



DEVELOPING AND EVALUATING DRAGON-SHIELD

DRAGON: DEVELOPING RESISTANCE AGAINST GROOMING ONLINE

2023



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**End Violence
Against Children**



**UK Research
and Innovation**



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PART ONE: EXECUTIVE SUMMARY

A note on terminology in this report:

- In accordance with the United Nations Convention on the Rights of the Child, 'child/children' is used to refer to any person aged 0-18.
- When referring to online child sexual grooming / online grooming, 'online' is used as a catch-all term to account for all forms of digital technology.

Introduction

Sexually motivated violence against children, especially online, is reaching epidemic proportions and has been identified to represent a child protection emergency. In 2022:

- A webpage showing a child being sexually abused was discovered every two minutes; and
- In four out of five online child sexual grooming cases children were groomed by someone they had met – and knew exclusively – online!

Both the scale and pervasive nature of the problem, and the need to act, are evidenced by a growing global movement urging an overhaul of protections for children online. This is reflected in moves towards legislative change across many jurisdictions aiming to mandate safety by design, introduce stricter regulation, and improve the detection and disruption of known and unknown child abuse material (CSAM) and grooming online.

The DRAGON-Shield training platform adds value to existing preventative efforts and fills an important gap in current provision. This is achieved through a unique and research-evidence-based focus on online child sexual grooming as communicative manipulation. Groomers use language (words, images, videos, etc.) to manipulate and control children online. Yet the language of online child sexual grooming has received little attention in research and training developed

to date. DRAGON-Shield is the only training to offer a holistic view of how language works in groomer ↔ child online interactions.

Developing DRAGON-Shield

What is DRAGON-Shield?

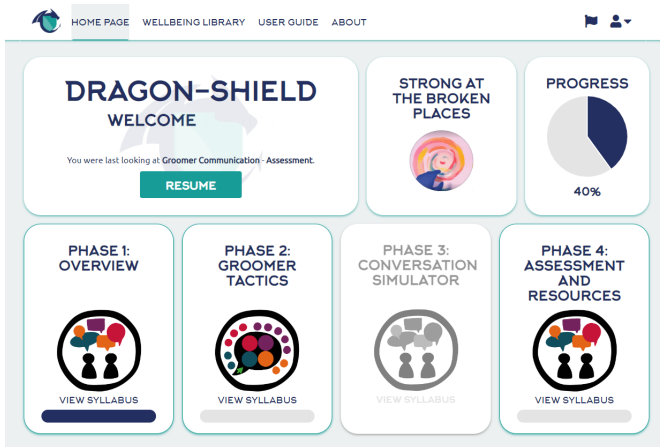
DRAGON-Shield is one of two digital tools developed through Project DRAGON-S: an online grooming detector for law enforcement (DRAGON-Spotter) and an online grooming prevention training platform for child safeguarding practitioners (DRAGON-Shield). The training platform was co-developed in 2021-2022 with c. 250 individuals (domain experts (academia, policy making, third sector), child-safeguarding practitioners, children and lived experience experts (LEEs)) across five jurisdictions: Australia, Canada, New Zealand, United Kingdom and United States of America.

DRAGON-Shield is an interactive, multi-media training platform that relays specialist knowledge to child safeguarding practitioners about groomer ↔ child communicative behaviour during online grooming interactions. The training platform strengthens a child safeguarding practitioner's ability to prevent children from being sexually groomed online and support those who may be at risk of, or have experienced, online grooming.

What does DRAGON-Shield include?

The DRAGON-Shield training platform is split into four Phases (see Figure 1). Phases One - Three contain eight Modules, interactive Quizzes, and an optional Conversation Simulator. Phase Four includes a final Quiz and two downloadable assets, namely a Resource Pack that may be used to support work with children aged 11-18 and a Certificate to evidence continuing professional development.

Figure 1: DRAGON-Shield Dashboard.



DRAGON-Shield is also accompanied by a User Guide, a Wellbeing Library and FAQ section. There is also an about/welcome page introducing the tool and Project DRAGON-S. Overall, the training takes approximately four hours to complete – this can be done in any way that suits practitioners, over a period of three months.

Piloting and Evaluating DRAGON-Shield

Between November 2022 and July 2023 DRAGON-Shield was piloted and evaluated by practitioners and children across three jurisdictions: Australia, New Zealand and the UK (England and Wales). The development, pilot and evaluation of DRAGON-Shield were also externally assessed during this period.

Results

Practitioners' feedback

96% fed back that it was important to understand how communication works in online child sexual grooming contexts.



The whole concept of online grooming is communicating with the child and gaining their confidence. It's essential to understand how perpetrators do this.



100% found the DRAGON-Shield content informative.



Having the opportunity to closely examine the communicative style between groomer and child target was a real eye-opener.



100% found the Conversation Simulator informative and relevant.





A superb way to round off the training by partaking in an interactive demonstration of pertinent tactics groomers use to ensnare child targets and keep them engaged. Well done! This is a sure way of driving home some of the aspects of groomer tactics.



100% reported being more knowledgeable about how communication works in online child sexual grooming and about the tactics used by groomers to communicatively entrap children since completing the training.

91% reported being more confident using their knowledge to work with children and/or families who had experienced online child sexual grooming since completing the training.

100% said they would recommend the DRAGON-Shield training to other child safeguarding practitioners.



Very relevant and interesting. Makes you sit up and see the way perpetrators are in reality and the lengths they will go to.



88% planned to use what they had learned from the DRAGON-Shield training in their professional practice.



Hopefully it will allow me to spot potential grooming earlier on, but also, by being able to share my knowledge with young people, I can support them to be more aware of the language used in order to groom them, so they can recognise if this is happening early on.



95% felt their professional practice would improve as a result of engaging in the DRAGON-Shield training. They highlighted that the training:

- Taught them how to work with children

who have experienced online child sexual grooming in a way that avoided blaming them.

- Gave them the confidence to address the issue of online child sexual grooming.
- Provided them with useful examples to illustrate how groomers use language to manipulate children.

76% provided positive feedback about the **Resource Pack**, including praise for the fact it **filled a gap** in **current resource provision**, it was **easy to use** and **empowering** to children.



The design is excellent. I think it's really engaging. It feels like I'm inhabiting a child's world and that is really important. So, when a practitioner goes into it, they can feel that they are part of this space too.



Children's feedback (Resource Pack)

88% agreed that the **design** and **83%** agreed that the **accessibility** of the activities were appropriate.

90% of children agreed that the activities were **easy to navigate** and **93%** agreed that there was **clear signposting to further support**.



If I had seen this video before it would have made me realise what the person [groomer] was doing and I would not have met up with him.



External evaluator's feedback

The external evaluator report concluded that the DRAGON-Shield platform can become a powerful preventative tool in addressing the issue of online child sexual grooming. The

report particularly praised the business case for the training; the commitment to stakeholder engagement and the high participant engagement and completion rates.

Enhancements

A small number of enhancements were recommended by the practitioners, the children and the external evaluator regarding expression in parts of, and navigation through, the training. The enhancements were completed in July 2023.

Conclusion

DRAGON-Shield has been co-developed with domain experts, child safeguarding practitioners, children and LEEs to provide novel, research-evidenced knowledge about online child sexual grooming to child safeguarding practitioners and, thus, to fill a critical gap in their current practice.

The piloting and evaluation of DRAGON-Shield show that the training platform and accompanying resources are a needed addition to the online grooming prevention and support landscape. DRAGON-Shield provides research-based training about how language works in groomer ↔ child online sexual grooming interactions.

Overall, the evaluation of DRAGON-Shield shows:

- children and practitioners find the training platform relevant, clear, engaging and needed.
- very high rates of reported improvements in knowledge and confidence in applying the learning in practice.
- practitioners' intention to use the learning in their work with children to improve their practice and to recommend the training to colleagues.

External evaluation of DRAGON-Shield development and pilot confirm the added value of the training and recommend national and international roll-out, as well as future expansion to other user groups (e.g., parents) and languages.

Overall, DRAGON-Shield provides practitioners with knowledge about groomer and children communicative behaviour, complementing that knowledge with a Resource Pack to facilitate application to practice-based preventative and support interventions. This approach helps to disseminate cutting edge research into practice in a safe, engaging and age-appropriate manner, and adds considerable value to the existing prevention and support landscape.

PART TWO: FULL REPORT

1. Introduction

DRAGON-Shield is one of two digital tools developed through **Project DRAGON-S**: an online grooming detector for law enforcement (DRAGON-Spotter) and an online grooming prevention training platform for child safeguarding practitioners (DRAGON-Shield).

DRAGON-Shield is an online training platform designed to help develop the knowledge and confidence of child safeguarding practitioners to understand online child sexual grooming as communicative manipulation. It is evidence-based training built from approximately a decade of research into how language works in online child sexual grooming.ⁱⁱ Aided by a downloadable Resource Pack, the learning can subsequently be applied in practice work with children 11-18 years old who are either at risk of or have experienced online sexual grooming. The training includes eight Modules, a Conversation Simulator, interactive Quizzes and a Resource Pack for practitioners, as well as a User Guide and FAQ section to support practitioners to navigate through the training. A Wellbeing Library provides additional support.

DRAGON-Shield was developed in 2021-2022 with involvement from c. 250 individuals (domain experts, child safeguarding practitioners, children and lived experience experts (LEEs)) across five jurisdictions: Australia, Canada, New Zealand, UK (England, Scotland and Wales) and USA. A pilot and evaluation of all the DRAGON-Shield training components was undertaken between November 2022 and July 2023 across three jurisdictions: Australia, New Zealand and the UK (England and Wales).

This report firstly contextualises the problem that DRAGON-Shield addresses (Section 2). It then offers an overview of its development (Section 3). The report next presents the results of the pilot and evaluation of the DRAGON-Shield (Section 4), before offering a succinct appraisal of the final product (Section 5) and some conclusions (Section 6). Four Appendices (A-D) are also included, which focus on the methodologies deployed across the development and pilot/evaluation stages.

2. The Problem: Online Child Sexual Grooming

Sexually motivated violence against children, especially online, is reaching epidemic proportions and is increasingly recognised as an urgent child protection issue.ⁱⁱⁱ In 2022:

- **824,466** instances of child sexual abuse material were identified.^{iv}
- A webpage showing a child being sexually abused was discovered **every two minutes**.^v
- In **four out of five** online child sexual grooming cases, the grooming was carried out by someone they had met – and knew exclusively – online.^{vi}
- **56%** of children reported receiving online, sexually explicit content from an adult; and **55%** of children reported having been asked to do something sexually explicit online that they did not want to do, or that they felt uncomfortable doing.^{vii}

Both the scale and pervasive nature of the problem, and the need to act, are evidenced by a growing global movement urging an overhaul of protections for children online. This is reflected in moves towards legislative change across many jurisdictions aiming to mandate safety by design, introduce stricter

regulation, and improve the detection and disruption of known and unknown child abuse material and grooming online.

There is an important gap in the evaluation of programmes aimed at preventing online, sexually motivated violence against children, unlike other areas of the prevention of violence against children.^{viii} Amongst training and educational programmes that have been evaluated, the focus tends to be on the impacts on, and improvements to, children's understanding of online safety strategies and dangers, often using narratives of avoiding 'high-risk' behaviour.^{ix} How these programmes impact on children's ability to disclose experiences of sexually motivated violence, including of online child sexual grooming, and how they work to prevent children's exposure to such experiences have rarely been evaluated. DRAGON-Shield addresses this gap through a rigorous approach to development and pilot/evaluation of training to prevent online child sexual grooming and support the recovery of children who have experienced it.

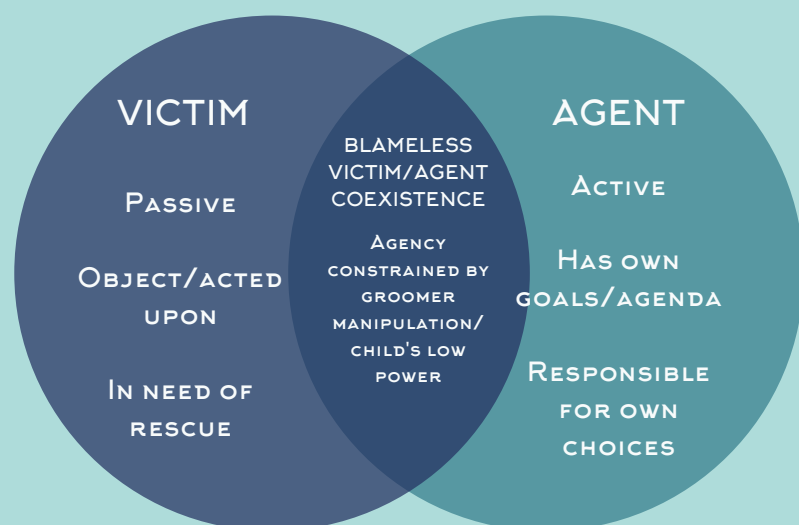
2.1 Online child sexual grooming as communicative manipulation

The DRAGON-Shield training platform responds to the twin challenges of the exponential and intensifying increase in online child sexual grooming cases, and the research evidence of sophisticated communicative tactics used by groomers. It adopts a unique language focus, adding value to existing preventative efforts and filling an important gap in current provision. Groomers use language (words, images, videos, etc.) to manipulate and control children online. Yet, the communicative aspect of online child sexual grooming has received little attention in research and training developed to date.

DRAGON-Shield is the only training to offer a holistic view of how language works in online child sexual grooming, which it defines as a practice of communicative manipulation, specifically as an adult's use of technology-mediated communication comprising multiple modes, to get a child to partake in sexual activities online and at times also offline.

Crucially, DRAGON-Shield sees the communicative practice of online child sexual grooming as involving a two-way interaction between a manipulative, offending adult (the groomer) and a child. This understanding acknowledges the communicative agency of the child without diminishing the sense that they cannot consent to their own abuse and are never to blame. DRAGON-Shield adopts an approach that deconstructs the binary of seeing children as either passive victims or active participants. In doing so, DRAGON-Shield recognises that a child can be both a blameless victim and display communicative agency (see Figure 2). The term agency is therefore used in a neutral sense that simply acknowledges that groomer and child are participants in the interaction.

Figure 2: Challenging the agency versus victimhood dichotomy in contexts of sexually motivated violence against children.



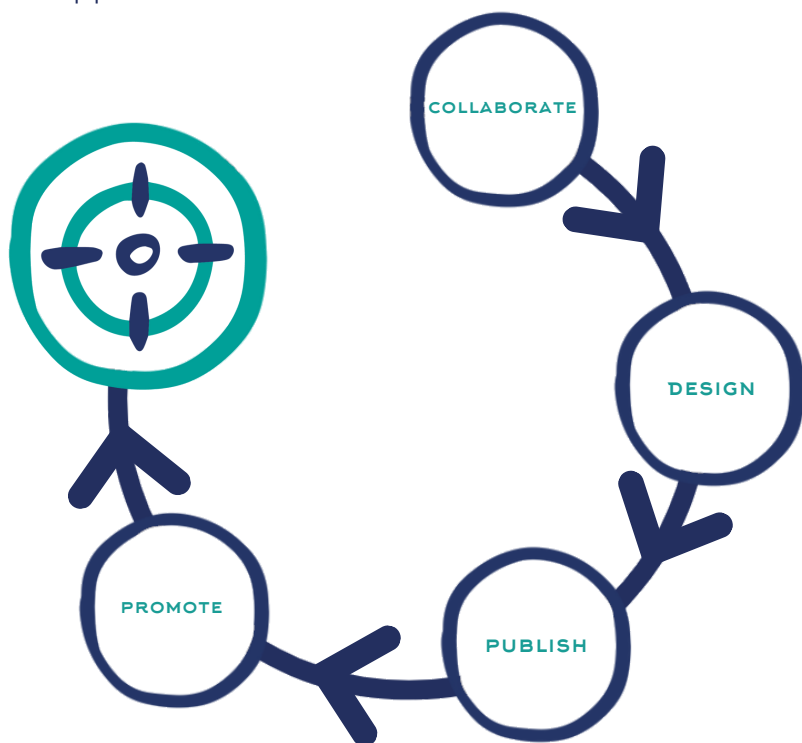
3. Developing DRAGON-Shield

3.1 Approach and context

The development of DRAGON-Shield took place in 2021-2022 and included four synergistic activities (see Figure 3 and, for details, see Appendix A):

- Collaborating, namely co-production and consultation, with domain experts, child safeguarding practitioners, children, and a LEE Group.^x
- Designing and implementing effective training on preventing online child sexual grooming.
- Publishing academic^{xi} and grey literature outputs.
- Promoting cross-sector and global spaces for learning and discussion.

Figure 3: DRAGON-Shield development approach.



The context of development of DRAGON-Shield spanned the Covid-19 global pandemic, which required a complete reassessment of multiple aspects. DRAGON-

Shield operated over a period of recurrent lockdowns. This meant that consultation and co-production workshops mostly had to take place online. Whilst initially this felt like a considerable challenge, and it led to a need to reassess delivery plans and altered some of the initial timelines, there was a successful adjustment to online development of all aspects of Project DRAGON-Shield. This now entrenched shift in hybrid on/offline working had the hidden positive of allowing Project DRAGON-S to attract and work with an international cohort of practitioners. DRAGON-Shield offers a global perspective, displaying commitment to continue as the training is rolled out and scaled up. The chief learning objective of DRAGON-Shield is to reach as many practitioners and, through them, as many children as possible.

3.2 Introduction to DRAGON-Shield training platform

3.2.1 What is DRAGON-Shield?

Adopting an interactive, multimedia approach, DRAGON-Shield relays specialist knowledge to child safeguarding practitioners about groomer ↔ child communicative behaviour during online grooming interactions. The platform strengthens a child safeguarding practitioner's ability to prevent children from being sexually groomed online and support those who may be at risk of, or have experienced, online grooming.

3.2.2 What does DRAGON-Shield include?

On enrolment in the DRAGON-Shield training platform, practitioners are guided through:

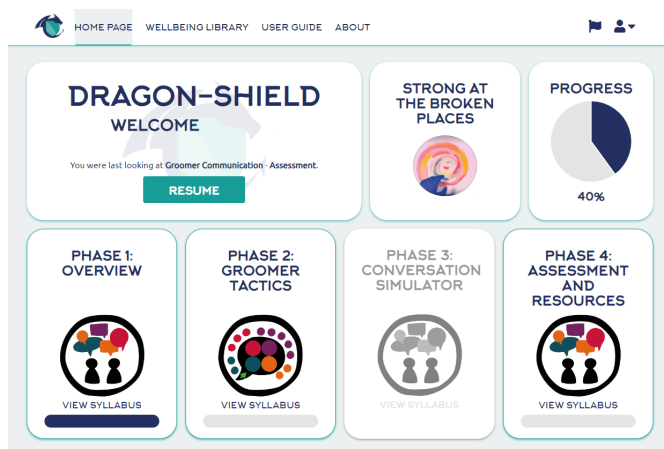
- Key concepts relating to how communication works in groomer ↔ child interactions.
- Explanations of online groomers' use of manipulative language tactics,

including illustrations of sample conversations based on real transcripts between groomers and children.

- Interactive Quizzes to test knowledge acquired in each module.

The DRAGON-Shield training platform is split into Four Phases (Figure 1). Phase One includes three Overview Modules. They introduce the key concepts of online grooming as communication and how it works between groomer and child.

Figure 1: DRAGON-Shield Dashboard.



Phase Two takes a more detailed look at each of the communicative tactics that have been identified as core within groomer ↔ child interactions. In Phase Three, practitioners can engage with a Conversation Simulator, to see groomers' use of the tactics in action. Phase Four includes a downloadable Resource Pack, which may be used to support work with children aged 11-18. Phase Four also provides a downloadable Certificate to evidence continuing professional development for practice portfolios. DRAGON-Shield is accompanied by a User Guide and FAQ section that help practitioners to navigate the training. There is also a Wellbeing Library that provides additional support to practitioners throughout the training experience. Overall, the training takes approximately four hours to complete – this

can be done in any way that suits trainees, over a period of three months.

3.2.3 What are the DRAGON-Shield training outcomes?

DRAGON-Shield aims to address three key problems:

1 A self-reported lack of understanding amongst child safeguarding practitioners around how groomers communicate with the children that they target online.

2 The sophistication of groomers' communicative manipulation.

3 An overwhelming volume and steady increase of online child sexual grooming cases.

The outcomes of the training therefore are:

Practitioners better understand what children may experience communicatively during online grooming.

Practitioners use the knowledge acquired through the training to strengthen current approaches to prevention, protection and support for children.

Practitioners are able to apply their learning in their working practice, e.g., with the aid of the DRAGON-Shield Resource Pack.

4. Piloting and Evaluating DRAGON-Shield

4.1 Methodology overview

Piloting and evaluating DRAGON-Shield entailed working closely with three key stakeholder groups: practitioners, children and external evaluators. Over a 10-month period (Figure 4), the practitioners who took part in the pilot completed one pre-training questionnaire (Questionnaire One 'Q1'), eight module questionnaires (Questionnaire Two 'Q2') and two post-training questionnaires; one immediately after completion of all the training (Questionnaire Three 'Q3'); the other one month after completion of all the training (Questionnaire Four 'Q4'). Focus groups and semi-structured, one-to-one interviews were then conducted with a cross-section of the practitioners. This was to seek additional feedback on both the training overall and its supporting elements, namely the Wellbeing Library and the Resource Pack. Children also provided feedback on the Resource Pack over the course of two consultation

workshops. In addition, the DRAGON-Shield development and pilot/evaluation were externally evaluated. For details of the different methodologies adopted to pilot and evaluate DRAGON-Shield see Appendices B-D.

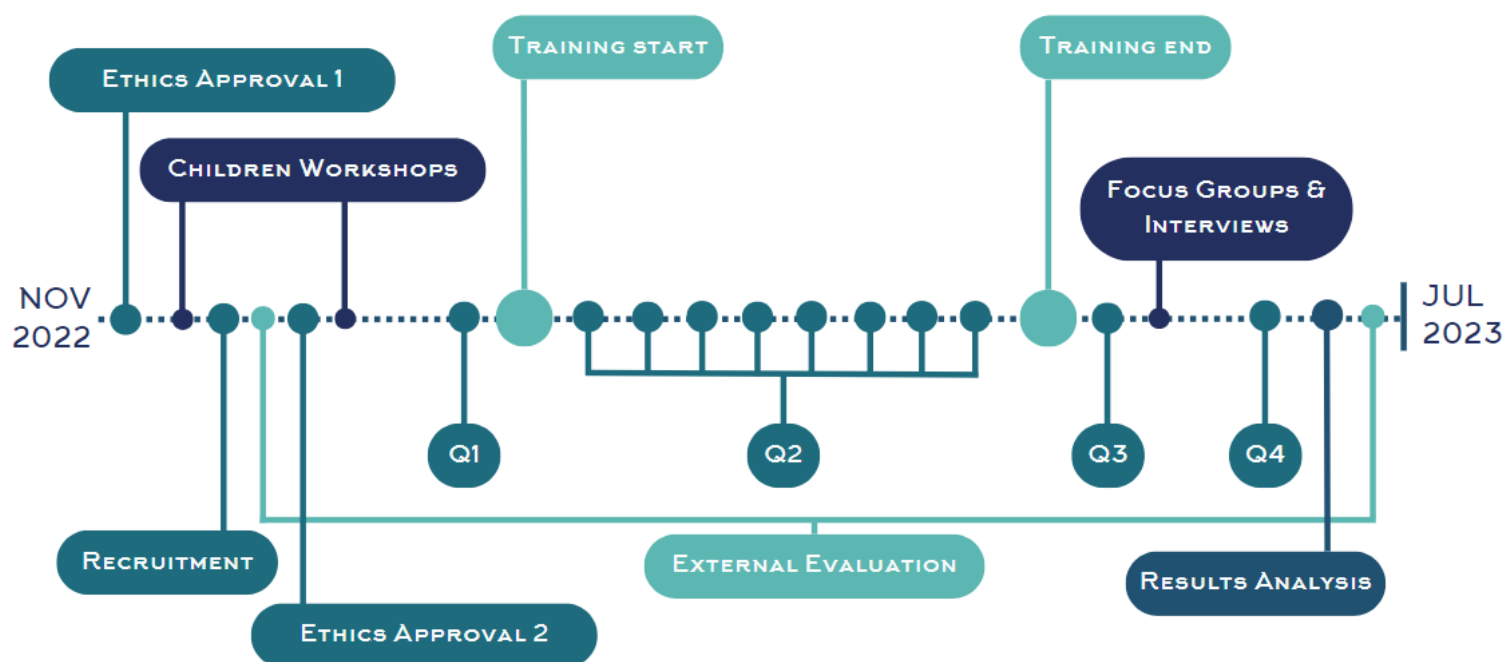
4.2 Results

4.2.1 DRAGON-Shield pre-training

Prior to commencement of the pilot, practitioners were asked about their level of training around online child sexual grooming and their pre-existing knowledge about how communication works in online child sexual grooming. This revealed that training around online child sexual grooming is inconsistent both in terms of frequency and content:



- **53%** had received training in the last year.
- **75%** had received training in the last three years.
- **73%** had never received training about how communication works in online child sexual grooming.



Figure 4: DRAGON-Shield pilot and evaluation timeline.



Awareness of the need for training about online child sexual grooming communication was high: **96%** recognised the importance of understanding how communication works in online child sexual grooming.

Confidence in being able to apply their training, however, was low: **44%** did not feel confident applying their training in this area to safeguard children.

 *The whole concept of online grooming is communicating with the child and gaining their confidence. It's essential to understand how perpetrators do this.* 

 *Knowledge will enable us to train a workforce who can be professionally curious and ask the appropriate questions in order to recognise online grooming effectively.* 

4.2.2 DRAGON-Shield training

4.2.2.1 Phase One: Overview modules

The three Overview Modules are:

- Module One: Online Grooming as Communication.
- Module Two: Child Communication.
- Module Three: Groomer Tactics.

Module One introduces the concept of online child sexual grooming as communicative manipulation. It explains the core features of online grooming communication and establishes it as a distinct, two-way interaction between an offending adult (the groomer) and a child. Key concepts around child communicative agency (Module Two) and groomer manipulative goals and power abuse (Module Three) are then explained and differentiated. Phase One thus provides the base knowledge to support practitioners to engage with Phase Two of DRAGON-Shield.

The main learning objective of Phase One is to understand:



- The concept and key features of online grooming communication.
- The rationale for studying children's communication in grooming contexts and explore three key types of child communication.
- The communicative tactics used by groomers, including the features that these tactics share.

100% agreed the Overview Modules were informative.

93% agreed the Overview Modules were easy to follow.

93% agreed the Overview Modules were relevant to their job role.

 *Having the opportunity to closely examine the communicative style between groomer and child was a real eye-opener.*

 *I thought explaining the agency vs victim dichotomy was EXCELLENT and really relevant [...] Great having language to use around concepts that are really hard to explain to communities.* 

4.2.2.2 Phase Two: Detailed Modules

In the five Modules that comprise Phase Two, practitioners are provided with explanations and examples of five groomer tactics, termed:

Trust
Isolate
More
Entry
Sex

A mnemonic (TIMES) is used to link groomer tactics to the concept of time. The order of the tactics in the mnemonic may suggest that tactics work sequentially. Yet, as discussed in Phase One, that is not the case and practitioners are encouraged to select the order

in which they prefer to complete the individual tactic modules.

The main learning objectives of the Phase Two Modules are to:

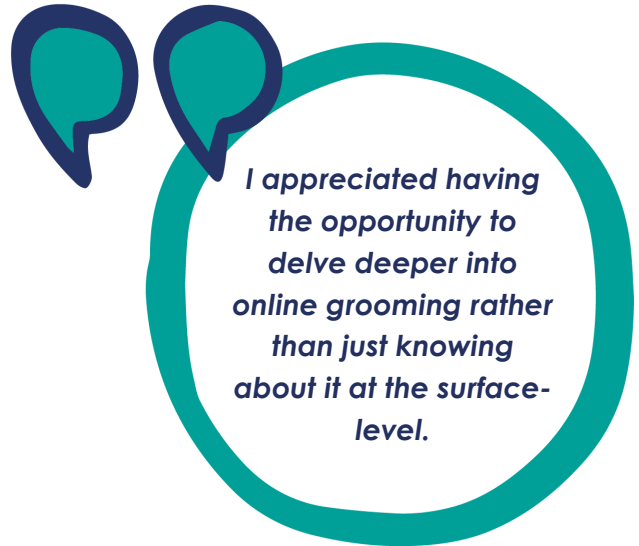
- Understand groomer tactics and corresponding sub-tactics.
- Consider how groomers use the tactics to engage children, demonstrated through the examples provided.
- Consider examples of how children respond to groomers' use of certain tactics.
- Recognise, and reflect on, how tactics work within online child sexual grooming communication as a whole.

100% agreed Phase Two Modules were informative.

93% agreed Phase Two Modules were easy to follow.



Individually unpacking groomer tactics is extremely useful in gaining insight into the level of skill and manipulation used to ensnare the child target and keep them engaged.



Highlights

Practitioners identified the following best things about the modules in Phase One and Phase Two:

- New insights into real-world online child sexual grooming scenarios.
- A useful breakdown of key concepts surrounding online child sexual grooming.
- Helpful examples that supported



- understanding of the groomer tactics.
- The potential for application of the knowledge gained into their professional work.
- The right balance between giving attention to the agency of the child in an online sexual grooming context and stressing the importance of not victim-blaming the child.

Recommended improvements

Practitioners suggested:

- Adding a few more trigger warnings, to prepare them for the examples in the modules.
- Condensing some of the content and making expression clearer in some parts.
- Resolving a few technical issues, such as facilitating the playback of videos and reducing the number of clicks to move around the platform.

4.2.2.3 Phase Three: Conversation Simulator

The Conversation Simulator places the practitioner in the role of a child during an online grooming interaction. It enables the practitioner to experience in 'real-time' three online child sexual grooming communicative scenarios, providing an opportunity to review and consolidate learning.

The Conversation Simulator was welcomed by all practitioners, who saw it as an effective way to cement their learning.

100% agreed it was informative and relevant.

86% found it interactive and easy-to-follow.



The use of the conversation simulator is a novel way to almost gain first-hand experience of how a groomer engages with a child target.



Highlights

Practitioners identified the following best things about the Conversation Simulator:

- Its novelty.
- Its interactivity.
- That it gave them "first-hand" experience of what children encounter communicatively when facing online child sexual grooming.



Recommended improvements

Practitioners suggested:

- Reducing the number of clicks needed to navigate between the three scenarios.
- Providing additional content warnings.

4.2.2.4 Phase Four: Quizzes

DRAGON-Shield includes brief, end-of-module Quizzes and a longer, overall Quiz. A pass rate is pre-determined, and a requisite to progress to the next module/phase. Details of the correct answers can be accessed if the overall rate is not achieved.

67% agreed the assessment was effective in measuring the learning that had taken place.



I found it helpful to have [the] function to redo the assessment. It happened a bit throughout as I was coming to grips with the specific language.



The assessment makes you consider what you have retained and encouraged me to review the previous modules.



Highlights

Practitioners fed back that the best things about the Quizzes were:

- The opportunity to revisit knowledge gained throughout the module.



- Being able to reinforce the learning taking place across the training platform.

Recommended improvements

Practitioners suggested:

- Slightly lowering the percentage required to pass the Quizzes.
- Providing explanations in the answer sheets to help reinforce the learning taking place.
- Ensuring consistency in the terminology used across the modules and in the Quizzes.

4.2.2.5 Phase Four: Resource Pack – Practitioners’ Feedback

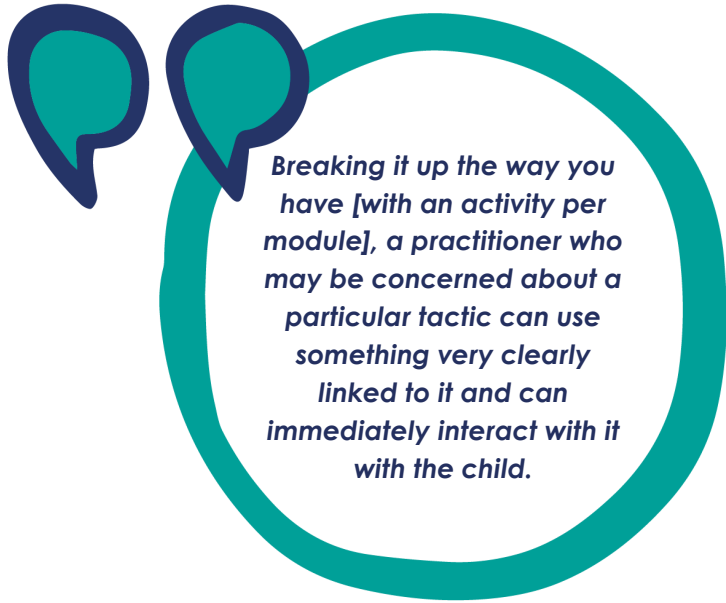
The Resource Pack is designed to support practitioners to share their learning with colleagues and to aid preventative and support work with children aged 11-18. Its main purpose is to facilitate engagement with, and help embed learning about, the ideas that relate to online child sexual grooming as a practice of communicative manipulation. It contains 12 activities, some of which (e.g., two digital animations) feature in the DRAGON-Shield modules.

The activities are a mixture of memory aids, animations and exercises that can be completed in any order and are designed to be selected based on how they best fit work with colleagues and children. The activities are designed to work both digitally and to be printed off as hard copy hand-outs. Each activity has a tailored description of what it is and suggestions for how it could be used. A list of materials needed for each activity is also provided.

Feedback on the Resource Pack was overall positive.



The design is excellent. I think it's really engaging. It feels like I'm inhabiting a child's world and that is really important. So, when a practitioner goes into it, they can feel that they are part of this space too.



Highlights

Practitioners praised:

- The interactivity and scope of the content in the Resource Pack.
- The provision of an activity per module.
- The ability to download the Resource Pack for work with children.
- The pack being fit for purpose, providing a much-needed addition to current training provision.
- It being user-friendly – even for practitioners who might not complete the training.
- It being well-designed and appealing to, and empowering for, children.

Recommended improvements

Practitioners recommended:

- Reproducing embedded videos in a more user-friendly manner.
- Providing more detailed guidance about how to use the activities.
- Clarifying some of the terminology used.

4.2.2.6 Phase Four: Resource Pack – Children's Feedback

Children's feedback was sought on the Resource Pack, which is the only child-facing part of the DRAGON-Shield training. Their feedback was obtained via two creative consultation Workshops.

Workshop One

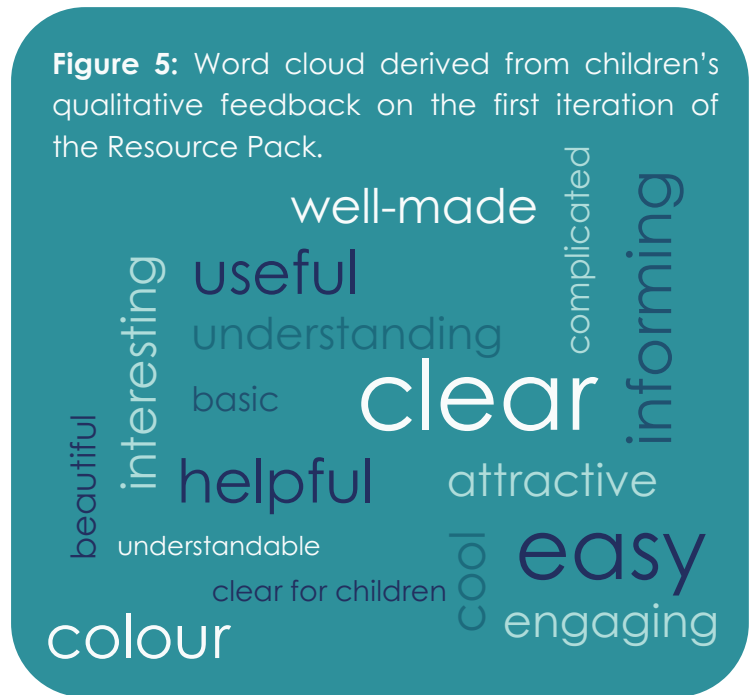
Highlights

Children fed back that the best things about the Resource Pack were:

- Its design, which was appropriate and attractive for children.
- The information included in each resource, which helped educate them about online grooming.
- The interesting and informative activities included in it.

Children's qualitative feedback was collated and is visualised in the word cloud at Figure 5.

Figure 5: Word cloud derived from children's qualitative feedback on the first iteration of the Resource Pack.



Recommended improvements

Children suggested:

- Reducing the amount of information used in each activity to make them easier to follow.

- Designing the activities to be more colourful and less “busy” to make them more appealing.

Workshop Two

88% agreed that the **design** and **83% agreed** that the **accessibility** of the activities were appropriate.

90% of children agreed that the activities were **easy to navigate** and **93%** agreed that there was **clear signposting to further support**.

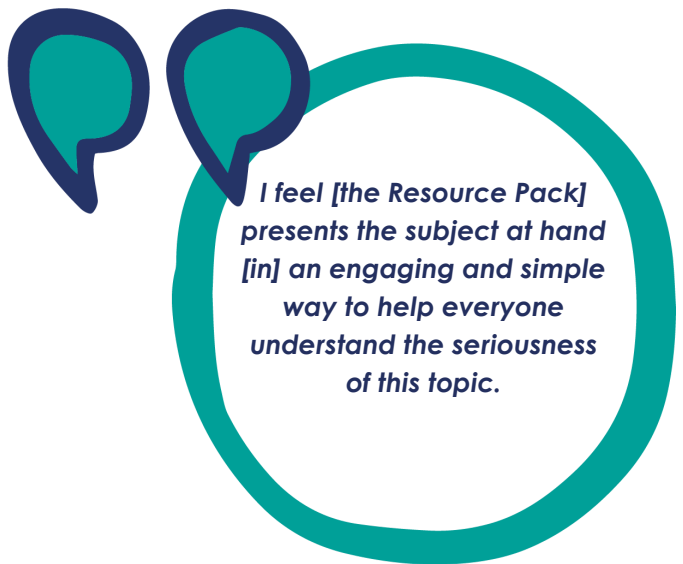
Highlights

During Workshop Two children were also asked to answer the question ‘In one word, how would you describe your overall experience of using the resource?’. The responses are visualised in the word cloud in Figure 6.

Figure 6: Children's responses to the question ‘In one word, how would you describe your overall experience of using the resource?’



If had seen this video before it would have made me realise what the person [groomer] was doing and I would not have met up with him.



The video conveyed the message in a way that uses simple vocabulary that will easily be understood by children and young people.



Recommended improvements

Children recommended that the DRAGON-Shield team continue to engage with children when updating content of the Resource Pack to ensure that it is reflective of their evolving online communication practices.

4.2.3 DRAGON-Shield Post-training (Overall feedback – immediate)

Immediately following their completion of the DRAGON-Shield training, practitioners were asked to assess the impact that the training had already had on their professional practice and how they intended to utilise it in the future.

100% felt more confident using their knowledge to work with children who have experienced online child sexual grooming and/or their families.

100% agreed they were more knowledgeable about how communication works in online child sexual grooming and the tactics used by

groomers to communicatively entrap children.

94% said they would revisit the training in the future to refresh their knowledge.

100% said they would recommend the DRAGON-Shield training to other child safeguarding practitioners.

88% planned to use what they had learned from the DRAGON-Shield training in their professional practice to:

- Educate children and/or their families about online child sexual grooming.
- Lead discussions about online child sexual grooming with colleagues and/or parents/carers.
- Identify incidents of relevant grooming communication when they occur.

4.2.4 DRAGON-Shield Post-training (Overall feedback - one month after)

One month after completing the DRAGON-Shield training, practitioners were asked to assess their reported knowledge of online child sexual grooming communication and the impact that they felt the training may have continued to have on their professional practice, as well as how they may have incorporated the training into their work.

95% were more aware of the importance of understanding how communication works in online child sexual grooming as a result of completing the DRAGON-Shield training.

91% agreed the DRAGON-Shield training had given them new knowledge about online child sexual grooming as communication that would assist them in their professional practice.

78% agreed the knowledge they gained during the DRAGON-Shield training had made them more confident in being able to safeguard children from online child sexual

grooming.

95% reported that their professional practice had improved as a result of completing the DRAGON-Shield training as:

- They were better able to spot potential online child sexual grooming.
- They were more cognisant of the nuances in the language children use to recount their experiences of online child sexual grooming.
- They felt more confident working with children affected by online child sexual grooming without blaming them for what had happened.

Highlights

88% of practitioners planned to use what they had learned from the DRAGON-Shield training in their future professional practice by:

- Raising awareness of the benefits of looking at online child sexual grooming through a linguistics lens.
- Sharing knowledge about the communicative tactics used by groomers during online child sexual grooming with children to empower them to identify these tactics themselves.

95% of practitioners felt their professional practice had improved due to the knowledge gained during the DRAGON-Shield training, which had:

- Given them the confidence to address the issue of online child sexual grooming.
- Provided them with examples to illustrate how groomers use language to manipulate children online.
- Given them a better awareness of warning signs and tactics used in online child sexual grooming.
- Taught them how to work with children in a manner that avoided blame.

82% of practitioners had used the knowledge they had gained as part of the DRAGON-Shield training platform in their professional practice to:

- Educate children about the communicative strategies used by groomers.
- Create interventions with children to empower them to recognise online child sexual grooming with greater ease.
- Educate children about the risks they could face in the online world and how to protect themselves against these risks.
- Amend mandatory safeguarding policies and training for new starters to include online child sexual grooming.

90% planned to continue using the knowledge they had gained as part of the DRAGON-Shield training platform to:

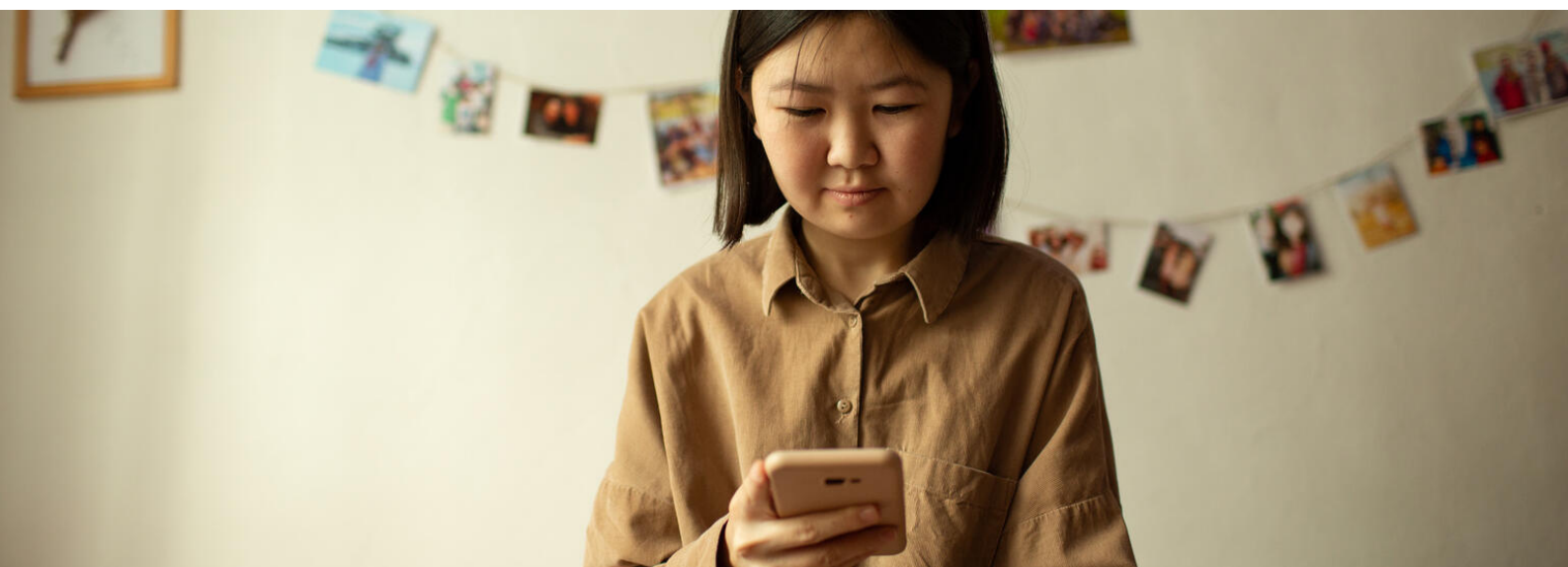
- Educate parents about the online world and the importance of monitoring their children's online interactions.
- Better analyse children's interviews when incidents of online grooming are being described.
- Develop a training package for children about online grooming.

- Provide front-line practitioners with the skills and knowledge to work through the Resource Pack with children.


Recommended improvements

Post-training, practitioners made further recommendations, including:


- Improving ease of navigation around and addressing occasional glitches in the system.
- Signposting to helpful sites for further information and advice on online grooming prevention, as well as apps for children to avoid.
- Providing more information about how professionals can apply the learning in practice.
- Enabling a longer timeframe to complete the training.
- Considering adding options for group discussion.
- Considering creating refresher courses.





4.2.5 Testimonials





I will definitely be using this to create an intervention with young people - one that can highlight to young people the language used by groomers to exploit them, and one that I can use with children who have been groomed online, to support their understanding of how this happened, and how this was not their fault.



Within safe situations - and preferably in a group - [I can ask] children questions about their online experiences, advising them of best practices for their own safety and comfort, and reminding them of the power and the support mechanisms they do have available to them should they have a problem. Most importantly, [I can tell them] that there is no shame too big to grow through.



The newly acquired info [about] grooming tactics and communication will assist me in potentially identifying relevant (grooming) communications between a child and perpetrator when reviewing electronic communication records. It will also allow me to share this knowledge with my team in order to raise their awareness of the significance of certain questions asked/ approached used by perpetrator (that previously may have appeared innocent or insignificant). This, I feel, will better enable my team to identify concerning communication and hopefully, in turn, better safeguard the children that come to our attention.



I work with young people who have already been the victims of online grooming and I often see them take responsibility for what's happened and blame themselves. I feel this has given me additional understanding of this that will enable me to explain how groomers use manipulation and various tactics to exploit children, and that this is not the fault of the child.

4.2.6 External assessment of DRAGON-Shield development and piloting

An independent third party with expertise in delivering and evaluating training to counter sexually motivated violence against children was procured to externally evaluate the development and piloting of the DRAGON-Shield tool.

The external evaluator formulated five questions to guide their work:

1 Has the business case for training been clearly made?

2 How confident are you that DRAGON-Shield has sufficiently engaged with, and been informed by, stakeholder views?

3 Is DRAGON-Shield effective?

4 How 'preventative' is DRAGON-Shield in different professional contexts?

5 How will DRAGON-Shield be sustained in the future?

Highlights

The external evaluator report concluded that DRAGON-Shield has the potential to become a powerful preventative tool against online child sexual grooming. Their critical reflection on the development and piloting of the training platform particularly praised:

- **the business case** for DRAGON-Shield, identifying feedback from practitioners that clearly indicates its value and necessity for widespread implementation nationally and internationally.

- **a commitment to stakeholder engagement** from various domains, which played a crucial role in informing and shaping the project, strengthening the credibility and effectiveness of the training and fostering a sense of ownership and shared responsibility among stakeholders.
- **high participant engagement and completion rates**, indicating a positive response to the training programme.
- **the good level of participation reflected in the pilot data**, highlighting that the training content resonated with the target audience and motivated them to actively engage in the learning process and foster their commitment to completing the training.

Recommended improvements

The principal recommendations for improvements made by the external evaluator were:

- To ensure clear signposting and information about how to apply the learning in practice and to assess potential barriers to implementation, reducing the onus on the individual learner to make those connections.
- To roll out DRAGON-Shield nationally and internationally. In doing so, to explore partnerships with public, private and third sector organisations.
- To continually gather feedback from practitioners about how learning is applied in practice as the DRAGON-Shield training is scaled up and rolled out.
- To evaluate longer-term impacts of DRAGON-Shield to explore metrics to measure how child protection outcomes are improved.

5. DRAGON-Shield: The Final Product

The DRAGON-Shield team have addressed all the recommendations made by the practitioners, children and external evaluators, namely:

- **Content:** making expressions as easy to read and digest as possible in the modules and the supporting elements (e.g., the Resource Pack and User Guide).
- **Software application:**
 - **Visibility of pop-up text** - increasing the size of explainer text.
 - **Weblinks** - reformatting and activating them.
 - **Videos** - fixing playback errors and offering guidance for use on different web-browsers.
 - **Navigation:**
 - **Making it more intuitive** - e.g., scrolling from top to bottom of pages.
 - **Clicking behaviours** - i.e., reducing the number of clicks around the training platform and thus creating a smoother user experience.
 - **Making the connection between Phases One, Two and Three clearer.**

Feedback about refresher training, group discussions, and the training duration and model are all being considered as part of plans for scale up and roll out of DRAGON-Shield from 2024.

6. Conclusion

DRAGON-Shield has been developed to address a lack of understanding within child safeguarding around online child sexual grooming communication. It fills a critical gap in practitioners' current practice knowledge by relaying specialist information about the communicative behaviour of both groomers and children during online child sexual grooming.

The results of the DRAGON-Shield pilot and evaluation show that DRAGON-Shield is a much-needed addition to the online grooming prevention and support landscape.

- Children determined that the activities contained in the Resource Pack are relevant, engaging and needed.
- Practitioners fed back that the platform provides useful research-based knowledge about how language and communication work in groomer ↔ child online sexual grooming interactions, and that such knowledge is novel and needed, complementing other training into online, sexually motivated violence against children. They found the training to be relevant, clear, attractive and engaging. Through the pilot, there were very high rates of reported improvements in knowledge and confidence in applying the learning in practice. All the practitioners intend to use what they learnt through DRAGON-Shield in their work with children and would recommend the training to colleagues and other practitioners.
- The external evaluators determined that DRAGON-Shield had been ethically and rigorously developed to meet the training needs of child safeguarding practitioners, with regard to online child sexual grooming, in an innovative,

interactive and effective way. The external evaluators recommended that DRAGON-Shield be rolled-out nationally and internationally and identified opportunities to support development of further integrated resources.

Overall, the development, pilot and evaluation of DRAGON-Shield over a three-year period – through close collaboration between domain experts, LEEs, children, practitioners and external evaluators – provides compelling evidence of the need to launch DRAGON-Shield nationally and internationally.^{xii} The combination of, on the one hand, research-evidence based knowledge about groomer communicative tactics and children's communicative behaviour and, on the other, supporting elements (Conversation Simulator, Resource Pack, Wellbeing Library) that consolidate learning and inform practice-based preventative and support interventions helps to disseminate cutting edge research into practice in a safe, supported, engaging and age-appropriate manner. DRAGON-Shield fills an important gap in current practice understandings of online child sexual grooming, adding considerable value to the existing prevention and support landscape.

It is hoped that this approach may be replicable and/or adaptable by others developing similar training, programmes and interventions.

END NOTES

- i Internet Watch Foundation (IWF) (2022). *Annual Report 2022 - Behind the Screens*. London: Internet Watch Foundation. Available at: <https://annualreport2022.iwf.org.uk/>.
- ii See, for e.g., Lorenzo-Dus, N., Evans, C., & Mullineux-Morgan, R. (2023). *Online Child Sexual Grooming Discourse* (Cambridge Element). Cambridge: Cambridge University Press; Lorenzo-Dus, N. (2022). *Digital Grooming: Discourses of Manipulation and Cyber-Crime*. Oxford: Oxford University Press; Lorenzo-Dus, N. & Kinzel, A. (2021). 'We'll watch TV and do other stuff': A corpus-assisted discourse study of vague language use in online child sexual grooming. In Fuster-Márquez, M. et al. (eds). *Exploring Discourse and Ideology through Corpora*. Bern: Peter Lang, 189-210; Lorenzo-Dus, N., Kinzel, A., & Di Cristofaro (2020). The communicative modus operandi on online child sexual groomers – recurring patterns in their language use, *Journal of Pragmatics*. DOI: [10.1016/j.pragma.2019.09.010](https://doi.org/10.1016/j.pragma.2019.09.010); Lorenzo-Dus, N., Izura, C. & Perez-Tattam, R. (2016). Understanding grooming discourse in computer mediated environments. *Discourse, Context & Media*. DOI: [10.1016/j.dcm.2016.02.004](https://doi.org/10.1016/j.dcm.2016.02.004).
- iii This has been for instance highlighted by the UK child protection charity the National Society for the Prevention of Cruelty to Children (NSPCC) in their parliamentary briefings on the UK Online Safety Bill. See: [online-safety-bill-briefing-nspcc-oct-2022.pdf](https://www.nspcc.org.uk/press/2022/oct/online-safety-bill-briefing-nspcc-oct-2022.pdf).
- iv Thorn. (2022). *Impact Report 2022 - Building Technology to Defend Children*. California: Thorn. Available at: <https://www.thorn.org/impact-report-2022/>.
- v See endnote i.
- vi See endnote i.
- vii WeProtect Global Alliance and Economist Impact. (2023). *Estimates of Childhood Exposure to Online Sexual Harms and their Risk Factors*. London: We Protect Global Alliance. Available at: <https://www.weprotect.org/economist-impact-global-survey/>.
- viii WHO. (2022). *What Works to Prevent Violence Against Children Online?* Geneva: World Health Organisation. Available at: <https://www.who.int/publications/i/item/9789240062061>.
- ix UNICEF. (2020). *What Works to Prevent Online and Offline Child Sexual Exploitation and Abuse? Review of National Education Strategies in East Asia and the Pacific*. UNICEF. Available at: www.unicef.org/eap/.
- x For key recommendations from co-creator work with the LEE Group, see: Palmer, P., Mullineux-Morgan, R., MacDonald, R-F., Hotham, T., Finney, P. (2022). *Strong at the Broken Places: Project report*. Available at: <https://www.swansea.ac.uk/media/LEEG-Project-Report-16-Dec.pdf>.
- xi See endnote ii.
- xii We recommend that adaptation to non-English language contexts or varieties be undertaken through an initial period of research into online child sexual grooming in relevant languages/language varieties, and in co-production with local experts. At the time of writing, such process is underway for Spanish (Latin America / Spain) – for details please contact project.dragonsplus@swansea.ac.uk.

APPENDIX A

DRAGON-Shield Development: Methodology

The development of DRAGON-Shield took place in 2021-2022 and included an approach based on the following, synergistic activities:

1. Collaborating, specifically co-production and consultation, to understand the need for training focused on how communication works in online child sexual grooming. This included scoping format, content, expression, and design requirements, as well as sense-checking the messaging and age appropriateness of the content. Co-production and consultation brought together c. 250 individuals internationally, namely child safeguarding practitioners (education, social services, police and third sector), children and domain experts. This took the form of:

- i. Three rounds of user experience (UX) testing, conducted by an expert contractor, [Elixel](#), in March, July and November of 2021 to ascertain, amongst other, the needs of intended end-users of DRAGON-Shield and potential ways of meeting such needs from a content, function and design perspective. Feedback from these workshops was received in the form of a series of reports and taken forward by the DRAGON-Shield team to inform content design, development and delivery for the training platform.
- ii. Co-creation and consultation workshop with children (November 2022), delivered by an expert contractor, [Youth Cymru](#) (see Appendix B).
- iii. Establishment of a lived experience expert (LEE) Group as part of a nine-month project run by a highly

qualified external consultant (Professor Tink Palmer).

- iv. Advice on module development (content and design) as well as feedback on module drafts from experts – from Africa, Australia, Canada, India, New Zealand, the UK and the USA – in digital communication, child development, child protection and digital training development. This feedback was enabled via the project's governance structure (Steering Board and Advisory Network), including nine interactive online sessions and additional consultation workshops.
 - v. Identification of a road map for roll out and scale up, including co-shaping the methodology of a pilot and evaluation phase (planned for 2023) through a Knowledge Transfer Working Group (February-May 2022).
- 2. Systematic linguistic analysis of a large dataset of online grooming chatlogs shared by UK law enforcement for research development purposes.** This resulted in invaluable insights and a robust evidence base for the effectiveness of the training.
- 3. Publishing academic outputs and grey literature** that provide detailed accounts of the research underpinning the training and that support knowledge transfer and dissemination.
- 4. Promoting cross-sector and global spaces for learning and discussion** through Project DRAGON-S outreach events and through the project's governance structure. Three of these outreach events were themed on Protection (September 2021), Support (March 2022) and Prevention (July 2022).

DRAGON-Shield development benefited hugely from close partnership working with the Digital Resilience in Education Child Safety Online Lead Civil Servants at [Welsh Government](#), law enforcement ([Tarian ROCU](#)), and [Marie Collins Foundation](#). The project also benefited greatly from advice and support across our c.30 organisation project membership.

APPENDIX B

Children's Workshops: Methodology

Two workshops were carried out to consult with children on the Resource Pack that accompanies DRAGON-Shield. Youth Cymru (Welsh Youth Work Charity) were commissioned to recruit and run these workshops. Full reports of these consultative workshops can be provided on request. See Table 1 for participation details.

In Workshop One (November 2022), children reviewed the overall Resource Pack and then focused on reviewing and scoring each of the activities in turn. They provided feedback using an online survey co-designed by youth worker leads. The group were asked to score their responses to the following questions against a five - point Likert scale:

- The Resource Pack is easy to understand for children.
- The Resource Pack sends a powerful message to children.
- The Resource Pack is a useful resource for the DRAGON-Shield training.
- The Resource Pack is relevant to the topic being discussed.

The survey also included a qualitative 'open' response format to enable respondents to expand on why they gave their chosen score.

In Workshop Two (March 2023), children reviewed the Resource Pack, which already incorporated the changes recommended during the first workshop. In line with youth work approaches and philosophy, children chose the activity or activities from the Resource Pack that they wanted to review in detail. Feedback was collected using discussion points and group work processes as the chosen activity from the Resource Pack was worked through with a practitioner. Data collection also included an online survey using a five-point Likert scale, against the following assessments of whether the Resource Pack was appropriate for children in terms of:

- Design.
- Accessibility.
- Ease of navigation.
- Age-appropriate language.
- Information about further sources of support.

TABLE 1: Children's Workshops participation

	AGE RANGE	GENDER (CHILDREN WERE ASKED TO DESCRIBE HOW THEY GENDER-IDENTIFIED)
Workshop One (n=103)	11-18	Male (48.5%); Female (44.6%); Non-binary (3.8%); Preferred not to say (2.9%)
Workshop Two (n=40)	14-16	Male (35.0%); Female (65.0%)

APPENDIX C

Pilot Study (Practitioners): Methodology

There were three key stages:

1 Mobilisation (November 2022 - January 2023)

During this period:

- The pilot methodology was developed by the DRAGON-Shield research team and reviewed by the external evaluator.
- Ethics approval was obtained from Swansea University.

2 Recruitment (November 2022 - February 2023)

Safeguarding practitioners from four sites were invited to participate in the DRAGON-Shield pilot. For each site, the DRAGON-Shield team coordinated engagements with the following groups, promoting and onboarding through established and existing networks:

- Site One – Swansea: child safeguarding practitioners of the Swansea CMET (Contextual, Missing, Exploited and Trafficked) panel chaired by CMET's Principal Officer for Child & Family Services.
- Site Two – UK-wide: safeguarding practitioners across the country were invited to register interest, predominately promoted through existing project networks. Shortlisted practitioners were invited to participate.
- Site Three – Australia: promoted and coordinated through [Professor Lelia Green](#) (Australia-based DRAGON-S Advisory Board member), for local practitioners to register interest.

Shortlisted practitioners were invited to participate.

- Site Four - New Zealand: promoted and coordinated through New Zealand-based DRAGON-S Advisory Board members ([NetSafe New Zealand](#); Dr Philippa Smith), for local practitioners to register interest. Shortlisted practitioners were invited to participate.

A total of 119 individuals were recruited. They were invited to attend a virtual welcome meeting, which 45 individuals were able to attend. Whilst this was not compulsory, it was important to set participant expectations in addition to providing information regarding the onboarding procedure, including signing Terms of Use. It also included a 'lite demo' of the DRAGON-Shield training platform. Due to the time-zone differences across all sites, the meeting was recorded and circulated to all – benefiting those unable to attend or those who wished to revisit the content.

3 Pilot (March - May 2023)

The pilot study hosted 66 participants across three jurisdictions (Australia, New Zealand and the UK). 83% of the individuals who took part were child safeguarding practitioners, and the remainder had other forms of domain expertise. As part of the study, participants completed a pre-pilot Questionnaire and Questionnaires to reflect on each of the eight training modules. Questionnaires elicited quantitative (using a five-point Likert scale) and qualitative feedback (using free-text responses). Questionnaires were completed digitally, using links sent out via email or embedded within the training platform.

Start dates for the pilot were staggered into two cohorts to ease onboarding, management and post-study data analysis: Sites One and Two (the first cohort) began on 13.03.23, and Sites Three and Four (the second cohort) began on the 20.03.23. Participants were given a six week period to complete the training.

Upon initial pilot launch, 35 participants from Sites One and Two completed all pre-training documentation. However, only 11 of these individuals created a DRAGON-Shield account. For the non-UK Sites (Three and Four), 25 participants completed all pre-training documentation, and 10 created an account. Participants were offered an additional two weeks to complete all pre-training documentation and create an account to increase this number. The extended deadline did not impact the scheduled pilot end date, resulting in four weeks remaining to complete the training. Out of the initial 119 individuals who were shortlisted to participate:

- 38 did not submit any pre-training documentation;
- 13 partially completed pre-training documentation; and
- 11 completed the documentation but did not create an account on DRAGON-Shield to begin the training.

Therefore, a total of 66 participants completed all the documentation and created an account to begin the training, resulting in a 55% drop-off rate prior to the pilot commencing. Whilst a drop-off rate was predicted, the project benefitted greatly from the extension, gaining 45 participants who completed all documentation and created an account before the revised deadline.

To ensure technical issues could be resolved in a timely manner, a 'report' function was added to the DRAGON-Shield interface to flag problems as they occurred. This function

was referred to in the virtual welcome meeting and referenced within weekly communications. This, however, was only utilised on three occasions during the pilot, which was an early indication that the platform did not present any notable issues requiring an instantaneous response.

During the training, the team held two virtual drop-in sessions for UK sites and non-UK sites separately, due to the contrast in time-zones. One-hour slots were communicated to all participants when the DRAGON-S team would be on hand to ask any questions to or communicate early feedback. The purpose of the drop-in sessions was to troubleshoot any difficulties experienced in navigating DRAGON-Shield. Drop-in sessions were scheduled as follows:

- 30.03.23 at 10am (GMT) for Sites One and Two – approximately two weeks into the training.
- 30.03.23 at 10pm (GMT) for Sites Three and Four – approximately one week into the training.
- 13.04.23 at 10am (GMT) for Sites One and Two – approximately four weeks into the training.
- 13.04.23 at 10pm (GMT) for Sites Three and Four – approximately three weeks into the training.

Participants from Sites Three and Four were spread across seven time zones and therefore a meeting scheduled at 22:00 GMT in the UK resulted in a meeting for participants between 05:00am – 10:45am depending on the recipients' time zone.

Communications

Throughout the pilot (and post-pilot), a series of designed and scheduled communications were distributed to participants across all sites (including key network leads from each where appropriate). In total participants received 20 scheduled emails,

including onboarding reminders, focus group invitations, questionnaire links (Questionnaires One - Four) and a series of weekly communications (six in total) of polite reminders and top tips advising on how to make the most out of the training platform.

The scheduled emails received a number of direct responses from participants, prompting them to engage with the team, feedback or seek support where required. Regular and consistent messages from the team contributed to the high training completion rate – participants were kept engaged and supported throughout their training through professional and encouraging communications.

Post-Pilot

Once the training closed, six weeks after the start date, access to DRAGON-Shield was revoked.

- 46 participants completed the training (70% of those who completed all the requisite pre-pilot documentation);
- 12 participants (18%) partially completed the training, and;
- Eight participants (12%) completed documentation and created an account but did not start the training.

Once the pilot ended, participants were invited to complete the third Questionnaire. A subset of c. 10% of participants from across all sites also took part in one-hour follow-up interview/focus group sessions. These were held in person (hosting institution: [Edith Cowan University](#)) and remotely over a two-week period. The final and fourth Questionnaire was distributed one month following the completion of the pilot training.

Summary

The DRAGON-Shield team conducted a reflective exercise on the effectiveness of the Methodology adopted, including both positive and negative activity, the impact the activity had on the pilot and evaluation and, in the case of the negative occurrences, how these may be improved in future work (see Table 2).

TABLE 2: Critical reflections on Methodology

EVENT	IMPACT	RECOMMENDATION
Project management and planning.	Cross-team contributions to the planning, preparation and coordination of the pilot from mobilisation through to engaging with the external evaluators. Project kept on track.	Replicate
Lengthy period between expression of interest/promoting the pilot (November 2022 - January 2023) to start date (March 2023).	Circumstances change frequently – 3-6 months could result in role changes or inability to continue with the pilot as intended.	Await to promote study until start dates are confirmed – no more than two months ahead of start date.
Utilising existing networks for recruitment.	International study logistics are managed with ease in utilising existing networks and benefiting from the contributions from governance board members.	Replicate
Communications plan and schedule drafted in advance.	Branding is clear and consistent, content professional and less laborious for the team to implement.	Replicate
Unanticipated keenness of participants to complete the training in one-go.	Scheduled communications and plan for six weeks, including post-pilot questionnaires – difficult to reflect on training completed six weeks ago.	Provide a more customised approach, automated triggers, e.g., all Questionnaires are ready to go in advance so that, when a participant completes the training, they are automatically sent the post-study Questionnaire.
Extension deadline to enroll.	Significantly increased the number of participants to the pilot and benefitted the data analysis greatly.	Replicate
Module feedback not initially compulsory.	Unable to capture all feedback from all participants.	This was amended early into the pilot. However, the pilot study missed feedback from some keen participants who completed the entire training in the first week. Those participants were encouraged to go back and complete it to reflect on the modules, although it could not be enforced.

TABLE 2 continued: Critical reflections on Methodology

EVENT	IMPACT	RECOMMENDATION
Software development support on leave during scheduled pilot launch.	Not clear who to contact from the IT team to resolve issues as they occurred.	Identify key individuals in advance, ensuring they are on hand to support.
Early analysis of feedback from Questionnaires One and Two for head start on implementing necessary changes.	Identifying key themes early provided the team with more time to implement necessary changes.	Replicate

APPENDIX D

External Evaluation: Methodology

To provide important validation and feedback of our approaches, the project competitively recruited and appointed two partnered external consultancies ([i-vengers](#) and Jess Ltd) to work with the DRAGON-Shield team over the course of the pilot to provide training expertise, feedback and advice on approach, process and execution. The external evaluators also provided vital reflection to the team, reviewing all questionnaires, focus group and interview protocols. These were reflected in three reports:

- **Interim Report** – independent perspective on how the tool has been developed. In order to produce this report, the project team provided a comprehensive briefing document, which included a summary of the project and an overview of the design and development process on DRAGON-Shield to date. This also included copies of relevant reports e.g., UX testing reports. Access to DRAGON-Shield was also provided.
- **Post-Pilot Report** - The Interim Report was revised and updated based on the analysis of the provided data from the DRAGON-Shield pilot study.
- **Final Report** - The Post-Pilot Report was revised and updated based how on Project DRAGON-S responded to and implemented necessary changes derived from the study and support from the external evaluators.

Copies of the reports are available upon request.

Throughout the process, the DRAGON-Shield team received constructive feedback and

insights from the external evaluators to feed into the design and implementation of questionnaires and focus group/interview protocols, amongst others.

The externally reviewed evaluation framework that underpins the pilot provided a comprehensive and rigorous methodology for measuring the effectiveness of the DRAGON-Shield training platform. The evaluation framework was built on the Kirkpatrick model (Kirkpatrick and Kayser, 2016) as an internationally recognised tool for evaluating the effectiveness of training. The evaluation framework adapted and was mapped across the Kirkpatrick themes (Reaction, Learning, Behaviour and Results) and identified ten core intended outcomes to measure throughout the various questionnaires, interviews and focus groups, namely:

- 1 The training is relevant.
- 2 The training is accessible.
- 3 The training is useful.
- 4 I know it (increased knowledge).
- 5 I can do it right now (increased skill).
- 6 I believe this will be worthwhile to do on the job (need) (positive attitude).
right now (increased skill).

7 I think I can do it on the job (increased confidence).

8 I will do it on the job (increased commitment).

9 My professional practice has improved.

10 Child protection outcomes are improved.

Each of the pre-, during and post-Questionnaires were designed to probe practitioners' perspectives on different aspects of these outcomes and to measure their self-reported distance travelled following engagement with the training. To measure the impact on participants, practitioner and professional practice, a series of questions were designed to assess a self-reported increased level of knowledge, skill, perception of need, confidence, commitment and self-reported improvement.

References

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