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Erasmus+ project

Development of Courses for Sustainable Waste Management for Municipalities

[ENCOURAGE]

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Result 4: Training materials for courses for sustainable waste management”

Report on Beta Testing of Encourage Interactive E-Learning platform

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1.RESULTS OF THE BETA TESTING

The quality of training materials is vital for effective education, particularly in specialized fields like waste management. Respondents rated the overall quality of training materials on a scale of 1 to 5, with most giving it a top score. A poll was conducted to assess the adequacy of training materials in addressing waste management challenges, with the majority expressing satisfaction. Clarity and understandability are crucial aspects of any course, and all participants found the modules well-organized and easy to understand. The structure and layout of the training materials received positive ratings, though some participants suggested room for improvement. Participants had mixed responses regarding navigation between course topics and modules, indicating potential areas for enhancement. Multimedia resources were highlighted as effective elements in understanding waste management issues. The training materials were generally perceived as adapted to participants' diverse levels of experience and knowledge. They were also considered up-to-date with the latest information and regulations. The presentation of training materials was unanimously rated as attractive, contributing to a positive learning experience. The course was deemed to contain sufficient practical examples and case studies to support learning. Additional resources provided were perceived as beneficial for enriching the learning journey. Participants expressed confidence in the course's potential to develop or consolidate their knowledge of waste management. The training platform received high satisfaction ratings for accessibility and ease of use. Navigation on the platform was considered intuitive, enabling easy access to training materials. The platform was found to be flexible in adapting to participants' learning preferences and time constraints. Technical aspects of the platform, such as content loading and multimedia performance, were rated positively. Platform accessibility across various devices was generally agreed upon, with the majority reporting availability on different devices. Overall, the evaluation highlights positive perceptions of the training materials, course structure, platform usability, and accessibility, with areas for potential improvement identified through participant feedback.

1.1THE OVERALL QUALITY OF THE TRAINING MATERIALS

The quality of training materials plays a crucial role in the effectiveness of any educational program, particularly in specialized fields such as waste management. The respondents were asked to rate the overall quality of the training materials that are available on the Encourage Education Module. Their answers were evaluated using a scale from 1 to 5, with 1 being the lowest and 5 being the highest score.

The distribution of responses given by the respondents is shown below.



1. How would you rate the overall quality of the training materials available for the waste management specialist course?

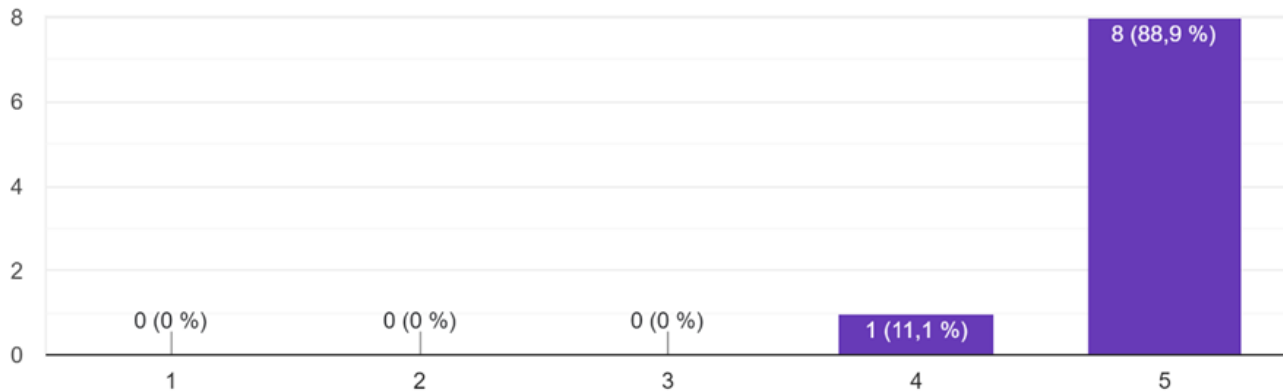


Fig. 1: The distribution of scores given by the respondent on overall quality of the training materials.

The results indicate that the majority of respondents, rated the overall quality of the training materials for the waste management specialist course as excellent (score 5). Only one respondent rated it as good (score 4), suggesting a high level of satisfaction among the participants that took a part in the course. The materials appear to have met or exceeded the expectations of the learners, contributing positively to their learning experience and knowledge acquisition.

Based on the poll results, it can be concluded that the overall quality of the training materials available for the waste management specialist course is highly rated by the participants. The positive feedback suggests that the materials are comprehensive, well-structured, and effectively designed to facilitate learning in the field of waste management.

1.2 TRAINING MATERIAL ADEQUACY FOR WASTE MANAGEMENT

Adequate training materials are vital for addressing themes and problems encountered in waste management work. They help professionals to gain the necessary knowledge and skills to address topics such as environmental sustainability and regulatory compliance.

A poll was conducted to assess the adequacy of training materials in addressing themes or problems encountered during work on waste management.



2. Did you find that training materials cover all the themes or problems you face during your work on waste management?

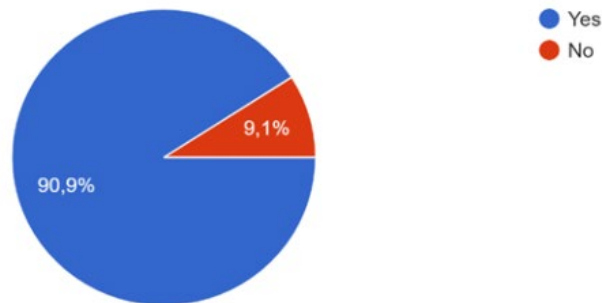


Fig. 2: Assessment of training material adequacy in addressing all the topics on waste management.

The results indicate that 90.9% of all the respondents answered by »Yes« when asked if they found the training materials covering all themes or issues they face during their work on waste management. Only 1 respondent, accounting for 9.1% of the total, answered »No.« **This suggests a strong consensus among the majority of respondents regarding the adequacy of the training materials in addressing waste management challenges. Still, the feedback from the minority suggests room for improvement to better meet the diverse needs and challenges in the field of waste management.**



1.3 ASSESSMENT OF COURSE CLARITY AND UNDERSTANDABILITY

Clarity and understandability are fundamental aspects of any educational course, because when course materials are presented adequately, students can grasp concepts more readily, engage with the content more deeply, and retain information more effectively. Ultimately, prioritizing clarity and understandability in course design enhances overall student satisfaction, comprehension, and success in achieving learning objectives.

3. In your opinion, do the proposed thematic modules organise the knowledge presented in the course clearly and understandably?

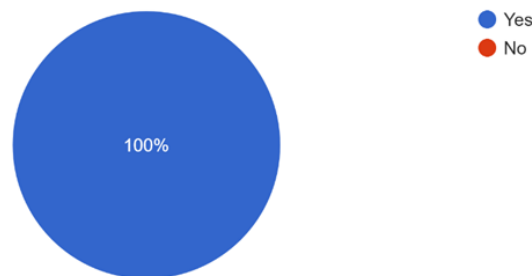


Fig. 3: Assessment of training material adequacy in addressing all the topics on waste management.

All the participants answered that the modules are well organized and that the course content is presented in a clear and understandable manner.

1.4 STRUCTURE AND LAYOUT OF THE TRAINING MATERIALS

The next question in the poll aimed to gather feedback on the structure and layout of training materials provided in the course. Participants were asked to rate their perception of these materials, providing valuable insight into their effectiveness in facilitating learning experiences.



4. How would you rate the structure and layout of the training materials?

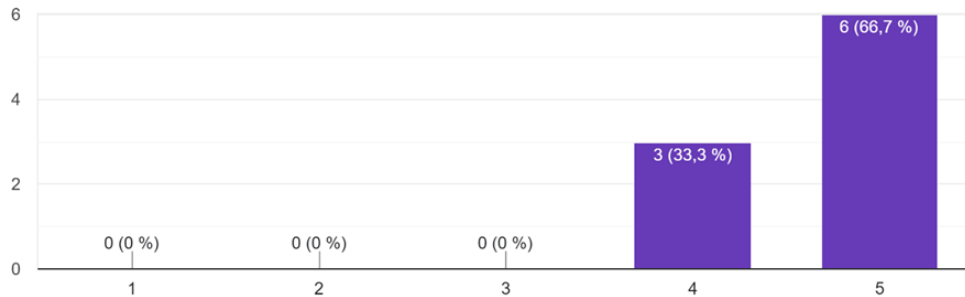


Fig. 4: Assessment of training material structure and layout.

The results indicate a varied response among participants regarding the structure and layout of the training materials. While a significant portion (66.7%) rated the materials with the grade 5, indicating a high level of satisfaction, a notable minority (33.3%) rated the structure of the training materials with 4. This suggests that a majority of participants found the structure and layout of the materials to be effective and well-organized. However, there is still room for improvement, as a portion of participants rated them slightly lower. **Further analysis and feedback from these participants could provide valuable insights into areas for enhancement to better meet the diverse needs of learners.**

1.5 EVALUATION OF NAVIGATION BETWEEN COURSE TOPICS AND MODULES

The purpose of this question was to evaluate participants' experiences with navigating between different topics and modules within a course. Participants were asked to assess the ease of navigation between these components, providing valuable feedback on the user-friendliness and accessibility of the course structure.

5. Was it easy to navigate between the different topics and modules?

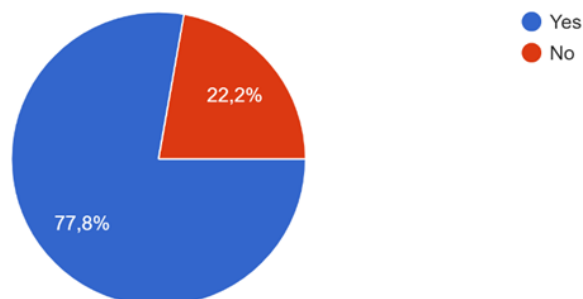


Fig. 5: Assessment of navigation between course topics and modules.

The results illustrate a mixed response among participants regarding the navigation between different topics and modules. While the majority (77.8%) reported finding it easy to navigate, a significant



minority (22.2%) expressed that they found navigation difficult. This suggests a need for improvement in enhancing the course's navigational aspects to better accommodate participants' preferences and facilitate smoother transitions between topics and modules.

One participant highlighted a disadvantage that not all modules have the same structure. He also suggested that it would be helpful if advancement to subsequent topics would be enabled only upon the completion of preceding ones, thereby promoting successive completion of the course.

1.6 IDENTIFYING EFFECTIVE TRAINING MATERIAL ELEMENTS FOR UNDERSTANDING WASTE MANAGEMENT ISSUES

The aim of the following evaluation is to identify the elements of the training materials that participants find most helpful in understanding waste management issues. Participants were presented with various options and asked to select the elements that they consider beneficial for enhancing their comprehension of waste management concepts.

Most of the participants highlighted the effectiveness of multimedia resources such as videos, PowerPoint presentations, and quizzes in facilitating comprehension. Specific mentions were made of the usefulness of resources related to circular economy concepts and waste disposal.

1.7 ASSESSMENT OF TRAINING MATERIAL ADAPTATION TO PARTICIPANT DIVERSITY IN WASTE MANAGEMENT COURSE

The participants were asked to assess their perceptions regarding the adaptability of training materials to the varying levels of experience and knowledge among them in the waste management course. They had to indicate whether they believe the training materials were effectively adapted to the diverse backgrounds and expertise of the course participants.

7. Are the training materials adapted to the different levels of experience and knowledge of participants in the waste management course?

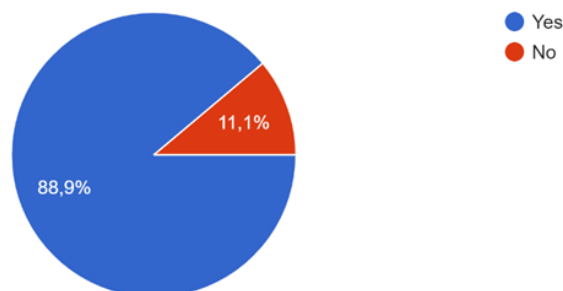


Fig. 6: Assessment of training material adaptation for diverse participant levels in waste management



course.

The results reveal a prevailing sentiment among participants indicating that the training materials is adequately tailored to accommodate the varying levels of experience and knowledge within the waste management course. The majority of respondents (88.9%) expressed a positive opinion, suggesting that they feel the materials sufficiently address the diverse backgrounds and expertise of participants. **In contrast, a small minority (11.1%) reported a negative perception, indicating that they believe the materials are not appropriately adapted to the differing levels of experience and knowledge.**

1.8 LATEST INFORMATION INCLUDED IN THE TRAINING MATERIALS

The participants were asked to evaluate their perceptions regarding the currency of information and adherence to regulations in the training materials related to waste management. They were asked whether they believe the materials accurately reflect the latest information and regulations in the field.

8. Do the training materials reflect the latest information and regulations on waste management?

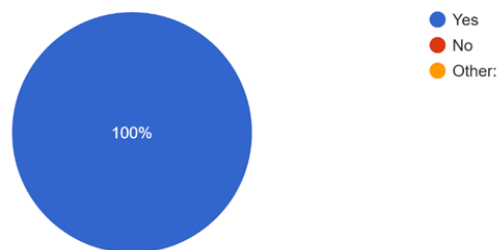


Fig. 7: Assessment of training material: is it up-to-date?

The results indicate a unanimous agreement among participants that the training materials reflect the latest information and regulations on waste management. This outcome underscores the importance of providing up-to-date information and adhering to regulatory standards in educational materials, ensuring that participants receive accurate and relevant content to support their learning in the field of waste management.

1.9 EVALUATION OF TRAINING MATERIAL PRESENTATION: ASSESSING ATTRACTIVENESS

The aim was to evaluate participants' perceptions regarding the presentation of training materials in terms of attractiveness. Participants were asked to assess whether they found the training material to be presented in an appealing and engaging manner.



9.Has the training material been presented in an attractive form?

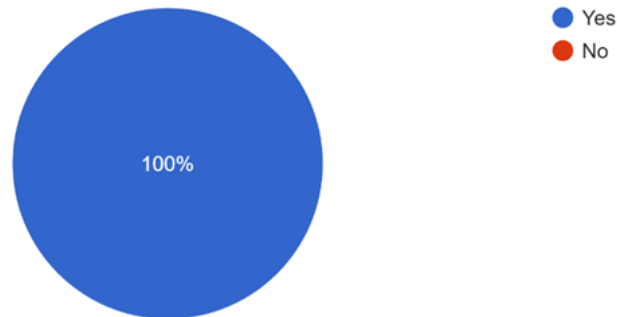


Fig. 8: Evaluation of Training Material Presentation: Assessing Attractiveness

The results indicate a unanimous agreement among participants that the training material has been presented in an attractive form, with all respondents (100%) answering affirmatively. This outcome suggests that the presentation of the material successfully captured participants' attention and contributed to a positive learning experience. An attractive presentation style can enhance engagement and retention of information, ultimately facilitating effective knowledge transfer in educational settings.

1.10 ASSESSMENT OF PRACTICAL EXAMPLES AND CASE STUDIES IN COURSE CONTENT

This question aims to evaluate participants' perspectives on the inclusion of practical examples and case studies within the course content. Participants were asked to evaluate whether they believe the course provides an adequate number of practical examples and case studies to support their learning experience.



10. Does the course contain enough practical examples and case studies?

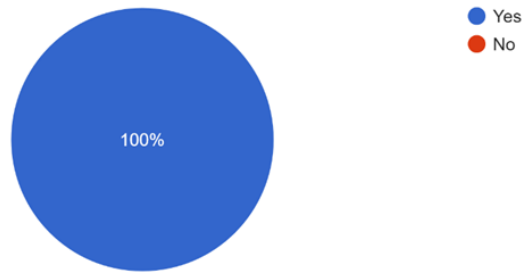


Fig.9: Assessment of Practical Examples and Case Studies in Course Content

The results reveal a unanimous consensus among participants, with all respondents (100%) indicating that the course does indeed contain enough practical examples and case studies. This outcome suggests that participants perceive the course content to be rich in real-world applications, enhancing their understanding and application of theoretical concepts. The inclusion of practical examples and case studies is crucial for bridging the gap between theory and practice, allowing participants to contextualize their learning within relevant scenarios and develop practical skills applicable to their field of study.

1.11 EVALUATION OF ADDITIONAL RESOURCES IN COURSE CONTENT

This question aims to evaluate participants' perceptions regarding the availability of additional resources within the course, such as articles, videos, or links to supplementary material. Participants were asked to assess whether they believe the course adequately provides sufficient additional resources to complement their learning experience.

11. Does the course provide sufficient additional resources, such as articles, videos or links to additional material?

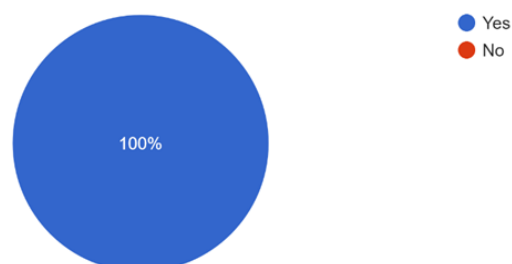




Fig.10: Evaluation of Additional Resources in Course Content

The results indicate a unanimous agreement among participants, with all respondents (100%) indicating that the course indeed provides sufficient additional resources. This outcome suggests that participants perceive the availability of supplementary materials such as articles, videos, and links to be comprehensive and beneficial for enriching their learning journey. Access to diverse additional resources can enhance participants' understanding of course topics, offer alternative perspectives, and facilitate deeper engagement with the subject matter. Overall, the provision of sufficient supplementary resources contributes positively to the overall learning experience within the course.

1.12 ASSESSMENT OF KNOWLEDGE DEVELOPMENT THROUGH THE COURSE

This question aims to assess participants' expectations regarding the potential impact of the course on their knowledge of Waste management. Participants were asked to indicate whether they believe the course will help to develop or consolidate their existing knowledge in this field.

12. Will the course help to develop or consolidate your knowledge of Waste Management?

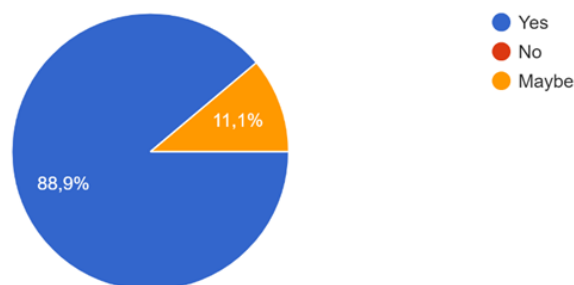


Fig.11: Assessment of knowledge development through the course

The results demonstrate a predominant belief among participants that the course will contribute positively to the development or consolidation of their knowledge of Waste Management. The majority of respondents (88.9%) expressed confidence in the course's ability to achieve this goal. This outcome suggests an overall positive outlook regarding the course's potential to enhance participants' understanding and proficiency in Waste Management. **The feedback provided by the minority expressing uncertainty may offer valuable insights for addressing any potential concerns and optimizing the course content to better meet participants' needs and expectations.**



1.13 ASSESSMENT OF TRAINING PLATFORM ACCESSIBILITY AND EASE OF USE SATISFACTION

The aim was to evaluate participants' overall satisfaction with the accessibility and ease of use of the training platform. Participants were asked to rate their satisfaction level on a scale from 1 to 5, with 1 indicating low satisfaction and 5 indicating high satisfaction, regarding the platform's accessibility and ease of use.

13. What is your overall level of satisfaction with the accessibility and ease of use of the training platform?

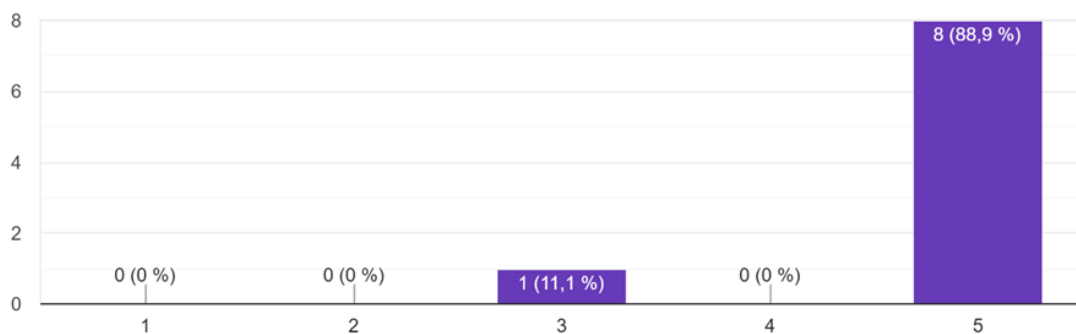


Fig.12: Assessment of training platform accessibility and ease of use satisfaction

The results indicate a high level of overall satisfaction among participants with the accessibility and ease of use of the training platform. The majority of respondents (88.9%) rated their satisfaction level as a 5, indicating a high level of satisfaction. One participant (11.1%) rated their satisfaction level as a 3, suggesting a moderate level of satisfaction. There were no respondents who rated their satisfaction level below 3. This outcome reflects positively on the platform's design and functionality, suggesting that it effectively meets the needs of the participants in terms of accessibility and ease of use. **The feedback provided by the participant with a moderate satisfaction level may offer valuable insights for potential improvements to further enhance the platform's usability.**

1.14 EVALUATION OF PLATFORM NAVIGATION FOR TRAINING MATERIAL ACCESSIBILITY

This question aimed to assess participants' experiences with navigating the platform and locating the



necessary training materials. Participants were asked to evaluate whether they found the navigation of the platform to be intuitive, facilitating easy access to the required training materials.

14. Was the navigation of the platform intuitive, allowing the training materials needed to be easily found?

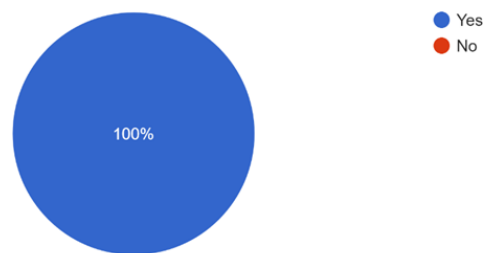


Fig.13: Assessment of platform navigation for training material accessibility

The results indicate a unanimous agreement among participants that the navigation of the platform was intuitive, enabling them to easily find the necessary training materials. All respondents (100%) reported a positive experience, indicating that they found the platform's navigation straightforward and effective. This outcome suggests that the platform's design and layout successfully facilitated seamless access to the training materials, contributing to a positive user experience. An intuitive navigation system is essential for optimizing the learning process, allowing participants to efficiently access the resources they need to support their education and skill development.

1.15 ASSESSMENT OF PLATFORM FLEXIBILITY IN ADAPTING TO LEARNING PREFERENCES AND TIME CONSTRAINTS

Participants' experiences with the platform in terms of its flexibility in adapting to their preferred pace of learning and time constraints was evaluated. Participants were asked to evaluate whether they found the platform conducive to easily adjusting the pace of learning according to their individual preferences and time capabilities.



15. Does the platform allow you to easily adapt the pace of learning to your preferences and time capabilities?

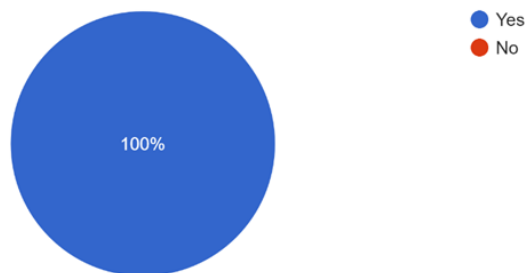


Fig.14: Assessment of platform flexibility in adapting to learning preferences and time constraints

The results reveal a unanimous agreement among participants, with all nine respondents (100%) indicating that the platform indeed allows them to easily adapt the pace of learning to their preferences and time capabilities. This outcome suggests that participants perceive the platform to be flexible and accommodating, enabling them to tailor their learning experience according to their individual needs and schedules. A platform that supports flexible learning pacing is essential for optimizing participant engagement and ensuring that learning objectives are effectively met, regardless of varying time constraints and preferences.

1.16 EVALUATION OF TECHNICAL ASPECTS QUALITY IN PLATFORM PERFORMANCE

This question seeks to gather participants' assessments of the technical aspects of the platform, specifically focusing on factors such as content loading and multimedia performance. Participants were asked to rate the quality of these technical aspects on a scale from 1 to 5, with 1 indicating low quality and 5 indicating high quality.



16. How would you rate the quality of the technical aspects of the platform, such as content loading, multimedia performance, for example?

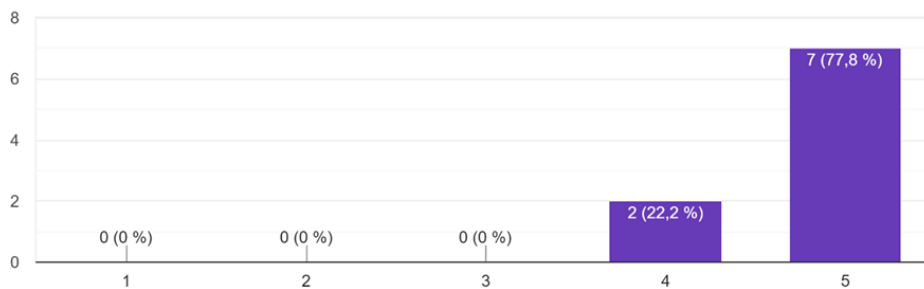


Fig.15: Assessment of technical aspects quality in platform performance

The results indicate a favorable overall assessment of the technical aspects of the platform among participants. The majority of respondents (77.8%) rated the quality as a 5, indicating high satisfaction with content loading, multimedia performance, and other technical features. Two participants (22.2%) rated the quality as a 4, suggesting a slightly lower but still positive evaluation. The absence of lower ratings suggests a general consensus that the technical aspects of the platform, including content loading and multimedia performance, are of satisfactory quality. **This positive feedback is crucial for ensuring a smooth and effective learning experience, emphasizing the importance of well-functioning technical elements in an educational platform.**

1.17 ASSESSMENT OF PLATFORM ACCESSIBILITY ACROSS VARIOUS DEVICES

This question aims to assess the accessibility of the platform across various devices, including computers, tablets, or smartphones. Participants were asked to indicate whether they found the platform available on different devices, allowing for flexibility in accessing the course materials.

17. Is the platform available on different devices such as computers, tablets or smartphones?

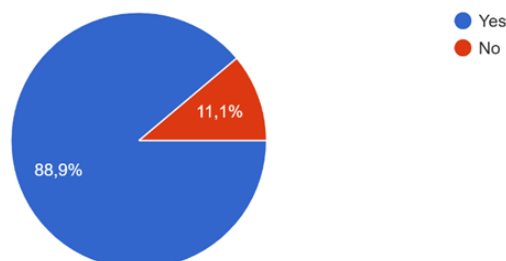


Fig.16: Assessment of platform accessibility across various devices



The results indicate a majority agreement among participants regarding the platform's availability on different devices. Eight participants (88.9%) reported that the platform is indeed accessible on various devices, highlighting its versatility and adaptability to different technological preferences. However, one participant (11.1%) indicated that they did not find the platform available on different devices. This discrepancy may reflect a potential limitation in device compatibility that could impact user accessibility for certain individuals. Overall, ensuring platform availability across multiple devices enhances accessibility and accommodates diverse learning preferences, contributing to a positive user experience.