Know Your Learner Type – Personalized Course Generator (MVP)

[Kyl_prototype.html](#) - GPT prototype

Objective

Launch an integrated, AI-powered feature inside EdQuest that helps learners understand how they learn best and then automatically generates a personalised learning course. Unlike generic recommendation engines, Know Your Learner Type combines a short assessment with on-platform course/roadmap generation. The MVP offers two outcomes:

- **Basic free evaluation** – Learners take the test and receive a summary of their top learner tags plus the option to generate a limited course (one or two requests per day) tailored to their dominant learning type.
- **Premium report and subscription** – For ₹50 learners can unlock a detailed PDF/interactive report. A subscription (₹499/year or ₹100/month) provides unlimited course generation, adaptive AI guidance (Eddy – the EdQuest learning buddy) and ongoing progress analytics.

Problem Statement & Market Need

The engagement problem

Most digital courses still deliver content in a fixed order and format. As a result, many learners lose motivation or drop out because the material doesn't align with how they process information. Research summarised by Engageli notes that 75 % of students feel more motivated in AI-personalised learning environments compared with just 30 % in traditional classrooms [engageli.com](#). Schools that adopted AI-powered personalised learning reported a 12 % increase in attendance [engageli.com](#) and a 15 % reduction in dropout rates [engageli.com](#). Learners in personalised programmes achieved 70 % better course completion rates [engageli.com](#) and 54 % higher test scores [engageli.com](#) than their peers in conventional settings.

Despite these gains, most platforms offer only surface-level recommendations or bury adaptive features behind paywalls. Stand-alone "learning style" quizzes exist, but they are not connected to course catalogues. Many young adults (17–24) lack self-awareness about their preferred learning modalities and end up wasting time on courses that don't match their strengths.

Market gap

Our competitive research could not find a mainstream ed-tech platform that:

1. **Presents a learner-type discovery test integrated directly into the product, and**
2. **Generates a personalised course or roadmap on-the-fly based on the test results.**

Adaptive learning platforms (e.g., Kidaptive, some corporate LMS tools) adjust content behind the scenes, but they do not offer an explicit learner-type assessment for users. This gap gives EdQuest a unique opportunity to differentiate its premium offering.

Feature Vision

Create a one-stop experience that blends self-awareness, simplicity and AI intelligence. Learners take a 5–7-minute assessment, discover their dominant learning styles and immediately receive a personalised course mapped from EdQuest's catalogue. There are no leaderboards, no complex diagnostic reports – just clear insight and actionable next steps that respect user privacy.

User Flow

1. **Access:** From the EdQuest navbar /dashboard (web or extension), users enter the "Know Your Learner Type" section via a banner or menu item.
2. **Intro & Consent:** A Step 0 screen explains what the assessment measures, why it matters (highlighting improved motivation and outcomes engageli.com), the estimated time to complete and how data will be used. Users must tick a consent box to proceed.
3. **Assessment (Steps 1-5):** Twelve questions delivered one per screen using varied interaction formats:
   - **Scenario ranking (drag-and-drop):** Learners reorder activities (build something, watch a video, listen to a podcast, read documentation, brainstorm with others) to indicate their preferred starting point.
   - **Media rating (1-5 stars or sliders):** Users rate how useful they find videos, audio content, illustrated articles and text handbooks. Ratings map directly to the corresponding learner tags.
   - **Problem-solving approach (single choice):** Given a new topic, users choose whether to experiment first, watch a demo, read instructions or discuss with peers.

- **Habits & rhythm (multiple select):** Checkboxes about study routines (e.g., planning sessions, spontaneous learning, summarising concepts, joining study groups) reveal Planner/Reflective, Active Experimenter and Social Collaborator tendencies.
  - **Environment & time (dropdowns or image choice):** Users select their preferred learning environment (quiet room, café, co-working space, library) and time of day (morning, afternoon, night). This informs reflective/planner scores and helps schedule modules.
4. **Results Screen (Step 6):** After completing the assessment, learners see:
   - Top 3 learner tags displayed as colourful chips with concise descriptions.
   - Score bar chart across all nine tags to visualise their full profile.
   - Plain-language explanations of what each top tag means and how to leverage it.
   - Next best actions – links to recommended EdQuest projects, cohorts or resources, plus an option to generate a personalised course.
   - Call to upgrade: Buttons to download the full report (₹50) or subscribe to Eddy AI (₹499/year or ₹100/month).
5. **Payment & Confirmation (Optional):** If users choose the premium report or subscription, they are directed to EdQuest's payment gateway. Upon success, they unlock additional insights and unlimited AI course generation.
6. **Generate Course (Step 7):** For free users (limited to one or two generations per day), the system prompts them to enter a subject or skill area. The AI engine assembles a short curriculum from existing modules, ordering content to suit the learner's dominant styles. For example, a Hands-On/Visual learner receives project-based tasks followed by diagrams and minimal text. Premium subscribers can generate as many courses as they like without cooldown.
7. **Roadmap Ready (Step 8):** The generated course appears as a roadmap of cards, similar to EdQuest's existing roadmaps. Each card lists the module's objective, format (project, video, article, quiz), estimated duration and prerequisites. Learners can preview the roadmap and adjust optional modules.
8. **Begin Learning (Step 9):** A timer or gentle reminder encourages learners to start their personalised roadmap promptly (e.g., within 24 hours). This momentum ensures they act on the insights gained from the assessment. Learners then proceed through the modules at their own pace, while Eddy AI provides nudges and reflections.
9. *Re-assessment: After a set period (e.g., 90 days) learners can retake the test to track how their learning preferences evolve. Historic results remain accessible for comparison.*

Learner Types & Tags

Tag	Description	Suggested Modalities

Hands-On Builder	Learns by doing; prefers experimentation, building prototypes and solving problems through practice.	Projects, labs, coding sandboxes, workshops
Visual Thinker	Understands concepts through diagrams, flow-charts, images and videos.	Videos, infographics, whiteboard animations
Audio Learner	Prefers spoken explanations and retains information through listening.	Podcasts, lectures, voice notes
Text/Read-Write Learner	Enjoys reading detailed materials and synthesising information through writing.	Articles, documentation, e-books, note-taking
Planner/Reflective	Likes structure and reflection; plans sessions and reviews progress.	Outlines, checklists, journals, reflection prompts
Active Experimenter	Iterates rapidly; embraces trial and error to learn through short cycles.	Hackathons, prototyping challenges, simulations
Social Collaborator	Learns best through discussion and collaboration.	Study groups, peer reviews, group projects
Step-by-Step Executor	Requires detailed guidance and clear steps before proceeding.	Tutorials, step-wise guides, annotated examples
Big-Picture Thinker	Needs high-level context before delving into details.	Overviews, concept videos, mind-maps

Evaluation Criteria & Scoring

The assessment uses a weighted scoring engine. Each question contributes points to one or more learner tags. For example:

- Scenario ranking: Ranking an item first awards 5 points, second awards 4, and so on. Each item corresponds to a tag (e.g., "jump straight into building" → Hands-On Builder; "watch a video" → Visual Thinker).
- Media rating: Each star given to a content type adds one point to its associated tag.
- Problem-solving choice: Selecting "experiment first" adds 5 points to Active Experimenter and Hands-On Builder; "watch a demo" maps to Visual Thinker; "read step-by-step instructions" maps to Step-by-Step Executor and Text/Read-Write; "discuss with peers" maps to Social Collaborator.
- Habits & rhythm: Checking "I like to plan my sessions" adds points to Planner/Reflective; "I summarise concepts in my own words" adds to Text/Read-Write; "I join study groups" adds to Social Collaborator; "I jump in spontaneously" adds to Active Experimenter.
- Environment & time: Choosing a quiet room and scheduled time adds to Planner/Reflective; choosing a café or co-working space adds to Social Collaborator; selecting nights may add to Active Experimenter.

At the end of the assessment the points are normalised. The top three tags determine the learner's primary profile. Scores for all nine tags are displayed in the results bar chart to show distribution.

AI Scoring & Evaluation Logic

Evaluation Dimension	Description	AI Method	Impact on Report
Tag scoring	Combines weighted points from all questions to produce a numerical score for each tag.	Predefined weight matrices stored as JSON. Future iterations may use machine-learning models to tune weights based on observed outcomes.	Determines the learner's top tags and drives personalised course generation.
Confidence index	Evaluates the reliability of tag inference based on answer variance and completeness.	Self-evaluation of scoring distribution; potential machine-learning calibration in future.	Displayed as an "AI Confidence Score" in the full report.
Adaptive feedback	Suggests roadmaps and study strategies based on weak or strong areas.	Rule-based mapping to EdQuest modules; later versions may use collaborative filtering.	Powers the "Next Best Actions" and personalised roadmaps.

Notably, research indicates that AI algorithms can identify learners' preferred styles with high accuracy – often above 90 % by analysing online interactionsijesd.com. This suggests that

EdQuest could eventually enhance the scoring engine with behavioural data (e.g., how long users spend on videos vs. projects) to refine recommendations.

MVP Deliverables

- A fully functional Know Your Learner Type page within EdQuest (web + extension) featuring step-wise assessment, progress indicator and consent mechanism.
- A question bank of 12 finalised items (drag-ranking, ratings, single/multiple choice, environment/time selection) with mapping to the nine tags.
- A scoring engine implemented in the backend to calculate tag scores and confidence indices.
- Results screen with top tags, bar chart, plain-language explanations and links to EdQuest resources.
- Personalised course generator limited to one or two free requests per day; premium users receive unlimited generations.
- Full report PDF/interactive view for paid users, detailing all tag scores, recommended study strategies and a sample weekly plan.
- Subscription service (Eddy AI) that delivers dynamic learning roadmaps, periodic check-ins and progress analytics.
- Admin interface for product managers to update the question bank and weight mappings via JSON/CSV.

Privacy, Compliance & Legal Notices

- Transparent data use: Clearly communicate that answers to the assessment and interaction patterns will be used solely to generate learner profiles and personalised courses. Provide a link to EdQuest's full privacy policy.
- Explicit consent: Require learners to consent before starting the assessment and before saving results to their account. Allow users to complete the test anonymously if they wish.
- Age and eligibility: Intended for learners aged 17 and above. For younger users, parental consent must be obtained in compliance with the Children's Online Privacy Protection Act (COPPA) and India's child data regulations.
- Limited free usage: Specify that free course generations are capped per day (e.g., one or two). Circumventing these limits may result in temporary suspension of the feature.
- Payment & subscription terms: Present clear pricing, renewal details and refund policies for the full report and Eddy AI subscription. Comply with local taxation and consumer-protection laws.
- Data protection: Adhere to India's Digital Personal Data Protection Act (DPDP) and the EU General Data Protection Regulation (GDPR) for international users. Encrypt data in

transit and at rest, allow users to download or delete their learner profile, and do not share data with third parties without consent.

- Disclaimer: Note that the assessment and personalised courses provide guidance to support learning. They do not guarantee specific outcomes. Encourage users to use multiple strategies and consult educators or mentors.

Success Metrics

1. Assessment completion rate: ≥80 % of users who start the test finish it.
2. Course generation usage: Average of ≥1 personalised course generation per active user per month within the pilot period.
3. Conversion to paid report / subscription: Target 10–15 % of assessment takers to purchase the full report and at least 5 % to subscribe to Eddy AI.
4. Engagement lift: Learners who use the feature should show higher course completion rates and session durations than a control group.
5. User satisfaction: Achieve ≥85 % positive feedback (ratings 4–5 out of 5) through in-app surveys about the clarity of insights and usefulness of the personalised course.

Personalised learning is no longer aspirational – it's a proven path to better outcomes. Studies show that AI-powered personalised learning environments dramatically increase motivation, attendance, course completion and test scores engageli.comengageli.com. By launching Know Your Learner Type, EdQuest becomes one of the first platforms to pair a learner-type discovery assessment with automatic course generation. This feature turns abstract insights into actionable plans, fostering deeper engagement and creating a premium upsell for committed learners. With thoughtful attention to privacy and compliance, EdQuest can set a new standard for learner-centric education and unlock new revenue streams.

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Assessment Framework

The assessment is divided into five sections, each designed to elicit the learner's preferences. The entire test takes about **5–7 minutes** and uses a **progress indicator**. Learners must consent to data processing before starting. Responses are stored locally until the user opts to save their profile.

Question Types

1. **Ranking (Drag-and-Drop)** – Learners order five activities from most to least appealing: building something, watching a video, listening to a podcast, reading documentation and

brainstorming with others. This reveals primary modality preferences and awards descending points (5–1) to tags associated with each item.

2. **Rating (Sliders)** – Learners rate the helpfulness of eight content types (videos, audio, illustrated articles, text handbooks, hands-on projects, step-by-step tutorials, high-level overviews, group discussions) on a scale of 1–5. Each slider adds the chosen value to one or two tags. For example, rating "Illustrated articles" splits the score between **visual** and **text** tags, while "Step-by-step tutorials" splits between **step** and **text**.

3. **Orientation (Single Choice)** – Learners choose how they typically approach a new topic (e.g., "experiment first," "watch a video," "read documentation," "discuss with peers," "plan first," "review a high-level overview," or "listen to a podcast"). Each choice awards a fixed number of points (4–5) to one or more tags.

4. **Study Habits (Multiple Choice)** – Learners tick all habits that apply, such as planning study sessions, summarising in their own words, joining study groups, diving straight into tasks, reflecting in a journal, following step-by-step guides, starting with an overview, listening to podcasts or building prototypes. Each selected habit adds a smaller number of points (e.g., +3) to its associated tag(s).

5. **Environment & Time (Dropdowns)** – Learners select their preferred study environment (workshop/lab, quiet room, café/co-working space, library) and time of day (morning, afternoon, night). These responses add modest points (e.g., +2–3) to tags (e.g., a workshop adds to **handsOn**, a morning study time adds to **planner**, night adds to **active**).

Scoring Logic

Each question contributes to a running score for each tag. At the end of the assessment, tags are sorted by their total scores, and the learner's **primary type** is the tag with the highest score. The top three tags are displayed, and all tag scores are shown on a bar chart.

Below is a simplified view of how points accumulate (actual values may be adjusted based on future experiments):

Step	Input	Mapping & Points
Ranking	5 items ranked	Top-ranked item adds **+5** points to its tag; second adds **+4**, etc. Example: Ranking "Listen to a podcast" first gives **audio** +5 points.
Rating	8 sliders (1–5)	Each slider value is added to one or two tags. "Illustrated articles" splits its value between **visual** and **text**. "Step-by-step tutorials" splits between **step** and **text**. "Hands-on projects" adds to **handsOn**.

Orientation	1 choice	Each choice adds a fixed amount (usually **+5** points) to one or more tags. Choosing "experiment first" adds to **handsOn** and **active**. Choosing "plan first" adds to **planner**.
Study Habits	Multiple selections	Each selected habit adds **+3** points to its associated tag(s). Selecting "I join study groups" adds to **social**; selecting "I like building prototypes" adds to **handsOn**.
Environment & Time	2 dropdowns	Selecting "Workshop or lab" adds **+3** to **handsOn**; "Quiet room" adds **+3** to **planner**; "Café" adds to **social**; "Library" adds to **text**. Morning adds **+2** to **planner**, night adds **+2** to **active**.

Interpreting scores: There is no absolute pass/fail. Tags typically accumulate **8–20 points** depending on the user's responses. A learner might finish with **Hands-On Builder – 20 points**, **Planner & Reflector – 18 points**, and **Visual Thinker – 14 points**, indicating they enjoy building things, organising their learning and using diagrams. The relative differences between tags inform the personalised recommendations.

Why this scoring is fair

- **Transparent weighting** – Each question contributes a known range of points. The algorithm does not hide any surprise multipliers; designers can tune weights based on user feedback.
- **Multiple modalities** – Because the assessment spans ranking, rating, orientation, habits and environment, no single question can dominate the final score. A user who heavily prefers one modality must confirm that preference across multiple question types.
- **Not a definitive label** – The feature emphasises that the learner type is a **preference profile**, not a capability judgement[uwaterloo.ca](uwaterloo.ca). Learners are encouraged to explore other modalities, and recommendations include a variety of formats.
- **Retake option** – Users can retake the assessment periodically as their preferences evolve. They can also skip questions, resulting in lower weight for uncertain preferences.

Architecture & Implementation

Front-End (Assessment & Results)

- The assessment is delivered as a **single-page web application** built using React with Tailwind for styling. The UI contains discrete **steps** (intro, questions, results) with a progress bar and consent checkbox. Drag-and-drop uses native HTML5 events; sliders and dropdowns are accessible form elements.

- All scoring is performed client-side for the MVP. The scoring function initialises a `scores` object with all tags set to zero, then updates values based on user interactions. After computing results, the app renders:
    1. **Primary type** with a star badge and description.
    2. **Top three types**.
    3. A **bar chart** showing scores for all tags.
    4. **Detailed breakdown** describing each tag.
    5. **Next best actions** recommending modalities for the top tags.
    6. **Course generation form** where users can choose a trending topic or enter a subject to generate a simple roadmap (overview, hands-on project, reading and group discussion).
- Privacy is addressed via an explicit **consent** step. Until consent is given, no data is stored. After results are shown, the user may choose to save their profile to their EdQuest account; otherwise scores remain local.

Back-End (Future Integration)

For the MVP, the assessment runs entirely in the browser. To scale for premium subscribers:

1. **API Endpoint** – A REST/GraphQL endpoint will accept an assessment payload `{ userId, responses, scores, timestamp }` and persist it to a learner profile store. Responses remain anonymised until linked to a user account.
2. **Recommendation Service** – A microservice reads the learner's top tags and suggests courses, modules, or micro-lessons that match their preferences. It can also adjust difficulty or presentation format (e.g., more videos for visual learners, more projects for hands-on learners).
3. **Course Generator** – A templating engine creates a roadmap by combining EdQuest's existing content into a four-module path (overview → hands-on → deep dive → group discussion). For premium users, the generator can produce longer multi-week courses with more modules, assignments and peer activities.
4. **Analytics & Feedback** – Aggregate anonymised data on tag distributions and course completions feed back into the scoring algorithm. This allows continuous improvement (e.g., adjusting weights if certain questions bias results) and monitors fairness across demographics.
5. **Security & Compliance** – All data handling follows Indian privacy regulations and GDPR. Consent records are logged; data is encrypted at rest; and learners can delete their assessments at any time.

QA & Design Considerations

- **Accessibility** – The app must meet WCAG 2.1 AA standards: keyboard-navigable drag-and-drop, labels for form controls, sufficient colour contrast, focus indicators and ARIA roles.
- **Error handling** – Prevent submissions without selections; validate inputs; gracefully handle local storage failures. Disable the "Start Assessment" button until consent is given.
- **Responsive design** – Ensure the assessment flows well on mobile devices. Use responsive units and avoid horizontal scrolling.
- **Test coverage** – Unit tests should verify scoring functions, ensure each question updates the correct tags and ensure that bar charts reflect underlying data. Integration tests should simulate complete assessment runs with different answer patterns to validate results.
- **Internationalisation** – Although the initial release targets Indian learners in English, prepare for localisation by externalising strings and supporting right-to-left layouts.

Validity & Ethical Considerations

Academic research cautions that the idea of fixed learning styles lacks strong empirical support; preferences vary by context, and matching instruction to a perceived learning style does not guarantee better outcomes[uwaterloo.ca](uwaterloo.ca). Therefore, EdQuest's assessment is positioned as a **starting point** to help learners explore modalities rather than a determinant of capability. The algorithm deliberately spreads points across multiple questions so that no single answer over-determines the result.

- **Non-restrictive recommendations** – Results encourage learners to try activities in their preferred modalities *and*suggest that they experiment outside of them to build new skills.
- **Transparency** – The scoring model is documented here; learners can see the scoring breakdown if they choose. There are no hidden penalties.
- **Optional retakes** – Preferences evolve; learners may retake the assessment periodically to update their profile.
- **Privacy first** – Data is collected only after consent and can be deleted on request. There is no tracking without user agreement.

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1) Assessment Sections & Global Weights

Step	Prompt type	Signals (choices/ratings)	Points scale	Notes
S1	Rank start-style	s1=Build, s2=Watch, s3=Diagram, s4=Ask peer	Position → 1st=4, 2nd=3, 3rd=2, 4th=1	Points are added to the mapped types (below).
S2	Rate modalities	Audio, Visual, Text, Video (1–5)	rating = 1…5	Direct points to mapped types.
S3	Route SCQ	Prototype / Plan / Discuss / Overview	Primary=+4, Secondary=+2	Mapped types below.
S4	Habits MSQ	Retros, Micro-loops, Teach-back, Group study	+3 / selected	Mapped types below.
S5	Environment/Time	Quiet / Cafe / Team + Morning / Evening / Late	Env: +1 or +2; Time: +1	Small nudges only.

2) Signals → Type Mapping (Exact Points)

S1: Ranking (drag to order)

S1 item (rank label)	1st	2nd	3rd	4th	Types affected
s1 Build first	+4	+3	+2	+1	Hands-On Builder (+100%), Active Experimenter (+(rank-1))
s2 Watch & follow	+4	+3	+2	+1	Step-by-Step Executor (+100%), Audio Learner (+max(rank-2,0))
s3 Diagram/cheatsheet	+4	+3	+2	+1	Visual Thinker (+100%), Big-Picture Thinker (+(rank-1))
s4 Ask a peer/mentor	+4	+3	+2	+1	Social Collaborator (+100%)

Implementation detail: "+(rank-1)" means if placed 1st add +3, 2nd +2, 3rd +1, 4th +0.

S2: Modality ratings (1–5)

Modality rated	Points	Types affected
Audio helpfulness	1–5	Audio Learner += rating
Visual helpfulness	1–5	Visual Thinker += rating
Text helpfulness	1–5	Text/Read-Write Learner += rating
Video helpfulness	1–5	Step-by-Step Executor += ceil(rating/2)

S3: Route (single choice)

Choice	Primary +4	Secondary +2
Prototype quickly	Hands-On Builder	Active Experimenter
Plan & outline first	Planner/Reflective	Step-by-Step Executor, Text/Read-Write (each +1)
Discuss with peers	Social Collaborator	Active Experimenter
Get high-level overview	Big-Picture Thinker	Visual Thinker

S4: Habits (multi-select)

Habit selected	Points	Types affected
Weekly retros	+3	Planner/Reflective
Micro build-test loops	+3	Active Experimenter
Teach-back / write summaries	+2 each	Social Collaborator (+2), Text/Read-Write (+2)
Group study / peer reviews	+3	Social Collaborator

S5: Environment & Time

Selection	Points	Type
Environment=Team/Lab	+2	Social Collaborator
Environment=Quiet	+1	Planner/Reflective
Environment=Cafe	+1	Active Experimenter
Time=Morning	+1	Planner/Reflective
Time=Late	+1	Hands-On Builder

3) Raw Score Caps (per type)

These help normalize to a /30 confidence.

Type	Max from S1	S2	S3	S4	S5	Raw Max (cap)
Hands-On Builder	4 + 3 (S1 s1 + Active bonus)	–	+4	+0	+1	12
Visual Thinker	4	+5	+2	–	–	11
Audio Learner	1−3 (from s2 watch bonus seldom)	+5	–	–	–	8
Text/Read-Write	–	+5	+1	+2	–	8
Planner/Reflective	–	–	+4	+3	+1	8
Active Experimenter	3	–	+2	+3	+1	9
Social Collaborator	4	–	+4	+5	+2	15
Step-by-Step Executor	4	+3 (video half-weight, max 3)	+2	–	–	9

| Big-Picture Thinker | 3 | – | +4 | – | – | **7** |

Notes: S1 secondary bonuses included in the cap where applicable.

4) Normalization to /30 Confidence Score

For each type:

```
confidence30[type] = round( (raw[type] / cap[type]) * 30 )
```

This yields a comparable 0–30 "confidence" per type regardless of differing caps.

5) Eligibility Rules (When do we declare a type?)

Rule ID	Condition	Purpose
R1 (Primary threshold)	confidence30 ≥ **18/30** (≥60%)	Don't over-classify weak signals.
R2 (Margin)	(confidence30_primary – confidence30_second) ≥ **3**	Avoid false ties; ensures dominance.
R3 (Modality check)	If type is modality-anchored, require S2 rating ≥ **4** on its modality (Visual/Audio/Text).	Prevents misclassifying without core signal.
R4 (Consistency)	Require ≥ **2** distinct sections contributing (e.g., S1 + S3, or S2 + S4).	Reduces single-item bias.
R5 (Ceiling check)	If confidence30_primary ≥ **24**, you may label "Strong <Type>".	Marketing/UX clarity.
R6 (Mixed profile)	If R1 or R2 fail but top-2 each ≥ **15**, label "Hybrid: <Type A> + <Type B>".	Communicates dual strengths.

Per-Type Extra Constraints (to keep results genuine)

Type	Extra eligibility guardrails
Hands-On Builder	S1(s1) position ≤ 2 **OR** S3=Prototype.
Visual Thinker	S2 Visual ≥ 4 **OR** S1(s3) position ≤ 2.
Audio Learner	S2 Audio ≥ 4 (hard requirement).
Text/Read-Write	S2 Text ≥ 4 **OR** S4 Teach-back selected.
Planner/Reflective	S3=Plan **OR** S4 Retros selected.
Active Experimenter	S4 Micro-loops selected **OR** (S1(s1) rank ≤2 AND S3 Prototype/Discuss).
Social Collaborator	Any of: S1(s4) rank ≤2, S3=Discuss, S4 Group study.
Step-by-Step Executor	Any of: S1(s2) rank ≤2, S3=Plan, S2 Video ≥4 (half-weight).
Big-Picture Thinker	S3=Overview **OR** S1(s3) rank ≤2.

6) "20/30 Marks" View (Simple)

- Show **confidence30** as "marks out of 30" beside each type.
- Primary badge appears if **R1+R2+R4** pass.
- Example legend:
    - 0–11 = Low fit, 12–17 = Moderate, 18–23 = Good, 24–30 = Strong.

7) Worked Example (Deterministic)

User answers

- S1 order: s1 Build (1st), s3 Diagram (2nd), s4 Ask (3rd), s2 Watch (4th)
- S2 ratings: Audio=2, Visual=5, Text=4, Video=3
- S3: Plan & outline
- S4: Retros, Teach-back
- S5: Env=Quiet, Time=Morning

Compute raw points (selected types only)

- Hands-On: S1 s1(1st)=+4; S3 Plan=0; S4=0; S5 Late?=0 → **4/12** → conf = round(4/12*30)=**10**
- Visual: S1 s3(2nd)=+3; S2 Visual=+5; S3 Plan sec=0; → **8/11** → conf=**22**
- Text: S2 Text=+4; S3 Plan sec +1; S4 Teach-back +2 → **7/8** → conf=**26**
- Planner/Reflective: S3 Plan +4; S4 Retros +3; S5 Quiet +1; Time Morning +1 → **9/8** (cap at 8) → **8/8** → conf=**30**
- Step-by-Step: S1 s2(4th)=+1; S2 Video ceil(3/2)=2; S3 Plan secondary +2 → **5/9** → conf=**17**
- Social: S1 s4(3rd)=+2 → **2/15** → conf=**4**
- Active: S1 bonus from s1 (+(rank-1)=+3) but we only grant that when S3=Prototype/Discuss; here S3=Plan → **0** → conf=**0**
- Big-Picture: none → **0**

Top confidence30

- Planner=30, Text=26, Visual=22.
  Apply Eligibility:
- Planner passes R1 (30≥18), R2 (30-26=4≥3), R4 (S3+S4), guardrail (S3=Plan ✅).
  Declare Primary: Planner/Reflective.
- Secondary: Text (26) passes modality (Text≥4) & consistency → show as secondary tag.

8) QA/Edge-Case Rules

- Cap raw scores at the per-type **Raw Max (cap)** before normalization.
- If top two within **<3** and each ≥15/30 → "Hybrid" with both shown.
- If zero types reach **≥12**, prompt: "Signals are mixed; try a longer assessment for higher confidence."
- Always record which sections contributed to each type (for explainability in the report UI).

9) Dev Hand-off (Data Shapes)

```
type TypeKey =
  | "handsOn" | "visual" | "audio" | "textRW" | "planner"
  | "active" | "social" | "stepByStep" | "bigPicture";

type SectionScores = Record<TypeKey, number>; // raw per section
type Caps = Record<TypeKey, number>;          // from table above
type Result = {
```

```
  raw: Record<TypeKey, number>;        // capped raw
  confidence30: Record<TypeKey, number>;
  primary?: TypeKey;
  secondary?: TypeKey[];
  rationale: Record<TypeKey, string[]>; // bullets: which signals
fired
};
```