

# Education Provider Guide



## Elements of a Quality Green Building Course

Last updated August 4, 2009

The following addendum provides context for the criteria evaluated in a course review. This practical information is an introduction to the principles of adult education and can guide the successful development and delivery of a green building course. For additional resources, please refer to the Education Provider Resources section of the USGBC website – [www.usgbc.org/DisplayPage.aspx?CMSPageID=1978](http://www.usgbc.org/DisplayPage.aspx?CMSPageID=1978).

### ***A. Adult Learners***

Understanding how adults learn will help Education Providers create more effective courses that present new information in a way that benefits the participant. Studies show that adults learn best when they know why they need to learn, how it will happen, and what it will do for them. Adults are self-directed and motivated to learn when they have a current problem to solve and see an immediate application of the new knowledge.

The following are five key principles of adult learning (andragogy):

- ❑ *Self-concept*: as people mature, their self-concept moves from being dependent personalities toward being self-directed human beings.
- ❑ *Experience*: as people mature, they accumulate a growing reservoir of experience that becomes an increasing resource for learning.
- ❑ *Readiness to learn*: as people mature, their readiness to learn becomes oriented increasingly to the developmental tasks of their roles.
- ❑ *Orientation to learning*: as people mature, their time perspective changes from postponed application of knowledge to immediate applicability; therefore, their orientation toward learning shifts from subject-focused to problem-focused.
- ❑ *Motivation to learn*: as people mature, their motivation to learn becomes increasingly internal rather than external.

An adult learner wants to be part of the learning and understand how it will happen. A good course will provide the learner with an overview of the agenda and activities, engage the learner, and allow them to interact and actively participate.

The adult learner wants to know practical applications and how to apply this new knowledge to real world situations. A good course will explain what to do with this new information and how it will solve a current problem or issue.

Adults bring a wealth of experience to a learning activity. They use these experiences to build on when learning. An effective course should build on the participant's prior knowledge and demonstrate how the new information relates to what is already known or assumed.

### ***B. Key Elements of Adult Education***

#### ***i. Learning Objectives***

A professional development course should have an overall goal. But, the course also needs to have specific actions that the learners can achieve related to this goal. These actions are the course's learning objectives.

Measurable and achievable learning objectives make a better course for both the learner and the Education Provider. Learners know exactly what to expect from a course, and the Education Providers know exactly what they need to cover and how to structure the course. "Measurable" means that the

learners can easily identify if they can or cannot do the action in the objective. “Achievable” means that the learners can actually learn what it takes to meet the objective within the course format, time frame, and content.

A simple way to determine a course’s learning objectives is to ask, “What will the learner be able to do at the end of this course? The more specific the objective, the easier it will be for the learners to know if they met it.

Passive verbs in an objective make it harder for learners to measure. Objectives that start with “understand,” “know,” “be familiar with” are broad, vague and difficult to measure. Active verbs, on the other hand, allow the learner to know exactly what they should be able to do at the end of a course and allow Providers to know exactly what to focus on in the course.

Examples of active verbs include:

- Analyze
- Apply
- Choose
- Compare
- Design
- Develop
- Identify
- Measure
- Prepare
- Produce
- Solve
- Specify

Ideally, the learning objectives should be written *first*. The learning objectives will guide the development of the course and will ensure that the proper materials and content is used. As the course content is being put together, the Education Provider should look at the objective and ask, “What content do I need to present so the learner will be able to meet this objective?” It will lead to a more focused and effective course if the materials tie to the objectives.

The course materials, content, activities, and assessment should all tie to the learning objectives. Providers can write very specific measurable and achievable objectives, but if they don’t provide content to teach it, activities to apply it, or assessments to measure it, the course will not be as effective.

See the matrix below for more information on learning objectives.

### *ii. Description*

It is important that the learners understand the learning activity in which they will participate. A clear description will help the learner understand the overall objectives and what they can expect. This information should be included in any materials advertising the course to learners.

A quality course description should include the following components:

- Course length
- Audience
- Content covered
- Expected learner activities
- Outcomes

Descriptions provided in the review application will be utilized in the online course catalog.

### *iii. Outline/Agenda*

Packaging is essential to learning, understanding, and remembering. For this reason, presenting the structure for the course or event will help the learners to understand what will be covered, set expectations for them, and help them become engaged in the learning. It helps a learner focus by allowing them to

consider what they already know about the items to be covered. It also shows that the Provider has structured the course and its learning activities.

#### *iv. Interactivity*

Interactivity increases retention and understanding and draws direct correlations between what is being taught and what the learner's experience. Interactivity can be as complex as an activity or assignment. It can also be as simple as asking questions or leading a discussion.

The activities used to teach the content should support the learning objectives. They should be designed and used to help the learners gain the knowledge needed to meet the objectives.

The activities should also be appropriate for the way the information is presented. It should fit with the format (online asynchronous and synchronous, live instructor-led, one-time events, etc.), as well as be appropriate for the class size and formality of the environment.

Additionally, the course or event should allow the learners to become engaged in the learning activities, which should include opportunities to interact with:

- Content (e.g., problems to solve, material sample to touch, case study to review)
- Instructor (e.g., asks questions, share information)
- Other learners (e.g., group activities, discussions)

#### *v. Audience*

The content presented in a course or event course should be appropriate for the intended audience's general learning styles, knowledge level, and needs. Knowing your audience is key to ensuring that your course or event is successful and that your attendees walk away having retained the information presented.

It is important to identify only the target audience for a course in the review application. This information will be posted to the course catalog. Having a clearly defined audience ensures that the right people find the right courses to meet their educational needs. Reviewers will verify that the correct audiences are selected. Any marginal audience members selected may be removed before posting to the catalog.

#### *v. Learning Level*

Providers are required to identify the learning level of the course, which helps potential participants understand the depth of the material and expected outcomes of the course. The level is based on what the Provider is asking the audience to be able to do within the format and time frame of the course. The USGBC learning levels are based on Blooms Taxonomy.

##### *Level 100–Awareness*

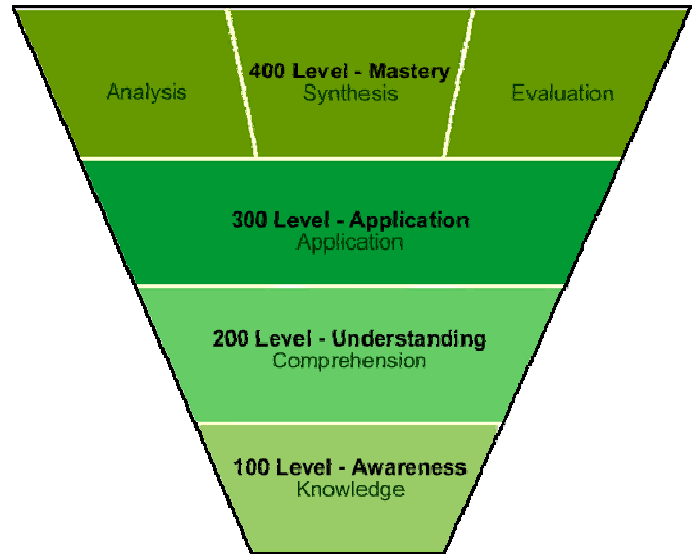
These courses provide general information and understanding of the topic. They transfer new knowledge without substantial action outcomes for the learner. Objectives may be to understand, describe, define, or recognize new information. This level is appropriate for courses that are presenting new concepts or conveying information in a limited time frame with minimal interaction by the participants.

##### *Level 200–Understanding/Comprehension*

These courses require the learner to be more engaged and produce more tangible outcomes. It will require more in-depth material or explanation by the instructor and more opportunity for the participant to interact with the material and be engaged in using the information in practice applications. Objectives may be to analyze, assess, select, or compare/contrast new information. At this level, courses should include activities such as discussions, practice assignments, or self-check assessments.

### Level 300–Application/Implementation

These courses require the learner to be able to complete a definitive action after the course. The course material and activities need to allow for opportunity for the learner to gain the new knowledge, practice its application, and be able to apply the information on their own. Objectives may be to implement, design, produce, or create a tangible product or action. To achieve this level, courses need enough material and time to allow the learner to achieve and demonstrate the objectives. Courses should include interactive activities and assessment measures.



### Level 400–Mastery

These courses are intended for learners with prior knowledge or experience with the course topic. Courses at this level include extensive, detailed training on specific technical topics. Learners are fully engaged with course materials and activities and demonstrate their mastery of the content through course work. Objectives may be to apprise, construct, calculate, develop or validate. Courses in this level are typically multi-day or semester-long trainings or include experiential training techniques.

See the matrix below for more information on learning levels.

#### *vii. Assessment and Evaluation*

All education activities should have a way for the instructor and learners to assess if the objectives were met. This can be done simply with an informal review activity or question and answer period; a more structured activity or a formal quiz or assignment. An activity should be designed so the learners can demonstrate (to the instructor or to themselves) they can do the actions of the learning objectives.

Participants in a course should have a way to provide feedback on the course to the instructors and developers. Evaluations provide feedback on:

- Course quality
- Instructor quality
- Material quality
- Participant satisfaction

### ***C. Subject Matter***

The green building industry is constantly changing as new products, tools, techniques, processes, and philosophies evolve. Solid, innovative and accurate information and learning continues this evolution. To ensure that professional development offered by USGBC Education Providers reflects current industry standards and trends, each course and event is reviewed by subject matter experts. The subject matter portion of the course review checks that the course or event is current, accurate, relevant, and applicable.

#### *i. Current & Accurate Information*

With the rapid change and advancement in the green building industry, successful professionals must have access to the most current information. The best courses will not only be current, but be cutting-edge, demonstrating new and innovative developments in the industry.

A constantly evolving industry leaves the opportunity for inaccurate information to infiltrate into professional development. The best courses educate about industry norms and standards. The content presented adheres to technical criteria. Technical language presented is accurate and appropriate to the intended learning level. Well-rounded, proactive and accurate information equips professionals with the knowledge and skills necessary to advance their green building careers.

*ii. Relevance to Audience & Professional Applicability*

Professional development must be relevant in helping professionals accomplish their goals and tasks. Subject matter and materials should be relevant to the defined audience. Course materials must address the needs of a defined audience, not only in subject matter content, but also in the delivery method.

Depending on the audience's needs, background and profession, various subject matter and delivery methods will be more or less relevant to accomplishing their job. For instance, a general contractor working primarily in the office will need different information than a subcontractor on the job site, although they both are doing "green construction". Likewise, a new professional will need a different depth of information than a seasoned professional. A good course will match the subject matter to the target audience's needs and learning level.

## Matrix of Education Levels with Blooms Taxonomy

	<b>100 Awareness</b>	<b>200 Understanding</b>	<b>300 Application</b>	<b>400 Mastery</b>
<b>Description of Level</b>	Knowledge, or the remembering of appropriate, previously learned information such as terminology, specific facts, ways and means of dealing with specifics, universals and abstractions in a field (principles and generalizations, theories and structure).	Grasping or understanding the meaning of informational materials.	The use of previously learned information in new and concrete situations to solve problems that have single or best answers.	The breaking down of informational materials into their component parts, examining such information to develop divergent conclusions by identifying motives or causes, making inferences, and/or finding evidence to support generalizations. Creatively or divergently applying prior knowledge and skills to produce a new or original whole.
<b>Prerequisite Knowledge</b>	No prerequisite knowledge, skills or coursework	May have 100 level prerequisite knowledge or coursework	Prerequisite knowledge or coursework required	Must have extensive prerequisite knowledge, skills or coursework
<b>Learning Objective Verbs/Test Question Cues</b>	define; describe; enumerate; examine; identify; label; list; match; name; read; recall; recognize; record; reproduce; select; state; tell; understand; view; write.	associate; classify; cite; contrast; convert; describe; differentiate; discuss; distinguish; estimate; explain; generalize; give examples; interpret; paraphrase; restate; summarize; understand.	apply; articulate; assess; calculate; change; chart; classify; compute; construct; control; demonstrate; determine; develop; establish; illustrate; implement; instruct; interview; operationalize; participate; prepare; produce; project; provide; report; select; show; solve; teach; transfer; use; utilize.	analyze; appraise; assess; break down; categorize; classify; compare; conclude; connect; construct; contrast; correlate; decide; design; develop; diagram; differentiate; discriminate; distinguish; evaluate; explain; focus; judge; justify; illustrate; infer; integrate; limit; measure; modify; outline; plan; point out; predict; prioritize; produce; rank; rate; rearrange; research; rewrite; select; separate; subdivide; substitute.
<b>Work</b>	Listening/Reading	Moderate Listening/Reading	Extended Presentation/Reading	Independent Research
<b>Nature of Instruction</b>	Little or no interaction with instructor, students or materials; Passive course	Interaction with at least 1 instructional method (live instructor, other students, materials)	Extended interaction with at least 2 instructional methods (instructor, materials, students)	Utilizes a variety of instructional methods
<b>Depth of Coverage</b>	Introduction or issues; general information	Summary of an issue which explores general topic areas	Extended consideration of a topic	Sustained attention given to topic of concern (technique, process, theory etc)
<b>Blooms Taxonomy</b>	Knowledge	Understanding	Application	Analysis, Synthesis & Evaluation