Digital Diversity:
Crafting Inclusive AI Narratives

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Analysis of the Focus Group Interview: Insights & Recommendations

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Authors	Mimic Productions (Germany), Budakov Films (Bulgaria)

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1. Executive Summary

This document presents the consolidated analysis of the two focus-group interviews conducted under Activity A1.2 – Focus-Group Interviews and Analysis within the Erasmus+ project Digital Diversity: Crafting Inclusive AI Narratives (D2CIN), Project No. 2025-1-DE02-KA210-VET-000354956. These interviews - held in Germany with Inclusive Education Experts and in Bulgaria with UX and Accessibility Designers - were designed to gather high-value insights for shaping the project's upcoming intellectual outputs: the Personalized Feedback Navigator and the Handbook "Accessible AI for Education: A Comprehensive Guide to Inclusive Design and Training."

Together, the two focus groups provided a rich and interdisciplinary perspective on how educators, designers, and technologists envision the future of inclusive, ethical, and user-centred AI in vocational education and training (VET). Despite differences in professional backgrounds and national contexts, participants in both groups expressed strikingly aligned concerns and aspirations, demonstrating a shared commitment to building AI systems that respect human diversity, mitigate bias, protect users, and reinforce equitable access to digital learning.

2. Purpose of the Analysis

The purpose of this analysis is to systematically synthesize the insights gathered from both focus-group interviews in Germany and Bulgaria and to directly support the development of two key tangible project results within the D2CIN project:

The Personalized Feedback Navigator – a core outcome of Activity 1, designed to help educators, trainers, and designers identify gaps in inclusive AI implementation. This analysis provides the foundational criteria, user expectations, and ethical considerations that will shape the Navigator's structure, assessment logic, and feedback mechanisms.

The Handbook "Accessible AI for Education: A Comprehensive Guide to Inclusive Design and Training" – the primary output of Activity 2, which will translate the focus-group insights into practical, evidence-based guidance for educators and VET professionals. The analysis informs the Handbook's thematic chapters, key principles, and pedagogical frameworks.

More specifically, this analysis aims to:

Integrate cross-disciplinary viewpoints from Inclusive Education Experts (Germany) and UX & Accessibility Designers (Bulgaria), ensuring that both pedagogical and technical perspectives inform the project outputs.

Identify user needs, risks, and expectations around inclusive design, speech technologies, adaptive content, bias mitigation, and accessibility.

Extract actionable design criteria that can be encoded into the Navigator's evaluation model and recommendations engine.

Provide evidence-based content that will form the backbone of the Handbook's structure and practical tools, including checklists, scenarios, and design heuristics.

Ensure coherence and alignment between Activities 1 and 2 so that both outputs reinforce one another and collectively support ethical, inclusive AI practices in VET environments.

Through this structured analysis, the project ensures that both the Navigator and the Handbook are grounded in real-world expertise, user expectations, and best practices across pedagogy, UX, ethics, and accessibility.

3. Methodology for Conducting the Focus Group Interviews

Both project partners—Mimic Productions GmbH and Budakov Films—strictly adhered to the Methodology for Conducting Focus Group Interviews that was developed under Activity 1: Personalized Feedback Navigator. This methodology was created as an internal guiding framework to ensure consistency, ethical rigor, and comparability between the two national sessions, while also guaranteeing that all insights collected would directly inform the development of the Navigator and the subsequent Handbook.

The methodology provided a structured, evidence-based approach that covered all operational and ethical dimensions of the interviews, including:

- Participant recruitment and screening
- Informed consent procedures in line with GDPR
- Accessibility requirements for both online and live formats
- Standardized sets of guiding questions aligned with project objectives
- Moderator roles and facilitation techniques
- Documentation, pseudonymization, and secure data management
- Evaluation metrics for quality assurance

Image 1. Structured Interview Methodology. Credit: D2CIN Consortium

Both the German and Bulgarian sessions followed the same core structure, timing, and thematic focus areas, enabling a reliable cross-country comparison and ensuring coherence between the two data sets.

Fulfilment of Key Metrics

- All predefined methodological metrics established in Activity 1 were successfully met:
- Participant Targets: Both focus groups achieved the planned number of seven specialised participants (Inclusive Education Experts in Germany, UX & Accessibility Designers in Bulgaria).
- Accessibility Compliance: All sessions provided necessary accessibility accommodations—such as captioning, structured pre-session materials, and accessible document formats.
- Session Structure & Duration: Each session adhered to the planned 90-minute format, supplemented by a buffer for participant questions and clarifications.
- Data Quality Indicators: High-quality outputs were achieved, including rich, illustrative quotes, clear thematic clustering, and strong engagement from all participants.
- Ethics & GDPR Compliance: All participants provided informed consent, and all transcripts and notes were pseudonymized and securely stored.
- Consistency Across Countries: Despite being held in two different formats (Germany live; Bulgaria hybrid), both sessions followed the same methodological flow, ensuring comparability and robustness of the findings.

- Alignment with Navigator Development: All question categories—bias mitigation, accessibility, adaptive content, trust, explainability, and user control—directly mapped to the criteria defined for the Personalized Feedback Navigator.

The adherence to this unified methodology not only ensured the reliability and validity of the results but also strengthened the relevance of the findings for the next stages of the project.

The insights gathered through this structured approach now serve as the foundational evidence base informing both the Personalized Feedback Navigator (Activity 1) and the Handbook "Accessible AI for Education" (Activity 2).

4. Comparative Analysis of Findings Across Germany and Bulgaria

The comparative analysis of the focus group interviews conducted in Germany and Bulgaria reveals both strong alignment in core values and meaningful differences shaped by the participants' professional backgrounds. While German Inclusive Education Experts approached AI primarily from a pedagogical and learner-impact perspective, Bulgarian UX and Accessibility Designers examined AI systems from a design, usability, and ethical interface standpoint.

Together, their insights form a cohesive and multidimensional understanding of what inclusive, transparent, and trustworthy AI requires.

4.1 Unbiased Learning Resources & Pedagogy

German participants focused on the pedagogical consequences of biased AI, emphasizing equitable learning opportunities, culturally neutral feedback, and the risks of reinforcing stereotypes in VET settings. They discussed unbiased AI avatars in terms of educational fairness and classroom dynamics.

Bulgarian designers, in contrast, concentrated on representational accuracy, interface cues, and the risk of biased visual or behavioral patterns embedded in avatar design. Both groups agreed on the need for transparent AI decision-making and early-stage bias mitigation, but their reasoning emerged from different angles—education versus interface design.

4.2 Speech Evaluation & Adaptive Content

German experts highlighted the potential of speech evaluation tools for multilingual learners but warned of stigmatizing effects if used too rigidly. They stressed teacher oversight and formative use.

Bulgarian designers focused on cognitive load, the "uncanny valley" effect, and the need for user-adjustable parameters such as pacing and tone. Both groups expressed caution toward adaptive content, agreeing that adaptation must be visible, explainable, and user-controlled.

4.3 Safety, Trust, and Inclusion

Both groups identified trust as essential, but educators linked trust to pedagogical transparency and learner protection, while designers linked it to explainability, predictable interactions, and visual authenticity. Both emphasized the importance of accurate cultural and gender representation, though educators spoke more about fairness in teaching, while designers addressed the risk of tokenism in visual and behavioral design.

4.4 Integration & Evaluation

German participants framed integration challenges around teacher workload, curricular alignment, and accreditation constraints, stressing the need for training and institutional support.

Bulgarian participants noted technical feasibility, design constraints, accessibility compatibility, and interface testing requirements. Both groups proposed evaluation metrics focusing on inclusivity, usability, and learner engagement.

4.5 Prioritization Exercise Results

Both groups prioritized ethics, transparency, and accessibility as foundational. Germans ranked adaptive content oversight and bias monitoring highest, reflecting classroom needs. Bulgarians prioritized assistive technology compatibility, representational sensitivity, and explainable interfaces, reflecting their design focus. The divergence helps shape a more comprehensive prototyping roadmap by combining pedagogical usability with design feasibility.

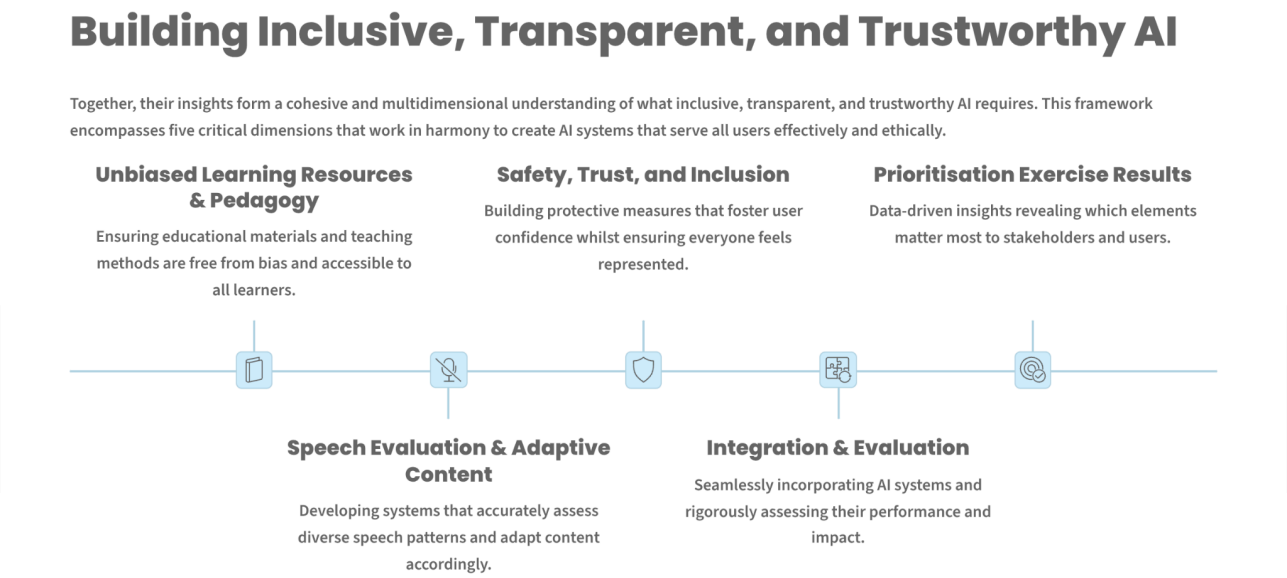

Image 2. Prioritization Exercise Results. Credit: D2CIN Consortium

5. Recommendations for the Personalized Feedback Navigator

This section presents consolidated and evidence-based recommendations for the development of the Personalized Feedback Navigator, one of the key tangible outputs of Activity 1 within the D2CIN project. The Navigator will culminate in a trained conversational AI avatar capable of interacting with educators and trainers in English, German, and Bulgarian, thus ensuring accessibility across the partner countries. The avatar will feature the D2CIN project logo and the Erasmus+ Programme emblem, clearly reflecting its European funding and consortium identity.

The recommendations outlined below draw directly from the insights collected during the focus-group interviews held in Germany and Bulgaria and are intended to guide the development of a tool that is pedagogically sound, ethically robust, technologically feasible, and user-centred.

5.1. Navigator Purpose and Intended Impact

The Personalized Feedback Navigator is intended to function as an integrated diagnostic, advisory, and educational instrument that supports educators, trainers, and designers in creating and evaluating inclusive, ethical, and accessible AI-driven learning resources. The final conversational AI avatar will embody this Navigator by:

- Providing real-time, multilingual guidance in English, German, and Bulgarian.
- Answering educator and designer questions related to ethical AI, inclusive design, bias mitigation, accessibility requirements, and responsible digital storytelling.
- Helping users reflect on their instructional materials, AI-generated content, or prototype designs through context-sensitive recommendations.
- Supporting reflective practice by explaining why a specific issue matters and how it relates to broader principles of fairness, inclusion, and educational quality.
- By integrating these functionalities, the Navigator aims to enhance digital readiness across VET sectors, strengthen user confidence in AI-supported teaching, and promote responsible and transparent adoption of emerging technologies in education.

5.2. Core Criteria for the Navigator (Derived from Focus Group Insights)

Based on comparative insights from both focus groups, three core evaluation criteria should underpin the Navigator's logic and conversational outputs. These criteria will also structure the knowledge base used to train the final avatar.

1. Bias Detection

- The Navigator should support users in recognizing and mitigating bias by:
- Assessing representational fairness in AI-generated visuals, voices, and narratives.

- Evaluating the linguistic neutrality of learning content and avatar communication.
- Identifying risks of stereotyping, exclusionary language, culturally biased examples, or imbalanced datasets.
- Offering clear explanations of potential bias and proposing practical mitigation strategies grounded in real-world design and educational scenarios.

2. Accessibility Integration

The Navigator must guide users in ensuring that educational AI tools comply with accessibility requirements by:

- Reviewing multimodal accessibility across visual, auditory, motor, and cognitive domains.
- Aligning feedback with WCAG 2.2 AA and recognized accessibility heuristics.
- Evaluating compatibility with assistive technologies (screen readers, captions, voice navigation, contrast controls, etc.).
- Addressing data privacy implications related to accessible personalization features and user preference storage.

3. Adaptive Content Delivery

The Navigator should help users evaluate whether adaptive content is implemented ethically and transparently by:

- Examining how content changes are triggered and communicated to learners.
- Assessing the balance between personalization and user autonomy.
- Highlighting risks associated with over-automation, hidden adaptation, or content removal without explanation.
- Encouraging adaptive designs that remain optional, reviewable, and understandable.

These core criteria will form the backbone of the Navigator's internal evaluation model and shape the conversational logic of the final AI avatar.

5.3. Practical Strategies for Navigator Implementation

To ensure a high-quality, practical, and trustworthy experience, the following strategies should guide the development of the Navigator - and by extension, the multilingual conversational avatar:

Clear and Educational Feedback

- Provide human-readable explanations that answer both "What is the issue?" and "Why does it matter?"
- Avoid technical jargon unless specifically requested by the user.

Tiered Explainability

- Offer layered responses:

- Basic summaries for educators seeking quick clarity.
- Detailed insights for advanced users needing more technical or UX-sensitive explanations.

Ethical Design Checklists

- Integrate modular checklists summarizing:
- Cultural representation requirements
- Bias-mitigation best practices
- Accessibility standards
- Data and privacy safeguards

These checklists should be retrievable on demand within the avatar's conversation flow.

Privacy-by-Design Guidance

- Provide reminders and risk flags related to:
- Data minimization
- Consent management
- Avoidance of unintended profiling
- Risks tied to personalization memory (identity, religious symbols, gender cues)

Risk Flagging

The Navigator should automatically flag risks such as:

- Reinforcement of stereotypes
- Overly "human-like" avatar behaviors causing discomfort (uncanny valley)
- Opaque adaptation triggers
- Accessibility compatibility failures
- Cognitive overload caused by excessive customization options

Each flagged risk should prompt tailored guidance on how to resolve or mitigate the issue.

5.4. Expected Outputs for Educators and Designers

Through its interactive and multilingual avatar interface, the Personalized Feedback Navigator is expected to deliver the following outputs to support VET professionals in improving their materials and practices:

1. Personalized Guidance

- Recommendations adapted to the educator's experience level, project context, or design scenario.
- Step-by-step suggestions for improving inclusivity in AI-generated content or instructional design.

2. Practical Improvement Steps

- Clear actions users can take immediately
- Scenario-based suggestions related to classroom integration, learner diversity, data practices, or UX enhancement.

3. Case Studies and Visual Heuristics

- Examples illustrating inclusive design, ethical decision-making, accessibility strategies, and culturally sensitive avatar representations.
- Visual heuristics to support rapid evaluation of AI-driven educational materials.

4. Decision-Support for Ethical and Pedagogical Dilemmas

- Guidance on common dilemmas (e.g., personalization vs. transparency, realism vs. cognitive comfort, neutrality vs. representation).
- Tools to help educators document decisions for accreditation or institutional review.

The Personalized Feedback Navigator—and its final embodiment as a trained conversational AI avatar—will serve as a cornerstone digital tool for enabling ethical, inclusive, and pedagogically aligned AI adoption in VET environments. The recommendations from the focus groups ensure the Navigator is grounded in authentic user needs and expert knowledge, while its multilingual and accessible design guarantees broad applicability across European educational contexts.

6. Key Topics for the Handbook “Accessible AI for Education”

The findings from both focus-group interviews directly support and advance the work foreseen under Activity 2: “Accessible AI for Education: A Comprehensive Guide to Inclusive Design and Training.” The Handbook will translate the project’s research base—including the earlier Needs Analysis and the newly gathered expert insights—into a structured, practical resource for VET educators, trainers, and designers.

The Needs Analysis provided the initial evidence base, identifying gaps in digital readiness, accessibility practices, and ethical AI integration across VET ecosystems.

However, the focus groups validated, expanded, and contextualized these findings with real-world perspectives from Inclusive Education Experts (Germany) and UX & Accessibility Designers (Bulgaria). The result is a refined and prioritised set of thematic areas that the Handbook must feature to ensure relevance, usability, and pedagogical impact.

The following five topics emerged as essential chapters for the Handbook.

1. Bias Recognition and Mitigation

How the insights support this topic:

Both the Needs Analysis and the focus groups highlighted systemic concerns around biased data, stereotype reinforcement, and the lack of mechanisms for evaluating representational fairness in AI-driven educational tools. Participants in both countries stressed that AI systems inevitably reflect the values, assumptions, and blind spots of their creators, making bias identification a critical educator competency.

What the Handbook must include:

- Techniques for spotting bias in AI-generated content
- Methods for assessing dataset diversity
- Strategies for culturally sensitive representation
- Ethical checklists for avatar design and narrative content
- Case examples illustrating how interface and content bias appear in VET

2. Inclusive UX Design

How the insights support this topic:

The Needs Analysis identified a lack of capacity among educators to evaluate or design inclusive user experiences. The Bulgarian focus group expanded this theme by demonstrating how small UX decisions—tone of voice, gesture design, symbol choices, interaction pacing—significantly influence trust, comfort, and perceived legitimacy of AI.

What the Handbook must include:

- Principles of inclusive interface design
- UX heuristics specific to AI avatars and conversational agents
- Methods to prevent tokenism and support authentic representation
- Multimodal design patterns (visual, spatial, auditory, cognitive)
- Tools for evaluating emotional impact and user-centredness

3. Accessibility Standards in AI for VET

Why this is essential, and how insights update the Needs Analysis:

The Needs Analysis identified Accessibility Standards in AI as a core requirement. However, the focus groups clarified that accessibility must be adapted to the specific challenges of vocational education, where learners may face diverse cognitive, linguistic, sensory, or socio-cultural barriers. Respondents stressed that accessibility for VET goes well beyond WCAG compliance: it must consider the dynamics of training environments, varying digital maturity among learners, and the need for adaptable, multimodal delivery.

What the Handbook must include:

- Accessibility principles contextualised for VET
- How AI avatars should support assistive technologies
- Multimodal accessibility (speech, captions, simplified visuals, gesture clarity)
- Guidelines for designing for low-bandwidth or resource-limited environments
- Practical accessibility evaluations for AI-driven educational tools

4. AI Ethics and Compliance for Educational Resource Development

How this expands the Needs Analysis:

The Needs Analysis stressed AI Ethics and Compliance as a key area, particularly regarding EU AI Act provisions. The focus groups reinforced this need by demonstrating that ethical considerations must be integrated not only at the system level but also into everyday educational content production. Educators need concrete, classroom-ready tools for interpreting AI behaviours and ensuring ethical alignment in both design and delivery.

What the Handbook must include:

- Educator-friendly explanations of ethical AI principles
- How to interpret and communicate AI decision-making in a classroom
- Ethical use of adaptive content and data minimization
- Privacy-by-design considerations for avatar-based learning
- Risk mitigation strategies (misuse prevention, manipulation concerns, trust building)

5. Digital Storytelling for Inclusive Education

How the insights support this topic:

The Needs Analysis identified storytelling as a potential strength, but the focus groups showed its importance for shaping learners' emotional connection to AI, establishing trust, and representing diverse identities. Respondents noted that avatars and AI-generated narratives must reflect the complexity of real people without reinforcing stereotypes.

What the Handbook must include:

- Storytelling frameworks for inclusive AI-driven training
- Narrative techniques for representing diverse cultures, genders, and abilities
- Ethical approaches to character, gesture, and voice design
- Customisation options that preserve learner autonomy
- Case studies illustrating how narrative choices influence learning outcomes

These five topics form the essential structure of the Handbook. They reflect the convergence of pedagogical needs (Germany) and design and accessibility expertise (Bulgaria), grounded in the evidence collected through both the Needs Analysis and the Interdisciplinary Focus Groups.

The Handbook must therefore offer a comprehensive, practical, and evidence-based guide, featuring:

1. Thematic explanations
2. Best practices and checklists
3. Visual heuristics
4. Educational case studies
5. Step-by-step implementation guidelines

These components will ensure that educators and designers are fully equipped to create AI-based learning environments that are ethical, inclusive, accessible, and fit for the needs of the European VET sector.

Image 3. Key Topics for the Handbook "Accessible AI for Education". Credit: D2CIN Consortium

7. Conclusion and Next Steps: Preparing the Framework for the Personalized Feedback Navigator

Building on the insights and recommendations gathered through the two focus-group interviews, the next step in Activity 1 is the development of the Framework for the Personalized Feedback Navigator. This PDF document will outline the exact structure, design specifications, and functional requirements of the tool, translating the qualitative findings into a clear technical blueprint. The framework will ensure that every feature of the Navigator—including bias detection, accessibility integration, and adaptive content evaluation—is grounded in the real needs identified by educators, UX designers, and accessibility experts. By providing a detailed, evidence-based specification, the framework will guide the creation of a reliable, user-centred, and pedagogically sound conversational AI avatar that can support educators effectively across English, German, and Bulgarian language contexts.