

How Masks Have an Impact on Communication

Jon Mahoney

Abstract

This study reflects on how wearing facial masks has an impact on communication. In total, 118 students took part in the study. A mixed methods approach was utilized to collect both qualitative and quantitative data in the form of class notes, interviews, and a Google Form, respectively. In general, students gave negative impressions about wearing masks, indicating that wearing them negatively impacted their ability to communicate smoothly with their classmates. For example, being unable to read the other person's mood or nuance and having to use more body language to convey their feelings. Results from this study suggest that instructors need to be mindful of the impact of wearing masks and should implement classroom strategies to compensate for this barrier in communication, such as effective seating arrangements, the issuance of name cards, attention to room temperature and acoustics, and the wearing of transparent face masks.

Keywords: Masks, communication, impact

Introduction

Since the onset of COVID-19, the wearing of masks has become mandatory for all teachers and students in the Japanese education system. This radical change has been implemented rapidly and generally accepted by educators and students alike. While the benefits are clear, providing protection from the COVID-19 virus, the drawbacks are complex and subjective. In this reflective study, the author explores the implications of this significant societal change and investigates how this new normal is impacting communication in classes and discusses the mental processes simultaneously taking place within this idiosyncratic environment. By investigating and analyzing the impact that wearing masks has on students' ability to communicate smoothly, the author will endeavor to provide some pedagogical strategies that instructors ought to be cognizant of.

This study took place at a private University in Tokyo, Japan. A total of 118 students took part in the study. All the students were participating in the discussion module, a 14-week course with the primary goal of having students discuss present-day topics using a selection of marked language skills. Instructors are required to encourage maximum verbal output from students and to facilitate balanced and interactive discussions about current topics in English with their peers (Hurling, 2012). Each class consists of around 10 students, with each member placed into classes with other members with a similar English competence. Preferably, 10- and 16-minute discussions take place in every lesson and should be balanced, interactive and co-constructed by all participants.

Masks and Communication

During the height of the pandemic the World Health Organization (WHO) recommended that healthy people wear nonmedical masks to control the spread of COVID-19, such as, in settings where physical distancing is unable to be achieved (WHO, 2020). This implies that peoples' faces have been obscured from one another. Our faces provide vital information of personal identity; —for example, trustworthiness, attractiveness, age, and sex. All these visual factors enable an interlocuter to be able

to gauge the other's emotional state via expression analysis (Bruce & Young, 1986). Face masks routinely worn during the COVID-19 pandemic to cover the mouth and the nose, envelop about 60 to 70% of the lower area of the face that is important for emotional expression and, consequently, emotion reading. Significantly, these masks cover an area of the face that is vital for the effective nonverbal communication of emotional conditions (Nguyen et al., 2021). Recognizing emotions is pivotal for social interaction. Explicitly, interpreting other people's facial gestures is of paramount importance during social development when children learn to interrelate with others (Denham et al., 2014).

Several studies have recently focussed on trying to understand the impact of face masks on various aspects of social interaction and cognition (Carbon, 2020; Carbon and Serrano, 2021; Freud et al., 2020; Gori et al., 2021; Marler and Ditton, 2021; Noyes et al., 2021; Spitzer, 2020). Many of these studies have demonstrated the deleterious effects of masks on the recognition of facial emotion and identity. The ability to see one's facial movements is useful for knowing mental states and plays a part in cultivating empathy (Marini et al., 2021). Facial expressions play a vital role in communication and the passing on of emotion across individuals. People judge the facial expressions of one another, which helps them forecast events and situations and allows them to develop suitable responses to them (Mheildy, 2020). The importance of the role of facial expressions in communication would seem to be apparent. One way to negate the impact of masks has been put forward by Marini et al (2021), who have argued that transparent masks that restore visual access to the mouth region have almost no adverse effects on emotion recognition. In the next section, the history of masks in Japan shall be reviewed.

Masks in Japan

Prior to the pandemic, mask usage was already well-established in Japan. Burgess and Horii (2012, p.1184) have argued that it is "socially embedded as a general protective practice" as a kind of "risk ritual." Mask wearing seems to be a normal coping strategy for Japanese people and is adjustable to various kinds of risks and uncertainties (Horii, 2014). The genesis of this refuge in wearing masks in Japan is debatable. One credible impetus for the inception of this behaviour is the onset of Spanish Flu in 1918. Rice and Palmer (1993) have posited that this global pandemic brought the nation of Japan together. By wearing a mask, it was a representation of a national defense against an invisible threat. Another possible catalyst toward the road of mask dependency is the emergence of hay fever in Japan. The ubiquity of Japanese cedar pollinosis increased 2.6-fold between 1980 and 2000 (Kaneko et al., 2005). Significantly, around 80 per cent of those afflicted using "self-care" methods of avoiding pollen (Okuda, 2003), with over 70 per cent of those wearing masks for protection. (Dake et al., 2003). Furthermore, the outbreak of SARS in 2003 caused a notable rise in the usage of flu masks in Japanese society, chiefly at international airports (Horii, 2014). While these events seem to provide a timeline to masks being so widely adopted in Japan, there may be more deeper reasons for their prevalence. Mask usage in Japan has developed into an ambiguous behavioral adaptation concerning health risks, sometimes without a specific objective, which also encompasses "cosmetic and comfort purposes" (Simonitch, 2012).

Methodology

After gaining consent from students via a research consent form stating my intentions, starting

from week two, the author began taking notes in class on what he deemed to be any abnormal behavior caused from wearing masks. For example, breakdowns in communication, unusual body language, or raised voices. In the final class of the semester, the author shared a Google Form with seven closed quantitative questions using the Likert scale and one open-ended qualitative question (see Appendix A), which asked the students to share their feelings on how wearing a mask has impacted their ability to communicate throughout the semester. Students were also allowed to discuss this topic in the final class of term. Research by Carbon (2020, p.6) posited that “face masks may complicate social interaction as they disturb emotion reading from facial expression.” The author intends to explore what impact wearing masks has on 1st-year Japanese university students, who are required to interact smoothly in class in English in the discussion class module. The author will also consider the pedagogical implications of the findings and how it may be possible to limit the negative impact that masks have on communication.

Lookatme Masks

In lesson six, the theme of the lesson was culture. The author included a warm-up question: “*Did you have a custom of wearing a mask before COVID-19?*” Most of the students indicated that they did not but that they did wear them when they were sick to protect other people. Some students also indicated that wearing masks in the wintertime helped them to keep warm. During these questions, the author often heard the students say that they strongly disliked wearing masks now, especially in the heat of summer. Some of the ideas mentioned in this lesson by students included the following:

Wearing a mask is bad because we can't make friends and remember names, but we must try our best.

I don't like wearing a mask because I can't tell who is speaking and I feel hot.

I want to see people's expressions and enjoy speaking more.

Wearing a mask is good because we have facial equality.

The responses given by students in this activity prompted the author to experiment with using Lookatme masks (see Appendix B) in two of his classes. In the previous academic year, the university in which this study is conducted distributed transparent Lookatme masks to all teachers and students. All these masks were free of charge, and their usage was encouraged by the university but not deemed as mandatory. Several emails were sent by the university to teachers and students that these masks were available, and all were encouraged to wear them. The author had issued Lookatme masks to his students in the previous year and advised them to wear them if they wanted to, but none of the students did so. This was perhaps influenced by the fact that the author did not set an example of wearing the mask himself, since he felt unaccustomed to them. Being that this was during the height of the pandemic and students had been studying online for over a year in most cases, this response was perhaps understandable. The author proposed to students in two classes in this study from week nine that they try wearing the masks for just one lesson and to see if they aided in their communicative abilities. The students agreed, and the university provided enough free masks for the two classes. The author began wearing a Lookatme mask from week eight and had noticed that although students were initially surprised, they soon got used to the author wearing it. The author also believed that they understood his instructions more easily and appreciated that they could see his smile and facial reactions to their discussion performances.

When the students in the two participating classes initially put the masks on, it was the first time for them to see each other’s faces. Therefore, there was a mixture of excitement and nervousness. It was soon apparent that students became relaxed wearing them and started to enjoy speaking to each other with more freedom. In one class especially, it was noticed that all the students smiled for almost the entire class and participated actively. Unfortunately, on the day of trying the masks for the first time in the other class, the weather was extremely hot and uncomfortable since there was a heatwave in Japan at that time. Although very similar findings were produced, due to the heat the students took longer to relax and enjoy seeing each other’s faces. At the end of each class, students were asked if they felt that the mask improved the smoothness of their speaking, and 19 out of 20 students agreed. The students were advised that if they wanted to continue wearing the Lookatme masks for the remaining five classes, then they should bring one to the class and that it was completely their choice. In the following classes, three students in one class continued to wear the Lookatme masks until the end of term. While, in the other class, just one student brought the Lookatme mask and wanted to wear it, but because the other classmates had not done so, this student swiftly put the mask away into their bag, indicating to the author that peer pressure had played a role in this.

Findings

In the final class of the semester, the students were asked to complete a Google Form to indicate their impressions of using masks throughout the semester. A total of 118 students completed the form.

The first four statements posed to students were designed to foster their general feelings of wearing masks in class. The results were reasonably ambiguous from the first statement posed to the participants. Figure 1 below shows that students did not clearly indicate if masks had impacted their ability to communicate smoothly in class. However, there was a marginal preference that masks did have a negative impact, with 56 students (48%) indicating that they had and 48 students (40%) indicating otherwise.

Figure 1
Wearing a mask did not affect my ability to communicate smoothly in class



Statement two: “Wearing a mask in class made me feel comfortable,” provided similar findings, with a majority 46 students (38%) agreeing with this and some 32 students (27%) disagreeing this

statement. This finding can be attested to the obvious fact that masks protected students from infection.

Statement three: “I often wanted to take my mask off in order to communicate smoothly” also provided slightly agreeable data. A total of 45 students (38%) agreed with this statement, with 36 students (32%) giving an opposite view. The observation by the author during class of many students often adjusting their masks lend credence to the fact that almost half of students indicated that they had felt this compulsion.

The fourth statement posed to students provided clearer results. A total of 64 students (56%) agreed that it was difficult to understand others when wearing a mask, with 33 students (30%) indicating that it was not difficult. With this being a discussion class, in which it is very important to understand other’s ideas and opinions smoothly, this is a sizable difference in opinion. This perhaps suggests that some students were more accustomed to wearing a mask than others.

Figure 2

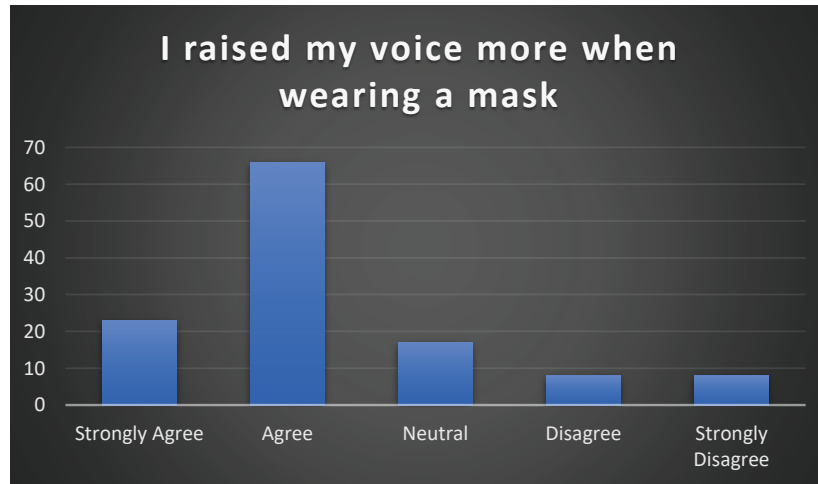
It was difficult to understand others when they were wearing a mask



Statements five, six, and seven were designed to garner students’ feelings of how the wearing of masks affected their behavior during the class. A total of 58 students (49%) agreed with statement five: “I used more body language than usual when wearing a mask,” with only 28 students (23%) disagreeing, suggesting that students were required to exert more energy when using a mask to make their opinions understood.

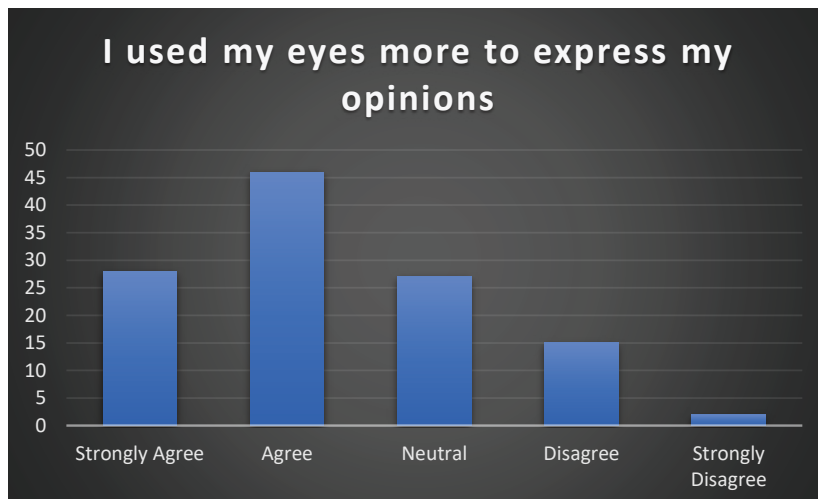
Regarding statement six, we can see a clear disproportionate response from students on the topic of raising their voices in class. A total of 89 students (75%) agreed with the statement, with just 16 students (14%) disagreeing (see figure 3 below). Together with the extra usage of body language, the extra pressure of having to speak louder may play a role in students' performance and motivation.

Figure 3
I raised my voice more when wearing a mask



The data gathered from statement seven regarding using eyes as a form of communication was also unambiguous. A total of 74 students (62%) indicated that they did rely on more eye communication, with just 16 students (14%) indicating otherwise (see figure 4 below). The author paid particular attention to the eye movement of students when evaluating speaking tests. By doing this, the author could usually detect who was taking speaking turns smoothly.

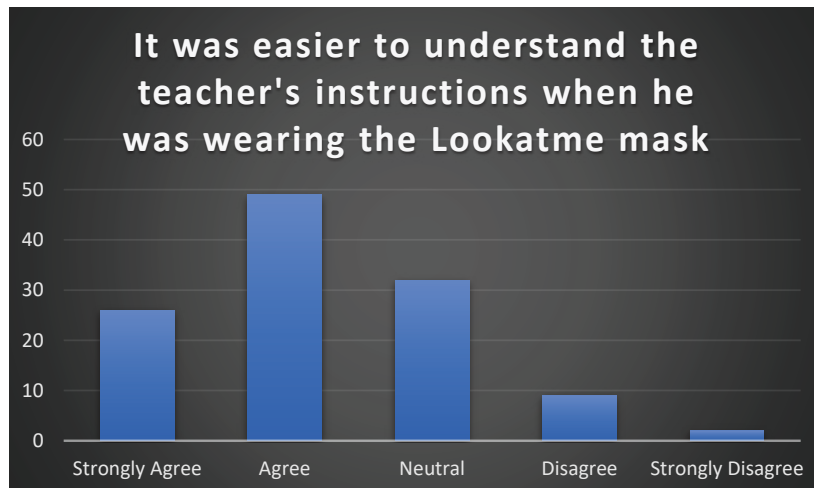
Figure 4
I used my eyes more to express my opinions



The final statement was chosen to collect students' impressions of the teacher wearing a transparent mask in class. The author wore the Lookatme mask for the final six classes of term. The results, with 74 students (63%) agreeing that they understood the teacher's instructions more clearly, pale in comparison with that of only 11 students (9%) disagreeing (see figure 5 below).

Figure 5

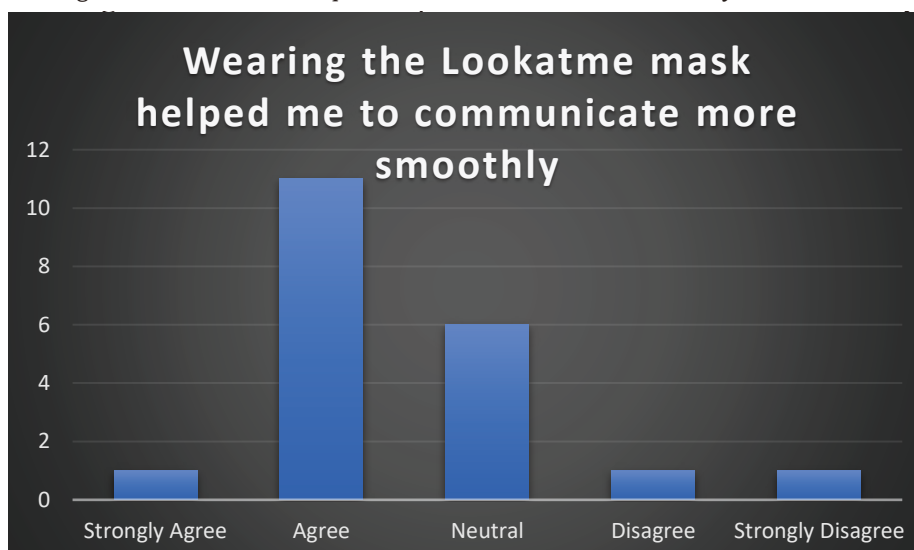
It was easier to understand the teacher's instructions when he was wearing the Lookatme mask



There was an additional statement on the Google Form for the two classes who wore the Lookatme masks. By looking at the figure below, we can see that 20 students (60%) agreed that wearing the masks boosted their ability to communicate smoothly, with only two students (10%) indicating otherwise. Six students (30%) were neutral (see figure 6 below). Since most students had a favorable experience of wearing the masks, the reasons why almost all the students did not continue wearing them in the following lessons could be deemed as complex.

Figure 6

Wearing the Lookatme mask helped me to communicate more smoothly



The final question was open-ended, asking students to indicate any positive or negative impact that they had felt about wearing masks in class. A total of 14 distinct advantages were stipulated by

students. The most common were feeling relaxed and having peace of mind (seven), followed by taking better care of pronunciation (four). Other noteworthy advantages mentioned included no need for make-up (three) and being shy to show their faces (three). It is understandable that students should pinpoint that masks made them feel relaxed due to the highly transmissible COVID-19 virus. The fact that students mentioned that they had to concentrate on their pronunciation more as an advantage was unexpected and is one of few examples of how masks may improve a student's speaking ability.

Students specified significantly more disadvantages to wearing masks. The most common included unable to see mouths, facial expressions, and emotions (41) and asking classmates to repeat often (18). Having to speak with a loud voice (14) is perhaps linked to the fact that students had to concentrate on their pronunciation more, thereby providing a possible caveat to this advantage. Hard to breathe and feeling hot (10) and difficult to make friends (four) were the other noteworthy disadvantages mentioned. The students who claimed it was hard to breathe lends credence to a study by Dooly et al. (1996), who reported that wearing a mask reduces the approximate value of maximal oxygen uptake by about 10% in an individual.

Group Discussions and Interviews

In the final class of term, the final discussion questions were posed to the students: "What are the advantages and disadvantages of wearing masks?," and "How does wearing a mask impact on communication?"

The most common advantages mentioned fell in line with responses in the open-ended Google Form question, such as protection against viruses and hay fever, no need to wear make-up, or no need to shave and feeling less nervousness. However, some other noteworthy advantages were given, such as from a shy person's point of view, it was easier to start speaking everyone has a beautiful face, there was no need to show a fake smile, and students could hide their true feelings. One student mentioned an advantage as "*No mask, no life,*" to which all the students' classmates agreed. The author later asked: "*What do you mean by this?,"* to which the student replied, "*We have been wearing masks for three years, so we feel shy to take them off and change our faces.*"

The most prominent disadvantages again correlated with the data from the Google Form, such as can't see people's true feelings, feeling hot and hard to breathe, and must use body language more. A few students mentioned that it was difficult to speak for prolonged periods because their glasses steamed up.

Many students responded to the second question by saying that they couldn't understand others' true feelings because they couldn't see facial expressions. This prompted the author to ask the question "How did this make you feel?"

Some of the responses to this follow-up question included the following:

It was difficult to express myself confidently.

I had to use gestures more to convey my feelings.

I was worried that they were disappointed about what I had said.

Because I couldn't read the person's mood, I felt anxious and confused.

It was difficult to predict how they would feel or react, so I felt anxious and hesitant.

The flow of the discussion was interrupted because I couldn't understand classmates' nuance.

The two classes who had participated in the Lookatme experiment were also asked the follow-up question: “Why did you discontinue wearing the Lookatme masks?” Some of their responses included:

The Lookatme masks helped us to communicate, but do we not have a custom of wearing these masks.

The Lookatme masks are uncommon. We first met wearing normal masks, so it was difficult to change.

The shape of the masks is like a bird’s mouth. It was strange for us.

Three students continued to wear the Lookatme mask until the end of term. All these students were male, suggesting that male students had less inhibition to show their faces. One of these students gave some positive feedback of using the Lookatme masks.

I’m grateful for the Lookatme mask. Regular masks irritate my skin and make me feel hot. I also wore my Lookatme mask walking to the station from campus and on the train. It is much better than a regular mask.

Classroom Behavior

Starting from the first classes of the semester, the author noted any abnormal behavior by students that he felt was caused by wearing masks. Some of the main behaviors observed included students speaking louder and gesticulating more frequently; awkward breakdowns in communication when turn taking should have been smoother; frequent adjusting of masks whilst and after prolonged periods of speaking; displays of exasperation in the amount of effort speaking while wearing a mask; often using a folding fan or a portable electric fan to keep cool when speaking; a tendency for extroverted students to maximize their facial visibility to others, in contrast to introverted students who minimized their facial visibility as much as possible; an inability to remember each other’s names, which would take place when they had forgotten their name cards; raising hands to take turns and pointing at themselves when speaking; looks of confusion as to who was speaking; frequent requests for classmates to repeat their ideas.

Instructor’s Perspective

Masked faces are harder to recognize (Marini et al., 2021). This is no trivial matter. The author’s ability to connect with students and create a collaborative environment in classes was impaired by the wearing of masks. If students forgot to bring their name card to class, the author would sometimes find it difficult to remember names to the detriment of the classes’ atmosphere. During the semester, the author had a variety of rooms that ranged from small to spacious and a variety of individual differences in students, varying from highly extroverted to extremely introverted. The acoustics of each room is unique, as well as outside on campus or noise from other classes since all doors needed to be kept open to help prevent the spread of COVID-19. All these factors play a role in the ability of a teacher to be able to listen carefully and accurately to each class and individual. In addition, wearing masks of all students undeniably made the teacher’s task of accurately hearing a student speak was much more challenging. An additional barrier to understanding was that students wore various types

and sizes of masks, making the tasks of deciding who is talking even more difficult. Most students tended to use some form of body language or optic expression to make themselves understood more clearly. However, a significant number of students did not employ such practices, confusing the author as to who was speaking. At such instances, the author had to pay significant attention to discreet movements in the students' eyes and masks to identify who was enunciating. The author often felt that whilst wearing a standard mask, sometimes the students could not read his instructions or feelings accurately. The author clearly noticed that when wearing the Lookatme mask, students understood instructions much faster. It was noted that students focussed on the teacher's oral movements and facial gestures to garner deeper understanding of the lesson's instructions and feedback. It is the author's opinion that showing a smile of approval or a grimace of disapproval is an extremely effective way of giving immediate feedback to students.

Discussion

The fact the students indicated feelings of frustration at not being able to read other student's emotions and true feelings is understandable. Since this study was carried out in a discussion class where the main purpose is for students to maintain conversations and take turns smoothly meant that the masks clearly obstructed and hindered their performance. They made students feel anxious, hot, and tired due to extra body language being used. By contrast, with around a third of students indicating that they felt comfortable wearing a mask and did not want to show their faces, this suggests that Japan has an affinity with wearing masks, which dates back to a century ago. However, the author wonders how detrimental this reliance on masks is for one's communicative and social development. And what is the impact on society itself? Do people become more detached from one another? Will people be able to take off their masks and interact naturally again? One student remarked "No mask, no life" and subsequently explained that they had been wearing masks for three years, which equates to the entirety of their high school days, suggesting that wearing masks has significantly impacted some students' confidence and social skills. Adolescence, which begins with puberty, is a phase in which physical changes such as changes in facial structure take place, along with cognitive, social development as well as changes in perception, motivation, and behavior (Negrea et al., 2019). It is also worth considering the impact on young children. They have perhaps been unable to learn communicative facial cues in early childhood that are pivotal for smooth communication and have been part of human evolution. As was previously mentioned, communication is a combination of voice, body language, and facial expressions. The possibility of breakdowns in communication between people wearing masks cannot be underestimated. Some of the examples that the participants in this study suggested show this is the case. In retrospect, the author should have issued the Lookatme masks earlier in the semester.

Conclusion

There can be no doubt that COVID-19 has profoundly changed the world and has affected how people interact with each other. Good speaking teachers create environments where students can express themselves creatively (Nunan, 2015). Creating this environment has become more challenging. A covered mouth restricts breathing and makes communicating less efficient, while also interfering with understanding. Trust, empathy, timing, and recognition are all negatively impacted when a mouth is obscured. Furthermore, mask wearing creates a sense of acceptance and

compliance, giving a feeling of reassurance in times of distress.

Since a high percentage of the students indicated that they wanted to see the teacher's mouth movements to gain deeper understanding of the instructions and word pronunciation, it is recommended that teachers, especially those who are teaching an L2, consider wearing a facial screen as opposed to a regular medical mask to facilitate this. For now, in Japan, masks are here to stay. It is crucial for teachers of English communicative classes to develop ways of facilitating effective communication in masks while mask wearing remains prevalent, such as effective seating positions with clear name cards in view, management of room temperatures, attention to room acoustics, and an acute awareness of the sensitivity of students in this environment. Teachers will also need to become adept at judging students' communication and participation levels in class, such as paying extra attention to their eye expressions, tone, and body language. More research in this area could be carried out to include the integration of video-based tools into class curricula, which would allow students to become accustomed to speaking without a mask and to see other students' faces, which could possibly aid in diminishing students' reliance on masks.

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Appendix A

Student Survey

1. Wearing a mask did not affect my ability to communicate smoothly.
Strongly Agree Agree Neutral Disagree Strongly Disagree

2. Wearing a mask made me feel relaxed and comfortable in class.
Strongly Agree Agree Neutral Disagree Strongly Disagree

3. I often wanted to make my mask off to communicate more smoothly.
Strongly Agree Agree Neutral Disagree Strongly Disagree

4. It was difficult to understand others when they were speaking in a mask.
Strongly Agree Agree Neutral Disagree Strongly Disagree

5. I used more body language than usual when I was wearing a mask.
Strongly Agree Agree Neutral Disagree Strongly Disagree

6. I raised my voice more when wearing a mask.
Strongly Agree Agree Neutral Disagree Strongly Disagree

7. I used my eyes more to express my opinion.
Strongly Agree Agree Neutral Disagree Strongly Disagree

8. It was easier to understand the teacher's instructions when he was wearing the Lookatme mask.
Strongly Agree Agree Neutral Disagree Strongly Disagree

9. ****Wearing the Lookatme mask helped me to communicate more smoothly****
Strongly Agree Agree Neutral Disagree Strongly Disagree

10. Please leave any positive or negative comments about how wearing a mask impacted on your ability to communicate in class.

Note: Question nine was only asked to the two classes that wore the Lookatme masks

Appendix B Lookatme mask

表情を隠さない防曇透明マスク
ルカミイ 'Lookatme'



◎ルカミイは透明部に特殊な化学的防曇処理をした硬質セルロースフィルムを使用しています。
 ◎防曇スプレーを塗布した一般の防曇フィルムは何回か使用したり拭き取ると防曇性能が落ちてくるのに対し、ルカミイは繰り返し使用しても、拭き取っても高い防曇性能が持続します。
 ◎ルカミイは自然のウェットマスクです。装着中にマスクの内部は湿度が上昇します。この時、薄い水の皮膜の結露が発生して防曇性が現れます。この湿度がウィルスを不活性化します。

装着方法



マスクの内側を自分に向けて持ち、一般の衛生マスクと同じ要領で装着します。
 マスク下部の不織布にあるゴムをつまみ、喉元まで引っ張り、安定させます。
 これで正しく装着できました。
 ゴム部分のストッパーで、フィッティングしてください。

ご使用上の注意

- ルカミイは使用后、洗って頂ければ繰り返しお使い頂けるマスクです。
- 壊れたら新しいマスクに取り替えてください。
- 不織布は手洗い後、十分に乾かしてからお使いください。
- 透明フィルムは中性洗剤を使用しないでください。中性洗剤を使用すると防曇効果が弱くなります。
- 使用を中断または終える際は、手洗いし清潔にしてからケース(別売)に入れて保管してください。
- 強い衝撃を与えないでください。破損の原因となります。
- 使用中に皮膚に異常が発生した場合は、すぐにご使用をおやめください。
- 呼吸で透明フィルム内側が濡れることがあります。その場合は乾いた布で優しく拭き取ってください。
- 持ち運びの際はポケットに入れたり、折り曲げたりしないでください。破損の原因となります。
- 持ち運びや保管は専用のケースに入れることをおすすめします。
- 小さなお子様の手の届かない場所で保管してください。
- ご使用中に息のしづらさ、暑さを感じた時は一度外してください。

本 社：〒430-0801 静岡県浜松市東区神立町 116-5
 TEL(053)464-0601(代) FAX(053)464-0616
 東京営業所：〒130-0001 東京都墨田区吾妻橋 2-18-15
 TEL(03)3634-4800(代) FAX(03)3624-6400

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