and stuff?

SHS: For me, if we're going to look for the teacher's perspective- For me it's a positive thing since the teacher can observe if the pupils completely agree, if they're nodding, or comprehend what the other person is trying to say. We can also see if they're disagreeing by just their head movement as well, but I also agree that we are the- if we are looking for the student perspective it's like (INT: Distracting?), yeah. Quite distracting, po.

INT: Okay, I can see your point... How about, okay... This is the last for the physical motions: How about the gesturing, right? I know I only put the raising-the-hand and some idle poses that you may have not noticed because they're a bit, you know, idle... How do they improve or, you know, deter(?) virtual interactions?

CLG: I believe, sir, the gestures are- it's okay, it's good as well po, especially if the student wants to answer, wants to give his or her opinion. While the idle poses, I couldn't quite see it while doing the experiment so I can't say anything about it, however if you updated it and there are some idle postures, sir, it will be quite exciting for the students, and it somehow can also be a good thing for the teachers because/if they need to lighten up the mood of the class. So, I believe that's it.

INT: The idle poses, yeah... I didn't put a lot since I don't do 3D-modelling. It was new to me, and they're very reserved, conservative. I didn't do the common- let's say you hold your hands in front of your, or you hold your hands together front of you- the "behave" pose. Or when-you're-holding-your-head pose, I didn't think of that. How about you guys? If I implemented that, how would that affect the interactions?

SHS: The gestures?

INT: The gestures or postures, 'cause I put in just one gesture...

SHS: If you're gonna implement the gestures, sir, for me it's a positive thing having the gestures, since having the gestures can easily attract the attention of the speaker if there are questions coming from the listeners. By this, the speaker can easily ask what the questions will be.

INT: Yeah, I wanted to remove it from the emotes that we (???) in Zoom. How about you Miss [JHS]? Should I put more postures?

JHS: I agree po with kuya's answer. The gestures would help a lot since not all of the students open their cameras and use their microphones- the gestures will really help them voice out; like if they have concerns, the teacher would easily recognize them.

[Set 2 - Active Listening & Learning in the (Virtual) Classroom]

INT: [Intermission] Next, the main topic is **Active Listening & Learning in the (Virtual) Classroom**. In what way does or doesn't the virtual environment **act as a possibly conducive learning environment**? So, how does it maybe **positively or negatively affect learning in general**? Your initial thoughts?

CLG: My initial thoughts about it, sir: It is a mostly- I keep saying it again and again, **it is a new perspective for the students and the teachers**, and, you know, it is **not the usual online setup** that we are used to- **just seeing pictures of everyone and seeing the presentations of the teachers**. It can be **somehow exciting** for those who are on an **online setup [of] learning**.

INT: Okay, any follow-ups?

SHS: I also agree with kuya's answer, since it will be a lot **more exciting since this is a new thing** or, what kuya said, it's a **new perspective**. Also, **it's like your physical body is there but it's virtual**.

JHS: I agree with the both of them, and it will **draw more attention since it's new to them** and the students will **maximize all the features**.

INT: I hope that's the case... Okay, so more specifically, which feature do you guys think **contributes the most to an improved learning experience**? Or if not the most, the least?

CLG: For me, sir, **the "most" is the gestures**. (INT: Oh?) Yes, sir. The **gestures** because, you know, in an online setup we can't just **speak simultaneously** [when we need to]. So, **in a gesture-way**, someone can be **first**, then the other one can be the **second**, and like that, sir. **Para po di nag-uunahan**. (INT: So like raising hands, then?) Yes, sir. It can also show that **in the gesture part**, just like what you said earlier, the one that is quite- the one with... What **gesture** is that? The one with listening... attentively? The **listening attentively pose** can also, in the perspective of the teacher, **they can also see that students are quite listening** din po talaga because that is **what they click on** and that is what's their **gesture**. Then next, the least? I believe **the "least" command, that is yung head movements talaga**. (INT: Ah, you mentioned that earlier?) Yes, which I mentioned earlier because it's **quite distracting** as well.

INT: How about the others? An individual perspective or some... I want subjective opinions, yeah.

SHS: For me, sir, **the feature that contributes the most** for an improved virtual learning experience is... For me, **it's the facial reactions** since based on how the pupils' **faces react** the instructor [is] **maybe able to determine whether or not they truly understand the lesson**.

INT: Hmm, okay...

JHS: I have the same answer with kuya. I believe that the **facial reaction po yung pinaka-maano na feature**, kasi, **parang yun nga po, malalaman po talaga ng teacher** kung ano po ba talaga yung naaano ng mga students, **kung naiintindihan po ba talaga nila o hindi**.

INT: How true... So, what I'm getting from you guys is that it's more of "response-based" instead of "interaction-based", I think? Yeah, so, let's see... Next question is: What's **missing from the current features** or, if ever, which one of them **needs more improvement**, yes? Since it's very prototyped- It's a very basic prototype, for now...

JHS: Siguro po yung sa **environment lang po**, **para mas gawin po siyang mas... ano po sa mga mata ng students**, hindi po yung super-plain since, for me po, yung **environment po ng students ay isang malaking factor sa pakikinig po nila**.

INT: Uh, I got it free from online... Sorry... I have a bigger classroom asset, but it has like 40 chairs and this - the experiment would take like maybe 2-3 people, so my professor said not to do that. How about the others?

CLG: Can I answer din po, sir? Mostly, sir, for me, what's missing is the presentation element, on how does the teacher can present their powerpoints, their materials. Mostly, I've seen the blackboard behind the teacher, however I couldn't see... (INT: Yeah, I didn't put anything yet...) Yes, sir, yun po, and I think it's ok because it's still a prototype.

INT: I was planning to add something like a whiteboard-ish feature (SHS: Yes, sir.), "but let's focus on the virtual interactions first," my adviser said, and that's that, so...

CLG: Okay po, sir. So, that's my answer po, sir.

INT: Mmhhh. I think that's also lacking, yeah. How about you, Sir [SHS]? Missing, or what can be improved?

SHS: For me, the things that are missing po, they already told/said po. For the improvement, I think the gestures- it will be a lot... The gestures will give a big help for the student as well as the teacher.

INT: Ah, yeah, I need to add more. Okay, just an extra question, coming(?) to this: would you think voice chat is better or, you know those Twitch chats? Something like that. Which do you think is more apt for this?

SHS: Sir, can you repeat the question?

INT: Would you think a voice chat is more fit for this, or stream chats?

JHS: If I were to pick the ano po, I prefer the stream chats rather than voice chats (INT: Oh?) kasi po minsan nakakahiya pong umimik.

INT: Ah, okay, I see. I also prefer that.

SHS: For my opinion, I prefer voice rather than chat since if we're in school, like we're really going to school, we always use voice or we speak if we're going to answer, so why don't we try it even if we're virtual.

INT: I see, yeah, okay...

CLG: For me, sir, I agree with them- voice chat, because sometimes stream chat, ano po, there are cases that we can't open our cameras, so voice chat is more important rather than stream chat.

INT: Ah, no, stream chat doesn't need a camera. (CLG: Ah, okay, sir.) Yeah, continue..? (Noise) Ah, sorry..

CLG: Oh, it's okay, sir. Mostly sir, what I'm trying to say is voice chat is more important than stream chat because in communication we need an answer, which means it needs our voices to be heard.

INT: Yeah, 'cause I've seen in some research that some chat- writing out words lacks a certain level of emotion, or maybe a subtle, say, sarcasm; you can't really type that our or something. (Interruption due to noise) Sorry about that... Okay, for the last question in this set: would this app hypothetically be a benefit to your class? Or maybe, how 'bout other situations? Like what other use cases do you have for this?

JHS: For me, I think it would be a benefit since the features- marami po siyang features, and I'm sure that students will parang mas ma-eengage po sila makinig kasi mas marami na pong pwede magamit, then mas madali pong malaman din nung teachers kung ano po ba talaga yung parang nafe-feel ng students with the emotions and facial reactions.

SHS: For me, sir, I completely agree with her, since students will be excited if there are a lot of features. And also, there are a lot of people who want FPS than other type[s] of perspectives, so it will be a lot more exciting than the usual ones.

CLG: I completely agree, sir. **It would benefit** some of our **meetings and conferences** as well due to its **new look and new features**. However, there are some things that need to be updated- enable for some students to use it or to, ano po, to have the most of it, **like those students who are trying their experiments**, like that sir; most who need **materials/presentation po from the teachers**, yung (noise) po, parang **need ng videos/makapanood po ng videos yung students**. Ganoon po, sir.

INT: Ah, videos. I can see that, yeah. Mmhm. What platforms do you use now: like *Zoom*, *Google Meet*, maybe even *Discord* or whatever- Give a short **comparison** of this app to them, in terms of function. I remember someone [ask], I think it was Sir [CLG], if this can be used as a, let's say hangout session or it can be used solo or with a fewer/group of people without a teacher or something?

CLG: I think that's not me, sir... However, your question earlier is something about the **comparison**? (INT: Mmhm) The **comparison**, sir, **is it eats up a lot of storage in our gadgets**, mostly, sir, *Zoom* (INT: Really?) Yes, sir. And Microsoft Teams also **eats up a lot of storage in my gadgets** especially, mostly weekly they are **trying to update and update and update their system**, so... I believe sir, **if someone is trying to use data**, it is around 200 MB per hour, so it is **quite hard for students who have low budget**, just like me, and in these trying times.

INT: I see. Any more additions? Any more ideas or suggestions? [...] Okay, I think there's none... [Intermission]

[Set 3 - Regarding the Technology Used and Possible Improvements]

INT: Okay, I'll proceed with Set 3, and this is **Regarding the Technology Used and Possible Improvements**, as I've kinda said earlier. In what way **can this be improved using other features or technologies**? [...] Uh, any ideas? Or want me to start off with an example? (SHS: Start off with an example, po, sir.) So, I've fiddled with this idea of **adding a greater range of movement like walking or maybe changing seats** to improve the quality of the app as a learning environment. I think one of the professors, I mean teachers expressed at the time, that might be a bit... bad? But, as a student, what do you think?

JHS: **Yung ganun pong feature is okay** for me as a student, kasi parang **ganun din naman po yung nangyayari 'pag face-to-face classes**, but of course, **dapat mangyari lang po yung mga ganun-ganun kapag wala pong discussion or, kunwari po, kailangan makipag-interact lang talaga sa classmate**. Parang **maganda po siyang experience** sa student kasi, since online po, **parang nasa face-to-face parin po**.

SHS: I agree with her. Also, sir, for another feature, **I think for the mic, there is only a range that this voice can be heard**, so that just like in schools, sir, **when the teacher is speaking in front and we want to talk to our seatmate po we can do that, as long as it's not too loud; if it's too loud then the teacher can hear it and scold us**, like that.

INT: I can see that... It's called a *proximity chat*, and it's actually been going around in a few popular games recently, so I think the idea is very doable. Yeah, mmhm.

CLG: For me, sir, in a teacher's perspective, **like standing up or, ano po, walking around**, there are some students **who are really quite** (INT: Distracting?) **bothersome or distracting**, yun, so I think it is **best if we keep it somehow minimal**, sir? Yun po, sir. And another idea is **a feature where a student can chat in case they can't speak in a microphone and there will be a thought bubble that would be appearing right at the top of them**.

INT: Ah, instead of- you know the *Minecraft* chat? Instead of something like that on the lower-left screen, a thought bubble... Ah, okay. (CLG: Something like that, sir.) I see, yeah. Someone also suggested something like that as a chat option- I forgot... That's actually a good idea... Okay, next feature: something- this is in regards... Instead of the avatar or movement, this in regards to the face. Are you guys familiar with *FaceRigging*? You know the filters that change your faces on, I think iPhones? I don't use them... Are you guys familiar with that concept?

CLG: The one that is creating animated version of us, sir? Is that it?

INT: Yeah, the animated virtual faces like, I think, there was a cat or something that was popular..? I don't use them, man.

CLG: I use them, sir. I'm quite familiar with that.

INT: Okay. Regarding that, which do you think is the **more fit as a virtual avatar**? A **FaceRig** technology or, so, the **webcam feed** as you can see here? 'Cause my initial idea was to put a webcam feed on top of every avatar, but I think that's a bit too complex for this technology at the current state.

CLG: I believe, sir, the **avatar is quite more enjoyable** because, you know sir, **some of us have a cheap webcam just like mine**. Haha. It is not quite good, and also **if students create their own avatar, it is/would be a more exciting way for them to show to their classmates** or show to the... I mean, at least they create it presentable, as well, for the teachers. **It is quite exciting if they create avatars**.

INT: I see. So more personalization and enjoyment... How about the more pragmatic side? Any ideas from the other two?

SHS: Is it about the virtual avatar or webcam feed parin, sir?

INT: Yeah, like FaceRigs vs webcams.

SHS: For me, I agree with him- the **virtual avatar**, **since there are a lot of/some people who don't want to reveal their faces...** (INT: I'm one of those, yeah) Yes, po, and I think we should respect their decision, as well. So, I think **virtual avatar will be more fitted to everyone**.

JHS: I agree din po- **avatar din po**, **since students will be able to entertain themselves** and at the same time para **makapag-explore** din po ng iba't-ibang... Kasi po diba parang sa iPhone po, **mamimili sila ng hair-style, ng lips, ganun po, so parang sila po talaga yung mag-cucustomize**, and agree din po ako kay kuya na may mga students po talaga na **prefer na hindi pinapakita yung sarili nila**.

INT: Ha, yeah. Regarding that, there's actually more pragmatic/practical purposes: FaceRigging would mean a lot less data sent, so less internet to use, but it could be a bit more tough to process for... mainly, I think phones- maybe computers can do it fine, but phones might find it hard to do that for an app. Actually no, iPhones have FaceRig..? I think it's a bit hard to implement on a phone but it requires less data. Meanwhile the webcam feed, of course, if you put it there, you can see your true face [or] whatever. It also takes a lot more data 'cause you're sending video instead of just moving something within the device. It's just a bit of context there.

CLG: So, sir? Can I ask a question? So FaceRigging sir requires the user to have a picture of themselves and it will be automatically animated like that, sir?

INT: Not necessarily your face, but you can have, as you said, a customizable avatar or something, and then your webcam tracks your facial features and replicates them onto the avatar directly.

CLG: While the webcam feature, sir, is quite, you know sir... mostly the actual face of those (INT: Students, yeah?) users, yeah. Users, yes po. Yun po. Okay, po sir. I understood po.

INT: Anymore ideas? Or should I move on to the last question regarding this? [...] Okay, I think let's move on to the last... This is actually one of the... where I got this idea- the virtual environment. How and by how much would the use of **VR** affect this type of environment? [...] **How do you think VR**, the *Oculus* stuff or... **Virtual Reality perspective would influence your thoughts on the matter?**

CLG: I think, sir, **in an interactive way**, mostly, sir, **we can hide behind the camera**... I mean we can't hide behind the camera literally, however it can- **just like me I'm a shy person**, so, haha, **I can vocalize more and I can share more** **if I am closing my camera or like that**, so, in a VR... **I've tried it once and I quite interacted with a lot of people more** than when I am in a Zoom meeting, because, sir, they don't know my usual face and **I can show my true attitude and true self** **in a virtual platform**.

INT: Ah, regarding *virtual reality*, it's like... An example is where you have virtual reality tracking, when you have move your hand in front of your webcam, the hand of your avatar moves. That's more on that.

CLG: Oh, okay sir. So mostly, sir, just like that.

INT: So you still want more virtual..?

CLG: Yes, sir. I believe **virtual [reality] is good**; it's still for me, sir, **especially for those persons who are shy and quite introverted**, po. Yun po.

INT: Ah, okay. I was thinking something along the lines of more immersion in the classroom with VR equipment, and maybe replicating more physical movements instead of clicking and hotkeys and stuff. How about you two? Do any of you have experience with the VR equipment? Since I know it's expensive- I don't have those.

SHS: Sir, I think using **VR or virtual reality** **po will be a lot cooler** since it's like our self is into... It's like **our physical self will be transferred virtually...** (INT: Yeah, inside.) Yeah, like that sir, **in which we can interact with the people** (INT: And the environment, yep.) **and also the environment**.

JHS: I **agree din** po with the both of them. **It would be a lot cooler po** since, yun nga po, **you're there but you're not there**, and you'll be able to **interact with others** na parang... **nandun ka talaga na yung environment** mo na **yon parang same talaga po kayo na ginagalawan** ng lahat.

INT: As I said earlier, the actual inspiration of this project was... You guys know *VR-Chat*? I was planning to make a lower-cost but also lower-performance version of that, or something that's similar to or copies the main features of that. It's a bit hard to do motion tracking through a normal webcam, through a normal device without the proper equipment. Okay... I think that would be it for the main questions. If you have any other questions or inputs, please state them.

SHS: I have no questions naman po.

JHS: I have none din po.

CLG: For me, sir, my last input is the software can create a- **give students more mental involvement** especially in the **classroom, and that's good**.

INT: Mhmm, yep. Okay, I think that's all for this session. Thank you very much for joining. I will be stopping the recording now...

[De-briefing and End]