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The perceived strengths and weaknesses of the General Practice training e-portfolio: A case study exploration of General Practitioner (GP) trainers' perspectives

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ABBREVIATIONS

CBD - Case-Based Discussions | **COT** - Consultation Observation Tool | **DEN** - Doctor's Educational Need | **GP** -General Practitioner | **HEEKSS** - Health Education England, Kent, Surrey and Sussex | **MSF** – Multi-source Feedback | **NHS** – National Health Service | **PD** – Programme Director | **PUN** - Patient's Unmet Need | **PSQ** - Patient-Satisfaction Questionnaires | **RCGP** - Royal College of General Practitioners | **WPBA** - Work-Place Based Assessments

All authors made substantive intellectual contributions to this study by making substantial contributions to conception and design, acquisition of data, or analysis and interpretation of data; drafting the article or revising it critically for important intellectual content; and giving final approval of the version to be published.

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What this paper adds:

This study demonstrates GP trainers struggling with the time-burden placed on them by the e-portfolio. Its three recommendations may be transferrable to other medical specialties to release clinical time and improve morale. The paper also contributes to the developing conversation about written reflections on clinical errors, highlighted by a recent high-profile court case.

Abstract

Background: General Practitioner (GP) trainers[1] spend considerable time completing their trainees' e-portfolios, yet there is a paucity of research into their views. This study aimed to illuminate their perspectives and propose modifications. Additionally, a recent law-suit has highlighted tensions over written reflections in training e-portfolios being used in a court of law and this paper contributes to the conversation.

Methods: Case study methodology was adopted. A survey permitted purposeful selection of six GP trainers for interview and informed the interview schedule. Semi-structured interviews provided the data and thematic analysis was employed for data analysis. Credibility indicators included member-checking and cross-checking.

Results: Strengths and weaknesses of the e-portfolio were identified. Strengths lay in the ability to demonstrate accountability for a rigorous educational process, and intrinsic educational aspects of the e-portfolio. Weaknesses lay in the time spent by GP trainers in documentation, perceived by them as excessive, and the threats to credibility conferred both by burdensome documentation and the requirement for written reflection on clinical errors.

Conclusions and Recommendations: GP trainers risk their work-life balance and clinical performance by the time spent on the e-portfolio. Participants proposed reducing documentation with fewer competencies and log-entries. They suggested that written reflection on clinical imperfections should not be expected, whilst learning from researching knowledge gaps should, and that they, as GP trainers, should be more involved in e-portfolio evolution.

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[1] GP trainers are GPs who have undergone extra training in education, often involving obtaining a Post Graduate Certificate in Education.

Introduction: In this case-study, the perspectives of those General Practitioners (GPs), called GP trainers, responsible for training the next generation of doctors were sought. They gave their views on how well the Royal College of General Practitioners (RCGP) training e-portfolio functions and made suggestions for improvement.

The first author is a GP trainer in Health Education England, Kent, Surrey and Sussex (HEEKSS) using the RCGP e-portfolio on a daily basis. The heuristic problem driving the study was the frustration the researcher felt at the hours spent documenting evidence of progress on the e-portfolio: particularly during the reviews, (Foulkes, Scallan and Weaver, 2013).

At any one time a GP trainer can have up to three trainees, occasionally four, at varying stages in their training. Supervision has to take place within the hectic clinical arena though there is weekly HEEKSS funded tutorial time.

When discussed informally with fellow GP trainers, a groundswell of dissatisfaction emerged, both with the actual time taken (considered excessive), and a sense of time-wastage. Many considered that the documentation was burdensome and frequently futile because they regarded the examinations as the major determinants of success. An excellent e-portfolio counts as naught against examination failure. Indeed, Shaw *et al.* (2014) reported that a higher degree of trainee engagement with the e-portfolio did *not* correlate with examination success. Failure on an inadequate portfolio in the face of examination success is rare.

Outline of the structure of GP training in th UK:
GP trainees currently undergo three years of specialist training, having already worked two years after qualifying in medicine. The training structure is outlined in Mohanna and Tavabie (2009). The salient points now follow.

For their three training years, one trainee is assigned to one GP trainer. Trainees spend most of the first two years in hospital posts, but for the third-year work in their trainer's general-practice under their direct supervision. Each GP trainer may supervise up to three, exceptionally four, trainees. The GP trainers (and trainees) belong to training groups administered by Programme-Directors (PDs): also, usually GP trainers. The groups are overseen by Health Education England[2]. This study originated as a HEEKSS sponsored MSc project.

The RCGP has designed an e-portfolio which is provided to each GP trainee in England to electronically record progress. E-portfolio usage has been mandatory in GP training since 2007, having been first discussed by Pereira-Gray (1993) and replaced the previous method: a structured trainer's report. The RCGP has defined 13 competencies to be documented in the e-portfolio. GP trainees must enter two or three log-entries every month (though at the time of the study it was every week) and written reflection on mistakes or imperfections is expected. The e-portfolio also contains work-place based assessments (WPBAs). These are observed consultations with patients, known as the consultation observation tool (COT) and case-based discussions (CBDs). Multi-source feedback (MSF), and patient-satisfaction questionnaires (PSQ) are also recorded.

The COTs and CBDs have a summative element, as the GP trainer not only gives feedback, but also records a grade in the e-portfolio.

Throughout the three years it is the GP trainer who links the log-entries, WPBAs and hospital supervisor reports electronically to the competencies. The GP trainer also performs the six-monthly face-to-face reviews mandatory for progression, making statements on all thirteen competencies. HEEKSS monitors progress, based on the e-portfolio content, with particular reference to the reviews: taking remedial action when a GP trainer has concerns. GP trainees must also pass two examinations. To become GPs the exams must be passed and the e-portfolio be satisfactory. It is extremely rare for the certificate to be denied to successful examinees. However, no matter how good the e-portfolio is the trainee cannot become a GP unless both examinations are passed and only four attempts are permitted. In the unfortunate eventuality of four failures another career, in medicine or otherwise, must be sought.

There is a paucity in the literature of research seeking trainer, supervisor or educator views[3] on training e-portfolio usage, including from secondary-care[4], international, and even third-world reports. This gap has been noted before (Foulkes, Scallan and Weaver, 2013). This study aimed to partly remedy this.

Accountability, defined as the ability to demonstrate responsibility for, in this situation, a rigorous education process, features in the literature as an e-portfolio strength

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[2] Health Education England is the training body that reports to NHS England. It is comprised of thirteen regional organisations, one of which is Health Education England Kent Surrey Sussex.

[3] Terminological clarification is required (Ridley, 2010 p.33), as the term 'trainer' is not used in other walks of medicine. The nomenclature 'supervisor' and sometimes 'educator,' used in hospital medicine had to be included.

[4] In this study secondary-care refers to care delivered in hospitals. Primary-care means via General Practitioners in the community.

(Johnson *et al.*, 2008; Hrisos, Illing and Burford, 2008; Jenkins Mash and Derese, 2013a; Jenkins, Mash and Derese, 2013b). Another recognised strength is the enhancement by e-portfolio usage of trainee learning. E-portfolios can catalyse (Jenkins, Mash and Derese*,* 2013b p.7), educational meetings and clarify progress: 'I can look down and see exactly what needs targeting', (Johnson et al., 2008 p. 485). Additionally, the linkage to the faculty facilitates earlier remediation by identifying underperformance (Makris et al., 2010).

There is however a body of opinion that believes that little or no educational benefit derives from e-portfolio usage. Tailor, Dubrey and Das*,* (2016), reported 76% (23/30) of supervisors believing that little educational benefit was derived from e-portfolio usage, whereas Hrisos, Illing and Bough, in 2008, reported 44% (35/75) holding this negative view. The position appears to be deteriorating.

Reasons include reports of assessments being done as tick-box exercises as deadlines loomed, with scant educational impact (Makris *et al.*, 2010; Ferguson, Wakeling and Cunningham, 2014; Barrett *et al.*, 2016). This is not seen in the 2008 papers, (or from South Africa), suggesting a developing issue. Also criticism of e-portfolio usage is that GP supervisors (Wiener-Ogilvie, Jack and Lough, 2008: Ferguson, Wakeling and Cunningham, 2014) reported teaching meetings marred by documentation, eroding the important trainer-trainee relationship (Kilminster and Jolly, 2000).

One supervisory group were asked if they considered written reflections intrinsically aided learning. They saw the theoretical usefulness but in practice, 'battled to get a reflection' (Jenkins, Mash and Derese, 2013b p. 7).

Doubt has been frequently cast on the credibility of the record, undermining accountability, as some GP trainers had difficulties themselves recording negative feedback in the physical presence of trainees (Wiener-Ogilvie, Jack and Lough*,* 2008). Other educators observed that trainees would not readily record clinical imperfections (Barrett et al., 2016; Tailor, Dubrey and Das, 2016), for fear of impeding career progression or creating a source of litigation. With the Bawa-Garba case[5] (Cohen 2017), subsequent to the conclusion of this study, many fears have been expressed about recording of errors, echoing the reports of 2016.

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[5] This nationally recognised case involved the trial of Dr Bawa-Garba for negligence. In court her e-portfolio written reflections were used as prosecution evidence.

The large investment of time for e-portfolio documentation, taken from the clinical arena, features prominently in the literature. Foulkes, Scallan and Weaver (2013)*,* reported some GP trainers spending up to a massive 10 hours per educational review and suggested researching the reason for this to relieve the pressure on GP trainers. One South-African educator captured the pressures: 'that responsibility will mean bending to breaking point', (Jenkins, Mash and Derese*,* 2013a p.5). The sentiment of being 'bogged down with the whole process', (Ferguson, Wakeling and Cunningham, 2014 p. 213), pervaded. Improving e-portfolio functionality as a time-saver has been repeatedly suggested, (Wiener-Ogilvie, Jack and Lough 2008; Makris et al., 2010; Foulkes, Scallan and Weaver 2013; Barrett et al., 2016).

Additionally, educator perspectives have seldom been sought, despite their role being described as pivotal. Murray and Smith, (2007, p.9) state:
'Their voices must be heard. If they have some level of ownership in every aspect from design through to implementation, they are far more likely to champion the cause.'

Drawing together threads from the literature the research question was formulated:

The Research Question: What do GP trainers perceive to be the strengths and weaknesses of the General Practice training e-portfolio and what suggestions could they make for improvement?

Methodology: As GP trainers' perspectives were being researched, qualitative methods, aligning with social-constructivist theory, were appropriate. However, in order to incorporate a minor preliminary survey (to permit purposive sampling and refine the interview questions), case-study methodology was selected to embrace both the qualitative and quantitative paradigms.

Reflexive Statement: Aware that pre-formed ideas could create bias, a reflexive attitude was adopted throughout the study to mitigate against this. Member-checking both for accuracy and interpretation was undertaken; each participant approved the transcript of their own interview for accuracy. The final qualitative report was also read and approved by participants each knowing their own number. No amendments were requested. The veracity of the thematic analysis was cross-checked (first transcript only) by an expert from an academic, rather than clinical arena, enhancing validity.

The first author also recognised that her 'insider' position necessitated extra reflexivity. Being an insider can impede

impartiality (Costley, Elliott and Gibbs, 2010 p.6), though counterbalanced by gaining access to busy clinicians, which might have been denied an outsider (Lewis, 2014 p.59). To minimise the influence of the researcher's perspective, leading questions or the sharing of personal impressions was avoided. esp

Methods: Semi-structured interviews were used, preceded by a survey, the latter being subsidiary to the qualitative interviews: the norm in case-study research (Robson and McCartan, 2016 p.151).

Recruitment and Survey: HEEKSS emailed the GP trainers an explanatory invitational letter which included the survey and the opportunity to volunteer for interview. This indirect approach added an ethical dimension precluding coercion as colleagues, especially since the home-group might otherwise have felt obliged, the researcher being an insider. The survey was adapted from an interview schedule previously used by Makris et al. (2010), adding an element of construct validity as the theoretical concepts had been previously expressed.

The preliminary survey facilitated recruitment and permitted purposive sampling as survey participants holding contrary views to the majority, the negative cases, were selected for interview.

Two trainer groups (see Introduction) from HEEKSS were chosen: the researcher's home group and one in which the researcher was barely known. Invitations to participate

were sent to *all* members of both. Seeking GP trainer views from an unfamiliar group, as well as from the home group, was intended to reduce bias from 'cultural collusion' (Lewis, 2014 p.66).

Semi-structured Interviews: An interview schedule derived from the survey results was used, with freedom for participants to widen the discussion. Three trainers from each group were interviewed, each interview lasting approximately fifty minutes.

Data Analysis: Thematic analysis was performed by the first author, beginning with immersion in the transcripts. Individual words / phrases were identified as codes inductively from the data itself and also by searching for codes that would be expected based on the literature and common sense. These codes were then mapped into strengths and weaknesses and then into broader categories. Themes were then developed by moving to and fro between the categories, using the survey data, (though kept separately), for confirmation and convergence. The process was done manually, as the data-set of six interviews was small enough to be manageable. The first transcript was checked by the second author, an expert from a different field and the same themes emerged, enhancing validity.

Results
Survey: There were 32 respondents: 18/21 (85.7%) from the home group and 14/22 (63.6%) from the unfamiliar group, an overall response rate of 74.4%. There was no
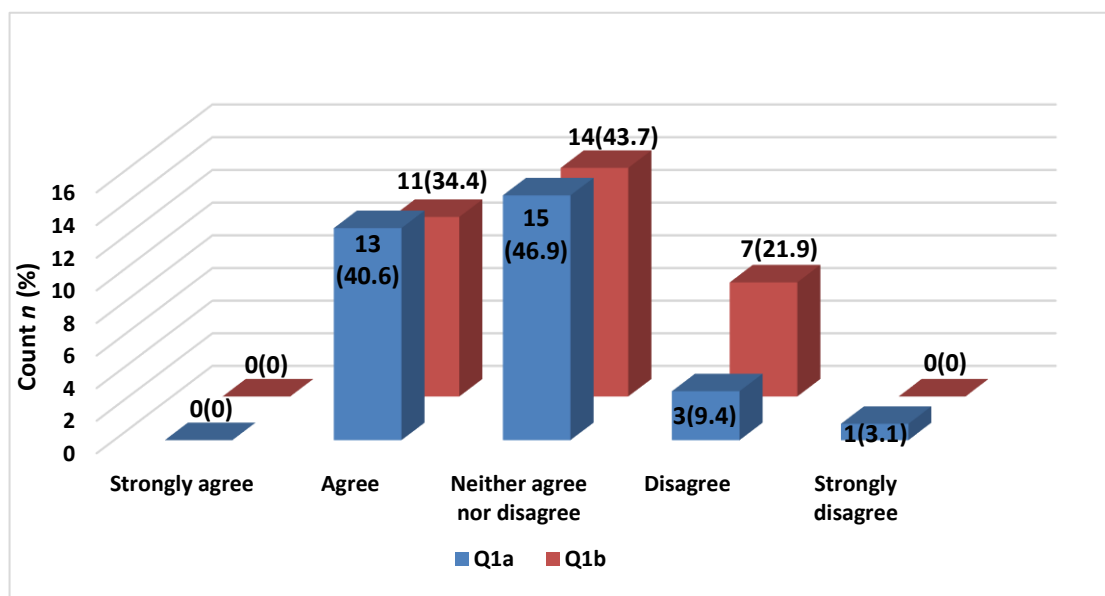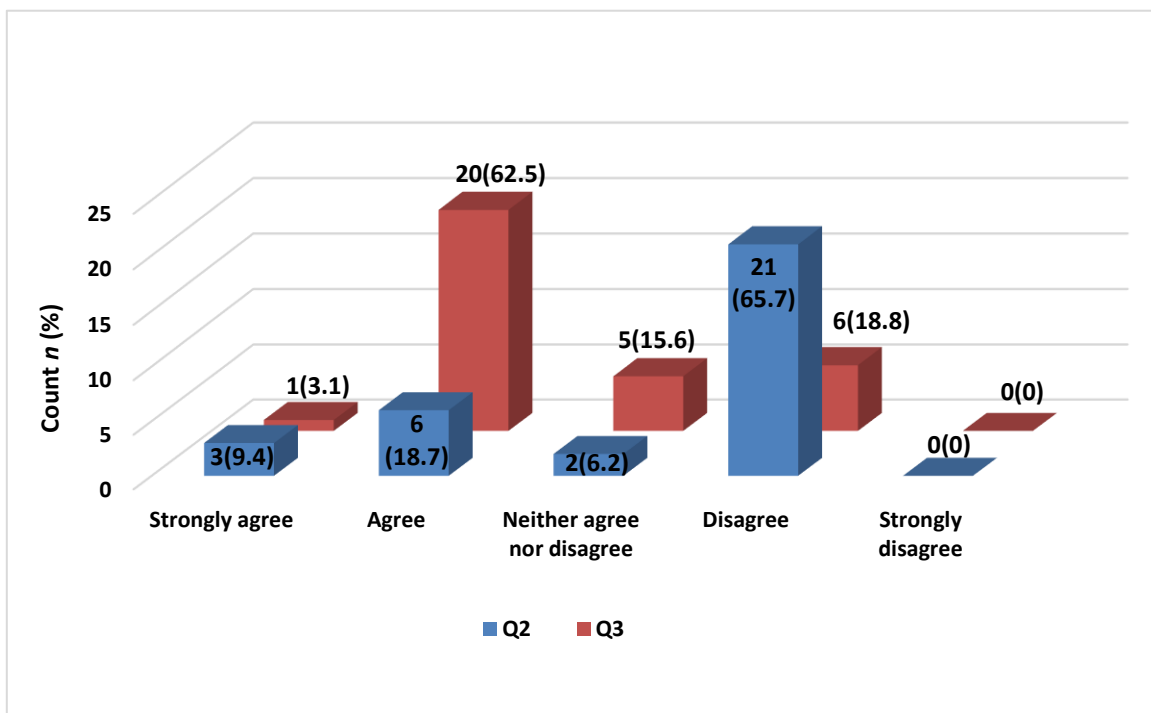

Bar Chart 1
Q1a: The RCGP training e-portfolio is valued by and useful to GP trainers?
Q1b: The RCGP training e-portfolio is recognised as having good 'acceptability' amongst GP trainers?

difference between the two groups in the nature of their responses. All participants completed all the questions. 30 respondents volunteered for interview. Bar-charts display the frequency distribution. Related questions: Q1a with Q1b (bar chart 1), Q2 with Q3 (bar chart 2) and Q4 with Q5 (bar chart 3), are shown together. Question 6 (bar chart 4) stands alone.

Bar Chart 2
Q2: The log-entries component of the RCGP training e-portfolio is an effective vehicle for enhancing learning?
Q3: The work-place based assessments component of the RCGP training e-portfolio is an effective vehicle for enhancing learning?
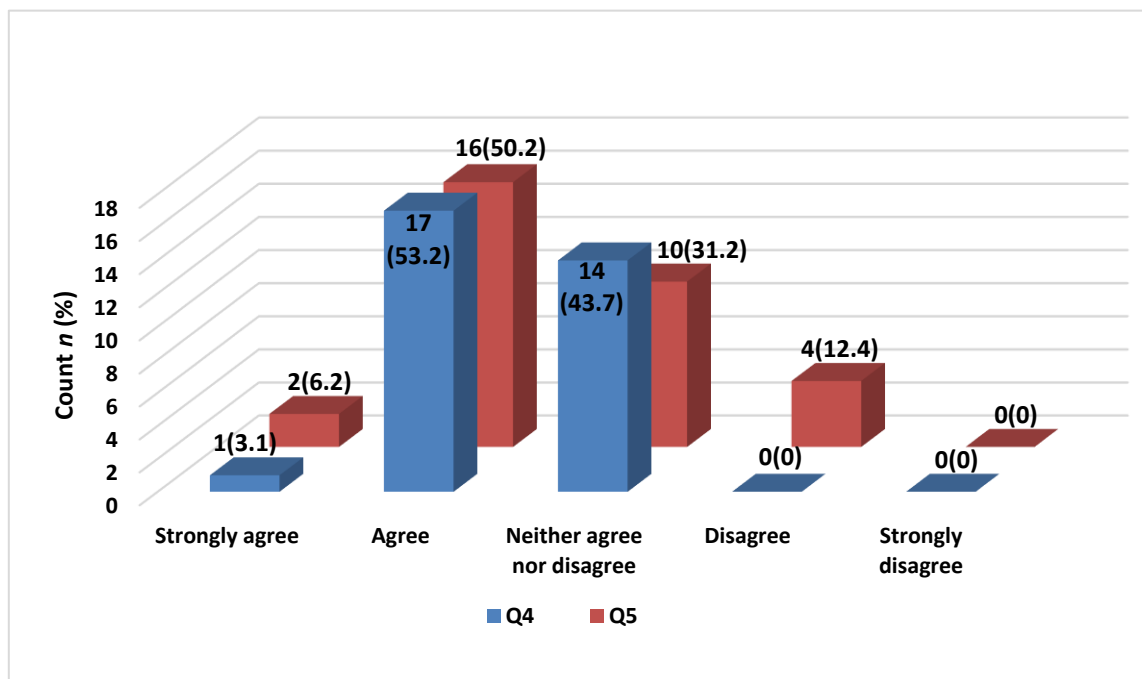
Bar Chart 3
Q4: The live RCGP trainee e-portfolio is of value for review of information by educational authorities (RCGP and HEEKSS)?
Q5: The e-portfolio is of use in guiding struggling and/or underperforming trainees?

Bar Chart 4
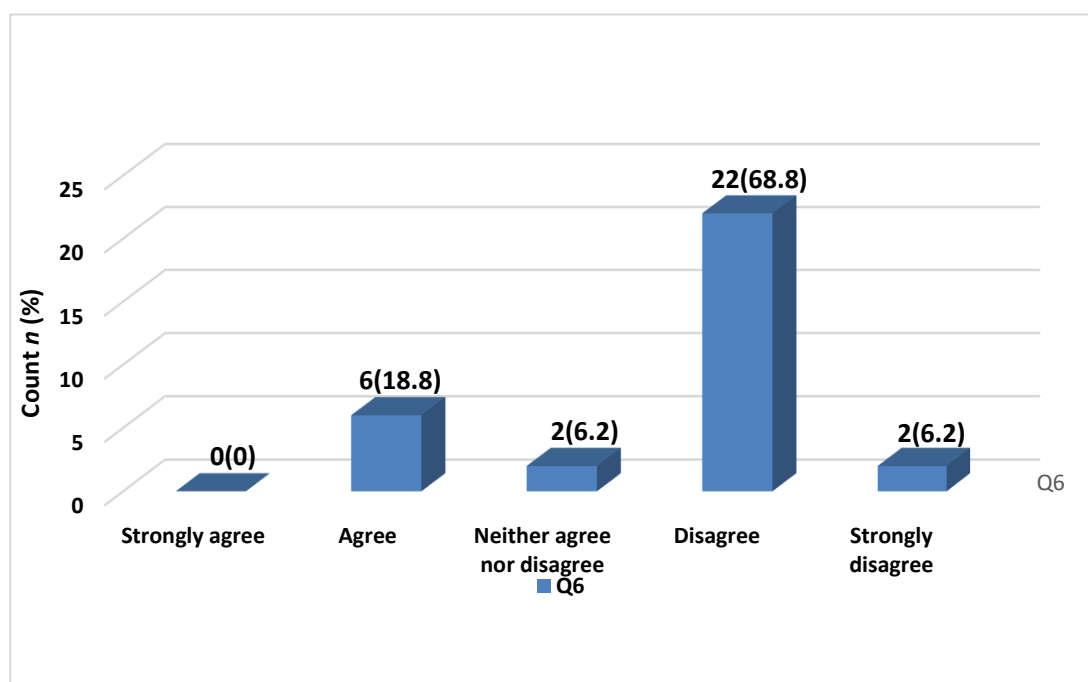Q6: Regarding the relative costs and benefits of using the e-portfolio, the balance is right regarding GP trainer time spent for benefit gained?

Most respondents do not consider log-entries to be an effective vehicle for enhancing learning, the converse holding for the WPBAs. Purposive sampling for interview of those GP trainers who held the minority positive view of log-entries was enabled.

The majority of GP trainers have a negative view of the benefits of their time spent on the e-portfolio. Only six respondents considered their time well spent. Three of these were programme-directors (PDs). There were four PDs participating. PDs frequently have to deal with struggling trainees, so it is likely that they would have different perspectives from grass-roots trainers (Ferguson, Wakeling and Cunningham, 2014).

Only three grass-roots trainers thought positively about the amount of time they spent. Two of these were purposively interviewed (the third declined interview).

Thematic Analysis: From the thematic analysis five themes emerged. Saturation appeared to be achieved as no new insight emerged after the fourth interview.

Theme 1: Demonstrating Accountability:
Accountability, defined as the need to demonstrate, in this case, a rigorous educational process, was deemed essential:

I can see there is a need for public safety and accountability. I think from a summary of my feelings about the portfolio is I accept there has to be something… (Participant1)

The survey had revealed that GP trainers, frequently felt neutral about the acceptability of the e-portfolio:

I guess this is a way of formalising what we do, but it is a bit of a sausage-machine, whereas you know I guess, what's led to this, why have we come to this point? (Participant2)

Tensions were exposed between accountability and the practical realities by all the trainers:

Yeah but I suppose that's the difference between the needs of the process compared with the reality. There is a need for the process to say that this doctor is competent in these areas. (Participant1)

Frustrations were expressed:

Look, this is the e-portfolio, we've got to tick boxes, we've got, you've got to show that you're competent. (Participant 4)

Everything has to be ticked off in boxes now…and yes, it is taking away from professionalism. (Participant 5)

These were coupled with hopes that improvements could be made.

> It's just it takes too long and it's boring… So it needs tweaking to make it better. (Participant 2)

There is an obvious threat to accountability if the record is not believable, leading to the second theme.

Theme 2: Threats to Credibility: E-portfolio credibility was threatened as participants had observed trainee reluctance to write log-entries about mistakes:

> ...the threat is that they're going to be used as part of a legal case…Then no-one is going to write anything honest. (Participant 2)

> …bound to be an edited record, scared about putting anything. (Participant 5)

GP trainers also thought that trainees were concerned about even their trainers reading about imperfections, adding an air of artificiality.

> ….it doesn't reflect what actually happened. It reflects, you know, what they've learnt to deal with… (Participant 2)

> If you are trying to demonstrate competence you can only really be showing when you did things right. (Participant 1)

Theme 3: Time Constraints and Oppression: Four interviewees described a sense of oppression: defined as the exercise of authority in a burdensome manner:

> It's very much a tick-box exercise for the Royal College, our lords and masters, to show that for some quantification that the trainee is competent and also some quantitative way of showing if they're not competent... (Participant 4)

> The deanery said you need to write more helpful things… or we're not good enough trainers. (Participant 5)

One trainer showed distress:

> I've been criticised for the reports that I've done, which I think some of it's been unfairly, unfair criticism. (Participant 3)

Another expressed resignation:

> …. then you stop railing against it and just get on with it really and fight the battles that you've got a chance of winning so I take the e-portfolio as one of those things, you're never going to, you know, whatever you say, no-one's going to change it, it just is. So I just get on with it really, I don't think it's, it's neither good nor bad, it just is.' (Participant 4)

There was very strong negative opinion about the time taken, especially for the reviews. It was difficult to find <u>any</u> positive comments:

> The reviews are time-consuming and repetitive. (Participant 2)

Some participants quantified the time spent on reviews:

> Two-and-a-half hours probably. Minimum. For a good one. Four hours for a difficult one, quite easily. (Participant 4)

And all admitted to having to use their own time:

> All done at home…on a good cycle of six months three bursts at doing three trainees' e-portfolios for a whole weekend. (Participant 6)

Only 3 GP trainers (out of 32) had indicated in the survey that the time they spent on the e-portfolio was reasonable. Two of these outliers were purposively interviewed and shed light on why:

> …then the review, yes does take a while and I do that on a Sunday usually because you need to have a good run at it, or a couple of Sundays. (Participant 5)

The other gave this explanation for holding a minority view:

> When I first started… I spent a whole weekend literally probably 18 hours, just trying to… it was so onerous and I just find that now it is so much easier, that it doesn't take so much of my time…. it takes me two to three hours to do the report. (Participant 3)

One participant commented on what non-training GP colleagues perceived:

> Colleagues see the time required to undertake and complete the e-portfolio as a negative factor in wanting to become trainers themselves. ….. When the number of trainers continuing is under threat,

perhaps a reassessment of the platform is required. (Participant 1)

Comment was frequently made about time being wasted

I resent the amount of time I spend c***about with the e-portfolio. (Participant 6)

…having to write a load of drivel. (Participant 3)

So to me the mind-numbing thing is when we are in the supervisory review, I sit there writing in the little boxes….and they have to sit through 13 times, filling the box in. I think the end result it is a pointless exercise. (Participant1)

These negative attitudes may impact on teaching and learning:

Theme 4: Barriers to Trainee Learning: Most participants were purposively selected from the minority of GP trainers (9/32) who believed, in the survey, that log-entries enhanced trainee learning. However, despite this positive standpoint, barriers to learning were recognised at interview.

All participants supported the theoretical concept of reflection as promoting learning, but reported practical difficulties persuading trainees to write their reflections down:

There's a mechanicalistic element, 'you must do this,'…banging people over the head to produce their log entries' (Participant2)

Reasons were suggested:

I think they see it as a nuisance exercise. (Participant4)

… you see; some people don't like writing. (Particpant5)

… bear in mind that they're just having to produce log-entries for the sake of the numbers…then at year end they start piling them in. (Participant 2)

All trainers reported reading many log-entries with inadequate reflection:

…. very flat and narrow. Don't understand reflection: making it a tick-box exercise. (Participant 1)

Some trainers reported trainees in serious difficulties because they could, (or would), not write log-entries:

…. daunting, trashing thing to be seen to have failed just because not enough numbers…. the whole process has switched her off to the point where she is likely to fail. (Participant1)

Participants 1, 2 and 4 volunteered that they felt the number of log-entries required was excessive and suggested:

…look, if you had 13 good logs, one for each competence, then you know that should be enough. (Participant 2)

All participants agreed that the number of log-entries could be reduced[6] if the quality was guaranteed and matched to competency. Also that the log-entries were more important in the first two training years when the trainees and GP trainers were not meeting daily:

Of less use in the last year because nearly every log-entry they have already discussed with me. (Participant 4)

The log-entries are more useful when they are in hospital posts, but the COTS and CBDs are rubbish then, so it swings round in the third year. (Participant 5)

Simplification was suggested to make the filling of a knowledge gap acceptable:

…don't need to ruminate…rumination ones are generally the tricky social situations. If they saw something they didn't know and looked it up, that actually is all you need to know. (Participant 5)

The log-entries consumed a lot of time in the reviews, having a demoralising effect:

If I didn't have to judge pointless log-entries against competencies…. (Participant 1)

Participants were positive about WPBAs. 21/32 survey participants agreed or strongly agreed that they enhanced learning, but there was some negativity about the documentation:

All the sections you have to fill in whether they are good or not, I don't find particularly useful. (Participant 3)

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[6] It should be noted that three months after this project, performed as an MSc study, was concluded HEEKSS reduced the number of log-entries required.

… fitting into someone else's template. (Participant 6)

… ticking irrelevant little boxes (Participant 1)

Some participants did not like the summative nature of the WPBAs:

It's blurring the role between mentor and the formative and the summative. There is that flavour to them that changes the dynamic between us. (Participant 4)

One cannot cope with having needs further development and is now doing the melodrama queen act. I would get rid of them as graded things altogether. (Participant 6)

Theme 5: Enhancement of Trainee Learning:
All interviewees agreed that the e-portfolio record was useful for assessing curriculum-coverage and lent a structure to training:

I think the COT gives it a structure that's enforced. Makes us get on with it. (Participant 2)

as well as aiding communication with the training authorities, and providing a way of keeping in touch when the trainees were in hospital posts:

I see the e-portfolio as their cohesive base. (Participant 6)

I think particularly in the hospital jobs when you're trying to, when you're not seeing them, you're trying to build, sort of start to build a relationship with someone that you are only meeting every six months. (Participant 5)

The participants, as in the survey, held positive views on the WPBAs:

Trainees want to do them…they do indeed demonstrate good and bad. (Participant 1)

There was a dichotomy of opinion as to the extent that log-entries enhanced learning. Two participants, although agreeing that a reduction in log-entry numbers was desirable, were positive:

I think it can if you can get the trainees to use it in the right way. I mean it ensures that they've actually thought about all the different areas and yeah, thought it through and I think to learn to reflect is a very useful role in life. (Participant 3)

Discussion:
The five interlinked themes are detailed below:

Time Constraints and Oppression:
The most prominent finding was the discovery that GP trainers were spending many hours of their leisure time on the e-portfolio.

Concerns about the time consumed by e-portfolios have been previously observed (Murray and Smith, 2007; Wiener-Ogilvie, Jack and Lough, 2008; Van Tartwijk and Driessen, 2009; Makris et al., 2010; Foulkes, Scallan and Weaver 2013; Jenkins, Mash and Derese, 2013b; Tailor, Dubrey and Das, 2014). GP trainers in this study, cannot fit the documentation into the working day despite the funded tutorial time. All of them, some more than others, are spending many hours of their own time working on their trainees' e-portfolios. Working such long hours disrupts their work-life balance and could contribute to burn-out, shown to detract from clinical performance (Sexton et al., 2016).

Participants felt that objecting to aspects of the e-portfolio was futile. The educational authorities had not sought their opinions. The literature, on the other hand asserts that educator views should be integral (Murray and Smith, 2007; Wiener-Ogilvie, Jack and Lough, 2008; Driessen, 2009; Cleland et al., 2014). This might explain the high survey response, and the near total willingness to be interviewed.

Barriers to Trainee Learning
Log-entries: Quantity: Participants agreed that reading and commenting on the log-entries took time and also reported having had difficulties persuading their trainees to compose enough log-entries. Similar reports appear in the literature (Hrisos, Illing, and Burford, 2008; Jenkins, Mash and Derese, 2013a; Ferguson, Wakeling and Cunningham, 2014). Participants considered that log-entries are perceived as a burden by trainees and frequently made as last minute tick-box exercises, a view aligning with the literature (Makris et al., 2010; Ferguson, Wakeling and Cunningham, 2014). All participants had seen trainees struggling with log-entries. Some had even seen trainees be sufficiently demotivated that failure loomed, because the requisite number of log-entries had not been written.

Participants recognised that writing is not a universal learning style (Honey and Mumford, 1986), which could be contributory. Participants suggested fewer log-entries, specifically targeted at fewer competencies, which aligns with the literature (Driessen, 2009; Goodyear, Bindal and Wall, 2013).

As well as the quantity, the nature of the log-entries was discussed:

Log-entries: Reflection: All participants considered reflection[7] integral to learning, concurring with the well-known theories (Schön, 1983; Kolb, 1984). Reflection has also been endorsed in clinical training (Sandars, 2009) and the policy the General Medical Council[8] (GMC) is to promote reflection, (Good Medical Practice, 2013). Whilst all of the study participants espoused the importance of reflection, they had reservations about underlined written reflections. Participants had observed reluctance from their trainees to commit personal feelings and anything but the most minor imperfections in clinical management to writing (Mann, Gordon and Macleod, 2009). Perhaps there is a flaw in the learning theories when they are applied to clinical situations? Snadden and Thomas (1996) commented that e-portfolios had emanated from the graphic arts where they demonstrated ability, and it could be that the concept of demonstrating deficiencies is alien. Participants considered that reluctance to demonstrate deficiencies was now magnified because a trainee had recently been prosecuted (Cohen 2017) and her written reflections used against her.

Participants considered that written reflection on mistakes would (and should) cease: a view endorsed by Furmedge (2016), and should be replaced by more straightforward log-entries, such as knowledge gained by looking-up facts following the recognition of a Patient's Unmet Need (PUN) or a Doctor's Educational Need (DEN) (Eve, 2003). So, whilst still espousing the importance of reflection, study participants advocated accepting a more factual written record, which would still provide evidence of curriculum and competency coverage and by virtue of being straightforward could enhance credibility.

Barriers to learning in relation to WPBAs: All participants were concerned about the adverse effect assessment and grading has on the supervisory relationship, previously regarded as the 'lynch-pin' of GP training (Wiener-Ogilvie, Jack and Lough, 2008 p.370). It seems there is a tension between the political and educational requirement for assessment and the quality of the supervisory relationship.

Participants expressed dislike of the e-portfolio's tick-boxes integral to recording WPBAs, perceiving them as time-consuming and artificial. The documentation may here be being prioritised over the actual learning (Cleland et al., 2014), with experts being forced to tick simplistic boxes. Participants wanted the tick-boxes removed and the free-text space used. Government policy (Department of Health, 2004) of promoting regular assessments could be adhered to, with less box-ticking and more freedom for GP trainers to express their complex judgments.

Threats to Credibility: Two issues undermine credibility. Participants reported that if a large number of log-entries is required then GP trainees tend to record anodyne information rapidly to meet deadlines, creating the electronic equivalent of the 'huge useless pile of paper' alluded to by Driessen (2009, p.8). They advocated reducing the number of log-entries. The second issue is the effect that fear of litigation is having on truthful reflection on clinical mistakes. As described above a more believable record would strengthen the demonstration of accountability.

Demonstration of Accountability: A strength of the e-portfolio is the demonstration of accountability. Every participant bar one, (who held extreme views on privacy), volunteered accountability as the main purpose of the e-portfolio aligning with the literature (Johnson et al., 2008; Hrisos, Illing and Burford, 2008; Jenkins, Mash and Derese, 2013a; Jenkins, Mash and Derese, 2013b). A further strength now follows:

Enhancement of Trainee Learning: Participants recognised the e-portfolio as a means of communication, granting an overview to the educational authorities (Hrisos, Illing and Burford, 2008; Makris et al., 2010) and vital for identifying struggling trainees.

Despite suggesting an overall reduction in log-entries, participants valued them when the trainees were in hospital posts and GP trainer and trainee only met six-monthly. This was because log-entries then facilitated communication. They suggested that e-portfolio content could be adjusted for the stage of training (Ferguson, Wakeling, Cunningham, 2014), with fewer log-entries and more emphasis on assessments, the WPBAs, in the final year.

Participants considered that the WPBAs enhanced trainee learning by being a record of learning and providing a structure to ensure that teaching occurred (Johnson et al.,

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[7] Reflection was defined by Boud, Keogh and Walker (1985, p.19) as: 'intellectual and affective activities in which individuals engage to explore their experiences in order to lead to a new understanding'

[8] The General Medical Council (GMC) is a committee consisting of both doctors and members of the public. In order for a doctor to practice in the UK doctors must be registered with the GMC and hold a licence.

2008; Hrisos, Illing and Burford, 2008; Jenkins, Mash and Derese 2013a).

Study Limitations: The sample was small, albeit purposively selected, so the findings cannot be generalised. (There are around 3000 GP trainers in the UK and only 32 participants in this study. Additionally, the sampling has only taken place within one region (HEEKSS). However, the findings are offered for consideration and possible transferability to other health e-portfolios.

Every effort to remove bias was made, employing several credibility indicators, but, the first author's insider status may still have introduced bias: though affording good access that might have been denied an outsider.

Implications for Practice: The large consumption of GP trainer time was the dominant theme in this study: detracting from time for patients and possibly contributing to burn-out.
Participants endorsed the theories of reflective learning, but voiced concerns about demonstrating deficiencies by written reflection, because of possible litigation.

Participants recognised that the e-portfolio had several strengths. The ability to demonstrate accountability and the many features of the e-portfolio that enhanced trainee learning were acknowledged.

Participants considered that the e-portfolio could be strengthened further if the following recommendations were implemented:

Recommendations:

1. Reduce Documentation:
- Reduce the number of log-entries to one or two per competency in each review period. (This was in fact implemented within 3 months of completion of this project by HEEKSS in August 2017). Adjust for the stage of training with fewer log-entries in the third year and more WPBAs.

- Reduce the number of competencies by grouping together similar competencies.

- Remove the tick-boxes used for grading in the WPBA's and rely on assessor comment.

2. Improve GP trainer input into e-portfolio development: Involve GP trainers extensively in design

and implementation of the e-portfolio, as the literature recommends.

3. Remove the Expectation of Written Reflection on Clinical Errors: Make the log-entries more factual, aiming at filling knowledge gaps. Not having to reflect in writing on errors would remove the threat of litigation, which has been centre-stage recently. A subpoenaed written reflection could be considered tantamount to a confession. Verbal discussion of errors could support the learning instead.

Avenues for Further Research: As there is a huge amount of media attention at present regarding shortages of GPs, (including GP trainers), and reports of high levels of stress in primary-care, research into the causes could be useful. Larger scale research, perhaps building on this study, has the potential to elucidate factors that would improve the training experience for both GP trainers and their trainees, which could enhance both recruitment and retention.

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