M.O.T.I.O.N.

Mechanised Orthosis for Children with Neurological Disorders

Evaluation of Training Packages
February 2023

Canterbury
Christ Church
University

Interreg
2 Seas Mers Zeeën
M.O.T.I.O.N.
European Regional Development Fund

Prof Eleni Hatzidimitriadou
Dr Maria Stein
Dr Julia Moore
Joanna Apps
Thomas Kanderakis

Faculty of Medicine, Health and Social Care
Canterbury Christ Church University

FOREWARD

The Canterbury Christ Church University (CCCU) Team led the development, training, and evaluation of Work Package (WP) 3.2.4, an integral part of the Mechanised Orthosis for Children with Neurological Disorders (M.O.T.I.O.N.) project. This report contains an outline of the training programme including its development and dissemination process, followed by detailed evaluation of the three Units in the programme. The report is a collaborative piece of work with respective stakeholders and partner countries (France, Belgium and Netherlands) and relevant internal and external organisations.

The report is divided in two sections. Section 1 contains a concise description of the training programme, process of development and an outline of the content. Section 2 contains the results and findings of the evaluation survey for each Unit.

EXECUTIVE SUMMARY

The purpose of this report is two-fold: to present the development and content of the M.O.T.I.O.N. online training programme as well as to report on the results of the evaluation of the training by learners.

Key Highlights:

- **The M.O.T.I.O.N online training was well received,** as reported by both healthcare professionals and students enrolled in relevant higher education programmes across the four countries of the project.

- **Training content was comprehensive** in addressing professional research and learning gaps in Lower Limb Robotic Assistive Technology (LLRAT) for children with neuro-disabilities. This is a specialist area in which LLRAT is rapidly advancing, hence the need for readily available and accessible professional training programmes.

- **The programme content was well presented,** interesting, easy to follow and understand. Learners reported that it was at the right level of difficulty for both students and professionals who work in this specialised field.

- **Given the rapid advancements in LLRAT,** there is a need for further dissemination of the training programme and possibility of integrating it into mainstream accredited health and social care education programmes.

The online training programme consisted of three Units. Unit 1: Introduction to Robotic Assistive Technology offered an introduction to field, it was largely theoretical. Unit 2: Lower Limb Robotic Assistive Technology for children – Practice and Developments focused on potential applications and development of specific LLRAT. Unit 3: Train the Trainer consisted of a series of presentations and webinars delivered by the project team to professionals who work in the field. The content covered recent research and developments, global differences to education, research and approaches to RAT and an introduction to M.O.T.I.O.N. technologies being developed and tested.

In conclusion, the training programme has been valuable as a dissemination and learning tool for healthcare students and professionals to increase familiarity with LLRAT solutions for children with neuro-disabilities and enable transfer of this technology to healthcare practice.

CONTENTS

LIST OF TABLES & FIGURES

1. DEVELOPMENT OF THE M.O.T.I.O.N TRAINING PROGRAMME

The main aims of the M.O.T.I.O.N. training programme were twofold:

- To bridge the current gap between theory - novel technologies being developed and tested in the laboratory - and professional practice in the paediatrics field, and specifically, with children experiencing mobility difficulties due to neurodisabilities. This gap was identified through a systematic literature review conducted by the CCCU research team as part of this project activity'.. In addition, findings from the M.O.T.I.O.N. survey of training needs of healthcare professionals in bionic rehabilitation (HCPs) [1] also identified the need for specific education and training in the field.

- To increase awareness and understanding of Lower Limb Robotic Assistive Technology (LLRAT) to support HCPs and informal carers (usually family) in their roles. That is, when making clinical decisions and advocating for the use of suitable LLRATs for children with neuro-disabilities who can benefit from an array of developing technology in the field.

LLRAT is a relatively new albeit rapidly advancing field of research. Due to its technical, clinical, and practical complexity, a collaborative, interdisciplinary approach involving a multi-disciplinary team of professional expertise was used to develop the training content [2]. The team consisted of experienced occupational therapists, physiotherapists, psychologists, learning and support (IT) technicians, bioengineers, and sports scientists who met regular to plan, review and discuss the training content. In addition, there was periodic consultation with the M.O.T.I.O.N UK Advisory Group which consisted healthcare professionals working in the field of neurodisabilities, services providers, and parents of children with neurodisabilities.

1.1 Development process

The development of training content was informed by several sources, including findings from relevant literature reviews, e.g. [3-5], project team publications [1,6] and findings from the M.O.T.I.O.N surveys of healthcare professionals and parents of children with neurodisabilities on on experiences, knowledge and training needs required for LLRATs. Also, the training content was also shaped by clinical expertise within CCCU and other partner teams as well as views of the project's national advisory groups. Clinical expertise within the UK team and partner countries as well as expert consultations from advisory board members. Development of training content was further underpinned by a robust and comprehensive model of health and disability - The International Classification of Functioning, Health, and Disability (ICF)'s bio-psycho-social model [7]. The ICF shifts the focus from disability to health and functioning which is reinforces the project theme and supports the aims and objectives of the training programme.

Units 1 and 2 (outlined in Table 1) content went through a similar process of development. That is, project partner and related external organisations were invited . to participate and send material for possible inclusion. These resources were reviewed by the CCCU team and materials for inclusion to the training were selected on the basis of relevance, clarity and appropriateness for online delivery of the training. Selected content was mapped onto sub-headings and synthesised into a coherent piece of work. A draft version of the Unit's content was sent to the CCCU Learning Technologist who trasferred the content to the e-learning platform, Moodle. This was then reviewed by project partners and further refined before launching it to the target audience – HCPs, allied health students and sports scientists.

Unit 1 was launched in October 2022, and Unit 2 in November 2022 in all partner countries. Unit 3 consisted of follow-up informative presentations and educational webinars presented by the CCCU project team to HCPs including qualified physiotherapists and Occupational therapists, and conference presentations.

1.2 Delivery methods

One of the challenges encountered was how to present complex information online to facilitate learning and transfer of knowledge into the workplace. This was achieved using the following methods in Unit 1 and 2.

- Visual illustrations including Images, graphics and videos with optional voice-over for better inclusivity. Selected screenshots of the content are shown below.

- Links to outside resources for further information and reading.
- Clear distinction between recommended and optional viewing.
- Self-reflection exercises to reflect on practice and deepen learning online.
- Inclusion of a case study with an answer guide.
- Unit quiz to test extent of learning and knowledge gleaned from the Units.
- Certificate of completion for Units 1 and 2 that could be included in professional portfolios.
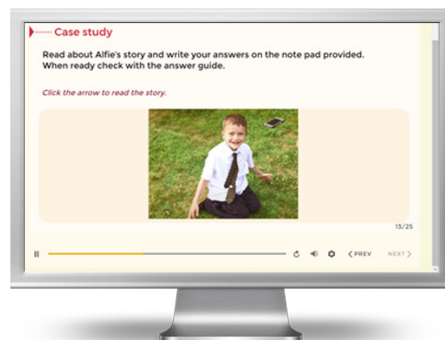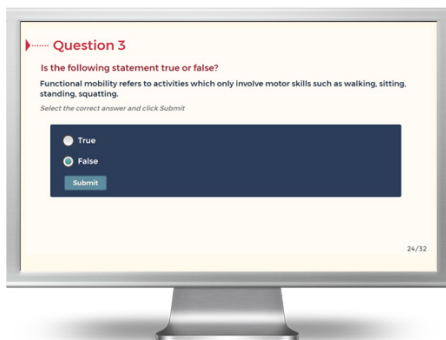
1.3 Outline of the M.O.T.I.O.N. Training Programme

The training programme consisted of three modular Units; their content is outlined in Table 1.
Unit 1 is introductory and largely theoretical; Unit 2 is clinically focused and more applied in relation to how LLRATs being developed may be used in practice to augment traditional treatment and therapeutic methods. Also, the type of conditions that may be helped with specific LLRATs. A section dedicated to M.O.T.I.O.N. technologies is included. Unit 3 consists of informative presentations and educational webinars delivered in the UK and in partner countries.

UNIT 1 Introduction to Robotic Assistive Technology (RAT)	**UNIT 2** LLRAT for children – Practice and Developments	**UNIT 3** Train the trainer
• Definitions e.g., mobility, neuro-disability • Supporting evidence for Assistive technology for posture and mobility • Gait training and RATs • Classification & type of RATs; exo/endoskeletons • How RATs work • Overview of RAT for rehabilitation • Mechanical vs powered Ankle Foot Orthosis • Benefits & limitations	• Best practice principles • Legislation and regulation • Overview of LLRAT available • Introduction to MOTION technology - PAFO, LL-exo, hip module, SMART sensory garment Engaging children & familiesManaging risk • Case Studies	• A series of training and dissemination activities including webinars and presentations on key issues in the use of RAT in rehabilitation. • International differences in education, training and approach to RAT, presentation of M.O.T.I.O.N. technologies

Table 1: Outline of the M.O.T.I.O.N. Training Programme

1.4 Evaluation

Evaluation was conducted via a purposefully designed online questionnaire, hosted on the Online Surveys platform (https://www.onlinesurveys.ac.uk/). Participants were invited to complete a questionnaire at end of each Unit. The evaluation questionnaire was also made available in French and Dutch as the training was offered to professionals and students in all project countries. Informal methods of evaluation were used for Unit 3. A detailed description of the evaluation process can be found in the next section.

2. EVALUATION OF TRAINING

The aim of the evaluation of the training was to explore how it was received by learners and its relevance for practice amongst healthcare professionals and students.

The objectives of the evaluation were as follows:

- to collect demographic data of the learners completing the Units of the training programme;
- to understand how the training delivery was perceived by the learners;
- to evidence the potential impact of the training in levels of LLRAT knowledge and confidence as well as readiness to apply LLRAT solutions in practice work settings.

2.1 Evaluation Methodology

A survey method was adopted to capture learners' feedback for Units 1 and 2. An online questionnaire was designed by the CCCU team for evaluation of training purposes. This questionnaire was a modified version of the ADAPT project evaluation questionnaire that was designed by CCCU researchers to evaluate online training of healthcare professionals on Assistive Technologies for adults with mobility difficulties. [8]. It contained 36 questions mostly closed with relatively few open-ended questions generating quantitative and qualitative data respectively (a copy of the questionnaire can be found in Appendix 1). Responses were provided on a Likert scale, rating from 1 to 5 or similar nominal response that could be categorised for data analysis purposes.

The development of the questionnaire was underpinned by the Kirkpatrick's Four Levels of Training evaluation model (2006) [9] consisting of:

• **Level 1 - Reaction** - satisfaction with training

• **Level 2 - Learning** - knowledge, skills and confidence gained via training

• **Level 3 - Behaviour** - application of training into practice

• **Level 4 - Results** - desired outcomes at an organisational level1

Level 4 could not be utilised given the timeframe of this project.

The evaluation questionnaire consisted of a demographic section followed by questions on experiential learning regarding knowledge and skills gained, confidence and readiness to implement in practice, presentation of content, quality and delivery methods, other features such as ease of access/login and negotiating through the e-learning platform. Also, there was a question whether participants intended to use aspects of learning in their workplace currently or in future and if so, how they may incorporate newly learned insights into their practice.

The evaluation study obtained ethical approval by the UK Health Research Authority (HRA) (IRAS ID: 314184) and University (CCCU) ethics approval for the other 3 participating countries.

Quantitative data were analysed by descriptive statistics while qualitative data from open-ended questions were analysed thematically. The results are presented in the next section.

2.2 Findings from the Evaluation of Units 1 and 2

Findings from Unit 1 (U1) and Unit 2 (U2) are presented together, followed by analysis of feedback received for Unit 3. For clarity, missing data from the evaluation questionnaire was omitted from the analysis which explains the slight numerical discrepancy that may be observed in the data used to generate this report. In addition, a few participants, being part-time Masters' level students who were also healthcare professionals, identified themselves as both students and professionals, which added to the difficulty calculating precise numbers. This needs to be borne in mind when interpreting the data presented in the report.

2.2.1 Participant Demographics for Units 1 and 2

A total of 125 learners registered for the training (as of 10th February 2023). Of these, 79 were from the UK, 29 from France, 9 from Netherlands, 6 from Belgium, and 2 did not indicate country.

52 learners from across the four countries had completed the training units at the time of writing this report (U1 – 38; U2 - 14). Of those, 32 participated in the evaluation (U1 – 24; U2 – 8) (Table 2).

Most evaluation participants were university students n=19; (U1=16, U2=3), with the majority (n=24; U1=20, U2=4) at undergraduate level. Of the professionals (n=10; U1=8, U2=2), most were occupational therapists (n=6), with half of them having 14 years or more of experience.

Table 2: Number of Learners and Evaluation Participants per unit and country

		COUNTRY (%)				TOTAL
		UK	France	Belgium	Netherlands	
Registered Learners	U1	26 (68.4%)	4 (10.5%)	5 (13.2%)	3 (7.9%)	38
	U2	10 (71.4%)	2 (14.3%)	-	2 (14.3%)	14
Evaluation Participants	U1	16 (66.7%)	4 (16.7%)	2 (8.3%)	3 (12.5%)	24
	U2	6 (75.0%)	2 (25.0%)	-	-	8

2.2.2 Previous experience with LLRAT

Almost all participants in Unit 1 and 2 (n=24) had not used RAT prior to training, however it is not clear how they defined RAT; for example, five participants indicated that they used RAT for "recovery from injuries" e.g., wheelchairs, walking aids, standing aids, hand & foot splints, which would not classify as RAT (Table 3).

Most participants reported higher levels of RAT knowledge, confidence, and readiness after training. This marked change towards improvement in knowledge, confidence and readiness skills is visually illustrated in Figure 1a (Unit 1), where there is a shift from 'very poor' and 'poor' towards 'good 'and 'excellent'. The same tendencies can be observed in Figure 1b (unit 2). These observations are further supported by most participants who indicated that the learning objectives were met in both Units (Unit 1 – 20/23, 87% and Unit 2 - 5/5, 100%).

Table 3: Learners' prior experience with RAT before and after training per Unit

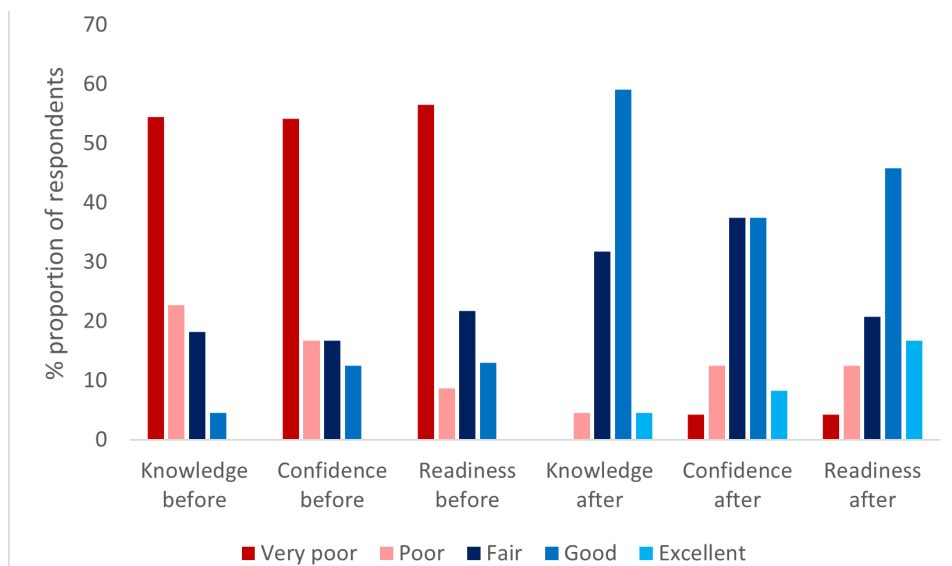|	Never	Rarely	Sometimes	Often
Unit 1 (n=24)	20	1	2	1
Unit 2 (n=4)	4	-	-	-

Figure 1a: Knowledge, confidence, and readiness ratings to use RAT before and after training - Unit 1 (n=24)
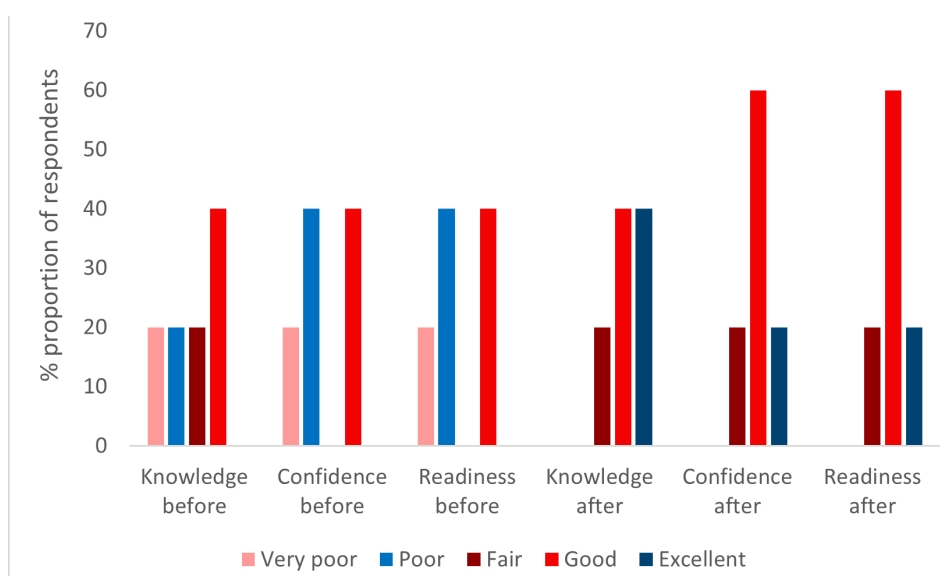

Figure 1b: Knowledge, confidence, and readiness ratings to use RAT before and after training - Unit 2 (n=5)

2.2.3 Usefulness of training

In Unit 1, from analysis of respondents' comments, most of them (14/15, 93.3%) found the training content useful in practice settings (therapeutic application), as "it is realistic and novel". They were *"more insightful and aware of mobility issues in children and how these could be helped."* Some of them also commented on the *"thorough coverage of topics and use of videos, graphics to assist in understanding the subject"*, they found *"further reading and resources helpful"*, one referred to need for more practical examples e.g., how to put the devices on. In general, respondents appreciated the connection between theory in Unit 1 and relevant to their work. There were no qualitative comments for Unit 2.

Learners were also asked to state three important things that they learnt from each Unit. In Unit 1, 16 responded in relation to this question. Most indicated that learning was varied and insightful, e.g. *"what RATS is and how they can help"*, *"the impact of tech on people, how it helps; social, cognitive and in terms of general health not just mobility"*, *"the reasons for using RAT alongside traditional therapies and the need for more research to be undertaken"*, *"lack of accessibility of the devices, not affordable on average"* *"the different types of RATS and how they work"*, *"what is neuro-disability"*, and *"considerations for scaling from adult to child"*. In Unit 2, participants highlighted other areas: *"how high-tech RAT operates - technical-neural interface"*, *"how it can be applied on the person, can link practical to theoretical information in Unit 1"*.

Most respondents found the entire content useful, some noted that the introductory video on cerebral palsy was "not needed" and one requested more explanation of the ICF model. This may be explained by the varied level of knowledge and experience of the students and professionals on this topic and suggests there may be room for further

development of the training in the future.

In relation to learners' intention to apply new learning to their practice or studies, Unit 1 respondents (n=24) had mixed views and were split between 'yes' and 'not sure' whereas all Unit 2 respondents (n=5) indicated that they would apply learning (Figure 2). Although the samples are small, this discrepancy of views between the two units could be explained by the type of learning, namely Unit 1 content was broad and generic whereas Unit 2 content was more applied and could be perceived more applicable.

Some learners elaborated further on key learning and insights. In particular, highlighting exoskeleton basics including awareness of, and potential benefits. They were prepared to *"advocate for its use within the Trust"*, indicated that the learning could be useful for their Masters post graduate degree thesis, and learned about *"how much work goes towards innovating, developing, testing and marketing and associated costs"*.
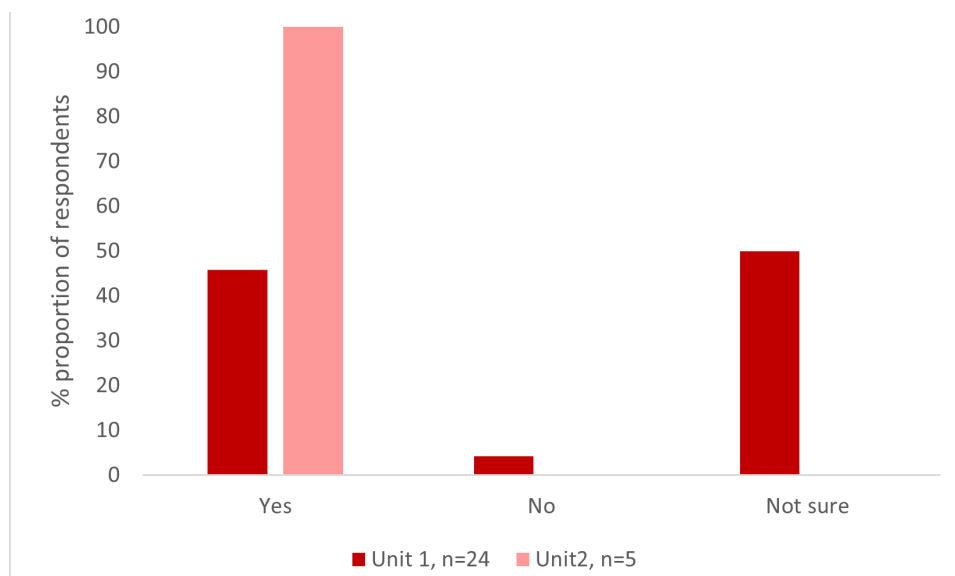

Figure 2: Learners' intention to apply learning to their practice or studies

2.2.4 Confidence about applying learning from M.O.T.I.O.N training

Learners also rated their confidence applying the learning (range 1 = low to 5 = high). Findings indicate that most respondents were confident or very confident in applying what they learnt, especially so in Unit 2 (Unit 1 - 13/23, 56.5%; Unit 2 - 4/5, 80%).
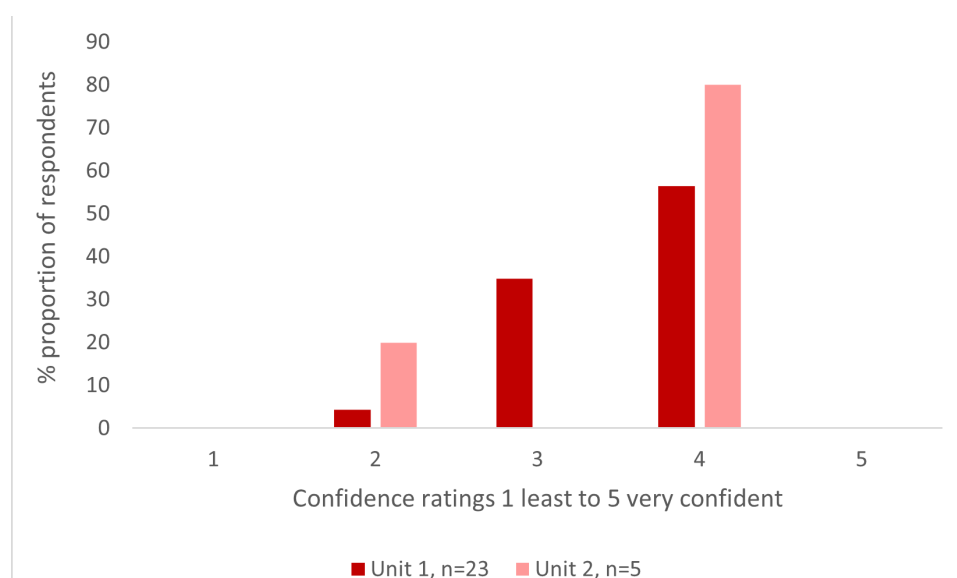

Figure 3: Levels of confidence in applying training per Unit

2.2.5 Quality of training content

Most respondents indicated that both units contained an adequate amount of content and that this was set at the right level (Unit 1 - 22/24, 90%; Unit 2 - 5/5, 100%).

This finding is also supported by qualitative feedback by learners such as "it starts basic and builds up on difficulty, plenty of videos and diagrams, about right amount, quiz right length to test knowledge" (Unit 1), "it shows to use how the RAT and the motion can be defined practically in this Unit" (Unit 2), "not too much jargon, so I could easily follow and learn, engaging content, extra information useful to read more" (Unit 2). This feedback supports the usefulness of the training at theoretical and practical levels for both students and professionals.

In addition, most respondents agreed or strongly agreed that the material included in both Units was easy to follow, clear presented, interesting, engaging and professionally relevant (Unit 1, n=24 and Unit 2, n=5 respondents, Figures 4a and 4b respectively). Respondents' comments elaborated further indicating that they would be "Interested to go in clinical centre and try it [the training knowledge]".
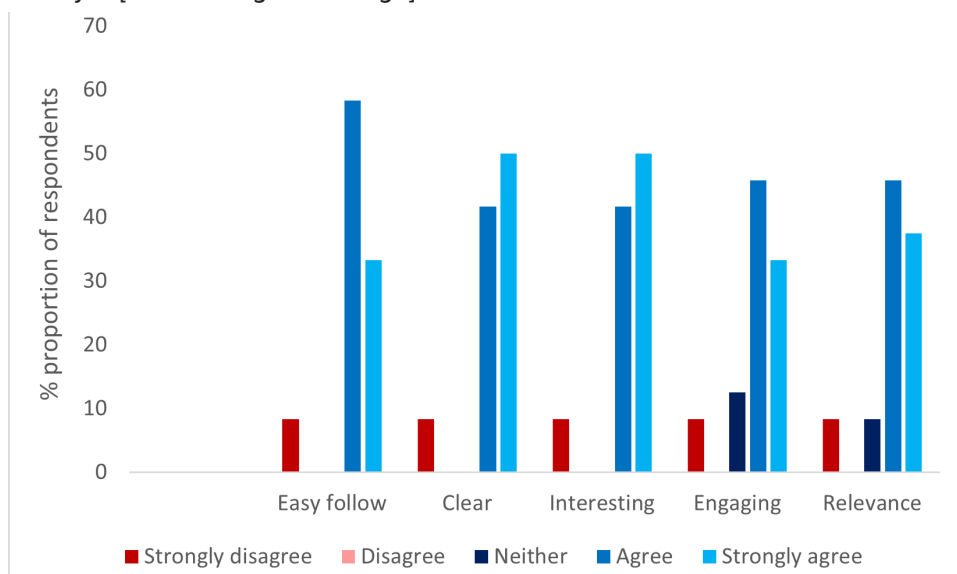

Figure 4a: Feedback from learners on quality of material in Unit 1(n=24)
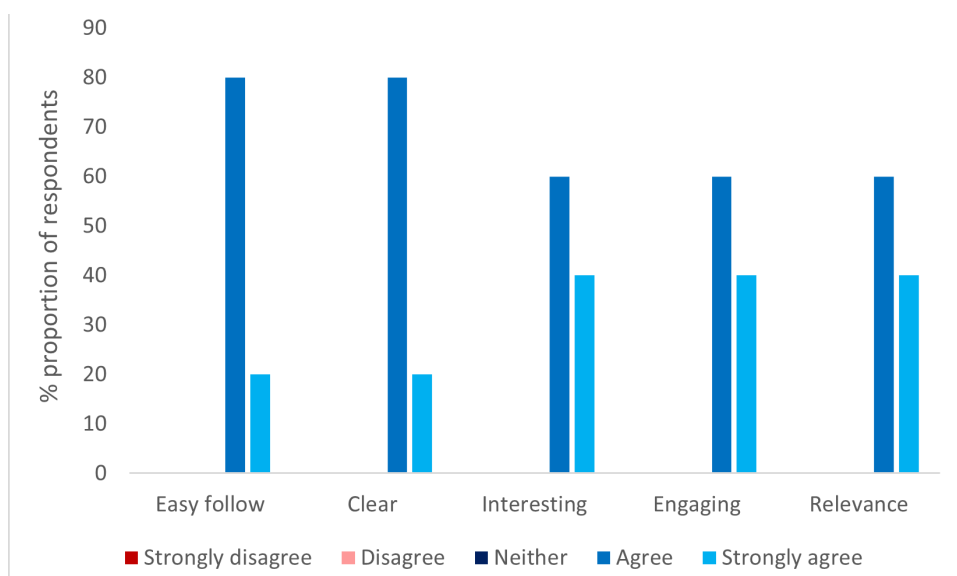

Figure 4b: Feedback from learners on quality of material in Unit 2 (n=5)

Finally, respondents provided suggestions for further development of the training. Suggested changes were - more case studies, fewer self-reflection exercises, more testimonials from users of technology, more explanation about the differences between traditional and robotic devices from a client perspective, more on impact of LLRAT devices on users' lives and how LLRAT devices are connected to the body, and more about interface between device and client, and user safety.

2.2.6 Features of the e-learning platform

Learners commented on features of the e-training platform (Moodle) and methods employed to deliver the training material. Data in Figures 5a and 5b suggests that most respondents rated access to the e-training, presentation of material and navigation of Moodle platform to be good or very good for Unit 1 (n=24) and Unit 2 (n=5) respectively.
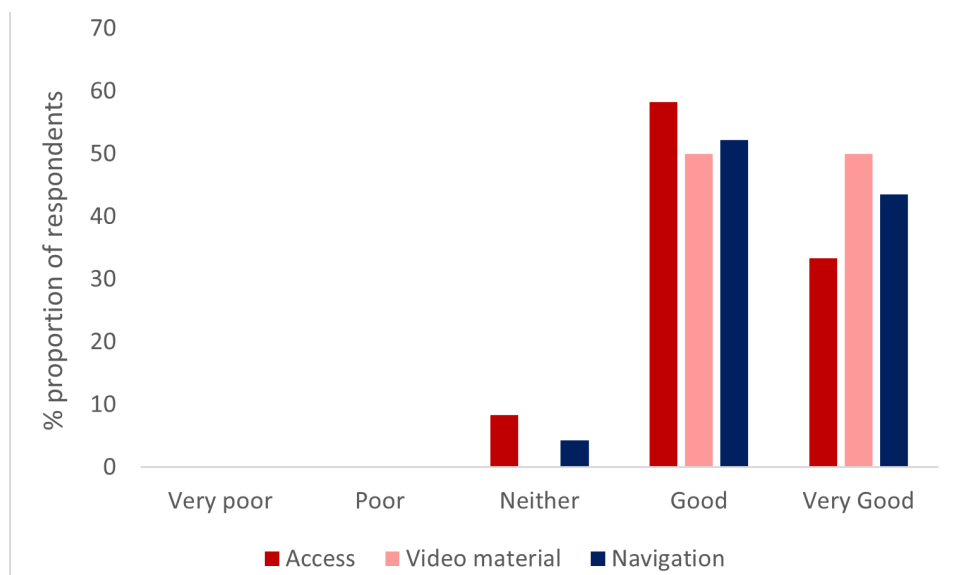
Figure 5a: *Learners' feedback on e-learning platform by feature for Unit 1 (n=24)*

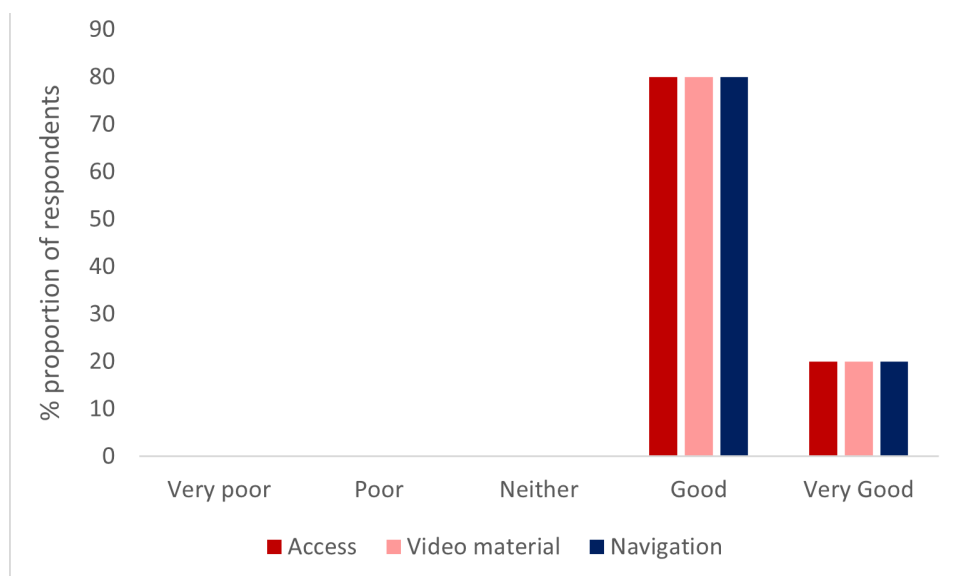*Figure 5b: Learners' feedback on e-learning platform by feature for Unit 2 (n=5)*

Learners also offered qualitative feedback about difficulties they experienced with login, the fact that the pace of showing the material had to follow the voice over speed, more guidance about navigation when opening separate windows for embedded material and how to get back to training after watching videos.

2.2.7 Engagement with further training in LLRAT

Respondents were invited to indicate the likelihood of engaging with other LLRAT training and other M.O.T.I.O.N. training units. Almost all respondents indicated that it was "highly likely" or "extremely likely" that they would engage with other LLRAT training and other M.O.T.I.O.N. training units to others as illustrated in Figures 6a and 6b respectively.
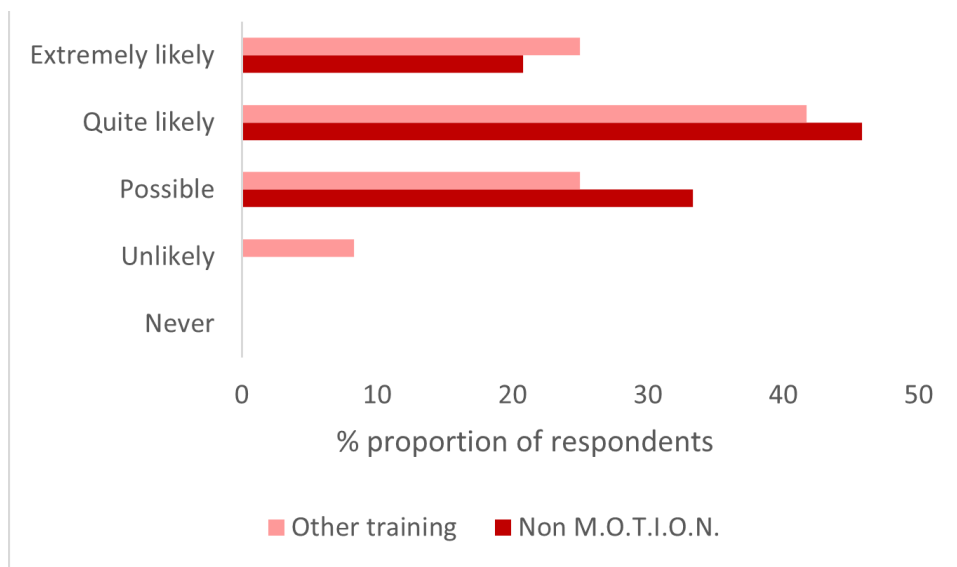
Figure 6a: Engagement with further training results for Unit 1 (n=24)
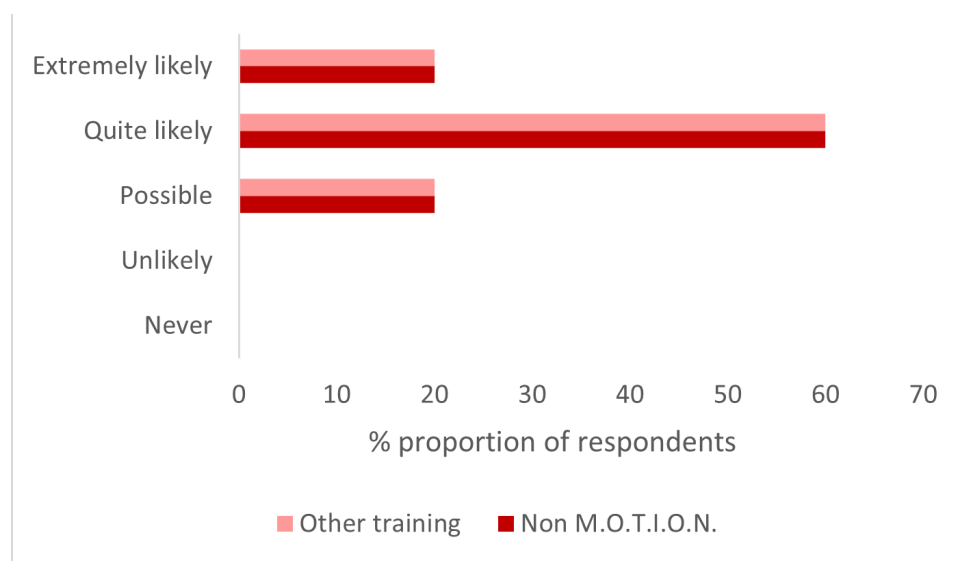
Figure 6b: Engagement with further training results for Unit 2 (n=5)

Respondents were asked to elaborate further in this area of feedback and comments were very positive: "great introduction to RAT without having to do internet searches", "useful for rehab therapists to keep updated about developments in RAT technologies & for general population to learn more about their use", "increased awareness of how technologies can improve our life". Overall, these comments support earlier findings that the training was largely

well received on many levels.

2.3 Evaluation of Unit 3 "Train the Trainer"

Unit 3 Train the Trainer (TtT) was the last and most recent unit to be launched as part of the project training programme. Consequently, the data and evaluation are limited at the time of writing. Partner countries were responsible for organising their own dissemination and TtT activities.

As part of this unit, in the UK, the project team delivered a series of presentations and webinars to healthcare professional audiences, including one at the North Tees NHS Trust, the Posture and Mobility Group (PMG) and the Association of Paediatric Chartered Physiotherapists (APCP). The following aspects were covered during these sessions:
- Key issues in the use of RAT in rehabilitation
- Evidence based practice supporting LLRAT in the recovery of neurological conditions.
- International differences in professional education and training, attitudes, and approaches to RAT
- Presentation of M.O.T.I.O.N. technologies
- Next steps for research, development, design, and implementation of LLRAT

Professionals who attended the APCP webinar were invited to rate the content and delivery after the session. 185 qualified paediatric physiotherapists were registered, of whom 80 attended the live session which was recorded to watch afterwards for those who could not attend. Sixteen evaluations were received by APCP and feedback indicates that 15/16 respondents were likely to use what they learnt from the webinar in their practice and the majority rated both content and delivery as good or excellent (Figure 7).

Figure 7: Evaluation data from the Association of Paediatric Chartered Physiotherapists (ACPC) webinar on 28.11.2022

3. CONCLUSIONS

The training programme outlined in this report and its evaluation fulfil the deliverable for WP3.2.4.

Overall, the findings from the evaluation data presented in the report indicate that both theoretical and application aspects were well received by learners, both students and professionals. Although the sample size for each Unit was relatively small, most respondents were satisfied or very satisfied with the content, delivery, and presentation as well as with the e-learning platform used. The respondents were generally more knowledgeable and aware of the potential of RAT and LLRAT after the training. They were also more skilled and felt confident that they could use newly gained insights from the training in their practice. Considering the time constraints to develop and deliver training as well as collect evaluation feedback, the findings are positive and encouraging. Together, they reinforce the value of the training programme and emphasise the need for wider dissemination within relevant communities and specialities. In future, a carer version of the training will also be available by the project team.

The strengths of the M.O.T.I.O.N. Training programme are in its co-production with service users, extensive collaboration, and consultation with professionals in the UK and partner countries. Working collaboratively to produce a high-quality piece of work to fill identified research and learning gap in RAT/LLRAT for children with neuro-disabilities. Another strength is the fact that it is readily accessible online, and sufficiently comprehensive to advance knowledge, research, and practice in the field. It is also underpinned by a holistic model of health, functioning and disability as defined by the ICF.

Going forward, the challenge will be to keep the training content up to date and relevant to practice given the rapid advancements in RAT and the need to transfer findings from research into practice. There is also room for fine tuning of the content once more evaluation data is available. More importantly, the evaluation data has shown that the training can be potentially integrated into mainstream professional health and social care programmes, design and engineering programmes and specialised areas where training opportunities are hard to come by, limited and not always affordable.
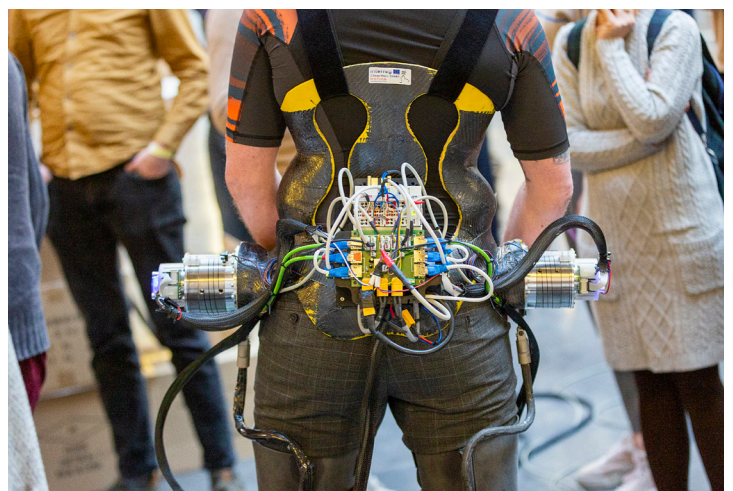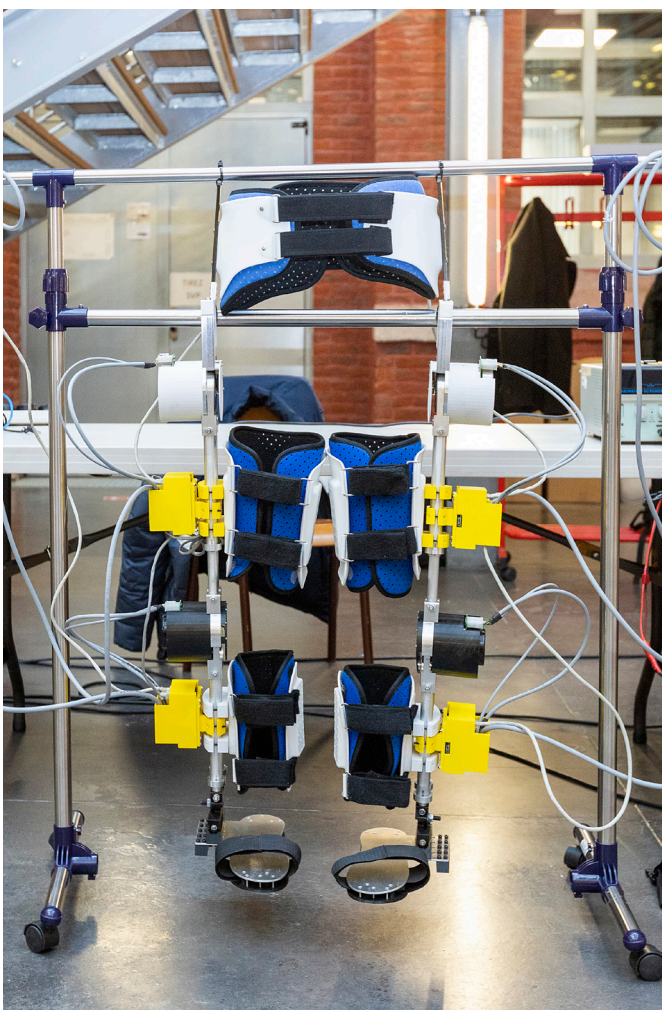
4. REFERENCES

[1] Smith, R., Apps, J., Hatzidimitriadou, E. (2021). *'Uptake of, attitudes to and experiences of robotic assistive technology in health professionals, parents and carers of children and young adults with neurodisabilities: a protocol for a systematic review.'* PROSPERO 2021 CRD42021243775

[2] Cowan, D. Judge and S. Cudd, P. (2015) *Over a Decade of Developing the Assistive Technology Field in the UK. Technology and Disability*, 27, pp.1-3

[3] Alvarez-Perez MG, Garcia-Murillo MA, Cervantes-Sanchez JJ. *Robot-assisted ankle rehabilitation: a review*. Disabil Rehabil Assist Technol. 2019. https://doi.org/10.1080/17483107.2019.1578424

[4] Gonzalez, A., Garcia, L., Kilby, J., & McNair, P. (2021). *Robotic devices for paediatric rehabilitation: a review of design features*. BioMedical Engineering OnLine, 20(1), 1-33

[5] King, P., & Martínez, E. G. (2020). *Robotic Assistive Technologies: Principles and Practice.* IEEE Pulse, 11(1), 27-28

[6] Hunt, M., Everaert, L., Brown, M., Muraru, L., Hatzidimitriadou, E., & Desloovere, K. (2022). *Effectiveness of robotic exoskeletons for improving gait in children with cerebral palsy: A systematic review. Gait & Posture*.

[7] World Health Organization: International Classification of Functioning, Disability and Health (ICF). 2001, Geneva: World Health Organization

[8] Ménard, L., Petit, A., Leblong, É., Stein, M., Hatzidimitriadou, E., Khemmar, R., ... & Gallien, P. (2020). *Novel robotic assistive technologies: choosing appropriate training for healthcare professionals. Modelling, Measurement and Control C*, 81(1-4), 43-48.

[9] Kirkpatrick, D. L., & Kirkpatrick, J. D. (2006). *Evaluating Training Programs: The Four Levels (3rd ed.)*. San Francisco, CA: Berrett-Koehler Publishers, Inc.

5. APPENDICES

MOTION Training Programme Evaluation Questionnaire

Thank you for your interest in helping us evaluate this unit, developed by Canterbury Christ Church University (CCCU) and partners working on the cross-Europe project MOTION (Mechanised Orthosis for Children with Neurological Disorders-www.motion-interreg.eu).

As part of the development of this training the MOTION team want to gain the views of those undertaking the training modules regarding content, clarity, relevance, and usefulness to you and how easy you found it to complete the unit. This will help us to make any necessary refinements and improvements to the modules. The answers will be compiled into a report on participant views of the modules across the UK, France, Belgium, and the Netherlands and used in future publications about the findings of the project.

Completion of this evaluation questionnaire is completely voluntary and does not affect receipt of the certificate of completion for the unit. The questionnaire takes approximately 15 minutes.

By completing this questionnaire, you are giving consent for the data you provide to be used for the purposes of this part of the MOTION project. You can withdraw at any time you wish before pressing 'Finish' at the end of the questions-just close the survey and your answers will not be recorded. You will not be able to withdraw your data after you have pressed 'Finish' at the end of the questions.

We will need to use information from you for this research project. This information will include your profession and number of years in practice but no other identifying data. We need to manage your records in specific ways for the research to be reliable. This means that we won't be able to let you see or change the data we hold about you. We will keep all information about you safe and secure. All data and personal information will be stored securely within Canterbury Christ Church University premises in accordance with the General Data Protection Regulations 2018, Data Protection Act 1998, and the University's own data protection requirements.

Once we have finished the study, we will keep some of the data so we can check the results. We will write our reports in a way that no-one can work out that you took part in the study. Data will only be accessed by the researchers working on this project. All data will be deleted after a period of 9 years from the start of the MOTION project (2018), i.e., they will be deleted in 2027, as per funders' requirements.

You can find out more about how we use your information by: Clicking on the following link www.hra.nhs.uk/information-about-patients Or sending an email to the research team at: motion@canterbury.ac.uk

INSTRUCTIONS FOR COMPLETION:

This survey comprises 4 sections:

1. Information about you and your background

2. Your experience of the unit including your knowledge, confidence and readiness to implement LLRAT with children before and after this training

3. Your views on the content and online platform

4. Your overall view of the unit and likelihood of undertaking further training

Please answer the questions as fully as you can, including where there is space for free text answers.

If you have any questions please contact the MOTION team at CCCU, at motion@canterbury.ac.uk.

Results from the study will be available on www.motion-interreg.eu in December 2022.

Q1. I confirm that I have read and understood the information above and have contact details of the research team if I have any questions. *Required*

1 Yes

2 No

Q2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason. *Required*

1 Yes

2 No

Q3. I understand that any personal information that I provide to the researchers will be kept strictly confidential. *Required*

1 Yes

2 No

Q4. I agree to take part in this evaluation study. *Required*

1 Yes

2 No

Section 1: Information About You and Your Background

Q5. In which country are you based?

1. UK

2. France

3. Belgium

4. Netherlands

5. Other

Q6. What is your occupation or role?

1. Physiotherapist/physical therapist

2. Occupational Therapist

3. Speech and Language Therapist

4. Orthotist

5. Consultant

6. Teacher

7. Nurse

8. Parent

9. Student (please specify discipline below)

Other (please specify below)

Q7. If you selected Other, please specify:

Q8. If you are a professional, how long have you been practicing?

1. < 2 years
2. 2-4 years
3. 5-7 years
4. 8-10 years
5. 11-13 years
6. 14+ years
7. n/a I am not a professional

Q9. If you are a professional currently in employment, please specify your employing NHS Trust or other employer.

1. Add list of Trusts
2. Non-NHS employer
3. Not applicable I am not/no longer a professional in employment.

Q10. If you are a student, please give your level of study

1. Level 3
2. Level 4
3. Level 5
4. Level 6
5. Level 7
6. Not applicable-I am not a student.

Q11. If you are a student, please state your place of study

Q12. If you are neither a registered/qualified professional nor a student, please state your role/reason for undertaking the training

Q13. Do you use Robotic Assistive Technology (RAT) in your practice/studies/role?

1. Never
2. Rarely
3. Sometimes
4. Often
5. Always

Q14. If you use RAT in your practice/role, please provide further details of what you use

Q15. In relation to Robotic Assistive Technology, how would you rate your own knowledge, of RAT, BEFORE and AFTER undertaking this training.

Please do not select more than 1 answer per row.

	Very poor	Poor	Fair	Good	Excellent
Before the training module					
After the training module					

Q16. In relation to Robotic Assistive Technology, how would you rate your own confidence in using RAT, BEFORE and AFTER undertaking this training?

Please do not select more than 1 answer per row.

	Very poor	Poor	Fair	Good	Excellent
Before the training module					
After the training module					

Q17. In relation to Robotic Assistive Technology, how would you rate your own readiness to implement RAT, BEFORE and AFTER undertaking this training.

Please do not select more than 1 answer per row.

	Very poor	Poor	Fair	Good	Excellent
Before the training module					
After the training module					

Q18. Do you feel that this unit met its learning objectives?

1. Yes
2. No
3. Not sure

Q19. Please use the space below to say more about why you think this is the case.

Q20. What were three important things you learned from this unit?

Q21. Were there any parts of the unit that you found less useful?

1. Yes
2. No
3. Not sure

Q22. Was there anything you learned from this unit that you intend to apply back in your job/studies/family?

Q23. Please give details below:

Q24. How confident do you feel in applying what you have learned in this unit to your job/practice/studies/role as a parent/carer? (Where 1 is not at all confident, and 5 is totally confident)

1   Not at all confident

2

3

4

5   Totally confident

6   Not applicable

Q25. Do you think this unit contained an adequate amount of content?

1. Yes
2. No
3. Not sure

Q26. Please give more details:

Q27. Do you think this unit's content was set at an appropriate level?

1. Yes
2. No
3. Not sure

Q28. Please give more details:

Q29. Please rate the extent to which you thought the material was: *Please do not select more than 1 answer per row.*

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
Easy to follow					
Clearly presented					
Interesting					
Engaging					
Professionally relevant					

Q30. Please provide any further comments you have about any of these areas:

Q31. Do you have any comments or suggestions to improve the content and/or features of this training in relation to your profession?

Q32. In terms of the online training platform and the mode of delivery of the content, what did you think of (Please don't select more than 1 answer(s) per row.)

	Very poor	Poor	Neither poor nor good	Good	Very good
Accessibility					
Use of video materials					
Navigation between sections					

Q33. Please provide any further comments you have about any of these areas below:

Q34. After this unit, how likely would you be to engage in further units of training in RAT? (Please don't select more than 1 answer(s) per row).

	Never	Unlikely	Possible	Quite likely	Extremely likely
List of units					
Train the trainer					

Q35. Would you recommend this training to a colleague/friend?

Q36. Please give more details on why you say this:

This is the end of the evaluation survey. If you have any further information that you would like to add or any comments, please use the space below. If you are happy to submit your responses, click 'finish' below and your responses to the questions will be submitted. If you do not wish to submit your responses and participate in this evaluation simply close it now without going onto the next page. Thank you very much for your interest in this evaluation study and the MOTION project.

Interreg
2 Seas Mers Zeeën
M.O.T.I.O.N
European Regional Development Fund
EUROPEAN UNION

Canterbury Christ Church University

Chailey Clinical

NHS
Sussex Community
NHS Foundation Trust

Sint Maartenskliniek

yncréa

KU LEUVEN