Royal College of Anaesthetists

2021 Anaesthetic Curriculum Handbook

User Journey Report

Authors:
Rajashree Krishnian
Neil Wiseman

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Contents

1 Summary of main findings

In the face of increasing emails, members turn to a trusted senior clinician to seek information

Members are experiencing 'Filter Fatigue' – they do not have the time to mentally filter out whether that communication would be relevant to them at that time. The more communication they receive, the more they tend to ignore that type of communication in the future, eg emails.

This feeling of being overwhelmed, led participants to turn to their trusted senior clinician, who in turn received the most emails from their colleagues, which led to increased filter fatigue, and restarted the cycle.

If anaesthetists in training and SAS doctors (learners) had a negative experience with their trusted senior clinician, they would turn to College resources instead.

Work away from work

Increased use of WhatsApp groups and online events are leading to better engagement and increased flexibility.

However, many members have found that this increased flexibility is simultaneously leading to a fear of missing out. They felt like they needed to catch up with courses and events, and this was blurring the lines between work and home.

Navigating the curriculum

All participants found the curriculum document hard to navigate, but the trusted senior clinicians felt more comfortable sifting through it for themselves and for colleagues. This increases pressure for those clinicians, primarily College and Deanery representatives, to keep up-to-date with this information and to always be available to their colleagues.

Learners who had a negative experience with trusted senior clinicians used the College website, Lifelong Learning Platform and improvised curriculum handbooks for themselves, sometimes by printing out the entire curriculum, and directing their own learning.

2 Introduction

2.1 Background

According to the Lifelong Learning Platform, there are in excess of 18,000 anaesthetists involved in the delivery and receipt of training. In August 2021, a new curriculum for anaesthetics was launched; the current curriculum was launched in August 2010. The change to the new curriculum is likely to have a tangible positive impact on those undertaking and delivering training; there will be a step away from relying on case numbers and training duration as proxies for educational attainment. The Curriculum describes the governance, management and delivery of training in the UK, and a new set of guidelines, processes, and terminology will need to be learnt.

At the time of writing, 21.4 per cent (N=251) of the categorised email queries sent to the training@rcoa.ac.uk inbox related to the curriculum, many of which could be answered in the 2010 curriculum and associated guidance documents. However, the 2010 curriculum, including its annexes, is 486 pages long across eight PDF documents and is very difficult to access for users requiring specific information or guidance.

A successful bid to the College's Technology Innovation Fund in 2020 enabled the Training Department to employ a member of staff to undertake research into the factors relating to why email queries are received on existing published information. This project was specifically established to help learn lessons and develop the website so that users are able to find and access information related to the new 2021 curriculum.

2.2 Aims

The aim of this research is to better understand how our members find and assimilate the information they need to manage progress through the anaesthetic training programme.

We would then like to be able to use this information to design, build, and implement a system to enable members to access the information they require in a timely fashion without needing to resort to sending an email query, which has the potential to incur a delay in response.

2.3 Challenges

The primary challenges driving this research are:

2.3.1 Improving self-service options for members

PDF documents are simple to produce and publish but can be lengthy and have limits in how they can be navigated. Swartz and Iacobucci (1999, p104) state that if 'technology is cumbersome or complex... this type of option can actually increase the service delivery time.'

2.3.2 Improving customer service levels

Potentially avoidable email traffic effectively creates make-work for the Training Department, when responding to high volumes of emails is already a notable challenge, ie administrators are finding information in public documents on behalf of service users; this reduces the utility of having the documents published. Swartz and Iacobucci (1999, p108) note that freeing staff from 'grunt' work allows 'more time to attend to customers and access better information to serve them.'

Processing email queries inherently incurs delays for members in getting the information they want. Administrative capacity to respond to email queries is a finite resource and capacity cannot quickly, if at all, respond to changes in demand. Between January and May 2021 the average resolution time for an email to training@rcoa.ac.uk was 31.08 days. Although no SLA exists this level of service has scope for large improvements.

2.3.3 Approach

This research is intended primarily to improve the user experience of members and in turn will enable the Training Department to better manage workloads. Design thinking advocates the use of ethnographical tools, such as journey mapping and rapid prototyping, to understand customer needs in a spirit of co-creation. Kimbell (2014) notes that mapping the user experience will help to create a holistic understanding of the interactions between the College and its members; and according to Liedtka and Ogilvie (2011, p32) rapid prototyping can 'better facilitate meaningful conversation and feedback about what needs improvement'.

3 Research methodology

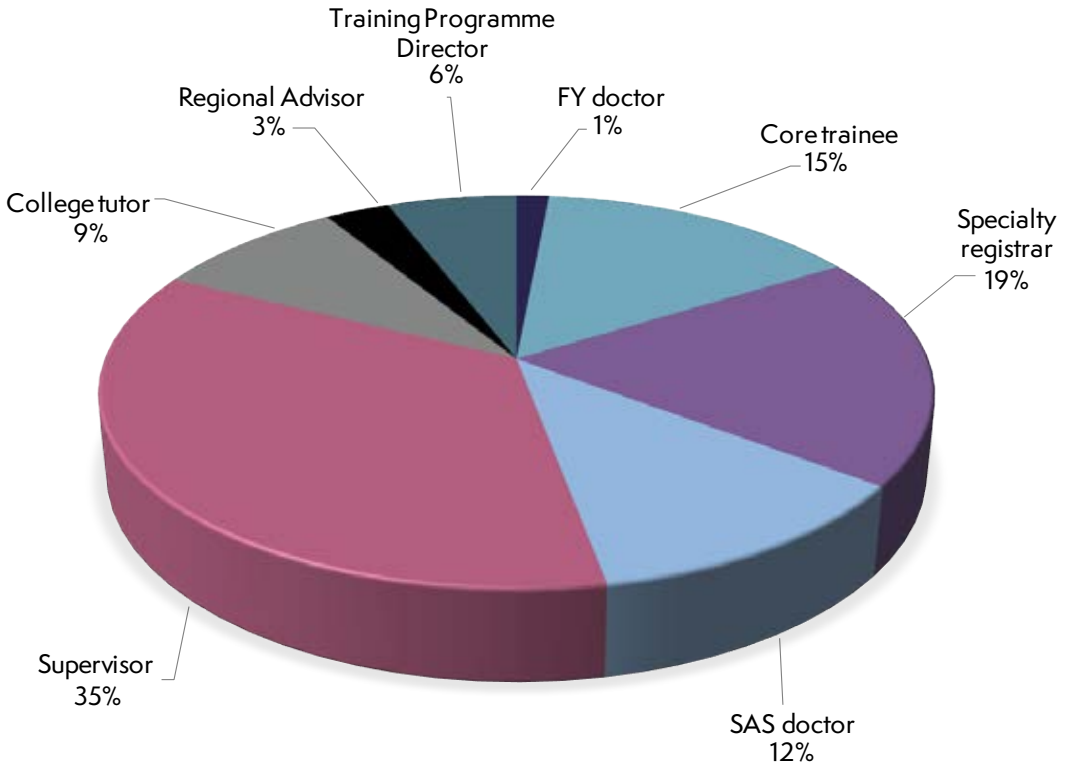
3.1 User Journey Workshops

A pilot workshop was conducted with members of the Curriculum Handbook group to establish initial themes and points of interest. The group consisted of two anaesthetists in training who were asked how they found information about the curriculum, and more broadly about anaesthetic training, on a day-to-day basis.

A user journey template was customised to capture an anaesthetist's journey to finding a satisfactory answer to a question about the curriculum. The flow of questions that followed was guided by this template, which helped identify initial patterns and touchpoints. A quick analysis immediately after the pilot workshop revealed a holistic view of their experience of searching for information around the curriculum. Their responses, and any gaps or pain points in the experience, formed the questions and flow for the main sessions that followed.

The Membership Engagement Panel (see the College website for details) were invited to 15 workshops, each being two hours long. 117 members expressed their interest, of which 68 people took part. Anaesthetists from a wide range of career grades and backgrounds participated, from foundation doctors to senior College representatives, and even doctors who are now settled in different countries.

Figure 1 Breakdown of different roles of participants



The figure shows a detailed breakdown of the members' roles. The majority of participants were supervisors – both SAS doctors and consultants who were educational or clinical supervisors, as well as those who held a representative role, such as College tutor, training programme director or regional advisor. Anaesthetists in training were the second largest category, with only slightly more specialty registrars taking part in the workshops than core or ACCS trainees. SAS doctors who described themselves as learners are shown in a separate category.

In line with design thinking principles, the workshops were hosted on Zoom to stimulate creative thinking through its interactive whiteboard, and the questions for each workshop were developed iteratively. At the start of the session, each group was asked how they found information and each participant was asked to elaborate on why they took that route to find it. This opened the door to further questions that were based around the emerging themes.

3.2 Thematic analysis

The first workshop followed the initial themes outlined in the pilot. After each workshop, a quick analysis was performed and any new themes that emerged were added to the framework. The new themes were incorporated into subsequent workshops, with the line of questioning narrowing as certain data points became saturated. A data point was considered saturated when the same answer was repeated for the same theme.

The qualitative data consisted of observation field notes and recordings of 15 workshops each two hours long, that were later transcribed using a web-based software called Otter. In total, the information consisted of 30 hours of recordings. Initial themes were generated based on the pilot study, prior research, and conceptual framework. Themes were outlined to provide detailed analysis of aspects of the data the study would be most interested in exploring. Although subverbal cues were not captured explicitly, they were marked on the observation field notes and themes that had subverbal reactions attached to them were explored further in the same or subsequent sessions.

Challenges

Some of the key challenges were technical. In one instance, the Zoom recording failed to capture the written ideas on the whiteboard but saved the video recording. In another, the video recording failed but the whiteboard images were saved. In one group, participants were unable to use the whiteboard due to technical ability and the feature was turned off. In half of the workshops at least one participant had to cancel due to increased work commitments or did not attend on the day.

Process

The data was analysed in three iterations. First, the observation field notes were written using an application called Miro, which functioned like a whiteboard. This enabled the host to draw connections between points of interest in real time and begin to group key points together, which helped focus the discussion on repeated points of interest. Following each workshop, a quick analysis was conducted using observation field notes as reference, and any salient points were highlighted on the Miro board.

When the first ten workshops had been completed, the host familiarised themselves with the transcriptions and identified any points of interest on the Miro board, assigning them to matching themes where possible. Any quotes relating to the points of interest were recorded on an Excel spreadsheet for reference. When points of interest did not fall under the umbrella of an existing theme, a new theme was created, and existing points of interest were remapped if appropriate. Similarly, if themes emerged that had only a few points of interest or themes that had overlapping points of interest, these were merged and renamed to reflect the nature of the underlying information. Some themes were discarded as they were irrelevant to the scope of the project.

Analysis of the first 20 hours of workshops led to three main outcomes; repetitive answers for certain themes, further questions that were outside the initial themes, and some gaps in the information under some themes. The next five workshops were tailored to address the further questions and fill the information gaps that were revealed, until all data points relating to the scope of this project were considered saturated, ie participants in each group repeated the same answer for that point of interest. Building on the analysis from the second iteration, the analysis was repeated for the further ten hours of recordings. This gave 32 points of interest that were then mapped against three global themes.

3.3 Ethical considerations

Participants were informed that the workshops would be recorded, and that all recordings would only be accessible to the host and would not be shared. They were informed that all analysis and results of the data would be anonymised before being published.

Participants were made aware that:

- the data would be stored in line with the College's data protection and data retention policy
- the workshop would be recorded on Zoom
- the audio file would be transcribed using software called Otter.

Data protection and privacy policies of each organisation were sent to the participants before the workshop, and their consent was verbally reconfirmed before recording.

4 Themes

In the face of increasing communication from all organisations, anaesthetists are relying on long established hierarchies of trusted clinicians to filter their information for them. For those who have had a good experience with this hierarchy of information, it reinforces the idea that this hierarchy needs to exist and increases pressure on those at the top of the information chain. For those who felt that the support structure was lacking, this led them to create their own guidance material for the curriculum, most of which looked very similar to the guidance material that those at the top of the information chain had created as well.

4.1 Trusted senior clinicians are the first point of call

In the face of increasing electronic communication, anaesthetists in training and their trainers would rather go to a trusted senior clinician in their network to receive filtered information that is tailored to their needs.

When asked how they felt about the volume of emails they received, almost all participants said that they were facing an information overload from all organisations across the board – from local departmental updates to national alerts from the Government. They felt that most emails could be ignored and did not contain any information relevant to them at that time. Interestingly, most participants added that they would rather receive the overload of irrelevant information than receive less emails. Although the information may not have been pertinent to them at the time, there have been many instances where the email that was ignored then later became necessary and the email had to be later searched for. This may also be a side-effect of the formative information that was communicated constantly throughout 2020 in response to the pandemic and the way that anaesthetists needed to filter, react, and action the information that came to them (which was not always from an authoritative or reliable source). This led to them having to check the facts of the evidence themselves and verifying with their peer group for similar experiences.

When anaesthetists in training and trainers, who were not in representative roles, were asked where they would go for a query about the curriculum, over half responded that they would turn to a trusted senior clinician in their hospital in the first instance, usually a supervisor, College representative or training programme director. In return, College representatives and training programme directors were asked from whom they received curriculum queries, and they responded that the queries often came from junior colleagues and anaesthetists in training in their hospital.

Senior clinicians, especially those who were College or Deanery representatives, felt that they needed to be kept in the loop. They reported receiving the highest number of emails compared to other clinicians, trainers, or anaesthetists in training, sometimes as a result of their role as a representative. They were the group that were most happy to receive that overload of communication, to filter them for the doctors in their network and cascade the relevant information, sometimes even after they had left their position. Two factors may have contributed to this:

- the historic duties of the role and the subsequent SPA time allotted
- the inherent nature of the people who aspire to these positions.

Anaesthetists in training and consultants who were not in representative roles felt that they received too many emails, and vital information was often missed due to the volume of incoming communication that was irrelevant to them. They acknowledged the paradox that they would not know what would be relevant to them at that time, and there is a danger that an email might be muted that would contain important information that would need to be caught up on later. With the increasing demands on anaesthetists' time, both due to the pandemic and technology creep, participants said that the simple act of filtering information as relevant or irrelevant has become tiring. This feeling is described here as filter fatigue.

It emerged that the type of communication the member interacted with most often would be most prone to filter fatigue. Junior anaesthetists in training reported feeling that they were overwhelmed with social media channels, while consultants were more likely to say that they received too many emails. The more relevant the communication, the more likely the member would read and action that information. They went on to say that the more irrelevant information they received in one medium, the more that type of communication felt a burden to filter and so was more likely to be ignored in the future.

When participants were asked what their first point of contact was about the curriculum, three major groups appeared. In each group, the answers were directly influenced by their experience of the support system in their network.

4.1.1 Anaesthetists in training

- Anaesthetists in training prefer to go to a trusted senior clinician in their hospital if they have had a good experience with them before.
- Anaesthetists in training who said they had not had a good experience with senior clinicians were more likely to go to the website and other College resources, sometimes using this as evidence of support against senior clinicians or as a simple check of their own knowledge.

4.1.2 SAS doctors and CESR applicants

- SAS doctors who are new to the country said that they would first ask peers or colleagues in their hospital who have gone through a similar experience. In hospitals where participants felt the support system for SAS doctors was good, for example in a hospital that receives a lot of overseas doctors, the SAS doctor said they often did not go any further than asking immediate peers for help and did not look for an alternative source.
- SAS doctors who felt they did not have a supportive network in their hospital more often said that they go to the College website and contact the College for support directly. A few doctors added that this was usually insufficient information and that they would usually 'try to piece together a roadmap for themselves by mirroring a core trainee's programme and asking anaesthetists in training.'

4.1.3 Consultant anaesthetists

- This group of people were more likely to use a trusted senior clinician as a filter for essential information and will often engage with their College tutor first, who often is proactive about sending relevant information to their consultants.
- Consultants who are not supervisors are often receivers of information rather than seekers.

4.2 Work away from work is increasing

Clinicians are doing more work at home as technology brings to-do lists from the hospital straight to their phone; this is not only due to COVID-19.

4.2.1 Work at home

Many participants said that the amount of time spent doing work-related activities during non-work hours was steadily increasing, partly due to the use of WhatsApp being used by hospitals and trainee groups to signpost information, and certain College announcements being made via Twitter.

Contrarily, some felt that their colleagues were harder to engage with because they would not check, or not be able to check, their work inbox outside work hours, and that WhatsApp groups were a way of flagging up important items to those colleagues. Those who received the flags from their colleagues agreed that it helped reduce playing catch-up during work.

Emails continue to be a clear line between home and work, and all felt that they could disengage much easier than with an alert that came to their phone automatically.

4.2.2 Playing catch-up

Participants were asked about the shift to online events over the past year, and they remarked that it has made it easier to catch up on a topic quickly and from the comfort of their homes (or when the on-call is slow). Conversely, they said that the line between home and work is blurring, and some felt that watching the videos and podcasts, on top of life admin, was akin to doing more work at home.

Consultants reported the added burden of COVID-19 updates and departmental updates sent to them by email, along with regular correspondences, requests, and rota changes.

4.3 The burden of path dependency

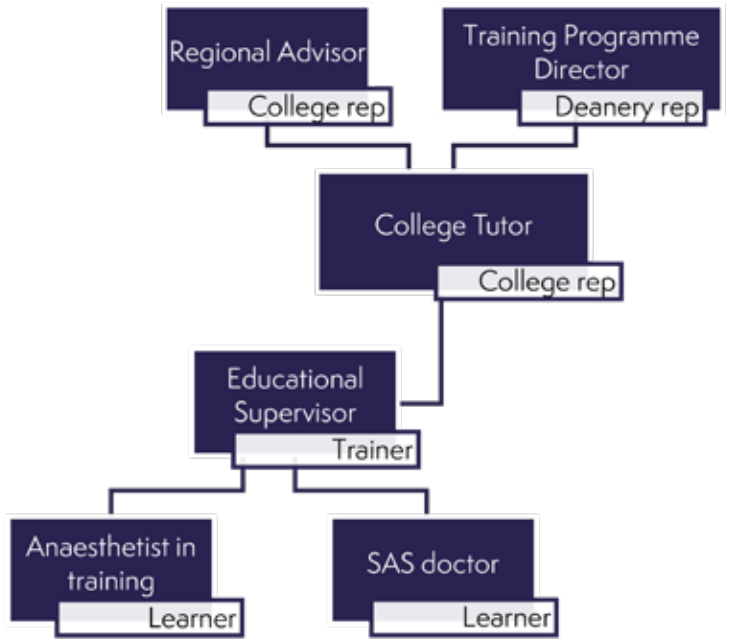
Historical behaviour around curriculum guidance has influenced the support structures that currently exist, creating a reinforcing loop that increases the burden on trainers and anaesthetists in training.

4.3.1 Hierarchy of information

When discussing the curriculum document, most anaesthetists in training and trainers said that they are familiar with the 2010 curriculum document but find navigating within it difficult. Experienced trainers, usually College or Deanery representatives, were more likely to say they were comfortable sifting through the document themselves and relaying this information to their colleagues. They said that this was usually faster than asking the other doctor to search for specific details, which is time-consuming for both and not always successful.

The curriculum document is not mobile friendly which makes this an activity that trainers said that they needed to make time for, which College and Deanery representatives may be allocated or, more often, set aside their own time for. In addition, senior clinicians who are in these roles felt that confidence in their leaders and trust in their knowledge pushes anaesthetists in training and trainers towards trusted senior clinicians.

Figure 2 Example of the flow of information in a hierarchy



One College tutor said that during a crisis, this helps them isolate a small area around which they can be sure of and 'have their ducks in a row'. When representatives felt they did not have the answer they said they felt the pressure to provide a solid, trusted answer, which would usually involve returning to the curriculum document to brush up on their knowledge during their own time.

4.3.2 Navigating the curriculum document without the support structure

Anaesthetists in training remarked that they often planned their training every three to six months, where they rotated through a different mix of trainers and environments each time. This is mirrored by the trainers' experience of training a new group of learners every few months. All anaesthetists in training participants, and some trainers, said that they use the progress wheel on the Lifelong Learning Platform to keep track of their progress, and all who said this agreed that it was difficult to keep track of progress towards individual assessments this way. Most participants said that they used a paper version of the curriculum document to track their day-to-day progress and show to learners/trainers during work.

Many anaesthetists in training said that they use paper versions of the curriculum document because it is offline, editable and can be carried with them in the hospital where technology, or even the assessor's familiarity with technology, can be hit or miss. Three groups agreed that learning a new platform or guiding your assessor through learning a new platform, when both parties are already time-poor due to the nature of their work, can be difficult. All trainers and learners agreed that paper assessments were more familiar to many trainers in their hospital.

Anaesthetists in training in some regions have made their own workbooks or checklists for the curriculum based on their stage of training. Some regions use local workbooks to help trainers and trainees keep track of progress. In places where internet connectivity is intermittent, anaesthetists in training and trainers find that it is easier to keep paper on themselves rather than waiting for Wi-Fi or relying on NHS computers to check on their progress. WPBAs and formal feedback is still done using the Lifelong Learning Platform when possible, but some trainers are glad to have a quick and easy way to check their learners' progress. This was particularly true for module leads who may not supervise anaesthetists in training directly and therefore may not have access to view their portfolios without being sent a specific form.

5 How anaesthetists interact with each type of information

This method helps us understand holistically the interactions with a service or organisation from the perspective of a user. It helps clarify what the experience is made up of, for that individual, allowing us to identify important patterns and pain points. Here, this method has been used to describe existing experiences and the exercise was repeated for different types of communication.

Table 1 Customer journey map SIH Method 4 (Kimbell)

Type of communication	Initial reception	Deciding to engage	Later interactions	Ending/ Closing	How would they like to receive them?
Email	Receives in already full inbox. Dismisses if not from trusted sender or if generic.	Scans for relevant information in subject line. If immediately relevant, reads during spare time.	Explores any links for more detail.	Saves the email or any important links. Forwards to colleagues/ juniors if relevant.	Less frequently. Filtered for their interests.
Website	Navigates to website directly or through a search.	Clicks through the headers to the relevant section, or uses the search function.	Explores further articles through links or recommended content.	Saves any documents or certificates, bookmarks any pages, sends to colleague if required.	Relevant information to be highlighted on the front page for the member.
Documents	On a page of the College website.	Reads the document, or scrolls to the relevant page.	Explores other sections of the document at leisure.	Downloads the document, or bookmarks the link.	Relevant sections to be highlighted, with clickable navigation.
Webinars	Signs up for event.	Watches pre-webinar videos at their convenience Submits questions to panel pre-event.	Attends the webinar and asks questions of the speakers. Talks to colleagues about webinar.	Feedback on the event. Saves recording for future rewatch.	
Instant messaging (WhatsApp)	Receives notification in full notification tray.	Reads messages in the next possible free time. Dismissed if too many notifications from a group.	Explores any links in more detail. Responds to message if required.	Forwards to other groups or colleagues if relevant.	Filtered for relevance.

6 Conclusion

Historically, the presentation of the curriculum has made it difficult to assimilate. It is published as a PDF document that all participants said was hard to navigate for those not already familiar with the training programme. Due to a variety of reasons, support systems have emerged that compensate for this. In most cases, the first point of contact, for both learners and trainers, is their trusted clinician within the hierarchy of information. Supervisors often go above and beyond to filter and signpost curriculum information for their anaesthetists in training and colleagues.

With the ongoing pandemic and the eventual push from the NHS to catch up on elective work, some members are concerned that educational time will be cut as a result. They anticipate that this will lead to less quality one-to-one time spent with their anaesthetists in training and, therefore, less space to effectively filter and make curriculum information easy to digest. This will have a knock-on effect on those navigating the curriculum without traditional support from mentors or trainers and blur the line between home and workplace, leading to further fatigue at home.

Different roles and grades of anaesthetists clearly experience this shift more keenly than others, and some are more prepared to take on this challenge than others. However, there appears to be a reinforcing loop of information overload that draws on the existing hierarchical structure and may lead to anaesthetists being overburdened more than they already are.

The key touchpoints for all anaesthetists are centred around trusted sources of information and people with whom they interact most in their day-to-day business:

1 trusted clinicians in their network
2 College website
3 Lifelong Learning Platform.

Although, the current website was found to be a significant improvement on the old design, most members reported that it was hard to navigate and that put them off from further interactions with the website. The few participants who found the website relatively easy to navigate were senior trainers who had experience with the training programme and seemed familiar with the documents or guidance that they were looking for. A major blocker for many anaesthetists in training, especially core anaesthetists in training, was the absence of a section on the website that was designed for them. Senior clinicians reported this less.

All participants still felt that the website was the central source of all information about training and the curriculum. The curriculum document fared similarly in people's views – being hard to navigate but accepted as the single authoritative document on the curriculum.

The Lifelong Learning Platform was constantly highlighted as a way of accessing the curriculum and to track progress. The near synchronisation of the progress wheel with the details of the curriculum was a frustration for many participants. It may be that because the Lifelong Learning Platform *almost* does what a custom workbook does, it causes added frustration when members need to return to paper workbooks.

While social media plays a heavy role in the way participants interact with their peers, especially WhatsApp groups, the interaction between doctors and their trusted clinician stood out for almost all participants. For those who felt that they did not have adequate support in their hospitals, they turned to the College website and to making their own guidance resources.

Anaesthetists in training often said that they felt disconnected from the College, especially during their early years, and felt that they did not have a dedicated space on the website, which to them feels like the central hub for all training-related information. Trainers echoed that it would be easier to filter information based either on the grade of the trainee they were looking after or the role they were in (College tutor, TPD, etc). Language and depth of information exchange was found to be very varied depending on how senior the trainee or trainer was, and how long they had been in the training programme.

7 Recommendations

Personalisation

Participants who used curriculum guidance often viewed similar information repeatedly based on their own role and stage of training, or those of the anaesthetists they were supervising. A function that provides information according to the user's role and interests would ease navigation, encourage them to stay engaged for longer, and potentially improve their connection to the College.

With the information the College holds on its membership database, myRCoA and the Lifelong Learning Platform, important information or guidance can be flagged to members based on their grade, role or interests. This could be through personalised landing pages, targeted notifications, or developing a filtered search that could be bookmarked.

Incorporated into existing platforms

Any curriculum guidance or handbook would need to be incorporated into the existing main platforms, namely the College website or Lifelong Learning Platform, to reduce the burden of additional platforms or logins.

This could mean clearly demarcating the function of the Lifelong Learning Platform from the website and reinforcing the concept of the website as a knowledge base, so that information is not duplicated.

Offline and mobile friendly

Internet connectivity varies across hospitals. To support the 2021 curriculum methodology of conducting structured learning events contemporaneous with a procedure or event in theatre, it is imperative that the guidance can be accessed offline and is mobile friendly. This would enable learners to take ownership of their curriculum and encourage proactive learning with their trainers.

Support existing hierarchy of information

In the short term, incorporating any communication within the existing hierarchy of information more appropriately will maximise reach and reduce duplication of efforts for both the College and the representative.

The Training Department currently communicates information to senior College or Deanery representatives with the intent that they will then cascade to their networks.

Create space for new information flows

There is a need to create new information flows to supplement established processes, particularly in areas where the hierarchy may not be effective. Some examples might be personalised emails targeted towards groups of anaesthetists, such as Stage 3 trainees and trainers, or Lifelong Learning Platform alerts for training programme directors. In the long term, this would aim to reduce the burden on those deanery or College representatives at the top of the information chain and those at the source, ie the College.

Improving existing communication channels

The Training Department moved their email management system from TOPdesk to Outlook, and initial feedback shows this has had a positive impact on the way communication is being received by members. Further improvements to query management will directly address members' concerns around service delivery.

8 Further reading

- Kimbell L. The Service Innovation Handbook: Action-oriented creative thinking toolkit for service organisations: templates, cases, capabilities. *BIS Publishers, Amsterdam 2014.*
- Liedtka J, Ogilvie T. Designing for Growth: a design thinking toolkit for managers. *Columbia Business School Publishing, Chichester 2011.*
- Swartz T, Iacobucci D. Handbook of Services Marketing and Management. *SAGE Publications, London 1999.*

Royal College of Anaesthetists
Churchill House, 35 Red Lion Square, London WC1R 4SG

training@rcoa.ac.uk

rcoa.ac.uk

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Appendix 1: Customer Journey Map – Amended Template

Amended template from 'Method 4: Mapping the user experience from the Service Innovation Handbook' by Lucy Kimbell

Type of communication	Initial reception	Deciding to engage	Later interactions	Ending/ Closing	How would they like to receive them?
Email					
Website					
Documents					
Webinars					
Instant messaging (WhatsApp)					