

Design Document

Training Title: From Feel to Framework: Consistent Route Grading and Setting

Business Goal and Problem	<p>Business K, a rock climbing gym, aims to reduce customer complaints by 50%.</p> <p>In the past six months, the gym has seen a 50% increase in complaints from gym members regarding the mismatch between rock climbing routes and the difficulty grade assigned to these routes. An internal review by management revealed that despite being experienced climbers themselves, route-setters are creating routes intuitively, not intentionally. The route setting team has not received training in designing routes for various grades and skill levels of climbers. This results in routes that are inconsistently graded, while climbers express frustration and are less likely to continue progressing their skills and using the gym.</p> <p>In providing training to route setters, they can intentionally create routes that incorporate climbing techniques and hold placements for different skill levels. They can also observe and assess feedback to adjust routes as needed. Business K can increase the quality of rock-climbing routes and decrease customer complaints.</p>
Target Audience	<p>Learners are a mixed-gender group of route setters in their 20s at Business K. Learners have little experience in intentionally creating routes. Learners are experienced climbers who can climb routes graded 5.10a and above. They know the two grading systems used in rock climbing (but not how the systems apply to different levels of climbers); the types of holds on climbing walls (but not how they lend themselves to difficulty levels); how to choose the correct gear; how to tie knots; how to belay and lead climb; and how to climb safely.</p>
Learning Objectives	<p>Terminal LOs:</p> <p>By the end of this course, route setters will be able to:</p> <ul style="list-style-type: none">● Design accurate climbing routes using the appropriate climbing rating system● Integrate climbing techniques and holds into climbing routes to create varied routes.● Assess the difficulty & feasibility of climbing routes. <p>Enabling LOs:</p>

	<ul style="list-style-type: none"> • Differentiate between the Yosemite Decimal System (YDS) and the V-Scale.
Training Recommendation	<p>Delivery Method: To address the inconsistency in route grading and decrease customer complaints for Business K, learners will complete an e-learning course created in Articulate Rise. This course will guide learners on how to intentionally and thoughtfully design climbing routes of an appropriate difficulty grade, using their previous climbing experience.</p> <p>The e-learning format allows learners to complete the training on their own time and engage with it at their own pace. This accommodates learners' busy schedules. The course content builds on learners' prior knowledge, such as climbing techniques, types of holds, and grading systems, to teach them to design, observe, and assess routes to ensure they are appropriately graded.</p> <p>Learners will also receive a job aid that outlines the 4 Fs of Route Assessment: <i>Fun, Fair, Functional, and Flow</i>. Each criterion includes questions to help learners evaluate whether a route meets expectations for quality and grading consistency.</p> <p>By providing targeted training for learners, Business K can empower its route-setter team to design routes more intentionally. This will result in more consistent route grading, a better customer experience, and fewer customer complaints.</p> <p>Approach:</p> <ul style="list-style-type: none"> • Rise e-learning course • Performance-based final quiz
Training Time	15 minute e-learning course
Deliverables	<ul style="list-style-type: none"> • Published SCORM-compliant file of e-learning module created in Articulate Rise • Job Aid for quick reference
Training Outline	<p>Introduction</p> <ul style="list-style-type: none"> • Welcome <ul style="list-style-type: none"> ○ Share business problem--number of complaints have increased. ○ Share company's business goal with learner ○ Explain what factors ought to be considered when planning routes <ul style="list-style-type: none"> ■ Which climbing grading system to use and why ■ What techniques climbers use and develop at each level

- How holds on the wall affect movement and difficulty
 - How to adjust routes based on observation and feedback.
 - Explain why such consistency matters in route setting.
 - Allows climbers to judge difficulty and assess if they have the skills needed.
 - Making challenging, engaging routes helps climbers progress their skills.
- Learning Outcomes
 - Design accurate climbing routes using the appropriate climbing grading system.
 - Integrate climbing techniques and holds into climbing routes to create varied routes.
 - Assess the difficulty & feasibility of climbing routes.

Climbing Grading Systems & Designing Routes

- Yosemite Decimal System (YDS)
 - Used to grade routes for auto-belaying, top-roping, and lead climbing
 - Routes are longer and emphasize endurance and stamina
 - 6 classes of grades (0-5); for training purposes, focus on Class 5, which grades vertical climbing routes
 - 5.0 - 5.6: beginner routes that are ladder-like and have large holds
 - 5.7 - 5.9: intermediate routes have positive (easy to grip or place feet on) holds and some overhangs
 - 5.10a - 5.12d: advanced routes with smaller, less positive holds that do not face up
 - 5.13a and above: elite routes with large overhangs, very small and or negative (difficult to grip or place feet on) holds
- V-Scale (or Hueco Scale)
 - Used to grade routes for bouldering
 - Routes are shorter and emphasize power and strength
 - 4 classes of grades
 - V0 - V2: beginner routes that are easy to read and plan how to complete
 - V3 - V6: intermediate routes with holds are smaller and less positive
 - Combination of strength and technique needed
 - V7 - V10: advanced routes that require powerful moves, excellent technique, dynamic movement, and accurate body positioning
 - V11 and above: routes for elite climbers
 - Specialized techniques and extremely challenging moves
 - Requires extreme focus and problem-solving

- Climber Levels
 - Beginner Climbers
 - < 6 months climbing
 - Climbs routes graded up to 5.8 and or up to V2
 - Usually limited to top-roping or auto-belaying
 - Developing techniques and strength
 - Intermediate Climbers
 - 1-2 years climbing (more consistently)
 - Climbs routes graded between 5.9-5.11d and or V3-V6
 - Some experience with lead climbing, bouldering, and or outdoor climbing.
 - Comfortable and knowledgeable with techniques
 - Advanced Climbers
 - 2-3 years climbing
 - Climbs routes graded as 5.12 and above, and or a V7 or above
 - Proficient belayers and lead climbers
 - Efficient in body moves & positionings, and adept with climbing techniques

Combining Climbing Techniques and Holds in Routes

- Climbing Techniques
 - Footwork
 - Smearing - pushing climbing shoe onto wall for friction
 - Edging - using edges of climbing shoe to step on smaller holds
 - Hooking - placing heel or toe on a hold to provide stability
 - Body Positioning
 - Dynamic vs static movement
 - Dynamic movement - moves with momentum and power
 - Static movement - slow, controlled, and fluid moves
- Types of Holds
 - Beginner Holds
 - Jugs, edges, horns, and spires
 - Larger, more surface area to grasp or place feet.
 - Best for beginner climbers or for the beginning of a route.
 - Intermediate Holds
 - Crimps, pinches, and slopers
 - Harder to grasp or place feet on.
 - Best for intermediate climbers to practice technique and offer dynamic moves

- Advanced Holds
 - Crimps and pockets
 - Smaller holds with less surface area; holds in awkward positions
 - Best for advanced climbers with considerable strength and technique
- Combining Techniques and Holds
 - Beginner Climbers
 - Developing climbing strength and techniques
 - Ladder-like routes with large jugs
 - Emphasize and prioritize developing techniques over strength
 - Intermediate Climbers
 - Solid strength and techniques
 - Holds with less surface area and or face away from climber
 - Focus on body positioning & incorporate both dynamic and static moves
 - Advanced Climbers
 - Mastered techniques and are experienced
 - Small holds, holds in challenging positions, and holds facing away from climbers
 - Emphasize risky dynamic moves, precise footwork, and advanced body positioning
 - Remember...a struggling climber does NOT mean a route is improperly graded.

Observing and Assessing Routes

- Four Criteria of Route Setting
 1. *Fun* - do climbers enjoy the route?
 2. *Fair* - is the route accessible and safe to all climbers?
 3. *Function* - does the route teach the climber something?
 4. *Flow* - does the route lead to moves that connect naturally?
- Observation
 - Where do climbers hesitate?
 - What parts of a route do climbers skip?
 - When do climbers rely on strength, not technique, to complete a route?
- Assessing/Gathering Feedback
 - Feedback is part of the route setting process, not an afterthought
 - Identifies parts of a route that work or need improvement
 - Ask climbers for specific information about their climbs
 - We will discuss how to implement feedback in Part 2 of this course

	<p>Assessment</p> <ul style="list-style-type: none">• Five performance-based questions (two multi-choice responses, three multiple choice) <p>Course Wrap-up and Congratulations</p>
Assessment Plan	<p>Level 2 Assessment:</p> <ul style="list-style-type: none">• Three ungraded knowledge checks assess learners' understanding during the module• A final graded quiz with five multiple-response, performance-based questions, each with a unique scenario. The passing score is 80% and learners may retake the quiz<ul style="list-style-type: none">○ Two questions focus on knowledge of climbing grading systems and designing routes with a given grade○ One question applies knowledge of holds and techniques to create a route○ Two questions discuss how to observe and assess performance on routes <p>Level 3 Assessment:</p> <ul style="list-style-type: none">• Observe route setters over the next 3 months• Give surveys to gym members to track number of complaints about route difficulty• Interview route setters and managers separately after 3 months to ascertain whether learners are applying training to their jobs.