

LVAI2 Worksheets

Part I

Based on course material and your own research, complete the table with what you believe to be the key benefits (at least 3), drawbacks (at least 3), and suitable tasks (at least 3) for each of the devices listed in the first column.

Device	Benefits	Drawbacks	Suitable Tasks
Illuminated Handheld Magnifier	<ol style="list-style-type: none">1. Direct illumination2. Portable3. Runs on batteries	<ol style="list-style-type: none">1. Distortion on the edge2. Less magnification power3. Narrow field of view4. Easily misplaced	<ol style="list-style-type: none">1. Reading price tags, medication bottles, cans2. Looking to images3. Spotting and seeing small details
Illuminated Stand Magnifier	<ol style="list-style-type: none">1. Flat on surface allowing free hands2. Focal distance set3. Reading more and faster4. More comfortable	<ol style="list-style-type: none">1. Bulkier thus less easily portable2. Can provide insufficient lighting3. Can be more expensive	<ol style="list-style-type: none">1. Reading documents2. Looking at photos3. Writing notes
Portable Video Magnifier	<ol style="list-style-type: none">1. Offers more contrast, as well as inverted color features2. Can be used with both eyes3. Offers multiple magnification power	<ol style="list-style-type: none">1. Can have distortion on the edge2. Needs to be charged to work3. Text on the screen may not appear very sharp	<ol style="list-style-type: none">1. Reading letters2. Reading recipes3. Reading maps
Smartphone	<ol style="list-style-type: none">1. Accessibility features like zoom or text size2. Voice Over and Text-to-Speech3. Text and object recognition4. Voice input	<ol style="list-style-type: none">1. Text entry or composing a number2. Swipe gesture3. Touch operation4. Not all apps are accessible	<ol style="list-style-type: none">1. Read documents using Voice Over2. Reading books using Audible3. Recognized text or objects using Seeing AI4. Reading signs or menu in restaurants using the built-in camera, and zoom in
Full Field Microscope	<ol style="list-style-type: none">1. Can be used for an extended period of time2. Allows hands free3. Wide field of view4. Portable	<ol style="list-style-type: none">1. Must be used stationary, cannot walk around with it2. Can provide motion sickness3. Heavy to wear4. Needs adjustment time	<ol style="list-style-type: none">1. Crocheting/Sewing2. Reading3. Crafting

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Device	Benefits	Drawbacks	Suitable Tasks
Telemicroscope	<ol style="list-style-type: none"> 1. Comfortable working distance 2. Adjustable 3. Portable 4. Can be used for an extended period of time 	<ol style="list-style-type: none"> 1. Tiring for the eye 2. Heavy to wear 3. Small field of view 4. Not cosmetically appealing 	<ol style="list-style-type: none"> 1. Reading books, newspapers 2. Playing card games 3. Making puzzles 4. Watching TV
Biopic	<ol style="list-style-type: none"> 1. Versatile 2. Can see much further away 3. Works for multiple visual conditions 	<ol style="list-style-type: none"> 1. Heavy 2. Hard to fixate on eye 3. Not very large field of view 4. Not cosmetically appealing 	<ol style="list-style-type: none"> 1. Seeing presentations or boards 2. Reading menu on a wall far away 3. Reading street signs
Clip-on Loupe	<ol style="list-style-type: none"> 1. Lightweight 2. Attached on the glasses 3. Portable 	<ol style="list-style-type: none"> 1. The bar sits far out on glasses and could be distracting 2. See small areas 3. Less magnification power 	<ol style="list-style-type: none"> 1. Reading board 2. Seeing street signs 3. Reading hanging menu
Desktop Video Magnifier	<ol style="list-style-type: none"> 1. Wide range of magnification 2. Wide field of view 3. Can move in multiple directions to avoid glare 	<ol style="list-style-type: none"> 1. Most expensive 2. Not portable 3. Require you to stay in one place 	<ol style="list-style-type: none"> 1. Reading documents 2. Writing notes 3. Making crossword puzzles
iPad	<ol style="list-style-type: none"> 1. Accessibility features like zoom or text size 2. Voice Over and Text-to-Speech 3. Text and object recognition 4. Voice input 5. Big screen 	<ol style="list-style-type: none"> 1. Text entry or composing a number 2. Swipe gesture 3. Touch operation 4. Not all apps are accessible 	<ol style="list-style-type: none"> 1. Handwriting using Notability or GoodNotes 2. Reading books using Kindle 3. Zooming into text, photos or web pages 4. Use built-in camera to access and zoom documents on the go
Head-mounted displays	<ol style="list-style-type: none"> 1. Improve ergonomics 2. Ease of use (worn on head like goggles) 3. Occupies entire visual field 	<ol style="list-style-type: none"> 1. Heavy and bulky 2. Disorientation of real world 3. Small field of view 	<ol style="list-style-type: none"> 1. Accessing additional information about the environment using augmented reality 2. Obtaining travel directions easily 3. Viewing TV or PowerPoint presentations in class
Handheld Telescope	<ol style="list-style-type: none"> 1. Lightweight 2. Portable 3. Offers more clarity 	<ol style="list-style-type: none"> 1. Small field of view 2. Difficult to adjust 3. Difficult to stabilize 4. Restricted illumination 	<ol style="list-style-type: none"> 1. Reading boards 2. Reading distant signage 3. Reading bus route

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Device	Benefits	Drawbacks	Suitable Tasks
Spectacle Mounted Telescope	<ol style="list-style-type: none"> 1. Good for mobility 2. Attached to glasses 3. Can be binocular or monocular 	<ol style="list-style-type: none"> 1. Requires lots of training 2. Reduces field of view 3. Distorted depth perception 	<ol style="list-style-type: none"> 1. Watching TV 2. Viewing baseball games 3. Viewing Broadway shows

Part II

Based on what you know about low vision interventions and the performance of your college student:

- identify tasks related to the visual needs categories listed below that they need to perform
- select one or more low vision devices/strategies that would help them to meet these visual needs (and do not repeat the same device/strategy twice)
- provide a justification as to why

Visual Need Category	Task Description	Device Selection(s)	Justification
Short-Term Near/ Intermediate Clarity	Reading announcements on bulletin boards	Illuminated Handheld Magnifier	The device will allow the student to access the announcements displayed on the board, as a handheld magnifier is easy to use for a short period of time and with the illumination that it provides it allows easier reading.
Extended Near/ Intermediate Clarity	Making crossword puzzles	Telemicroscope	The student likes to make puzzles. With this device she can easily work on them for an extended period of time without experiencing eye fatigue or strain.
Short-Term Distance Clarity	Reading hanging menu in the cafeteria	Handheld Telescope	This device is lightweight and portabl. She can also attached a lanyard to it for quickly accessing it, and read the menu while waiting in the line in the cafeteria.

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Visual Need Category	Task Description	Device Selection(s)	Justification
Extended Distance Clarity	Looking at PowerPoint presentations in class	Clip-on Loupe	This device easily clips on glasses, they are not heavy, and thus allows to be used for an extended period of time to view distant presentations. This device also allows the student to get her hands free for taking notes. As it is a clip-on loupe, it can also attach and detach from glasses quickly.
Field of View	Viewing detailed photos	Full Field Microscope	This device has a high magnification power that will allow the student to see clearly and fully photos for her class. The high magnification will make all the details in the images more accessible.
Visual Efficiency	Moving around the campus	Using the strategies of tracing, tracking and spotting. Using a long cane.	The student will use the strategies of tracing, tracking and spotting to help her move around the campus. She will also use visual cues to enhance her visual efficiency. The student will use as well her long cane to orient herself inside and around the campus.
Color/Contrast	Handicrafts	Yellow coloured glasses	This glasses will allow the student to enhance the perception of contrast will making handicrafts. This glasses also reduces glare.
Lighting/Glare	Reading room numbers	Flash light	The student will hold the flash light near her better eye and pointing it to the sign that has the room number next to each classroom door. The addition of this light directly facing the sign will allow the student to quickly read to number, and thus quickly find her classroom.

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Visual Need Category	Task Description	Device Selection(s)	Justification
Comfort/Confidence	Reading her class notes and materials	Transportable video magnifier	This device will help the student to read all her notes and school material comfortably. This device provides to her brightness and a large field of view. She has also the possibility to change polarity to increase comfort based on the material she will be looking at. With the flexible arm of the device that include the camera, she will also be able to view the white board in class.