

STEM IN ACTION

LTTA1

Session 2 – Video Production

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DEPARTMENT OF TECHNOLOGY
ENHANCED LEARNING

SESSION OVERVIEW

- Setting up your equipment
- Sound
- Lighting
- Recording your footage
- Demo of Clipchamp
- Demo of WeVideo
- Demo of Adobe Premier Pro
- Naming Conventions



SETTING UP EQUIPMENT



SOUND

What can affect your audio?

There are **multiple factors** that affect the **quality** of your audio while recording a video. These include:

1. **Type of Microphone**

Does your microphone sound tinny or does it sound full and rich?

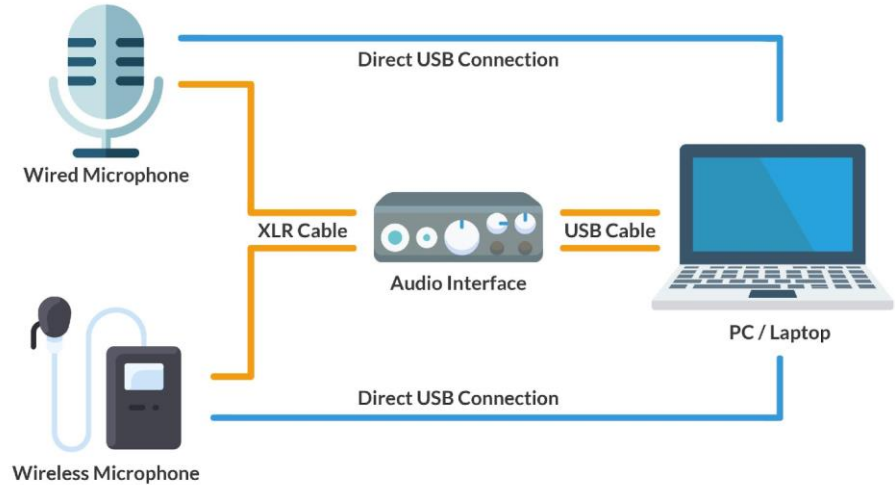
2. **The Type of Room**

An empty room with hard floors can echo, but a room with carpet, curtains and furniture will sound more natural.

SOUND

Microphone Types

- Dynamic Microphones
- Condenser Microphones
- Lavalier Microphones
- Ribbon Microphones



DYNAMIC MICROPHONES

The **dynamic microphone** is probably the most familiar-looking type of microphone to us these days.

They are:

- Well-known
- One of the cheapest types
- Versatile
- Robust
- One of the least sensitive to “up close” sound



CONDENSER MICROPHONES

Condenser mics are generally associated with the mics you often see in **recording studios**.

They are:

- Generally more sensitive to sound
- Audio sounds richer
- Inexpensive USB option
- Greater range in price
- They require phantom power or +48v



LAVALIER MICROPHONES

Lavalier microphones, also known as lav mics and lapel mics are small **omnidirectional** microphones that are **clipped or taped** to a piece of clothing on your upper half.

Lav mics are most **commonly** used and seen in **news** and television.



LAVALIER MICROPHONES

Modern lavalier microphones are usually part of a **radio microphone kit**.

These kits consist of the **microphone**, **connected to a transmitter**.

The transmitter then sends the audio signal to a receiver, which can be connected to a camera, pc, or audio interface using a patch cable or USB cable depending on the model.



RIBBON MICROPHONES

Generally, these mics are quite **old** in terms of technology, but their use is still required in special cases.

Ribbon microphones are the most **delicate** of all microphones and a **slight drop or bump** can disrupt the ribbon inside and render it **useless**.

Ribbon mics generally feature a figure-8 polar pattern. Meaning that audio can be picked up from the front and back, but **not the sides**.



USB-TO-PC MICROPHONES

Some key **differences** between a USB microphone and an XLR microphone include:

1. They are usually **heavier** - USB microphones have additional electronics inside.
2. They can cost up to **50% more** - due to the additional electronics inside them.
3. They usually come with a USB cable - whereas XLR microphones don't.



LIGHTING

Multiple factors can affect the quality of your video.
These include:

- Your source of light
- Time of day
- The Type of Light
- Your Camera's Settings.



LIGHTING

Your Sources of Light includes **windows, skylights, domestic lights and lamps.**



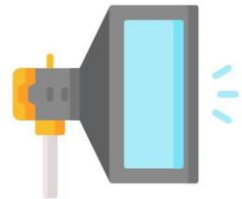
Natural Lighting

Just like using a shallow depth-of-field on a camera to focus on a subject, lighting can also be used to **emphasise** what you want the viewer to focus on.



Artificial(Domestic) Lighting

Lighting can also help give **shape** to a subject's face and make them look more **visually pleasing.**



Professional Lighting

LIGHTING

One, Two & Three-Point Lighting

These are some of the most used setups in both natural (outdoor and/or daytime) and artificial (indoor and/or nighttime) lighting conditions.

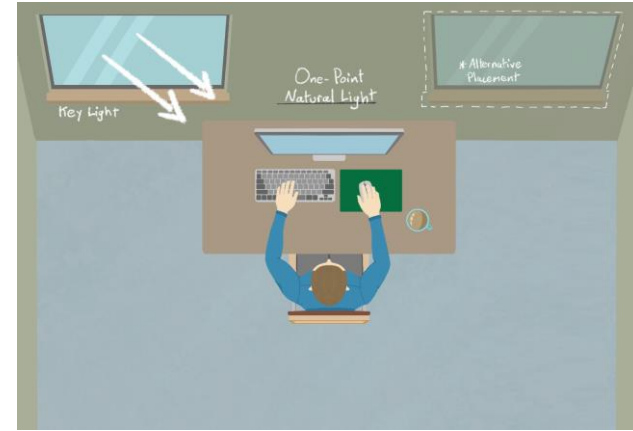


LIGHTING

One-Point Lighting

The most **simple** lighting setup you could adopt is one point lighting. This will consist solely of one light, also known as a **key light**.

A key light can be anything from the **daylight** coming in your window during the day, to a **lamp**, or a more professional option when there are no natural sources of light.

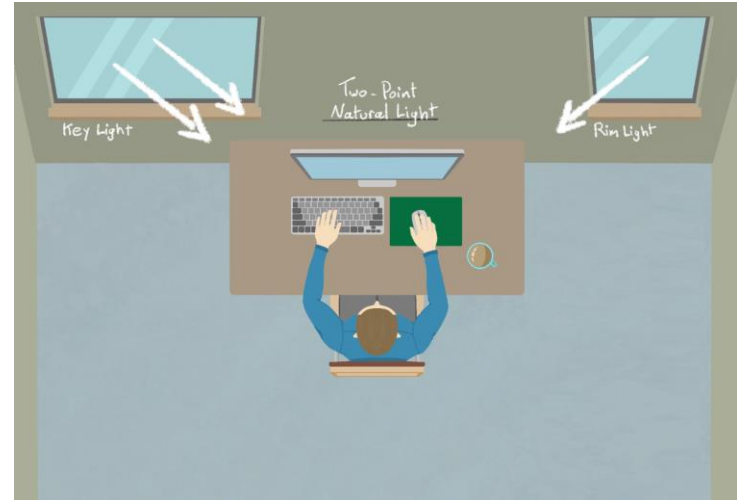


LIGHTING

Two-Point Lighting

A two-point lighting system consists of using one light as a **primary/key light** and the other as a **secondary/fill light**.

Unlike a one-point lighting system, a two-point system allows you to **fill in the shadow** that's created by your key-light with the second fill light.



LIGHTING

When trying to use a two-point lighting system:

1. Start by placing both lights at 45 degrees from where you sit.
2. Select what light you want to be your key light and fill light.
3. Set the intensity of your key light.
4. Set the intensity of your fill light to a fraction, or even to the key light's value.

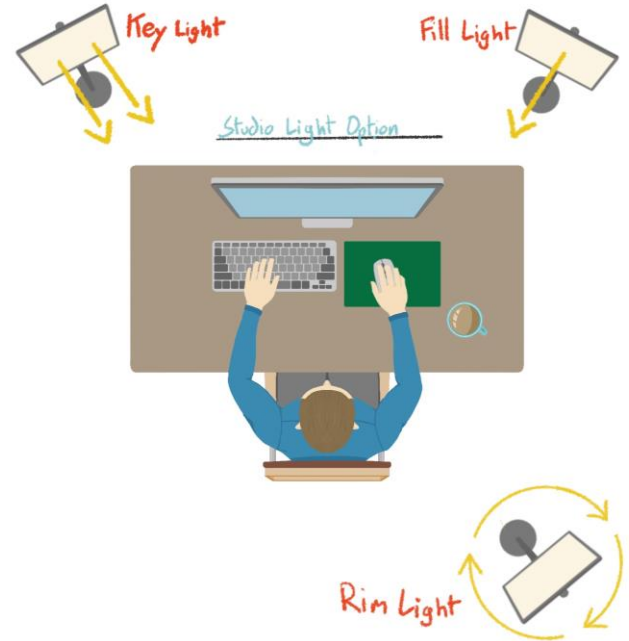


LIGHTING

Three-Point Lighting

The most sophisticated lighting setup that you could use is a **three-point lighting system**.

This setup consists of the aforementioned two-point lighting setup with the **addition** of a third light known as a backlight or rim light.

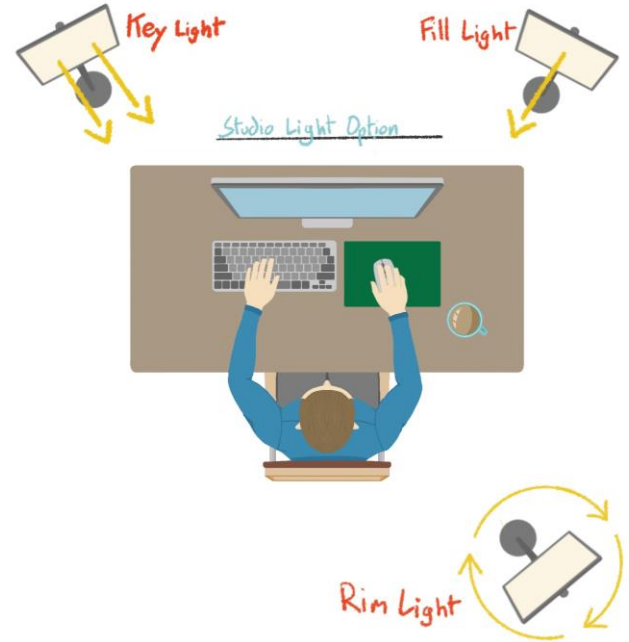


LIGHTING

Three-Point Lighting

The rim light is used to **separate** the subject/person from the background behind them.

This can be achieved by pointing a light **directly at the subject** from behind to create a **halo or rim** effect. It is also acceptable to point the light in the background to use as a backlight.



LIGHTING

Natural Lighting

It is also possible to use the **natural light** that comes through your windows during the day.

Just like using artificial points of light, one, two-point lighting can be used depending on the **number of windows** that are in the room.



LIGHTING

Exposing for Natural Lighting

Built-in webcams or USB webcams, have **built-in software** to automatically correctly expose you throughout the day and into the evening.

With DSLR or Mirrorless cameras, exposing and colour balancing may require an extra bit of work depending on if you choose to control the exposure and white balance **manually** or **automatically**.



LIGHTING

Exposing for Natural Lighting

Intensity and volume of light in a room will change throughout the day. Direct sunlight will be its **strongest in the morning** and **evening** as the sun rises and sets respectively.

These periods of the day are known as **golden hours**. As for the remainder of the day, natural light will remain to appear more **even**.

A south-facing room will appear to be the most evenly lit throughout the day, while east-facing rooms will be most bright in the morning and west-facing rooms being the brightest in the evening.

LIGHTING

What to avoid

Just like some natural light conditions can be used to your advantage, other lighting conditions and arrangements can cause an opposite effect, creating unflattering images.

Things to avoid include:

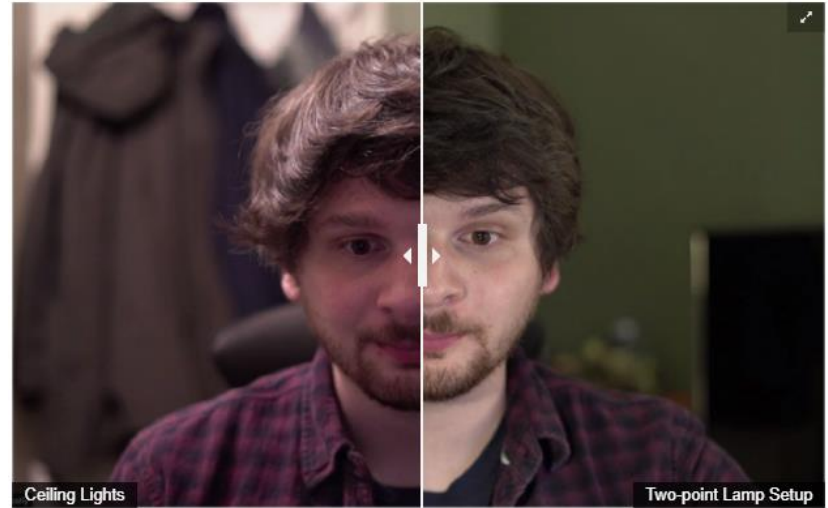
- Sitting too close to windows
- Skylights and overhead lighting
- Using a window as a rim light

LIGHTING

Using Artificial Lighting

The main **difference** between using a **ceiling light** and a **lamp/studio** light for recording video is that the latter option(s) can be **positioned** to best light the subject in front of the camera.

See the difference in quality between using a regular overhead ceiling light, versus two standard lamps placed on the same desk to light the subject.



LIGHTING

Using Lamps

Using house lamps is the most **inexpensive** lighting option of the three solutions covered in today's session.

Although **most lamps lack** the ability to control their intensity, a two-point lighting setup can quickly be created by placing them at opposite ends of your subject.



LIGHTING

Using Professional Lighting

Choosing to use professional lighting will give you the **most flexibility** and control over the light in your room. There are a range of lighting options available that are **compact**, and **inexpensive**.

An example of Professional Lights include: LED Panels

- Small panels
- large panels
- mounted to desk
- mounted to camera
- can be controlled by apps on your phone

LIGHTING

Reflector and diffuser panels

If you are **short a fill light** or even a rim light, a good suitable **alternative** would be to use a **reflector panel**.

Reflector panels have **three interchangeable sides** consisting of a **warm reflector(gold)**, a **cool reflector(silver)** and a **white reflector** that can be used to **bounce light** in whichever direction you point it.



OVERALL TIPS FOR RECORDING

- Record in a well-lit room
- Film for sound
- Keep your background simple
- Clean up the clutter
- Keep it steady
- Shoot horizontal
- Keep key players in the video space when recording
- Don't be afraid to re-shoot



NAMING CONVENTIONS

Descriptive file names are an important part of **organising, sharing, and keeping track** of data files. Develop a naming convention based on elements that are important to the project.

File naming best practices:

- Files should be named consistently
- File names should be short but descriptive (<25 characters)
- Avoid special characters or spaces in a file name
- Use capitals and underscores instead of periods or spaces or slashes
- Use date format
- Include a version number

Example: 25/10/2021_tina_cropped.jpeg

NAMING CONVENTIONS

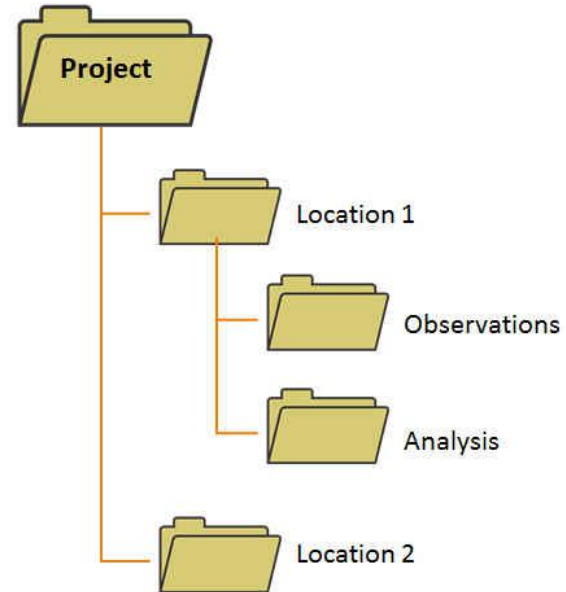
Hierarchical file structures can **add additional organisation** to your files.

As with file naming use whatever makes **most sense** for your data.

Some possibilities include:

- **Project**
- **Date**
- **Analysis**
- **Location**

Example





THANK YOU



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