



Co-funded by
the European Union



eSleep_dHealth

Digital literacy enables up-to-date sleep medicine in inclusive healthcare

eSleep_dHealth

Document: eSleep_dHealth Curriculum Assessment

Developed by the *Mediterranean Economic Foresight Institute (Activity 2.3. lead), E.C.H.R. Ltd. (NetHub), Reykjavik University, University of Crete, University of Split*



Co-funded by
the European Union



eSleep_dHealth

Summary

| | | |
|------|--|----|
| 1. | Introduction to the curriculum assessment | 3 |
| 2. | Curriculum Alignment | 4 |
| 3. | Curriculum Assessment Design | 6 |
| 3.1. | Level 1: Learners' feedback/satisfaction about the eSleep_dHealth training programme | 7 |
| 3.2. | Level 2 Learning: The degree to which participants acquire the intended knowledge, skills, and attitudes | 9 |
| 3.3. | Level 3: Attitudes and behavioural changes due to the training programme | 11 |
| 3.4. | Level 4: Results: The overall impact of the new course on the organization or individual's performance | 13 |
| 4. | Data Analysis | 14 |
| 5. | Set of Recommendations | 15 |
| 6. | Conclusions | 17 |

1. Introduction to the curriculum assessment

The demand for specialized training in sleep medicine has increased significantly as its essential function in overall health and well-being is more acknowledged. Current sleep medicine research relies on rapid digital health development and its potential to involve and support patients. In eSleep_dHealth programme we blend education in sleep medicine with digital health, entrepreneurship and social innovation training thus creating a unique training opportunity where students can acquire new knowledge and skills and then immediately use it to propose and develop novel solutions that adapt the current digital solutions to fit better to the needs of the vulnerable populations.

Creating a curriculum assessment strategy for eSleep_dHealth blended program is crucial to guarantee the program's efficacy and pertinence in the progressing healthcare area. Our hybrid training programme integrates online and face-to-face learning methods. It is specifically developed to challenge students and provide them with interdisciplinary real-life problem-solving experience and understanding end-user needs which is rare in their current study programmes and daily practice in their future work.

The curriculum assessment plan is vital for the program's success as it establishes a structure for evaluating how well the curriculum aligns with learning objectives, academic and healthcare needs, and student needs. It guarantees the achievement of educational objectives and the acquisition of essential knowledge, skills, and competencies for students to excel in their professional capacities.

The curriculum assessment plan will guide ongoing improvement, through iterative adaptations following analysis of the student and mentor feedback enabling the program to adjust quickly.

Here, we detail the methodologies that will be used to evaluate the efficacy of the curriculum including formative and summative assessments, feedback methods, and the use of data to guide improvements of instructional approaches. The data will be gathered to allow a mixed-method study. A mixed-methods study design for evaluating the effectiveness of our programme combines quantitative and qualitative research methods to gain a comprehensive understanding of the course's impact. This approach combines the strengths of both methodologies, providing a more complete picture of the course's effectiveness than either method could achieve alone. The details are given in the next chapters.



Co-funded by
the European Union



eSleep_dHealth

2. Curriculum Alignment

Newly developed eSleep_dHealth curriculum defines the structure of the new programme, learning outcomes that cover professional knowledge, research skills, life skills and minds and attitudes. It also describes the workload, and type of assessment that fill accompanies each topic and provides lists of reading material for each training part.

The process of comparing the alignment of newly created study materials with the learning outcomes defined by the program will involve a systematic review to ensure that each material directly supports the intended educational goals. Each piece of study material—ranging from pedagogical videos, original pedagogical text, suggested textbooks and articles and existing multimedia resources—will be mapped against these outcomes. This mapping process involved checking whether the content, depth, and instructional strategies used in the materials effectively promote the desired learning outcomes. Any gaps identified, where materials did not fully align with or support the outcomes, will be noted, and adjustments will be made to either the materials or the outcomes themselves. Additionally, feedback from subject matter experts that are partners in the project and expert educators will be incorporated to ensure that the materials not only cover the necessary content but also do so in a pedagogically sound manner, thereby ensuring a cohesive and outcome-driven learning experience. This alignment is critical for ensuring that students can achieve the program's objectives effectively and efficiently.

The process of aligning the assessment design with the learning outcomes defined by the program will involve a detailed review to ensure that all assessments accurately measure the knowledge, skills, and attitudes the program aims to develop in students. This will involve testing whether the assessment tasks are appropriately challenging, reflect real-world applications where possible, and allow students to demonstrate their mastery of the subject matter. If misalignments are found, adjustments will be made either to the assessments or the learning outcomes to better reflect the intended educational objectives. Input from educational experts will also be sought to validate that the assessments are fair and comprehensive, providing a reliable measure of student achievement.

One challenge is ensuring that all learning outcomes are adequately covered by the assessments. Some outcomes, particularly those related to higher-order thinking skills or soft skills, can be difficult to assess effectively through traditional methods. We also want to avoid a risk of overburdening students with too many assessments, especially if each outcome is assessed separately. This can lead to assessment fatigue, reducing the effectiveness of the evaluation.



Co-funded by
the European Union



eSleep_dHealth

We will develop clear rubrics that align with learning outcomes. Rubrics help standardize the grading process, making it easier to assess whether students are meeting the intended outcomes.

Pilot assessments: before fully implementing assessments, we will pilot them with a small group to identify any issues with alignment, clarity, or difficulty. This allows for adjustments before wider rollout. Moreover, first part of the programme will be online, consisting of 3 new modules, corresponding to 12 ECTS in total. Clear instructions on what is needed and how the work will be assessed are crucial for seamless implementation of the assessments in the eSleep_dHealth programme.

The alignment of learning outcomes, instructional materials, and assessments is a critical component of good educational design.

When these components are well-aligned, they collectively direct students toward the desired educational goals, ensuring coherence and clarity in their learning path. Learning outcomes specify the precise information, abilities, and attitudes that students should develop, providing a clear focus for both instruction and evaluation. Instructional resources can then be selected and organized to support these goals, thereby aiding the development of the required competences. Assessments, in turn, are intended to quantify the amount to which students have met the objectives and provide feedback on their progress.

Misalignment of these aspects can cause confusion and inefficiency in the learning process. For example, if assessments do not appropriately represent learning outcomes, students may focus on areas that are not crucial to their performance, perhaps leaving gaps in knowledge and abilities. Furthermore, well-aligned exams give trustworthy data on student performance, ensuring that evaluations are focused on the intended learning objectives rather than extraneous elements. This alignment is also critical for sustaining academic integrity since it assures that all students are judged fairly, using the same established standards.

In short, the alignment of learning outcomes, instructional materials, and assessments is essential for delivering a unified and effective educational experience. It ensures that all parts of the course work together to accomplish the targeted educational results, so supporting both student achievement and the educational program's overall aims.



Co-funded by
the European Union



eSleep_dHealth

3. Curriculum Assessment Design

The framework for curriculum assessment and evaluation will be a mixed-method study based on the Kirkpatrick Model to provide a multidimensional representation of the effectiveness of the eSleep_dHealth course. This methodology assesses both formal and informal training methods. The Kirkpatrick Model is a widely used framework for evaluating the effectiveness of training and educational programs, including online courses. It consists of four levels:

1. Reaction: How participants feel about the training (satisfaction, engagement).
2. Learning: The degree to which participants acquire the intended knowledge, skills, and attitudes.
3. Behavior: The extent to which participants apply what they learn in the following courses or projects.
4. Results: The overall impact of the new course on the organization or individual's performance.

In our study we will focus on the first three levels, with a short data collection for the fourth level. The reason for that is a relatively short time between the end of the pilot year and the end of the project.

- (i) For the reaction we will use quantitative data based on satisfactory surveys after modules;
- (ii) For the learning level we use a pre-post evaluation to assess perceptions about learning in each module, combined with academic results of the modules (formative and summative assessment integration)
- (iii) For the behaviour level, we will use qualitative data based on focus groups designed to explore and document the participants' experience in the training programme and the transferability of this knowledge in their academic and professional contexts.

Mixed methods provide a fuller understanding of the program by integrating numerical data with rich, contextual insights.

Quantitative data can reveal trends and measure outcomes, while qualitative data can explain why those trends occur and explore participants' experiences in depth. Moreover, this approach allows for triangulation, where findings from different methods are cross-verified, increasing the validity and reliability of the evaluation as conclusions. Mixed methods can adapt to the complexities of online programs by allowing evaluators to respond to emerging issues during the evaluation

process. For example, if quantitative data shows a drop in engagement, qualitative methods can be used to explore the reasons behind it.

By combining qualitative and quantitative methods, evaluators can gain insights into both the learning outcomes and the learning processes. Quantitative methods might show that a particular module is effective, while qualitative feedback could reveal specific aspects of the module that contribute to its success.

These benefits make mixed methods a robust choice for evaluating new online programs, ensuring that both the outcomes and the learner experiences are thoroughly understood.

3.1. Level 1: Learners' feedback/satisfaction about the eSleep_dHealth training programme

To assess how individuals reacted to the training model we will use a questionnaire that will include questions from 9 dimensions: Satisfaction, Content, Skills, Tasks, Activities Engagement, Workload, Methodology, Instructors and Assessment. The questionnaire will consist of about 20 5-point Likert scale questions and several open questions regarding the students' perceptions. A Likert scale is a popular method for measuring attitudes, opinions, or perceptions in surveys. Students will be asked to indicate their level of agreement or disagreement with a statement on a multi-point scale.

A 5-point Likert scale typically includes five response options, ranging from one extreme to another:

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly Disagree.

The questions to assess Level 1 (Learners' feedback/satisfaction) will cover various aspects such as satisfaction, content, skills, tasks, activities, engagement, workload, methodology, instructors, and assessment. For example:

Satisfaction

1. Overall, I am satisfied with the training program.
2. The training program met my expectations.

Content

3. The content provided in the training was relevant to my needs.



Co-funded by
the European Union



eSleep_dHealth

4. The content was well-organized and easy to follow.

Skills

5. The training helped me acquire new skills or improve existing ones.

6. I feel confident in applying the skills learned during the training.

Tasks

7. The tasks and assignments were relevant to the learning objectives.

8. The tasks provided a good challenge without being overwhelming.

Activities

9. The activities were engaging and helped reinforce the learning material.

10. The variety of activities kept me interested throughout the training.

Engagement

11. I was actively engaged in the training sessions.

12. The training encouraged participation and interaction among participants.

Workload

13. The workload was manageable within the given timeframe.

14. The amount of work required was appropriate for the course level.

Methodology

15. The teaching methodology used was effective for my learning style.

16. The combination of lectures, activities, and discussions was well-balanced.

17. I found the learning platform easy to navigate.

Instructors

18. The instructors were knowledgeable about the subject matter.

19. The instructor provided clear and helpful explanations.

Assessment

20. The assessments accurately reflected the content and skills taught.

21. The feedback on assessments was timely and constructive.

These questions can be used to gather detailed feedback from learners about their satisfaction and experiences with various aspects of the training program. The responses can then be analyzed to identify strengths and areas for improvement.

It is important to keep surveys concise and only ask essential questions. For qualitative data, we will be conducting brief, focused interviews and selecting a small representative sample for in-depth qualitative analysis.

Both quantitative and qualitative data at Level 1 are typically self-reported, which can be subject to bias. Participants may provide socially desirable responses rather than honest feedback. We will ensure confidentiality to encourage honest feedback. We will also triangulate self-reported data with course engagement analytics provided by the Moodle Mod platform which will host the eSleep_dHealth programme to cross-validate findings.

We will communicate the purpose and importance of the evaluation to students and explain how their feedback will be used to improve the course. This will increase engagement and the quality of responses.

3.2. Level 2 Learning: The degree to which participants acquire the intended knowledge, skills, and attitudes

When applying a mixed-methods study to assess Level 2: Learning in the Kirkpatrick model, the goal is to evaluate how well participants have acquired the intended knowledge, skills, and attitudes after completing the training program.

Quantitative methods will include pre- and post-tests, quizzes, or assessments that measure the improvement in knowledge and skills. The results will provide numerical data that can quantify learning gains across the participant group.

Qualitative methods will include interviews, focus groups, and open-ended survey questions. This approach helps to explore how participants perceive their learning, the challenges they faced, and how they intend to apply what they've learned. It provides depth and context to the quantitative data.

We are aware that there are challenges in using mixed methods. One of the primary challenges is effectively integrating quantitative and qualitative data to ensure that both types of data inform each other and contribute to a cohesive understanding of learning outcomes.

Mixed-methods evaluations are resource-intensive. Collecting and analyzing both quantitative and qualitative data can be time-consuming and require more resources than using a single method.

Interpreting mixed data can be complex, especially when quantitative and qualitative findings appear to contradict each other. Reconciling these differences requires careful analysis and possibly further investigation.

We will also try to avoid burdening students. Gathering data through multiple methods can place a significant burden on participants, particularly if they are required to complete tests, and surveys, and participate in interviews or focus groups. This can lead to lower response rates or incomplete data.

We will focus on the most important learning outcomes for eSleep_dHealth program's goals. This will help manage the scope of our study and ensure that the most critical aspects of learning are evaluated. We will use a sequential explanatory design where quantitative data is collected first, followed by qualitative data to explain or elaborate on the findings. This can make the integration of data more straightforward.

As Design Thinking is a methodology that our partnership uses in many steps of the eSleep_dHealth project, we will follow one of the key aspects of that methodology namely fast piloting of the prototype result. We will thus test our surveys, assessments, and interview guides with a small group before rolling them out to ensure they are clear, reliable, and valid. This will help identify potential issues that could affect the quality of the data collected.

We will keep surveys and assessments as concise as possible, and clearly explain the purpose and importance of each component to participants. We will focus on obtaining the most critical and actionable insights, rather than trying to measure everything.

Previous experience pointed to the importance of starting to analyze data early on, as soon as it is collected. This will help us refine questions or identify themes which can be explored further in ongoing data collection.

Specifically, we will use a pre-post evaluation through a self-report knowledge questionnaire 4-point Likert scale based on the specific learning outcomes of each module.

- 1 = I'm not able to do it,
- 2 = I'm partially able to do it,
- 3 = I'm able to do it, and
- 4 = I'm able to teach it to a friend

Designing survey questions to quantitatively test the achievement of learning outcomes at Kirkpatrick Level 2 involves creating specific, measurable, and relevant questions that align closely with the intended learning outcomes of the program.

We will create survey questions that directly relate to each learning outcome.

For skill-based outcomes, we will use scenario-based questions that require participants to indicate how they would apply what they've learned in a given situation. This will more accurately reflect their ability to use the skills in real-world contexts.

We will also add open-ended questions at the end where students can reflect on their learning, providing context for their quantitative answers.

3.3. Level 3: Attitudes and behavioural changes due to the training programme

Level 3 of the Kirkpatrick Model focuses on evaluating the degree to which participants apply what they have learned during the training when they are back on the job or in real-life situations. This involves assessing changes in behavior and attitudes, which are more complex to measure than the immediate learning outcomes assessed at Level 2. A mixed-methods approach is particularly useful for this level because it allows for a comprehensive evaluation that combines quantitative data on behavioral changes with qualitative insights into why and how these changes occurred.

Challenges in Assessing Level 3

1. Behavioral change takes time. We will thus schedule follow-up evaluations at a later time, e.g. 2-3 months after training, to capture longer-term changes. Here, we are constrained by the duration of the project itself.
2. Self-reporting bias: many assessments at Level 3 rely on self-reporting, which can be biased. Participants may overestimate their behavioral changes or report what they believe the evaluators want to hear. We will thus triangulate self-reported data with peer feedback, or observation, to reduce bias and provide a more accurate picture of behavioral changes.

For this level, we will design a specific survey with questions related to the expected behavioral changes. Then, we will conduct a focus group in each University with 7-10 students that finished the entire programme (3 online modules and 2 learning expeditions – innovation sprints) to ascertain:

- 1) their perceptions regarding the impact of the training received in their gain of knowledge and skills and,
- 2) the transferability of this knowledge to their academic and professional life.

To obtain information, a semi-structured interview will be conducted, and we will use a pre-set list of questions as a guide.

The objective of this qualitative approach is to acquire a comprehensive understanding of social issues by investigating the opinions, knowledge, perceptions, and concerns of individuals about the eSleep_dHealth program. A moderator will facilitate the group discussion by directing the participants through a sequence of open-ended queries. The sessions will be recorded, and the conversations will be transcribed using thematic axes to ensure anonymity and confidentiality. Informed consent will be implemented.

Here are some examples of the focus group questions:

- **Question:** "Can you describe a specific situation where you applied the skills you learned in this training? What was the outcome?"
 - **Moderator note:** Encourage participants to share detailed examples. If they struggle, ask them to think about recent work tasks where the training might have been useful.
- **Question:** "What challenges have you encountered when trying to apply what you learned from the training in your work?"
 - **Moderator note:** Ask for examples and delve into whether these challenges are personal, organizational, or related to the training itself.
- **Question:** "Did you feel you had enough support or resources to implement the skills and knowledge from the training? What additional support might have helped?"
 - **Moderator note:** Probe into organizational support systems, availability of resources, and any gaps that might have hindered the application of learning.
- **Question:** "Were there any outcomes from the training that you didn't expect? How have these outcomes influenced your work?"
 - **Moderator note:** This question helps uncover any positive or negative changes that participants didn't foresee, providing insights into the broader impact of the training.
- **Question:** "Based on your experience, what improvements would you suggest to enhance the application of the training in real-world scenarios?"
 - **Moderator note:** Encourage constructive feedback focused on making the training more applicable and effective in practice.

These questions aim to explore the behavioral changes and attitudes of participants following the completion of an online training program. The role of the moderator is to guide the discussion, probe deeper into responses, and ensure that the conversation remains focused on assessing behavioral changes due to the training.

Focus groups will be conducted at three universities with participants who have completed the course. Each focus group will use the same set of carefully crafted questions to ensure consistency in the data collected. To guarantee that all focus groups are moderated and conducted in the same manner, thorough preparation is required. This includes creating a standardized moderator guide that details the questions, follow-up prompts, and procedures for managing the discussion. Moderators will undergo training sessions to align on the approach, ensuring they understand the goals of the focus group, how to encourage balanced participation, and how to handle any challenges that may arise. This uniformity is crucial to ensure that

the data collected is comparable across the three universities, allowing for a more reliable and valid evaluation of the program's effectiveness across different settings. Standardizing the process also reduces the potential for bias and variability that could arise from different moderating styles or environments, ensuring that the findings reflect genuine differences or similarities in participant experiences rather than inconsistencies in the data collection process.

3.4. Level 4: Results: The overall impact of the new course on the organization or individual's performance

The fourth level of the Kirkpatrick Model is dedicated to evaluating the outcomes that resulted from the training, with a particular emphasis on the return on investment (ROI) and organizational impact. This level aims to ascertain whether the new course has resulted in substantial outcomes that are consistent with the organization's objectives, including increased productivity, enhanced efficiency, higher employee satisfaction, or cost savings.

Analyzing the effects of an interdisciplinary, inter-university student course on the larger results for the participating institutions as well as on the knowledge and skills of the participants calls for a comprehensive assessment. Whether the course has met its expected objectives depends critically on the Level 4 evaluation of the Kirkpatrick Model, which investigates the observable outcomes of the training in a larger context. These objectives for this course can be better interdisciplinary abilities among students, increased university cooperation, expanding the university network, wider application of innovative teaching designs, and more funding for the partner Universities through national or European grants. Using a mixed-methods approach, this assessment will integrate qualitative views from academics, students, and institutional stakeholders with quantitative assessments of project results.

Quantitative Data Collection and Analysis

We will agree upon and measure relevant Key Performance Indicators (KPIs) that reflect the desired larger outcomes of designing and implementing eSleep_dHealth course. These will include metrics such as using innovative teaching methods, the existence of interdisciplinary and inter-university courses, student satisfaction ratings, or financial metrics such as new funding applications. As mentioned in the beginning, due to the project duration, some of the KPIs will be difficult to assess before the end of the project. We will address that by monitoring, for instance, funding applications and not receiving funding as the decisions will come after the project ends.

Qualitative Data Collection and Analysis

Semi-structured interviews will be conducted with key stakeholders, including managers, team leaders, and course participants, to obtain a better understanding of the perceived impact of the course on organizational outcomes. To recognize recurring themes and patterns in the qualitative data, thematic analysis will be implemented. This analysis will assist in revealing the subjective experiences and observations of stakeholders with respect to the course's impact.

Interviews will be analyzed using cross-case synthesis to identify commonalities and differences in outcomes across different groups. This analysis will help to illustrate how the course's impact varies in different contexts.

Integration of Quantitative and Qualitative Data

The quantitative and qualitative data will be incorporated using a convergent parallel design to provide a comprehensive evaluation of Level 4 (Results). This method entails the analysis of both quantitative and qualitative data in isolation, followed by a comparison and contrast of the results to derive general conclusions. Themes and insights from the qualitative data will be contrasted to the results of the quantitative KPI and ROI analyses. This comparison will assist in the validation of the quantitative results and will offer a more profound comprehension of the factors that either facilitate or impede the attainment of organizational objectives. As in the procedures previously described, the credibility and validity of the findings can be improved by triangulating the data from multiple sources, thereby ensuring that the evaluation encompasses the complete spectrum of course outcomes.

Focusing only on positive outcomes can present a biased view of the course's impact and also hide the gaps where the greatest potential for improvement lies. We will thus intentionally seek out and analyze any negative or unintended consequences during both quantitative and qualitative data collection and analysis.

4. Data Analysis

For the Learners' feedback/satisfaction about the training programme, quantitative data will be processed descriptively by calculating the percentage and creating the categorization. The questionnaire of the first level will also include open questions regarding the students' perceptions, which will be analysed and categorised into positive aspects and improvement suggestions.

Statistical analysis

The JASP program will be employed to conduct a statistical analysis of the learning that has been accomplished during the training program. It provides comprehensive statistical tools while also offering user-friendly interfaces. The mean and standard deviations of the Likert-type survey questions will be calculated to quantify the numerical results of the satisfaction surveys after each module.

Descriptive statistics will be implemented initially to compute the mean and standard deviation of the pre-course and post-course outcomes. The Shapiro-Wilk test for normality will be implemented to determine whether the sample exhibited a normal distribution. The hypothesis that the post-test mean was substantially higher than the pre-test mean will be validated by conducting T-tests or Mann-Whitney tests in cases of deviation from normality. Cohen's d value will be employed to determine the effect magnitude.

Qualitative analysis

The textual analysis of the focus group will be carried out based on the assumptions of a thematic analysis, within a descriptive/exploratory perspective (Braun and Clarke, 2006; Miles and Huberman, 1994), configured around four key aspects: simplification of the data; segmentation based on thematic axes; categorisation and thematic coding; and analysis of results structured in a map of meanings.

5. Set of Recommendations

Designing meaningful curriculum assessment and evaluation and incorporating findings from curriculum assessments is essential to ensure continuous improvement and alignment with learning goals. Below are recommendations for integrating assessment results into curriculum development:

1. Align curriculum content with desired learning outcomes

Revisit learning outcomes and ensure they align with the assessment findings. If assessment results show gaps in certain competencies, modify the curriculum to emphasize those areas. For example, if students underperform in a particular skill, include more targeted materials or practical exercises.

2. Update assessment methods

Ensure that assessment methods reflect the intended learning outcomes. If assessments do not adequately measure student progress, adjust them to capture key skills, knowledge, and attitudes more accurately.



Co-funded by
the European Union



eSleep_dHealth

3. Strengthen teaching strategies

Use assessment results to inform teaching strategies. For example, if assessments show that certain teaching methods are less effective, explore new pedagogical approaches such as flipped classrooms, case-based learning, or blended learning environments to engage students better.

4. Encourage continuous feedback

Foster a culture of constructive feedback between students, instructors, and curriculum developers. Periodic assessments during the course can provide real-time feedback, allowing for curriculum adjustments while the course is ongoing.

5. Integrate real-world applications

If assessments reveal a gap between theoretical knowledge and practical application, introduce more opportunities for students to apply their learning in real-world contexts through case studies, simulations, or internships.

6. Adjust course workload and structure

If assessment data shows that students are overwhelmed or under-challenged, adjust the course workload and structure. This may involve redistributing content across modules or adjusting deadlines to enhance the learning experience.

7. Implement pilot programs

Before fully implementing significant curriculum changes, pilot the adjustments with a smaller group of students to evaluate the impact of the changes on learning outcomes. Use the feedback from this pilot to refine the changes before a full-scale rollout.

8. Assess technological effectiveness

Evaluate the technology platforms used in the course. This includes assessing usability, accessibility, and technical support for students and instructors. Surveys or focus groups can reveal any barriers students face due to technology and help identify areas for improvement.

9. Include instructor evaluation

Evaluate the effectiveness of the instructors through student feedback, peer reviews, and self-assessment. Examine areas like clarity of instruction, engagement, responsiveness, and support provided to students. This will help identify areas where instructors may need additional support or training.

10. Include longer-term post-course evaluations

Conduct post-course evaluations to measure longer-term retention and the practical application of skills and knowledge. This could involve follow-up surveys or interviews.



Co-funded by
the European Union



eSleep_dHealth

conducted several months after the course has ended to assess how effectively students have applied what they learned in real-world scenarios.

12. Foster a feedback loop

Implement a structured feedback loop where evaluation results are used to refine and improve the course consistently. Share the findings with instructors, curriculum designers, and other stakeholders to inform curriculum adjustments, professional development, and course design improvements.

13. Ensure transparency

Make the evaluation process transparent to students and faculty. Share the purpose of the evaluation and how the data will be used, and provide feedback on the evaluation-driven changes. This transparency fosters trust and encourages more honest and thoughtful feedback.

6. Conclusions

The Kirkpatrick Model will reveal the multidisciplinary, interuniversity student course's effectiveness across several dimensions and its tangible results. We can quantify student achievement, interdisciplinary collaboration, and institutional outcomes while recording participants' and stakeholders' perspectives using a mixed-methods methodology.

This evidence-based evaluation will guide educational program improvements instead of just reviewing past achievement. The collected and evaluated data will provide a clear, objective foundation for future course versioning. As education adapts to a more complicated and interconnected world, evidence-based innovation will be more important than ever.

Evidence-driven innovation will guarantee that new programs and experiences are well-designed and have verifiable benefits for students, teachers, and institutions. We will find what works, understand why, and make informed decisions to improve education by carefully analyzing it. This course review will inform and inspire future educational innovations to be impactful, sustainable, and future-oriented.