#7 Updates from the E+DIETing_LAB: Advancing Digital Dietetics Education – Piloting Successes and Lessons Learned

As we progress in our journey with the E+DIETing_LAB project, we are excited to share the latest developments from our recent piloting activities. With a focus on both the Self-Learning Tool and the Service-Learning/Trainers Tool, the past few months have provided valuable insights into the effectiveness of these innovative solutions in dietetics education and community outreach.

This newsletter highlights key findings from the piloting phase, lessons learned, and our plans for enhancing these tools to further extend and improve our impact on dietetics education across Europe.

Bridging Theory and Practice with the Self-Learning Tool

The Self-Learning Tool, designed to provide students with hands-on experience in patient history-taking and dietary assessment, has been widely tested across partner institutions. The platform's interactive virtual patient chatbots, powered by Dialogflow, enable students to practice critical dietetic assessment skills in a safe and controlled environment. This allows them to refine their consultation techniques and receive immediate feedback, bridging the gap between classroom learning and real-world clinical application.
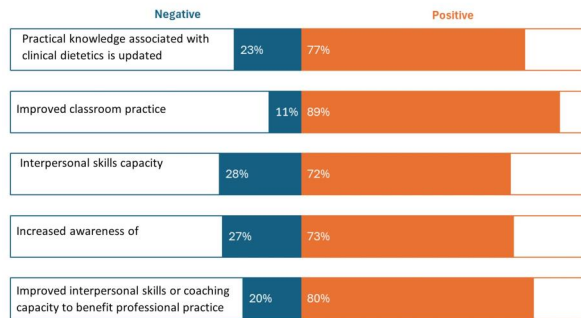
Key outcomes and lessons learned

Broad Accessibility and Engagement: With over 700 users participating in the piloting phase, the Self-Learning Tool successfully engaged students, educators, and dietitians across our European sites. The platform's availability in multiple languages, including Spanish, Portuguese, Polish, Dutch German and English ensured that participants from diverse educational settings could engage with the tool in their preferred language. This multilingual capability is essential for fostering an inclusive learning environment, enabling the tool to be integrated across different curricula.

Valuable for Early Education: The Self-Learning Tool has proven particularly beneficial for early-stage dietetics students. By interacting with virtual patients, students gained confidence in conducting basic dietary consultations, improving their ability to ask relevant questions, assess patient needs, and make informed decisions. The tool's structured yet flexible environment allowed students to practice these skills repeatedly, helping to develop proficiency in essential areas of dietetic care.

Overcoming Initial Learning Curve: Some students reported that it took time to adjust to the tool's interface and format, particularly when formulating effective questions. This challenge mirrors the experience of real-life consultations, where students must learn to ask precise, relevant questions. The tool's design encourages this learning process, helping students refine their questioning techniques in a low-risk environment, however provision of additional supportive information may help students who struggle.

Successfully builds dietetic skills and knowledge: A subset of 56 participants provided feedback on skill and knowledge gains after using the self-learning tool. The majority of users in the sample reported an increase in interpersonal and coaching skills, practical dietetic knowledge, awareness of the harmonised dietetic care process and improved classroom practice.

	Negative		Positive	
Practical knowledge associated with clinical dietetics is updated	23%		77%	
Improved classroom practice	11%		89%	
Interpersonal skills capacity	28%		72%	
Increased awareness of	27%		73%	
Improved interpersonal skills or coaching capacity to benefit professional practice	20%		80%	

1 - Increases in skills and knowledge after interaction with virtual patient

Customizability and Curriculum Integration: Feedback from educators emphasized the importance of aligning the tool to local curriculums and practices. In our next phase of the project, we will design a generalise user guide and syllabus that will form a basis from which sites can customise and adapt to their specific needs.

Changing expectations: With the explosion in generative AI technologies, users' expectations of chatbots has shifted to include much more human-like interactions. Our chatbot is based on natural language processing but does not include AI generated responses, instead using hardcoded responses from the developed patient cases. This design difference affected the realism of the simulation but also opens up an opportunity for integration of more sophisticated AI models that can handle a broader range of questions and scenarios, which could be an innovation for a future iteration of the platform.

Expanding Clinical Experience with the Service-Learning/Trainers Tool

Nutritional on-line clinics

Welcome to the on-line nutritional clinic.

Here you can practice the consultation as a nutritionist or as a patient.

Instructions

1. Choose a clinic to start. Search by language or name to find it.
2. Use the access password. You can request it at the clinic if necessary.
3. Schedule a visit in an online consultation room.
4. Practice as a nutritionist in a live environment.
5. Give us your feedback.

The Service-Learning Tool, a virtual clinic telehealth platform, offers a unique opportunity for students to conduct real or simulated consultations under supervision. The platform serves as a bridge between classroom learning and clinical practice. The tool's design reflects the

growing importance of telehealth in healthcare delivery, allowing students to build their skills in conducting remote consultations and providing nutritional advice.

Key Outcomes and lessons learned

Real-World Application in Community Outreach: Some of the project partners have already managed to integrate the service-learning virtual clinic into community outreach programs. Students used the platform to provide general dietary advice to real patients, offering a valuable service while honing their consultation skills. The telehealth format proved particularly effective in reaching populations that face barriers to accessing healthcare, such as those in remote regions or those with limited mobility. By offering consultations online, the platform extends the reach of dietetic care to underserved communities, supporting equitable access to health services.

Enhancing community health: Successful community engagement activities led to over 70% of patients surveyed community participants reporting increased awareness of healthy habits and ability to start a new healthy habit after their interaction with dietetic students.

Flexibility in classroom integration: The Service-Learning Tool's versatility has allowed partner institutions to incorporate it into different educational frameworks. Some universities used the platform for role-playing scenarios, enabling students to practice interpersonal skills and consultation techniques, while others integrated it into dietetic internships, allowing students to provide real-time advice to community members under supervision. This highlights the flexibility of the tool and adaptability to different curriculum and class needs.

Data Security and Legal Compliance: Protecting patient data is a critical concern, particularly when using real patient information. Feedback from partner institutions emphasized the need for clear information about the robust security measures implemented to ensure compliance with data protection regulations, such as GDPR. Providing adequate documentation of these practices is essential for building trust among users and facilitating the broader adoption of the platform.

User Experience Enhancements: While the platform was generally well-received, users identified areas where improvements could be made. Additionally, the user interface could be more intuitive, particularly for first-time users. Suggestions for enhancements include adding features like screen sharing and document uploads, which would enrich telehealth consultations and make the platform more versatile in clinical settings.

Next Steps

Moving forward, we will utilise the valuable information gathered during piloting to inform reports for a multiplier toolkit that will enable other institutions and health services to adopt the self-learning virtual patient platform and virtual clinic. This toolkit will comprise of a

guide for educators and trainers on the use of the platforms, a syllabus for the integration of the tools into dietetic education programs and recommendations on dietitians professionalism addressed to policy makers highlighting the role of the platforms outside of the education setting. We hope that this toolkit will be a useful resource for continuing community engagement and enhancing dietetic education across Europe.

The E+DIETing_Lab project is jointly funded by the Spanish Service for the Internationalisation of Education (**SEPIE, Spanish Agency of the European Programme Eramus +**) through to 2025.

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