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Right: Students do group work on projects, allowing them to support each other in both ASL (via live discussion) and English (via computer).

Developing ASL Text in the Bilingual Classroom

By Joey Baer and Rory Osbrink

One would never deny students pen and paper in the classroom—and one should never deny Deaf* students today's technology. Deaf students are visual learners, and technology—integral and accessible—should be part of every bilingual classroom. Deaf students need to learn to manipulate the hardware and software that allows them to express themselves and to advance their knowledge. Our students need mastery of both general technology and visually oriented technology in order to maximize learning potential.

Pages and MS Word are among the plentiful and well-understood resources for manipulating and publishing printed English. For Deaf students who use a visual language, manipulating and publishing through video is essential. Video allows students to express themselves and communicate better. It can facilitate students' understanding of American Sign Language (ASL) and English; it can permit students to use this understanding to manipulate both ASL and English and use them to complement each other, even within the same publication.

At the California School for the Deaf in Fremont, we have been fortunate to have a strong technological presence thanks largely to our school's Deaf-centric philosophy.

Developing Video-texts

Students need to understand what we mean when we refer to "ASL text" or "video-text." They need to understand how to effectively express ASL and capture it on video, and they need to understand that these ASL presentations can require the same intensive care and

Photos courtesy of Joey Baer and Rory Osbrink

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attention as any printed work.

The field of ASL publication is still new to K-12 education. Here's a step-by-step look at how to use video to develop students' skills in technology and narrative—and improve their understanding and use of ASL.

1. DEFINE THE PURPOSE. Prior to filming, teachers make sure they explain the purpose of the document that they want their students to create. Is this a homework assignment? A video essay? A test? A final exam? Should references be used and included? As the academic expectations become higher, the presentation must use appropriate software to improve the quality of its production. Teachers should also discuss the concept of "register" with their students (i.e., how ASL, like English, is used differently depending on circumstance); day-to-day conversations are phrased and developed differently than extended text in academic publications. For the classroom, students learn to employ academic ASL.

2. DISCUSS THE CONTENT. Once the purpose is defined, the content follows. What is the subject? Are students presenting answers to questions? Are they developing an essay? A formal document?

3. IDENTIFY THE AUDIENCE. Related to purpose and content is audience. For whom are the students developing the video-text? Will students share their work with each other? Their schoolmates? The general public?

4. PLAN A FORMAT. Should the video-text be only in ASL or should it be in both ASL and English? If it should be

in both languages, how should this be done? Should the ASL simply be captioned? Should formal English accompany ASL text?

5. FOLLOW THE "TEXT DEVELOPMENT" PROCESS. Just as

most people cannot generate text in English by typing it in a single effort, texts in ASL often require multiple drafts. When students produce ASL text, they have to follow the same procedure with which they write academic documents: they must brainstorm, generate multiple drafts, get feedback, and edit their work. How many drafts should students expect to produce? What is the teacher looking for in each draft? The rough draft of the ASL presentation is sometimes developed through

creating storyboards, in which students generate a script in a frame-by-frame lineup of illustrations and text.

6. EVALUATE. Evaluations should be

formative (occurring at intervals throughout the video's creation) and summative (occurring after the video is complete). Teachers should use some type of checklist for students to fill as a part of their formative work. This checklist will vary depending on the type of assignment. For the summative evaluation, teachers should develop a rubric that highlights their expectations (e.g., Was the video-text focused on an academic subject? If so, which language was highlighted? Was the register appropriate—was academic ASL

used appropriately? Did the student follow the assignment? Was software used effectively?). Rubrics presented at the time a project is assigned help students to under-stand the teacher's expectations and prepare to achieve high-quality work.

Other Video Tips

Keeping the following pointers in mind will help students in creating better quality video-texts.

CLOTHING

A green screen—so called because the color is green—positioned in the

background of filming allows for any type of background, solid color, pictures, or picture-in-picture to be projected behind the signer. This means that green should not be the color of any of the narrator's clothing. If clothing has green in it, expect the green portions to reflect whatever is projected on the screen. Avoid shirts with stripes or colorful logos because these interfere with audience perception of the on-camera signing. We actually encourage teachers to have a wardrobe of approved clothing at the ready as a backup.

FRAMING

Signing space, not automatically within the video frame, must be considered. If text or photos are added, these may infringe on natural signing space. Make sure that the person signing is aware of the parameters in which signing occurs. Movie editing software, especially Final Cut Pro, allows movement of the frame around the signers. Still, it is quicker to have the signers aware of the limitations in advance and for them to sign within a designated space.

Framing shots are all about composition, and that is another point to keep in mind before starting to record. If pictures or text are planned for the video, the "Rule of Thirds," a theory of visual composition that maintains an image will carry more interest and energy if its elements are placed along points where the image divides into thirds, is recommended. If a picture-in-video is added, the signer should move either right or left into the third of the frame to leave room for the picture.

STUDIO SET-UP

Studios do not have to be elaborate or to have expensive equipment. A simple but ample space with a computer, including a webcam or camcorder, two sets of lights, and a solid background will suffice. If you want to be able to insert illustrations into the background, the chroma keying

A Primer:
Developing ASL Text with Deaf Students

By Joey Baer and Rory Osbrink

These technologies—both hardware and software—will allow you and your students to use ASL effectively in your classroom.

Webcam—PC or Mac

For quick productions, as opposed to productions requiring more sophisticated cameras, a webcam or the camera built into a laptop will work fine. (Note: The quality of webcam recording is usually not as good as the quality of self-contained devices designed to capture and record video.)

Photobooth—Mac

Photobooth is an excellent application for quick video drafts or homework assignments. It is very easy for students to learn how to use.

iMovie—Mac

iMovie is a basic video editing software application. (Tip: Study the icons because iMovie often upgrades but the icons remain unchanged.)

Windows MovieMaker—PC

Windows MovieMaker is a basic video editing software application.

Final Cut Pro—Mac

For lengthy productions or those requiring higher resolution and formal publications, Final Cut Pro allows quality and nuance in video editing.

Screenflow—Mac

Screenflow is a screen recording program that allows software to capture live action on the screen of the computer as a video file. This file becomes a visual stand-alone video, which serves as an excellent tool for presenting tutorials. Screenflow allows editing and works well for formal and polished video-texts.

Quicktime—Mac or PC

Quicktime allows screen recording and permits teachers to give students immediate feedback on their work. Quicktime does not allow editing; it records the action in a one-shot screen recording.

SMART Board—Mac or PC

A SMART Board or similar type of hardware should be a priority in every classroom. The SMART Board allows live typing and enables students to see instant translations of ASL through typing into English. For example, students may sign or type discussions related to recent books. The teacher may also project print from the books and ask students to translate the English into ASL. The SMART Board is interactive, which allows for full control of presentations, and it includes software that allows for visual and hands-on manipulatives to be used, such as moving pictures to match video clips of individuals using ASL and printed English.
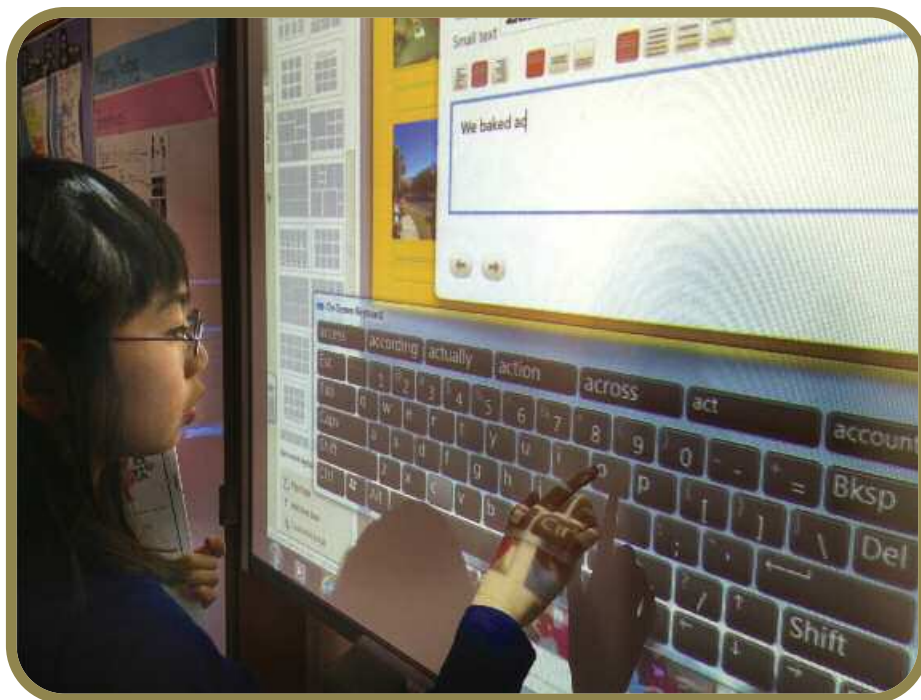
process, it would be better to use any kind of solid green or blue background because these colors differ most distinctly from human skin tones.

Studio space should be saved for finalizing formal documents. Use a webcam, built-in camera, or inexpensive camcorder for the successive drafts that lead to the final document. Try also to consider camera angles, especially when zooming in for handshapes or facial expressions; consider wide, medium, and close-up shots.

Teachers and parents as well as students should be able to use the studios to create videos for instructional purposes. For instance, we have parents take turns weekly in creating spelling lists for the classroom. The greater the variety of people in the videos, the greater the variety of signing styles— and this gives our students a greater range of exposure to ASL.

Teacher Alert: Background, Foreground, Distribution

It is also important to be aware of the environment and to make sure the background in off-camera areas is clear of clutter and distractions. Activities as simple as a person passing by can easily distract both the signers and, eventually, the viewers.

Students need to be monitored, and teachers should see what students are working on. The background needs to be neutral or covered with either a green or blue screen for ASL productions. In addition, diversity in the school's student population should be respected, especially when making videos for distribution. ASL is unique in that the person travels with the language. Therefore it is essential to have signers of both genders and various ethnic groups represented. Who students see affects their learning; selecting individuals from diverse groups can help all students achieve.

Differentiated Instruction

Videos allow for differentiated instruction (i.e., creating materials for a variety of student abilities and needs). For example, we presented the biography of Laurent Clerc, the Deaf Frenchman who helped establish deaf

education in the United States, in three different levels of ASL so that teachers can match the level of signing in the video with the signing that is most readily understood by their students. This entailed holding the content the same but making changes in the style of presentation. For example, the duration of the video clip varied; longer videos were made for more advanced signers and shorter videos were made for less advanced signers.

We hope to develop and produce more videos for students with various degrees of signing comprehension and to be able to share those videos with students in other schools. We encourage school-wide meetings among teachers, IT staff, students, and parents to explore different technologies that will push their Deaf students' development of skills that increase their bilingual awareness and ability.

Professional Development

All of this technological support cannot be achieved without professional development with experts who know how to use the technology in a way that best benefits Deaf learners. Training needs to be allocated for updates in current software, locating quality resources, creating videos, categorizing and tagging videos, and identifying and recording new bilingual strategies. All of these professional development activities need to be planned out and prioritized.

Technical and Technology Support

Each school needs to ensure that the instructional division and technological division have the same bilingual vision. This requires an administration that understands and embraces a true bilingual philosophy so that recording becomes a question of "How?" rather than "Why?" This is critical when considering the prioritization of funds for purchases in technology, location of wirings, wireless hubs, and the speed of Internet access. Rich—still unfathomed—potential is held within these technologies. With technology, we can truly advance bilingualism in deaf education and provide complete access for Deaf students.

* The authors wish to capitalize the "d" in "Deaf" to include children with all degrees of hearing levels—profound, moderate, severe, and mild, and children who use hearing aids, cochlear implants, and other assistive devices—and to emphasize the unique visual linguistic needs of Deaf children.