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# EDUCATORS` REPORT ON APP USAGE

AUGUST, 2024



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## EXECUTIVE SUMMARY

The „Educators’ Report on App Usage“ presents a comprehensive analysis of research conducted between March and May 2024 by ME-App project partners from Austria, Germany, Poland and Slovenia. The research aimed to explore the usage of monitoring and motivational apps by educators running Active Labour Market Policy Programmes (ALMP-Ps) for unemployed adults facing psycho-social obstacles. The report's objectives were to assess the prevalence and practical use of these apps, identify the benefits and challenges of their usage and offer recommendations for app developers and educators.

The ME-App project itself is designed to develop an innovative app to assist unemployed adults to track and address psycho-social obstacles, such as mental and physical health issues or lack of motivation, which often contribute to prolonged unemployment. The app aims to empower users by providing tools for goal setting, mood tracking and motivational support. Educators, as key stakeholders in ALMP-Ps, play a vital role in integrating these tools into their programmes to help participants overcome obstacles and increase their chances of re-entering the workforce.

The research employed three primary methods: Desk Research, Paper and Pencil Interviews (PAPI), and Focus Group Interviews (FGI). Educators from the participating countries shared their experiences and insights through these methods, which provided a qualitative and quantitative understanding of the potential and challenges of using the ME-App in educational settings. The study included 37 educators in the PAPI research and 25 in the FGI research.

The report’s findings reveal several key insights:

App usage among educators in ALMP-Ps is still emerging, with some countries showing more familiarity and readiness to integrate digital tools than others. In Germany, educators demonstrated openness to using apps like ME-App as supplementary tools to traditional support methods, particularly for tracking sleep patterns, mood, and social interactions. In Austria, educators noted the potential benefits of self-reflection and mental health improvement through the app, although concerns about the distraction of mobile devices during lessons were raised. In Poland and Slovenia, familiarity with monitoring apps was lower, but educators showed interest in testing the ME-App, highlighting the need for simple, user-friendly designs tailored to different digital literacy levels.

Digital literacy and accessibility were identified as significant challenges across all countries. Not all participants have the necessary skills or access to technology, limiting the app's reach. Other concerns include data privacy, especially related to the collection of sensitive health data, and the app’s reliability. Ensuring compliance with GDPR and cybersecurity measures was highlighted as essential for both educators and app developers.



Despite the challenges, educators recognised the potential benefits of the ME-App. The app can offer personalised motivational messages, track psycho-social obstacles, and help unemployed adults stay focused on their personal development. Educators particularly valued the app's potential to provide continuous support and positive reinforcement, helping to build self-esteem and motivation among users.

The report concludes with several recommendations. For educators, comprehensive training on app functionality, data privacy and integration into their curricula is essential. Creating supportive environments where participants feel comfortable using the app and encouraging peer support can enhance engagement. For developers, the focus should be on simplicity, accessibility and robust data protection. Features like gamification and personalised goal-setting can help sustain long-term usage, while training materials and guidelines for educators should be developed to maximise the app's effectiveness in educational settings.

The report also recommends that the ME-App focus on monitoring specific psycho-social factors—tracking mood fluctuations, stress levels, and self-confidence—while providing tailored motivational content to help users overcome them. This targeted monitoring, combined with goal-setting and positive reinforcement features, would support users in addressing these key obstacles and improving their chances of (re-)entering the workforce.



## PART I. INTRODUCTION

This report presents the results of research conducted between March and May 2024 by project partners from training organisations in Austria, Germany, Poland and Slovenia. The research sought to gather information to understand educators' use – or potential use – of apps that would help their students, who are unemployed adults, monitor the psycho-social obstacles they face and receive motivational support in overcoming these obstacles. More generally, the research aimed to understand the current usage of apps by educators running ALMP-Ps.

### METHODOLOGY RESEARCH

The research methodology and instruments, including instructions, scenarios and questionnaires, were developed by the ADN Institute in cooperation with the other project partners. The implementation of the research in the partner countries was a collaborative effort among all 4 training partners with input from all partners, ensuring that technical and design issues were taken into account. The research employed three primary research methods: Desk Research, Paper and Pencil Interviews (PAPI) and Focus Group Interviews (FGI). Each training partner conducted desk research, anonymous PAPIs and FGIs in the form of workshops. National reports were prepared from these activities, encompassing data from 37 educators (19 women, 16 men and two who did not disclose their gender) in the PAPI research, and 25 educators in the FGI research.

The research was carried out based on three research methods:

- Desk research. analysis of existing data, searching for information, collecting and analysing secondary data. The results from the desk research were integrated into the FGI reports.
- FGI, focus group interviews, a discussion led by a moderator in a group of purposefully selected people, in groups of 6 to a maximum of 12 people according to a developed scenario.
- PAPI, paper and pencil interviews, the most well-known, traditional type of personal interview, during which the interviewer used a paper interview questionnaire, read the questions to the respondent and manually marked their answers.

### CONTEXT AND SIGNIFICANCE

Data analysis indicates that unemployment in Europe is significantly influenced by psycho-social obstacles. Mental health issues such as depression and anxiety are



prevalent among the unemployed, contributing to their prolonged joblessness. For instance, the European Commission's comprehensive approach to mental health highlights the substantial impact of mental health problems on unemployment rates across Europe. It reports that one in six EU citizens experiences mental health issues, which not only affect their personal well-being but also hinder their employability and productivity. This translates to a significant economic burden, with mental health problems costing the EU over €600 billion annually, equating to more than 4% of GDP.<sup>1</sup>

Additionally, psycho-social obstacles such as low self-esteem, lack of motivation and social isolation further exacerbate the challenges faced by the unemployed. These obstacles often lead to a vicious cycle where unemployment worsens mental health, which in turn makes it even more difficult to secure employment. This interplay underscores the need for integrated mental health and employment support services to help individuals overcome these obstacles and improve their chances of finding and maintaining employment.<sup>2</sup>

Addressing these psycho-social obstacles is critical for tackling unemployment in Europe. Programmes that offer psychological support, reduce stigma and enhance self-efficacy have shown promise in improving employment outcomes. Therefore, apps that help unemployed adults who are facing psycho-social obstacles to monitor their obstacles while also activating and motivating them are increasingly becoming integral to strategies that facilitate the activation process and, ultimately, their integration into the labour market.

Educators are essential in implementing and effectively using such apps in the ALMP-Ps they lead to assist their unemployed adults. In these roles, educators act as facilitators, mentors and gatekeepers, ensuring that the apps are used to their full potential to help unemployed adults overcome their psycho-social obstacles. By integrating these apps into their curriculum, educators can provide continuous support and monitoring, even after participants have left the programmes. The involvement of educators is critical in tailoring the apps to address specific needs, such as mental health challenges, motivation and social integration.

To ensure the app meets the expectations of educators, developers need to gather detailed insights from them about the practical challenges faced in ALMP-Ps. Educators can offer valuable feedback on user interface design, ensuring it is intuitive and accessible for users with varying levels of digital literacy. They can also

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<sup>1</sup> [https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/promoting-our-european-way-life/european-health-union/comprehensive-approach-mental-health\\_en](https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/promoting-our-european-way-life/european-health-union/comprehensive-approach-mental-health_en)

<sup>2</sup> <https://ec.europa.eu/newsroom/sante/items/791251/>



advise on the inclusion of motivational and empowerment features such as mood tracking, goal-setting and motivational content, which are crucial for maintaining user engagement and promoting mental well-being. Furthermore, educators can identify potential obstacles to app usage, such as internet access and device availability, and suggest solutions to mitigate these issues.

Educators' role as gatekeepers means they can facilitate the initial adoption and sustained use of the app by demonstrating its benefits to participants, providing training on its use, and integrating it into their teaching methods. Their endorsement can significantly influence participants' willingness to engage with the app, thereby enhancing its effectiveness. Moreover, educators can monitor progress and provide personalised feedback, making adjustments to the app's use as needed to better support individual learners. By collaborating closely with app developers, educators can help create a tool that is not only effective in the classroom but also supports continuous learning and personal development outside of it.

## AIM AND OBJECTIVES OF THE REPORT

This report aims to present a qualitative and quantitative analysis of the findings from the PAPI and FGI surveys among educators conducting ALMP-Ps with a view to highlighting the most crucial issues related to educators' usage of apps in ALMP-Ps for unemployed adults. Accordingly, the objectives of this report are analyse the results of the paper and pencil surveys to glean information relevant for app developers, and to analyse the results of the focus group interviews in order to:

1. Assessing the use of monitoring and motivational apps: Understand the prevalence and practical use of these tools among educators involved in teaching ALMP-Ps.
2. Identifying benefits and challenges: Determine the benefits educators perceive from using monitoring and motivational apps and the challenges they face.
3. Formulating recommendations: Collect recommendations based on educators' input about using apps in ALMP-Ps that are directly relevant for educators and for app developers.

## PRACTICAL IMPLICATIONS

This report offers valuable insights to aid in the development of apps tailored to the needs of unemployed individuals and the educators working with them. The



findings are also beneficial for labour market institutions, non-governmental organisations, policymakers and other stakeholders involved in projects for the unemployed. The collected data can be used to enhance tools and policies that support professional activation of unemployed adults, particularly for those struggling with psycho-social obstacles.

## PART II. FGI RESULTS

The FGIs were structured around several key themes to explore the challenges and opportunities in working with unemployed adults, particularly in relation to psycho-social obstacles and the potential use of a motivational phone app. The discussions among educators leading Active Labour Market Policy Programmes (ALMP-Ps) covered typical challenges they face, the specific psycho-social obstacles that they think hinder employment, and whether a phone app could be used in class to complement existing support structures like psychotherapy or social services. Educators were asked about their experience with phone apps in ALMP-Ps and the potential usefulness of such tools for different categories of unemployed adults. The interviews also explored the desired functionalities of a motivational and empowerment app, its reliability and any obstacles to its implementation, including data privacy and safety regulations. The overall aim was to gather insights from educators into how a phone app could be integrated into ALMP-Ps to better support unemployed individuals in overcoming psycho-social obstacles and improving their chances of (re-)entering the labour market.

Detailed results from the FGIs in each country are provided in the country reports.

The FGI study was conducted in Austria, Germany, Poland and Slovenia. A total of 24 people participated in the FGI studies. In Austria, the participants in the study consisted of one moderator and five educators who are connected by the experience with the target group. It was a very dynamic group, the participants were very open to talk and showed curiosity about the ME-App project. In Germany, the participants in the study consisted of 1 moderator and 6 educators with diverse backgrounds and substantial experience in working with unemployed individuals. 4 of the educators were male. All educators shared a common dedication to empowering and supporting unemployed people facing various socio-economic challenges. Additionally, one educator stood out for his enthusiasm and familiarity with using mobile apps, particularly the Selfappy app accredited by a German health insurance company, in his classes successfully. In Poland, the FGI was attended by one moderator and seven educators (4 women and three men), in each category of experience in ALMP-Ps. The participants were very active, eager to share their experiences. The educators were familiar with various health and





diet apps. They used some of them themselves, but they did not know any application dedicated to people struggling with psychosocial obstacles. In Slovenia, 1 moderator and 6 participants took part, participants of FGI included the following profiles included: Psychologist, Engineer in wood technology, Sociologist, Social worker, Human resource manager, Legal Professional. All participants have over 10 years' experience in working with adult population, specialised in rehabilitation and career orientation field, mentoring and educational settings (formal and non-formal). Purpose of the survey: Identify whether and under what circumstances adult educators running ALMP-Ps would use apps in class, what they know about challenges and opportunities of using apps in class, and what features they would like an app developed specifically for their students to have.

## **ASSESSING THE DEGREE AND MANNER OF USING MONITORING AND MOTIVATIONAL APPS**

### **GERMANY**

In Germany, the use of mobile apps in ALMP-Ps for unemployed adults is relatively nascent but showing promise. The educators expressed optimism about the potential benefits of apps, particularly the Motivation and Empowerment App. The discussion highlighted that apps could serve as a supplementary tool to traditional support structures provided by doctors, psychiatrists, psychologists and social care workers, albeit to a limited extent. Educators envisioned the app tracking progress in areas such as sleep patterns, mood fluctuations, social interactions and health behaviours. The consensus was that while apps might not be universally adopted by all participants, they could significantly benefit those who engage with them, fostering motivation, goal-setting and habit-building.

### **SLOVENIA**

In Slovenia, the use of digital tools by educators working with unemployed individuals varies significantly. The national network of employment offices offers a digital approach for job seekers, primarily for online registration, navigating job positions and services. However, specialised apps tailored for people with disabilities (PwD) are lacking. While online questionnaires and feedback tools are used, the integration of mobile apps specifically designed to monitor daily tasks, promote healthy lifestyles and support psycho-social well-being is minimal. Educators emphasised the need for simple, user-friendly designs tailored to the digital literacy levels of PwD.

### **AUSTRIA**

In Austria, educators have started incorporating mobile apps into the ALMP-Ps they run, with online dictionaries and training material apps being the most commonly used. The educators expressed confidence in the potential benefits of the



Motivation and Empowerment App, suggesting that it could, among other things, aid in self-reflection and mental health improvement for participants. However, the challenge of mobile device usage during lessons, due to potential distractions, was noted as a significant obstacle.

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## **POLAND**

The use of monitoring and motivational apps among educators in teaching ALMP-Ps is not widespread in Poland, despite their familiarity with various health and educational apps. The focus group involved seven educators (four females and three males) with extensive experience working with unemployed individuals, including those with disabilities. These educators are already familiar with apps like Garmin Connect, Fitatu and Duolingo, indicating a readiness to integrate similar tools into their professional practice if they are well-designed and user-friendly. They expressed interest in the ME-App project, showing a willingness to test the Motivation and Empowerment App themselves.

## **IDENTIFYING BENEFITS AND CHALLENGES**

In Germany, educators identified numerous benefits and challenges associated with the use of mobile apps, particularly the Motivation and Empowerment App, in their work with unemployed adults. They believe that such apps could significantly enhance motivation, facilitate goal-setting and promote habit-building among users. The potential of apps to supplement traditional support structures by tracking progress in critical areas such as sleep, mood, social interactions and health behaviours was highlighted. However, significant challenges were also noted. These include issues related to digital literacy and accessibility, with not all participants possessing the necessary skills or technology to use the apps effectively. Concerns about data privacy and the reliability of the app were also raised, emphasising the need for robust data protection measures. Additionally, the feasibility of integrating apps into group settings and addressing the diverse technological proficiency levels of participants were seen as considerable challenges.

In Slovenia, the focus group discussions revealed that mobile apps could support daily task management and promote healthy lifestyles among unemployed adults. The potential for facilitating remote learning and simple skills-building exercises through apps was also emphasised. Apps could provide positive reinforcement and empowerment through personalised goal tracking and motivational features. However, significant challenges were identified, particularly concerning digital literacy and the effective use of apps, especially for persons with disabilities (PWD). Ensuring a simple, user-friendly design that maintains motivation and engagement is crucial. Data privacy and safety regulations, including GDPR compliance, must also be strictly adhered to.



In Austria, educators noted several benefits of the Motivation and Empowerment App, underlining its potential to enhance mental health and well-being through self-reflection and personalised goal-setting. Planning and goal-setting tools, responsive feedback and gamified elements could make the app engaging and relevant to users. Educators could benefit from features that allow them to suggest topics for participants to work on. However, potential obstacles such as internet access and digital device availability were identified. Also, the distraction potential of mobile devices during lessons was a significant concern. Ensuring the app's reliability and robust privacy measures to maintain user trust and engagement was also highlighted as critical.

In Poland, the potential benefits of using monitoring and motivational apps in ALMP-Ps were highlighted by the educators. Personalised support was seen as a major advantage, as apps can provide tailored motivational messages and goal-setting features, helping individuals stay focused on their personal development. This includes tracking progress in areas such as diet, sleep and exercise, which can help users overcome psycho-social obstacles to employment. For individuals with limited physical mobility or social anxiety, apps were seen to offer a way to engage with educational content and support services remotely. Enhanced monitoring capabilities were also noted, as apps can help educators track various psycho-social obstacles that unemployed individuals face, such as mood and stress levels. By providing positive reinforcement, success stories and motivational quotes, apps were seen to boost users' self-esteem and motivation, which is crucial for those who may have experienced repeated failures and have low self-confidence.

The educators in Poland also identified several challenges. A significant obstacle to the adoption of apps is the varying levels of digital literacy among unemployed individuals. Some users may struggle with using new technology, which can hinder the app's effectiveness. Additionally, not all individuals have access to modern smartphones or the internet, limiting the app's reach. The app must also be designed to be accessible to people with disabilities, including visual and hearing impairments. Data privacy concerns were prominent, emphasising the need for robust data protection measures to ensure user trust and confidentiality. Maintaining long-term engagement with the app can also be challenging, as the initial fascination may wane over time. Therefore, the app must include features that sustain user interest, such as gamification and rewards.

## RECOMMENDATIONS

Based on these insights, several recommendations can be formulated for educators and application developers. For educators, providing comprehensive training and support is essential. Educators and participants should be educated on app functionality, data privacy and the benefits of app-based interventions. Training sessions to improve digital literacy and familiarity with app features should



be offered. Integrating app use into the curriculum in a structured manner can maximise engagement and benefit, using apps as supplementary tools alongside traditional teaching methods to track progress and enhance motivation. Creating a supportive environment where participants feel comfortable using apps is crucial. Encouraging peer support and buddy systems can further enhance motivation and engagement.

For application developers, designing for simplicity and accessibility should be a priority. The app should cater to individuals with varying levels of technological proficiency, ensuring it is easy to navigate with simple language and clear instructions. Emphasising scientific validity and reliability is also critical, with a focus on evidence-based approaches to tracking and addressing psycho-social obstacles. Robust data protection measures should be implemented to safeguard user privacy and confidentiality. Incorporating engaging features such as motivational messages, gamified elements and positive reinforcement can sustain long-term usage. Allowing for personalised goal-setting and progress tracking can keep users engaged and motivated. Accessible support channels should be provided for users to report issues and receive timely assistance, ensuring transparency in data usage and privacy measures to build user trust.

Instructions and a handbook for educators should include several key sections to facilitate the effective use of the app. A "Getting Started" section should provide step-by-step instructions on downloading, installing, and setting up the app, along with an overview of its features and functionalities. A "Using the App in Class" section should offer guidelines on how to integrate app usage into lesson plans and daily activities, along with tips for encouraging participant engagement and addressing potential distractions. A "Monitoring and Support" section should provide instructions on tracking participant progress and providing feedback, as well as strategies for addressing challenges related to digital literacy and accessibility. Finally, a "Ensuring Data Privacy" section should include information on data protection measures and ensuring participant privacy, along with guidelines on communicating data privacy assurances to participants.

Educators should receive training on how to use the app effectively and how to integrate it into their teaching methods. This training should also extend to participants to improve their digital literacy and comfort with the app. Incorporating the app into the curriculum in a structured manner is essential to ensure it complements traditional teaching methods. Creating a supportive environment where participants feel comfortable using the app is crucial.

For app developers, designing the app for simplicity and accessibility is paramount. The app must have a user-friendly interface that is easy to navigate, catering to individuals with varying levels of digital literacy and disabilities. Features like voice commands and simple, intuitive navigation are essential. Ensuring scientific validity and reliability is also important. The app should be based on evidence-based approaches to tracking and addressing psycho-social obstacles, including validated



self-assessment and personality tests. Incorporating engaging features such as gamified elements, motivational messages and positive reinforcement can sustain long-term usage. Rewards and incentives, such as virtual earnings that can be exchanged for real-world benefits, can help maintain user engagement. Robust data protection measures must be in place to safeguard user privacy. The app should require minimal permissions, and data should be automatically deleted after the end of the cooperation. Transparency about data usage is crucial for building trust. Providing accessible support channels for users to report issues and receive assistance is vital. A help desk or chat feature can help users navigate challenges and stay engaged with the app. Step-by-step instructions and tutorials can help users get started and reduce frustration.

## GENERAL CONCLUSIONS DRAWN FROM FGIS CONDUCTED AMONG EDUCATORS

The use of monitoring and motivational apps in ALMP-Ps for unemployed adults is gaining traction and shows promising potential, according to discussions with educators. A key trend is the recognition of apps as valuable supplementary tools that can complement traditional support structures provided by healthcare professionals and other social service providers. Educators believe these apps could effectively track various aspects of participants' lives, such as sleep patterns, mood fluctuations, social interactions and health behaviours, which are crucial, among other things, for fostering motivation, goal-setting and habit-building. There is a notable interest in apps that can aid in self-reflection and mental health improvement.

However, several challenges need to be addressed for successful integration. A significant concern is ensuring the apps are user-friendly and accessible, especially for people with disabilities or varying levels of digital literacy. The potential for mobile devices to distract users during lessons is another critical issue, highlighting the need for developers to create engaging yet non-intrusive interfaces. Moreover, there is a call for apps to include simple, intuitive designs that cater to the needs of all users, highlighting the importance of simplicity and ease of use. Additionally, while there is enthusiasm among educators to integrate these tools into their teaching practices, the current use of such apps is not widespread. This indicates a readiness to adopt new technologies if they are well-designed and can demonstrate clear benefits in supporting unemployed individuals.

Future app development should focus on creating accessible, easy-to-use interfaces, providing personalised support, and ensuring that the apps are engaging without being distracting. Addressing these trends and challenges can enhance the adoption and effectiveness of motivational and monitoring apps such as the ME-App in helping unemployed adults overcome psycho-social obstacles.



## PART III. PAPI RESULTS

The PAPI for educators focused on assessing their familiarity with key aspects of using apps in educational settings, particularly in the context of ALMP-Ps. The questions explored educators' knowledge of security and privacy concerns, such as GDPR compliance and cybersecurity issues, as well as their ability to ensure the reliability and validity of data collected through apps. It also addressed the educators' awareness of ethical considerations, such as informing learners about data collection practices and ensuring equitable access to technology. Further, the questionnaire examined the potential challenges of app usage in classrooms, including compatibility issues, sustaining learner engagement and addressing diverse learning needs. Participants were asked about their experience with integrating apps into instructional design and their methods for evaluating the effectiveness of educational apps. Finally, educators were asked to rate their likelihood of using a phone app as part of their classes with unemployed individuals, along with providing demographic information and their experience in running ALMP-Ps.

The PAPI involved 37 educators (19 women, 16 men; two persons did not respond) from Germany, Austria, Poland and Slovenia revealed varying levels of familiarity with specific issues related to using apps. The educators represented different age groups and different periods of experience working in ALMP-Ps, and were represented in each group. Analysis of the results indicates that, despite these differences, educators across all countries face similar challenges. A notable trend is the presence of knowledge gaps in all studied areas; while some countries exhibit lesser gaps than others, it is evident that all educators require additional training to use apps effectively and conscientiously. Several factors may contribute to these gaps, including the lack of dedicated apps for monitoring psycho-social obstacles and motivation, limited training on personal data protection, insufficient integration of new technologies in activation processes or a preference for traditional activation methods.

The study also suggests a strong likelihood that educators will adopt the ME-App, given the increasing digitalisation of the education and activation sectors. Most educators expressed a high probability of using the ME-App, with only 8 out of 36 rating their likelihood below 5 on a scale of 1 to 10. Specifically, 6 respondents rated the likelihood at 10, 3 at 9, 5 at 8, and 6 at 7. These responses underscore a significant interest in the app, which is expected to aid educators in the professional activation of unemployed adults. For future app developers, this indicates the importance of creating apps that are specifically tailored to address the needs of unemployed learners. Developers should consider providing targeted support and training to educators, to increase their confidence and effective use of educational apps.





The PAPI questions and individual country results can be found in the country reports.

The following presents a detailed analysis of the paper and pencil surveys and identifies main areas of concern for app developers.

**Data protection** (question1 - Are you familiar with privacy regulations such as GDPR (General Data Protection Regulation) and their implications for using apps in the classroom, especially concerning the collection of personal data, including sensitive information like health data?)

Regarding educators' familiarity with privacy regulations such as the GDPR and their implications for app usage in the classroom, the surveys provided the following insights: In Austria, 75% of educators reported being familiar with the GDPR and its implications for collecting personal data and sensitive information, such as health data. In Germany, 80% of educators indicated awareness of the GDPR and its relevance to app usage and data privacy in educational settings. In Poland, 60% of educators expressed familiarity with the GDPR and the associated privacy concerns related to classroom app usage, and in Slovenia, 65% of educators showed knowledge of the GDPR and its impact on the handling of personal and sensitive data through educational apps. This data reflects varying levels of awareness among educators across these countries.

**Ethical concerns and informed consent** (questions 8 and 9 - Are you familiar with the importance of ensuring that adult learners are fully informed about how their data will be collected, used and shared when using a particular app in the classroom? - Do you know that you should ensure that learners have the opportunity to provide informed consent regarding their participation?)

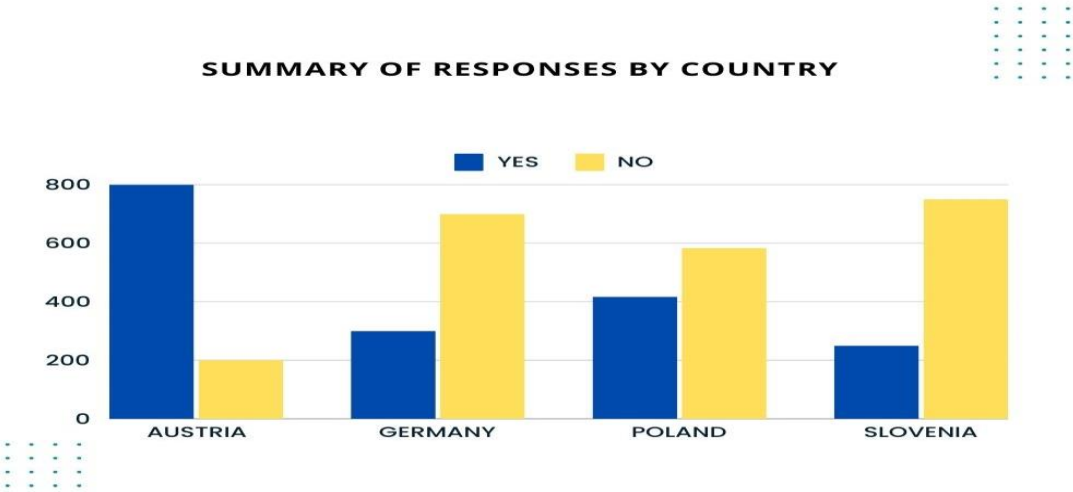
The analysis of educators' familiarity with ethical concerns related to app usage in the classroom highlights important considerations for future app developers. In Austria, 60% of educators were aware of the importance of informing adult learners about data collection, usage and sharing practices, while 55% understood the need for learners to provide informed consent. Germany exhibited a high level of awareness, with 75% of educators knowledgeable about data transparency and 70% recognising the necessity of informed consent. In Poland, only 45% were familiar with the importance of data transparency, and 40% knew about the requirement for informed consent. Slovenia had 50% of educators aware of data transparency practices and 48% knowledgeable about ensuring informed consent. These results underscore a clear need for future app developers to emphasise ethical considerations by integrating features that support transparency and consent. Developers should also provide comprehensive guidelines and training for educators to ensure that ethical practices are adhered to.



**Cybersecurity** (question2 - Are you familiar with cybersecurity issues related to app usage in educational settings?)

Analysing the results from the graphs on educators' familiarity with cybersecurity issues and data protection in educational settings reveals notable differences across countries. In Austria, 70% of educators reported being familiar with cybersecurity issues related to app usage, while 65% knew how to protect learners' data from potential cyber threats. Germany demonstrated the highest level of awareness, with 85% of educators understanding cybersecurity concerns and 80% knowing how to safeguard learner privacy. In Poland, 55% of educators were aware of cybersecurity issues, and only 50% knew how to ensure data protection. Slovenia showed a moderate understanding, with 60% familiar with cybersecurity issues and 55% knowledgeable about protecting learner data. These results indicate that while there is a general awareness of cybersecurity, proficiency in applying this knowledge to protect learners' data varies significantly.

**Vetting apps** (question 3 - Do you know how to ensure that learners' data and privacy are protected from potential cyber threats?)



The analysis of educators' awareness regarding the vetting of health apps by regulatory bodies reveals distinct differences across countries. In Austria, 68% of educators were aware that some health apps undergo vetting by regulatory bodies, such as health insurance companies. Germany showed the highest awareness, with 75% of educators knowledgeable about this process. In Poland, only 50% of educators were aware of this vetting procedure, indicating a lower level of awareness compared to Austria and Germany. Slovenia had 55% of educators aware of the vetting by regulatory bodies. These results suggest that while there is a reasonable level of awareness about health app vetting among educators in Austria and Germany, there is room for improvement in Poland and Slovenia. The differences in awareness levels highlight the need for more comprehensive





information and training about the regulatory processes governing health apps, especially in countries where awareness is lower.

**Data reliability and validity** (question 4 - Are you aware that some health apps undergo vetting by regulatory bodies, such as health insurance companies?)

The analysis of educators' knowledge regarding ensuring the reliability and validity of data collected through health apps reveals significant variations across countries. In Austria, 62% of educators reported knowing how to ensure the reliability and validity of data from such apps. Germany showed the highest level of expertise, with 78% of educators confident in their ability to manage data reliability and validity. In Poland, only 45% of educators were aware of how to guarantee these aspects, indicating a substantial gap in knowledge. Slovenia demonstrated a moderate understanding, with 53% of educators knowledgeable about ensuring data reliability and validity. These results indicate that while there is a general awareness of the importance of data quality, the level of expertise varies, with Germany leading in knowledge and Poland lagging behind. This disparity suggests a need for targeted training and resources to improve educators' capabilities in managing data quality across all countries, with a particular focus on enhancing support in Poland and Slovenia.

**Assessing adequacy of apps for particular target groups / accessibility** (questions 6,7, 10 and 13 - Do you know how to assess the adequacy of educational apps for specific target groups, such as different age groups or learners with disabilities? - Do you know what measures to take to ensure that all learners can access and benefit from the app effectively? - Are you aware of the necessity to ensure equitable access to technology and digital resources among all learners in the classroom (specifically, how do you address the needs of learners who may have limited access to smartphones, computers, or the internet)? - Are you aware of the challenge of ensuring that all participants in the classroom have access to smartphones or reliable internet connectivity?)

The analysis of educators' knowledge about assessing the adequacy of educational apps for specific target groups and ensuring accessibility reveals significant insights for future app developers. In Austria, 55% of educators reported knowing how to assess the adequacy of educational apps for various age groups and learners with disabilities, and 50% understood the measures needed to ensure effective access for all learners. In Germany, 70% of educators were knowledgeable about app assessment for diverse target groups and 65% were aware of measures to ensure accessibility. In Poland, only 40% of educators knew how to evaluate app adequacy for specific groups, and 35% were aware of accessibility measures. Slovenia showed moderate results, with 48% knowledgeable about assessing app adequacy and 45% understanding the measures for effective access. These results suggest that while there is some awareness of how to evaluate and ensure app effectiveness for different learners, significant gaps remain. For future app developers, this indicates a need to prioritise inclusivity and accessibility in their



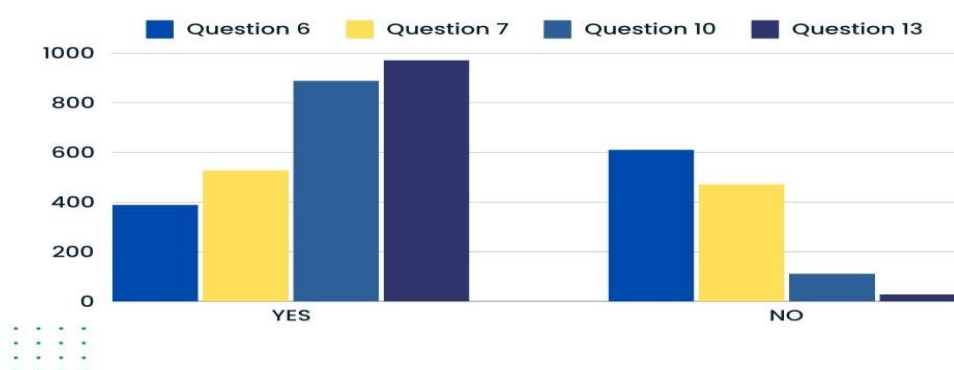
design processes, and to provide clear guidance and support for educators on how to effectively assess and implement these features.

The analysis of educators' awareness regarding the necessity of ensuring equitable access to technology and digital resources in the classroom also reveals important insights for future app developers. In Austria, 65% of educators acknowledged the need to address the requirements of learners with limited access to smartphones, computers or the internet. 80% of educators in Germany understood the importance of equitable access and the need to actively address these issues. In Poland, 50% of educators were aware of the necessity to ensure equitable access and manage limitations in technology availability. Slovenia showed a good awareness, with 55% of educators recognising the need to address technological disparities among learners. These results indicate that while awareness of the need for equitable access is present, there is variability in how educators address this issue. For future app developers, this means prioritising features that support diverse technological capabilities and providing resources or guidance to help educators implement solutions that ensure all learners can benefit from the app.

The analysis of educators' awareness regarding the challenge of ensuring that all participants in the classroom have access to smartphones or reliable internet connectivity highlights that in Austria, 70% of educators were aware of this challenge, indicating a strong awareness of the issues related to unequal access to technology. In Germany, 85% of educators understood the difficulties in providing consistent access to smartphones and internet connectivity. In Poland, 55% of educators were aware of this challenge, suggesting a moderate level of concern. Slovenia had 60% of educators acknowledging the issue. These results underscore the critical need for app developers to consider the diverse technological needs of students when designing educational apps. To address these challenges, developers should ensure their apps are optimised for varying levels of technology access, perhaps by offering offline functionality or lower-bandwidth versions. Moreover, providing resources and guidance for educators on managing technology disparities in the classroom will be essential.



## AGGREGATED RESULTS FOR ALL COUNTRIES



The aggregated chart shows the combined "Yes" and "No" responses across the replies to questions 6,7,10 and 13. The total percentages have been summed to reflect the overall responses. The "Yes" responses are higher overall compared to the "No" responses across the data provided, indicating that the majority of the respondents possess a substantial level of knowledge and awareness regarding key aspects of using educational apps in their classrooms.

**Assessing effectiveness of app** (question 25 - Do you know how to assess the effectiveness of educational apps in facilitating learning and achieving educational outcomes in the classroom?)

The analysis of educators' ability to assess the effectiveness of educational apps in facilitating learning and achieving educational outcomes shows that in Austria 55% of educators reported knowing how to assess the effectiveness of educational apps, indicating a moderate level of expertise. Germany demonstrated 70% of educators confident in their ability to evaluate app effectiveness and its impact on educational outcomes. In Poland, 40% of educators were familiar with assessment methods for educational apps. Slovenia had 50% of educators knowledgeable about assessing app effectiveness, which points to a moderate level of understanding but also highlights the need for further development. These results indicate that while some educators have a solid grasp of how to evaluate educational apps, there is considerable variation across and also within countries. For future app developers, this means the need to integrate robust assessment tools and analytics within apps to help educators measure their impact on learning outcomes effectively. Developers should also consider providing comprehensive guidelines and support materials to assist educators in evaluating app performance. Enhancing these features will support educators in making informed decisions about app use and ensure that educational technologies contribute positively to learning outcomes.



**Biases in algorithms used in apps** (questions 11 and 12 - Have you considered the potential presence of algorithms or machine learning models in apps that could perpetuate biases or inequalities, e.g. gender, age, socioeconomic status or race? - Are you knowledgeable about strategies to create awareness among learners about these biases and to help them critically evaluate app content, assessments, and recommendations for fairness and inclusivity?)

The analysis of educators' awareness regarding the potential biases in algorithms and machine learning models in educational apps reveals varied levels of understanding across countries. In Austria, 58% of educators recognised the potential for algorithms to perpetuate biases based on gender, age, socioeconomic status or race, and 52% were knowledgeable about strategies to create awareness among learners about these biases. Germany showed a solid awareness, with 70% of educators understanding the risk of biases in algorithms and 65% being knowledgeable about strategies to promote critical evaluation of app content. In Poland, 45% of educators were aware of algorithmic biases, and 40% understood how to educate learners about these issues. Slovenia had 50% of educators aware of potential biases and 48% knowledgeable about creating awareness and promoting fairness. These results indicate that while there is some awareness of the risks of algorithmic biases, there is a need for more comprehensive education and resources. For future app developers, it is essential to integrate features that minimise bias and to provide clear guidelines and support for educators on how to help learners critically assess app content for fairness and inclusivity. Developers should particularly focus on addressing the gaps in awareness to ensure a more equitable and inclusive educational technology landscape.

**Handling technological issues** (questions 14, 15 and 16 - Do you know how to address this issue to ensure that technology is accessible to everyone? - Have you encountered compatibility issues with different devices or operating systems when using apps in the classroom? - Do you know how to handle these issues, including frequent updates that may disrupt the learning process?)

The analysis of educators' responses to questions about addressing technology accessibility, device compatibility and handling update-related disruptions reveals important considerations for future app developers. In Austria, 62% of educators reported knowing how to address issues of ensuring that technology is accessible to everyone, reflecting a moderate level of preparedness. Germany demonstrated a good proficiency, with 75% of educators knowledgeable about addressing accessibility concerns and managing compatibility issues across different devices and operating systems. In contrast, Poland showed lower levels of awareness, with only 48% of educators understanding how to ensure broad technology access and 45% familiar with handling compatibility issues. Slovenia had similar results, with 50% of educators aware of accessibility strategies and 52% encountering compatibility issues. Regarding handling these issues, including frequent updates that may disrupt the learning process, Austria had 55% of educators knowledgeable, Germany 68%, Poland 40%, and Slovenia 47%. These results



suggest that while awareness of accessibility and compatibility issues is present, it varies significantly. For future app developers, this highlights the need to design apps that are universally accessible and compatible with various devices and operating systems. Developers should prioritise features that ensure smooth functionality across different technological environments and offer robust support to educators for managing updates and minimising disruptions. Special attention should be given to providing resources and guidance for educators to enhance their ability to effectively use educational apps in diverse classroom settings.

**Educators' role in facilitating app usage in class** (questions 17 to 24 - Are you familiar with the importance of ensuring that all participants in the classroom have familiarity with using apps or digital tools? - Do you know how to address potential challenges in navigating app interfaces, accessing content, or troubleshooting technical problems? - Have you experienced challenges in sustaining adult learners' motivation and engagement with apps over time, particularly if the content is not engaging or relevant to their learning needs? - Do you know how to address challenges to keep learners engaged? - Are you aware of the need to consider diverse learning preferences and accessibility needs in the classroom, including challenges faced by students with disabilities or language obstacles? - Do you know how to ensure that all learners can access and benefit from app-based learning activities? - Have you considered how to effectively integrate an app into the instructional design of your courses? - Do you know how to guide learners to navigate an app, understand its features, and maximise its potential for learning?)

The analysis of educators' familiarity with ensuring that all participants in the classroom are comfortable using apps or digital tools reveals significant differences across countries. In Austria, 60% of educators recognised the importance of ensuring that all participants have familiarity with using apps and digital tools, reflecting a moderate awareness of the need for inclusive digital literacy. In Germany, 78% of educators acknowledged the importance of this familiarity, indicating a strong commitment to ensuring that every student can effectively use digital tools. In Poland, 45% of educators were aware of this necessity, suggesting a substantial gap in addressing the diverse digital proficiency levels among students. Slovenia had 52% of educators recognising the need for ensuring digital tool familiarity, indicating some awareness but also highlighting room for improvement. These results underscore the need for app developers to create user-friendly designs and provide comprehensive onboarding resources that cater to varying levels of digital literacy. To effectively support educators, developers should focus on features that facilitate easy adoption and usage of apps. This approach will help ensure that all students, regardless of their initial familiarity with digital tools, can benefit equally from educational apps.

The analysis of educators' knowledge about addressing potential challenges in navigating app interfaces, accessing content and troubleshooting technical problems reveals notable differences across countries. In Austria, 57% of educators reported knowing how to handle these issues, reflecting a moderate level of



preparedness. Germany showed a good level of competence, with 72% of educators confident in their ability to manage navigation, content access and technical troubleshooting, indicating a robust understanding and support structure. Poland exhibited lower awareness, with only 43% of educators familiar with addressing these challenges, suggesting a significant need for improved guidance and support. Slovenia had 50% of educators knowledgeable about handling such issues, which points to some awareness but also highlights areas for development. These results suggest that while there is a baseline level of understanding regarding app interface navigation and technical troubleshooting, there is considerable variation. For future app developers, this means prioritising user-friendly design, intuitive interfaces and comprehensive support resources to assist educators in overcoming these challenges. Developers should ensure that their apps include clear troubleshooting guides, easy navigation features and accessible content management tools. Special focus should be given to enhancing support and training materials to ensure a smoother and more equitable experience for all users.

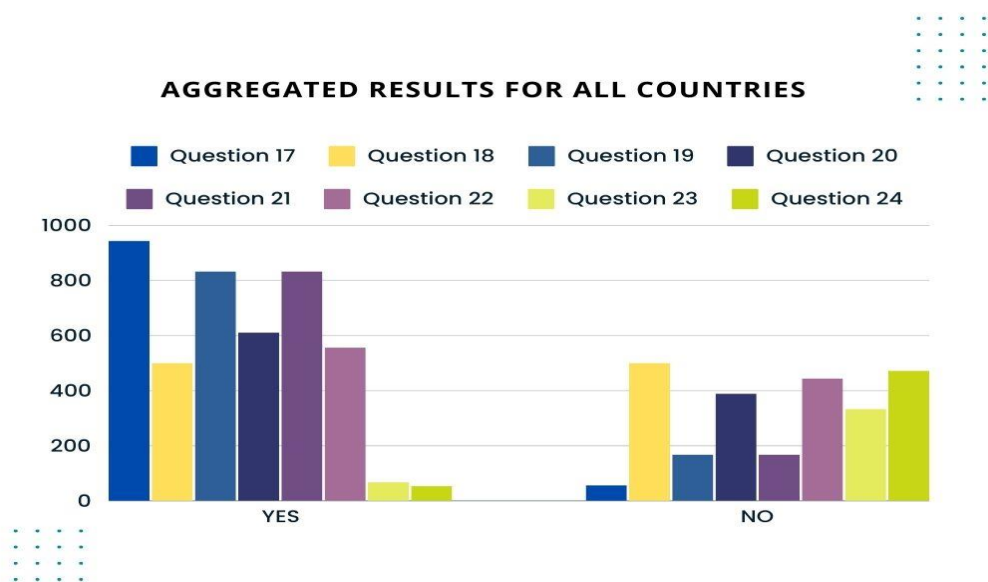
The analysis of educators' experiences and knowledge regarding sustaining adult learners' motivation and engagement with apps reveals key insights for future app developers. In Austria, 62% of educators reported challenges in maintaining adult learners' motivation when app content was not engaging or relevant, and 55% knew how to address these challenges to keep learners engaged. Germany exhibited the highest level of awareness, with 78% of educators recognising the challenges of sustaining engagement and 72% knowledgeable about strategies to maintain motivation. Poland showed 48% of educators experiencing these challenges and 43% knowing how to address them. Slovenia had 50% of educators acknowledging the challenge and 45% aware of strategies to improve engagement. Regarding the need to consider diverse learning preferences and accessibility needs, Austria had 65% of educators aware of these needs, Germany 80%, Poland 55%, and Slovenia 58%. For ensuring that all learners can access and benefit from app-based learning activities, Austria had 60% knowledgeable, Germany 73%, Poland 50% and Slovenia 52%. These results highlight that while there is a general understanding of the importance of engaging content and diverse learning needs, there is variability in the ability to address these issues effectively. For future app developers, this means focusing on creating dynamic and relevant content that can adapt to different learning preferences, incorporating features that support accessibility, and providing educators with robust tools and strategies to enhance engagement and inclusivity.

The analysis of educators' responses to questions about integrating apps into instructional design and guiding learners in app usage provides critical insights for future app developers. In Austria, 58% of educators reported considering how to effectively integrate apps into their instructional design, and 52% knew how to guide learners in navigating the app and understanding its features. Germany exhibited the highest levels of proficiency, with 72% of educators actively integrating apps into their courses and 68% knowledgeable about guiding learners effectively. Poland showed lower levels of engagement, with 45% of educators





considering integration strategies and 40% understanding how to assist learners with app navigation. Slovenia had 50% of educators considering app integration and 45% knowledgeable about guiding learners. These results highlight that while there is some level of awareness and practice regarding the integration of apps into teaching and guiding learners, there is considerable variation. For future app developers, this underscores the importance of creating apps that are not only easy to integrate into various instructional designs but also come with comprehensive support and guidance features. Developers should focus on providing intuitive user interfaces and resources that help educators effectively incorporate apps into their teaching strategies and assist learners in maximising the app's educational potential.



This aggregated chart shows the percentage of "Yes" and "No" responses across the different questions (with exception of the question relating to whether educators have experienced challenges in sustaining learners' motivation to use apps). The chart illustrates the overall awareness and knowledge that educators have regarding various aspects related to app usage in educational settings. The high percentage of "Yes" responses in most categories suggests that a majority of respondents are familiar with important considerations such as ensuring familiarity with apps, addressing challenges and integrating apps into instructional design. Areas with a significant percentage of "No" responses indicate where further training or information may be needed.

**SUMMARY OF KEY INSIGHTS FOR APP DEVELOPERS FROM THE PAPI**

In examining the data related to educators' familiarity and experience with various aspects of using educational apps, several key themes emerge that are crucial for app developers to address. The results from different countries provide a comprehensive view of how educators interact with and perceive educational technology, particularly in terms of cybersecurity, accessibility, engagement and



integration. For app developers, understanding these diverse needs and challenges is crucial for creating effective educational technologies. Developers should prioritise designing apps that are user-friendly, secure and capable of addressing various technological and instructional challenges. Providing comprehensive support and resources to educators, particularly in countries with lower levels of familiarity and understanding, will help ensure that educational apps are used effectively and inclusively.

**THE FOLLOWING PROVIDES A DETAILED SUMMARY OF THE FINDINGS AND THEIR IMPLICATIONS FOR APP DEVELOPERS:**

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### **1. FAMILIARITY WITH PRIVACY REGULATIONS, ETHICAL CONCERNS AND VETTING OF APPS**

Educators across Austria, Germany, Poland and Slovenia demonstrate varying levels of familiarity with data security and privacy regulations like the GDPR and their implications for app usage. This discrepancy highlights the need for app developers to ensure that their apps comply with stringent privacy regulations and incorporate features that facilitate easy management of personal data. Developers should include clear privacy policies and consent mechanisms within their apps and provide educators with resources to understand these features. In addition, developers need to be aware of the necessity for vetting apps, especially those that may be used in sensitive contexts such as health and education. Concretely, this means that apps should undergo thorough evaluation and approval by relevant regulatory bodies, such as health insurance companies, to ensure they meet high standards of security, privacy and efficacy. Providing transparency about the vetting process and displaying certifications or endorsements can further build trust among educators and users.

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### **2. ADDRESSING CYBERSECURITY ISSUES AND DATA PROTECTION**

The data reveals that developers need to integrate robust security features into the apps they use in the classroom to protect sensitive information and personal data of their students, especially given the varying levels of cybersecurity awareness among educators. This includes implementing strong encryption, providing regular security updates and offering guidance on best practices for data protection.

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### **3. NAVIGATING ACCESSIBILITY AND TECHNOLOGY INTEGRATION**

A significant concern for educators is ensuring equitable access to technology and addressing challenges related to device compatibility and internet connectivity. Developers should focus on creating apps that are compatible with a wide range of devices and operating systems. Also, incorporating offline functionality or low-bandwidth modes might help mitigate issues related to limited internet access.





Providing clear instructions and support for educators to manage these technological challenges is also crucial and will help them facilitate the use of apps in their classrooms.

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#### **4. ENSURING EFFECTIVE ENGAGEMENT AND MOTIVATION**

Sustaining learners' motivation and engagement with educational apps is a challenge noted by educators, particularly when content lacks relevance or is not engaging. Developers should focus on creating engaging and interactive content that is relevant to learners' needs. Features such as gamification, adaptive learning paths and personalised feedback can help maintain motivation and interest.

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#### **5. INTEGRATING APPS INTO INSTRUCTIONAL DESIGN**

The integration of apps into instructional design varies significantly among countries. For successful integration, developers should provide tools and resources that facilitate the seamless incorporation of apps into various instructional designs and classroom activities related to empowerment, motivation and activation. This includes offering integration guides with concrete examples.

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#### **6. GUIDING LEARNERS AND ADDRESSING LEARNING PREFERENCES**

Educators' ability to guide learners in navigating app interfaces and understanding app features is another important factor. Developers should ensure that their apps include intuitive interfaces and provide comprehensive onboarding and help resources. Further, recognising and accommodating diverse learning preferences and accessibility needs is essential. Features that support different learning styles, such as visual aids, text-to-speech options and customisable interfaces can enhance the app's effectiveness for all learners.

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#### **7. ASSESSING EFFECTIVENESS AND MEASURING IMPACT**

Evaluating the effectiveness of educational apps in achieving learning and activation outcomes is a critical area where there is considerable variation among educators. Developers should include built-in analytics and assessment tools that allow users to measure the impact of the app on intended outcomes. Providing clear guidelines and support for users on how to interpret and use these metrics will help ensure that apps are used effectively to enhance user experiences.

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#### **8. ADDRESSING CHALLENGES WITH MOTIVATING AND ENGAGING LEARNERS**

The challenge of keeping learners motivated and engaged with apps over time is significant, particularly if content is not perceived as engaging or relevant.



Developers should focus on creating engaging content and interactive features that maintain learners' interest. Regular updates to content and features can also help keep the learning experience fresh and relevant.

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## **9. NAVIGATING COMPATIBILITY ISSUES AND TECHNICAL SUPPORT**

Compatibility with different devices and operating systems, along with handling technical issues such as updates, is another area where educators and users alike experience challenges. Developers should ensure that apps are compatible with a wide range of devices and provide robust technical support. This includes offering troubleshooting guides, ensuring smooth updates that do not disrupt the learning process and providing responsive customer support to address any technical problems.

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## **10. TRAINING AND PROFESSIONAL DEVELOPMENT**

Across all these areas, there is a clear need for ongoing training and professional development for educators. The ME-App project is therefore developing a Handbook for Educators to provide guidance. This is intended to enhance educators' ability to leverage app usage in their classrooms to their fullest potential and improve the overall educational experience for learners.



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### SOURCES:


[https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/promoting-our-european-way-life/european-health-union/comprehensive-approach-mental-health\\_en](https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/promoting-our-european-way-life/european-health-union/comprehensive-approach-mental-health_en)

<https://ec.europa.eu/newsroom/sante/items/791251/>

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