

SAH Training Project Assessment Methodology

The revision of the learning objective requires that the SAH module and course test be modified to add test items that will support the objective. These test items will provide visual reference to particular scenes from the 3D house where trainees will have to correctly apply knowledge from the lesson. The addition of these test items will not change the overall passing criterion for the tests

Background and Testing Goals

There are two major types of tests: norm-referenced and criterion-referenced.

Norm-referenced tests compare a trainee's performance (standing or ranking) with the performance of other trainees (the norm). Criterion-referenced tests assess whether the trainee can perform to an established, well-defined training standard or criteria. Criterion-referenced tests have the following attributes

- Measure a trainee's ability to successfully perform the action specified in the training objective. The trainee's performance is compared to the training objective standard.
- Establish whether the trainee has mastered the supporting knowledge required to perform the training objective.
- Determine if the trainee has met the proficiency level required to continue successfully to the next block of instruction.

The type of testing selected for the SAH 3D Virtual House practice lesson is criterion-referenced testing.

Lesson Assessments

The assessments will cover the lesson's ELO at or above the level of relevancy that they are presented with. The lesson assessments will measure whether the trainee can demonstrate mastery of the tasks involved in conducting feasibility inspections. For the lesson, the ELO will define the standards the trainee is measured against to demonstrate mastery of these tasks. Specifically, these posttests will measure

trainee performance at the lesson's ELO level by demonstrating whether the trainee:

- Is able to perform actions specific to the tasks covered in the learning objectives.
- Has mastered the knowledge necessary to effectively meet the learning objectives.
- Has achieved the proficiency level that will allow him or her to move on to the next module.

The assessments will be administered and scored online, as a result, the assessments will include items that assess both lower- and higher-level Bloom's taxonomy depending on the individual lesson content and the feasibility to actually perform a task. For lower-level Bloom's aspects of the test, trainees will answer questions (e.g., multiple-choice, ordering, matching) on the computer by selecting the correct answer and then clicking "Submit." Higher-level Bloom's taxonomy components of the test will require trainees to use simulated tools to inspect virtual homes and demonstrate performance of the objectives. Trainees will be able to use virtual tools, including a tape measure, level, wheelchair rotation radius measure, camera, and checklist. Trainees will use these tools to answer questions such as, "What MPRs are not met in this room?" Additionally, procedural (e.g., sequencing and ranking) type questions will be asked to ensure trainee knowledge of the task performance.

Because the courseware as well as the posttest will be administered online, the GDIT design team will provide realistic (although simulated) stimuli such as virtual homes for examination, and online role-plays involving branching scenarios to ensure fidelity with the way the task resembles the work environment. In addition, to ensure fidelity when measuring the performance of certain skills in a completely online environment, including but not limited to decision-making and documentation of rationales for these decisions, adaptations will be made to account for the lack of a Training Facilitator to score the tests. In these situations, fidelity will be maintained through the use of realistic stimuli, and performance will

be assessed through a focus on the trainee's ability to identify the correct decision and discriminate between essential and extraneous information within a rationale, and to ensure cogency and completeness

Scenario 1 Assessment

In this scenario, the trainee will be represented by a novice agent and will be mentored by a veteran agent. The trainee will follow the directions of the veteran agent as they inspect the house. This scenario will involve 14 scenes, with each scene taking place in a specific room or area in or around the house. Periodically, the trainee will be asked by the mentor to complete an assessment item consisting of performing an action and interpreting its result. The trainee will complete all of the following actions:

1. Home Exterior
 - Observe topography of the land
 - Assess drainage
 - Is there evidence of pooling water
 - Is lot above, below, or even with street level
 - Is there an ingress/egress problem between street and house
 - Is there an ingress/egress problem from the parking area to the house
 - Is the lot reasonably level
 - Take pictures of road access to home
 - Take pictures of all critical surface areas in which drainage problems, steep grades, etc., are evident
 - Document checklist
2. Garage
 - Measure level change between house and garage
 - Is ramp or raised walkway required in garage
 - Explain reason for construction of ramp or raised walkway
 - Reiterate specifications for ramps and raised walkways
 - Measure garage dimensions
 - Listen to veteran agent explain specifications for garages

- Document checklist
- 3. Exterior Front Entry Ingress/Egress
 - Is ramp or raised walkway required?
 - Document height differential between walkway and front door of 14 inches
 - Explain specifications for ramps and raised walkways
 - Is platform area required?
 - Explain specifications for platform
 - Document checklist
- 4. Foyer, Hallways, and Corridors
 - Measure kitchen/foyer doorway opening
 - Explain MPR
 - Measure foyer
 - Place level on floor
 - Listen to veteran agent explain concerns
 - Listen to veteran agent explain conclusion
 - Measure area in front of master bedroom door
 - Measure hallway
 - Take photo
 - Listen to veteran agent explain MPR
 - Describe required adaptation
 - Listen to Vet's/SM's objection
 - Listen to veteran agent explain waiver request process
 - Document checklist
- 5. Living Room/Office (Second Bedroom)
 - Measure door
 - Measure threshold
 - Listen to veteran agent explain MPR
 - Listen to objection
 - Listen to veteran agent explain alternative

- Measure door
- Measure threshold
- Listen to veteran agent explain MPR
- Listen to objection
- Listen to veteran agent explain alternative
- Document checklist

6. Kitchen

- Is there a 5' diameter clearing area
 - Listen to veteran agent explain MPR
 - Listen to veteran agent recommend removal of center island
- Is there knee space below the kitchen sink?
 - Listen to veteran agent explain MPR
- Listen to veteran agent recommend installation of shallow sink with drain at the back with insulation to protect against heat
- Measure toe space beneath cabinets
- Listen to veteran agent recommend adaptation
- Is there adequate and accessible work area
 - Discuss relocating dishwasher
 - Measure area for proposed dishwasher location
 - Listen to veteran agent explain that there are several designs for recessed work areas
 - Select appropriate design
- Discuss use of upper cabinets
- Discuss use of lower cabinets
- Is there a wall mounted oven and counter mounted cook top
 - Listen to veteran agent recommend replacement of current ranged/oven
- Ask Vet/SM to discuss performance of tasks
- Take photographs
- Discuss use of microwave
- Document checklist

7. Laundry Room

- Measure door
 - Listen to veteran agent explain MPR
- Assess laundry room design
 - Listen to veteran agent explain MPR
- Take photographs
- Document checklist

8. Master Bedroom

- Discuss possible solutions
- Select appropriate adaptation
- Measure clearing areas in master bedroom
 - Listen to veteran agent explain MPR and other specifications
- Measure closet door
- Listen to veteran agent explain MPR
- Listen to veteran agent explain recommend adaptation
- Document checklist

9. Master Bathroom

- Listen to veteran agent explain challenge presented with bathroom design
- Listen to veteran agent explain that each challenge will be addressed
- Listen to veteran agent discuss safety issues
- Consider alternative solution
- Select adaptation
- Listen to veteran agent discuss need for adaptations
- Listen to veteran agent explain adaptations will depend on individual needs
- Request Vet/SM to describe use of lavatory
- Listen to veteran agent recommend replacing current lavatory with vanity and roll-under basin
- Listen to veteran agent explain MPR
- Agree on adaptation
- Request Vet/SM to describe use of medicine cabinet

- Listen to veteran agent recommend adaptation
- Agree on adaptation
- Request Vet/SM to discuss transfer to bathtub
- Request Vet/SM to discuss transfer to shower
- Listen to veteran agent recommend removal of tub, and install roll-in shower
- Listen to question
- Listen to veteran agent explain need to enlarge bathroom
- Measure room
- Listen to veteran agent explain next step
- Listen to veteran agent explain demolition of walls
- Listen to veteran agent explain additional benefit of expanded closet
- Listen to veteran agent explain MPR
- Listen to concerns
- Provide access information for VA Manual M26-12
- Provide access information for VA Pamphlet M26-13
- Measure height of bathtub
- Take photograph of Vet/SM positioned next to bathtub
- Listen to veteran agent explain relocation of bathtub
- Listen to veteran agent explain MPRs
- Discuss Vet/SM's ability to reach the back wall of the tub
- Agree on location of controls
- Listen to veteran agent explain MPR
- Measure height of toilet
- Request Vet/SM to discuss transfer to toilet
- Determine preferred transfer method
- Listen to veteran agent explain MPR
- Discuss placement of grab bars
- Listen to veteran agent explain MPR
- Agree on bathroom adaptations
- Document checklist

10.Third Bedroom (Exercise Room)

- Listen to veteran agent explain MPR
- Document checklist

11.Hall Bathroom

- Show 5' turning radius
- Determine feasibility
- Listen to veteran agent explain MPRs
- Listen to veteran agent explain goal of SAH program
- Listen to veteran agent explain waivers
- Document checklist

12.Fourth Bedroom

- Measure clearing areas
- Listen to veteran agent explain MPRs
- Document checklist

13.Additional MPRs

- Measure height of thermostat
 - Listen to veteran agent explain MPR
 - Agree to reposition thermostat
- Measure height of wall receptacle
 - Listen to veteran agent explain MPR
- Measure height of wall switch
 - Listen to veteran agent explain MPR
- Measure height of window sill
 - Listen to veteran agent explain MPR
- Determine if window lock is at convenient height
- Measure height of top breaker in electrical utility box
 - Listen to veteran agent explain MPR
 - Offer option to have box lowered
 - Agree to adaptation
- Document checklist

Scenario 2 Assessments

In this scenario, the trainee will be acting independently. This lesson will consist of 13 scenes, with each scene taking place in a specific room or area of the house. The trainee will have access to a house plan on the GUI, which will list all of the scenes available, and check them off as they are completed. Once a scene, room, is selected, the trainee must complete it before moving on to another one. In each scene, the trainee will be instructed to complete an assessment item consisting of performing all of the required actions and making all of the required judgments for that scene. The trainee will complete all of the following actions:

1. Site
 - Road access to the home
 - Driveway
 - Walkway
 - Pooling water near foundation
 - Reasonably level lot
 - Drainage problem on side of house
 - Document checklist
2. Front Entry Ingress/Egress
 - Measure the height differential from the walkway to the front porch
 - Measure the height differential from the front porch to the home
 - Measure the front porch area for a 5' X 5' platform area
 - Measure front door opening
 - Measure height of threshold
 - Document need for ramp or raised walkway
 - Document need to raise front porch
 - Document need to construct roof over open front porch
 - Document front door meets MPR
 - Document need to replace threshold
 - Document checklist

3. Entry Foyer, Hallways, and Corridors

- Measure the foyer
- Measure hallways
- Document checklist that the foyer and hallways meet MPRs

4. Spare Bedrooms/Hall Bathroom

- Measure all doorways
- Measure open areas in front of doorways requiring 90 degree turns
- Measure open area in bathroom
- Measure the toilet height
- Document to remove the 2-foot by 2-foot linen closet to create 5' by 5' clearing area at bedroom doors requiring 90 degree turns
- Document that there is no 5' X 5' open area in hall bathroom
- Document insufficient clearing area for either parallel or side transfer to toilet
- Choice of installing raised toilet fixture or seat.
- Veteran could request waiver as modifications of master bedroom bathroom meets MPR

5. Laundry Room

- Document need to replace current door with 36-inch door
- Apply MPR for 5' clearing area in front of washer and dryer
- Document need to relocate washer and dryer along 6-foot wall
- Recommend replacing top-loading washer with front-loader

6. Master Bedroom

- Document need to replace 32-inch inward swinging door with 36-inch outward swinging door
- Document MPR for bedroom clearing areas are met
- Apply MPR for at least two means of wheelchair accessible ingress/egress
- Apply location of ingress/egress should be at different locations within the house
- Apply that one means of emergency ingress/egress must be at the bedroom area
- Document need to replace one of the windows with 36 inch door
- Apply MPR for 5' X 5' platform outside bedroom door level with bedroom floor

- Apply MPR for 48 inch ramp or raised walkway with curb and handrails
- Apply MPR for 5' X 5' platform at bottom of ramp/raised walkway
- Apply need for hard surface from bottom ramp leading to safe area
- Recommend a cover over platforms and ramp/walkway
- Document need to construct platforms, ramp/walkway

7. Master Bathroom

- Replace current 32 inch inward swinging door with 36 inch outward swinging door
- Remove the cabinet below one of the sinks to allow roll-under access
- Wrap the pipes and drains to prevent burns and abrasions
- Remove the tub and install toilet/grab bars in that area with adequate room for transfer
- Remove walk-in shower and toilet and install a 5 foot by 5 foot roll-in shower in corner where existing toilet is situated
- Replace 32 inch walk-in closet door with 36 inch door
- Ensure 5' X 5' clear turning area
- Document checklist

8. Kitchen

- Create one roll under counter workspace no less than 3 feet wide, with a height not to exceed 2 feet 10 inches
- Replace the current range/oven with a roll-under built in counter top range, and separate wall oven unit, or
 - Relocate current freestanding range/oven unit to the end of the cabinets to provide side access
- Re-design lower cabinets to provide 9-inch high and 6 inches deep toe space
- Remove the cabinet below the sink to allow roll-under access
- Replace current sink with shallow 5-inch sink with the drain at the back
- Insulate the sink, water supply lines and drainpipe to prevent burns and abrasions
- Document the checklist

9. Dining Room/Great Room/Breakfast Area

- Document that the dining room and great room meet MPR

- Determine that the breakfast area meets MPR, and that the MPR for two means of emergency ingress/egress will be satisfied with the front entry and bedroom adaptations, but:
 - Recommend replacing the 6-foot sliding door unit with a 7-foot unit with a recessed track or 6-foot French door unit with threshold no higher than a ½ inch
 - Recommend either raising patio to floor level or the construction of a raised walkway (ramp) to allow direct access to the patio

10. Garage

- Document the need to replace the 32-inch laundry room door with a 36-inch door.
- Document the need to replace the threshold
- Document the need for a ramp from the garage floor to 5' X 5' platform level with laundry room floor

11. Basement

- Document the need for a chairlift to enable wheelchair access to the basement
- Take photographs to document no signs of settlement or significant cracks

12. Additional MPRs

- Determine if the Vet/SM can reach the thermostat from a seated position.
 - If not, request the relocation of the thermostat to a height of no more than 48 inches
- Determine if the Vet/SM can reach the wall receptacles
 - If not, request the relocation of wall receptacles to a height of at least 18 inches
- Determine if the Vet/SM can reach the wall switches
 - If not, request the relocation of wall switches to a height of no more than 48 inches
- Determine if the Vet/SM can reach the top breaker in the electrical utility box
- Document that window sill height conforms with MPR
- Document the need to replace carpet with non-slip material at bedroom emergency ingress/egress location

Document that flooring at front entry point of ingress/egress conforms with MPR

Feedback and Remediation

- There will be feedback and remediation offered after every item. Specifically, the trainee will be presented with whether he/she responded correctly, the correct answer, and will have the option of reviewing the corresponding topics.
- Since the posttests are computer based, the courseware will provide the trainee with feedback as soon as he or she completes the question. This feedback will include the correct answer, why that answer is correct, and the corresponding topic(s) for remediation. The trainee will be given this information regardless of whether he or she answered the item correctly or incorrectly. A hyperlink will direct the trainee to the topics in the lesson from which the question originated.

Table X: Assessment Feedback

Type	Sample Statements
Correct Answer	Correct! Here is the lesson topic that this question referred to. You have the option to select the corresponding lesson topic(s) for review or select NEXT to continue.
Incorrect Answer	Incorrect. Here is the lesson topic that this question referred to. You have the option to select the corresponding lesson topic(s) for review or select NEXT to continue.