

Creating Aligned Interactive educational Resource Opportunities (CAleRO)

Why CAleRO?

Perceptions and impact of ten years of CAleRO at the University of Northampton

May 2018



1. About this report

The purpose of this report is to provide an evidence-based critical reflection on CAleRO (Creating Aligned Interactive educational Resource Opportunities), a structured workshop used for programme and module design and redesign at the University of Northampton. CAleRO is a two-day workshop, attended by the module teaching team and run by a trained, independent facilitator. A CAleRO may also involve students, external examiners, critical friends and other stakeholders, such as employers.

The University of Northampton has been running CAleROs for approximately ten years. In response to an institutional initiative to introduce active blended learning across all programmes, the University has significantly increased both the capacity to deliver CAleROs and the number of CAleROs delivered since 2014. CAleRO supports our institutional curriculum change project, which has been informed by increasing evidence (e.g., Freeman *et al.*, 2014) that active learning is more

effective than lecturing in fostering learning amongst undergraduates.

The literature review below provides evidence that structured design workshops such as Carpe Diem, on which CAleRO was originally based, can be of great value in assisting course teams to (re)design their university programmes and modules. This evidence has been anecdotally reinforced by high levels of attendance and demand for CAleRO workshops at the University of Northampton, and suggests that many teams are using the process, often repeatedly, to enable programme and module design work. However, much of the supporting literature for Carpe Diem is now over five years old, and much of the evidence from CAleRO facilitators and participants, while positive, is still anecdotal. It is therefore both appropriate and timely to formally evaluate the use of the CAleRO process in supporting the design of active, blended curricula at Northampton.

2. Background to CAleRO

The CAleRO process was developed from the Carpe Diem course design model, and was adapted and improved to suit the requirements of the University of Northampton in 2008 (Usher, MacNeill and Creanor, 2018). Carpe Diem started in 2002 at Caledonian Business School, Glasgow Caledonian University, was refined at the University of Bournemouth and Anglia Ruskin University (Armellini and Jones, 2008; Salmon, Jones and Armellini, 2008), and then further developed at the University of

Leicester (UoL, 2011). Supporting material for the implementation of both CAleRO and Carpe Diem is freely available under the terms of a Creative Commons licence (UoL, 2011; UoN, 2017), and is in use at a number of universities around the world. After reviewing various different course redesign processes, CAleRO was chosen by the University of Edinburgh as the basis from which to develop their ELDeR (Edinburgh Learning Design Roadmap) process (Hale, 2016; UoE, 2016)

“The University of Northampton-based CAleRO framework (which is CC-NC-SA licensed) was chosen by academics and support staff as the best fit. The focus on designing of learning experiences over development of content; the structured format of the two day workshop, with ability to adapt based on each course design team, providing consistency and flexibility; and the ability to use CAleRO for on campus and online development, programme development, and different levels of courses (UG and PG, for example) were the key reasons for CAleRO being selected. In line with the findings of Mor and Craft, 2012, the CAleRO framework expertly combines the following domains – subject knowledge, pedagogical theory, technological know-how and practical experience - while also allowing for innovation in all of these domains” (UoE, 2017).

3. The CAleRO process

CAleRO is a team approach to course design. The overall purpose of the CAleRO process is to provide a structured, facilitated environment in which a course team are supported to design and implement a constructively aligned module that has a focus on active, participative and collaborative learning.

The definitive guide to CAleRO is Usher's *Demystifying the CAleRO* (2014), which explains both the process and the pedagogical principles underpinning it. In essence CAleRO is a structured, face-to-face workshop through which a course team, over a period of two days,

(de)constructs, (re)designs and (re)creates a module or programme, either from scratch or from an existing module or programme. The process involves a variety of participants, including the teaching team, learning designers, learning technologists, academic librarians, students, and external stakeholders, such as employers. CAleRO is always facilitated by a trained facilitator who is external to the teaching team.

The broad steps of the CAleRO process are as follows:

Pre-CAleRO Meeting

- *Agreeing aims of the CAleRO and deciding who needs to be there.*

CAleRO Workshop Day 1

- *Stage 1: Blueprint – Mission statement, look and feel, constructive alignment and “backwards design”.*
- *Stage 2: Storyboard – Creating a visual representation of the course.*

CAleRO Workshop Day 2

- *Stages 3 to 5: Building the course – creating learning activities (often referred to as prototyping), reality checking, reviewing and adjusting.*
- *Stages 6 and 7: Next steps - action planning, training requirement, reflecting on CAleRO.*

CAleRO Follow-up

- *Reviewing action plan and progress towards goals.*

4. Literature review

The CAleRO process is contextualised, outlined and explained in detail by Usher (2014) and Usher, MacNeill and Creanor (2018), but to date it has only been evaluated once, by Fitzgerald (2016). However, as CAleRO is derived from Carpe Diem, some insights from the literature about Carpe Diem are worth considering alongside Fitzgerald's findings about CAleRO. Regarding Carpe Diem, the key sources of information that have been reviewed here are: Armellini and Jones (2008); Salmon, Jones and Armellini (2008); Armellini, Salmon and Hawkrigde (2009); Armellini and Aiyegbayo (2010), and; Salmon and Wright (2014). Additional sources of information about Carpe Diem can be found in Salmon (n.d.); Salmon (2011, pp.88 and 126), and; Salmon (2013, pp.186-203).

Fitzgerald's evaluation of “digital divides, digital literacy and the impact of the Carpe Diem (CAleRO) process” (Fitzgerald, 2016, p.73) includes a substantial discussion about the experiences of twenty-three CAleRO participants (Fitzgerald, 2016, pp.108-130). Fitzgerald finds that CAleRO is perceived as a positive intervention by those who take part in it, but records that some participants are less supportive of CAleRO during and immediately after the process, especially the first time that they engage with it (ibid. p.109). Negativity sometimes occurs because participants have been required to attend, and do not see the value in doing so (ibid. p.112), and sometimes because the process is perceived as being too critical (ibid. p.110). Where CAleRO participants have a strong sense of ownership

of their courses, the redesign aspect of the CAleRO can make them feel as if they are being criticised for what they have done previously, which can lead to feelings of demoralisation (ibid. p.109). Nevertheless, Fitzgerald does make it clear that participants normally overcome these negative feelings and, on reflection, find the CAleRO experience to be “powerful and ultimately positive” (ibid. p.115). However this can be frustrated later by university quality process which may not necessarily be sympathetic to the innovative and creative designs that can be produced during a CAleRO (ibid. pp.119-120). Preparation, in terms of managing participants’ expectations of what can be achieved in, and what to expect during and after the CAleRO, is thus key to the success of the process (ibid. pp.112-116).

For many of Fitzgerald’s participants, CAleRO was positively impactful in a number of ways. For example, it allowed participants the time and space to experiment and to try new out new teaching and learning ideas (ibid. p.121). It also raised awareness of the practical issues of constructive alignment (ibid.), and allowed staff to break out of the cycle of teaching the same courses with the same materials year-on-year (ibid. pp.121-122). However, the most positive theme that emerged from Fitzgerald’s study was the collaborative nature of CAleRO (ibid. pp.123-127). While it could be seen that the positive experiences of collaboration would be evident in any situation where staff were encouraged to work together, Fitzgerald highlights the key role that CAleRO plays in making the most of the opportunities for collaboration, noting that “The challenges that are presented by adhering to the CAleRO framework enhance the experience of the group” (ibid. p.124). In respect of the collaborative aspect of CAleRO, also noted by Fitzgerald is the requirement for high quality facilitation, with facilitators needing to be both strong and flexible as the demands of the process require (ibid. p.126). As she explains, “It is a widely held view that the facilitator is the

key driver to ensure that the process is a success” (ibid. p.127). Ultimately, Fitzgerald concludes that

“It is almost certain that there is a long lasting effect on those who engage with the CAleRO framework as it nudges participants into reflection on their practice and consideration of the student experience” (Fitzgerald, 2016, p. 127).

Fitzgerald’s findings are generally highly consistent with the literature about Carpe Diem, and with our own findings about CAleRO.

The existing Carpe Diem literature establishes it as a successful, collaborative course design workshop where success is primarily defined as having the ability to change participants’ learning designs, from being static, transmissive and content-centred, to being participative, engaging and learner-centred. All of the papers explain that Carpe Diem is a team-based approach to course design. They state that it is considerably more in-depth and immersive than a standard staff development workshop, and portray it as an academic and pedagogically transformative process which also produces practically useful outputs. For example, Armellini and Jones (2008, p.19) explain the Carpe Diem process as “a design workshop, not an opportunity to learn how to use a given tool.” Carpe Diem, they explain, is “practical and outcomes based, ... and focuses on learner activity and group work” (ibid). Both Armellini and Aiyegbayo (2010, p.924) and Salmon and Wright (2014, p.55) note that Carpe Diem “differs from traditional staff development approaches”, and Salmon and Wright (ibid. p.57) are keen to emphasise that the “Carpe Diem outputs can be used by the course team immediately.” Salmon, Jones and Armellini (2008, p.100) similarly state that Carpe Diem is “not seen as staff development, but as a supportive academic activity.” They stress that the Carpe Diem process is not about the development of content and that it is the job

of the facilitator to “prevent content discussions dominating pedagogical ones” (ibid). The importance of the facilitator is particularly emphasised by Armellini and Aiyegbayo, who state that the “facilitator’s role is key to the success of the workshop” (2010, p.925).

All five papers address the way that Carpe Diem changes participants’ perceptions and practices of learning design. For example, Armellini and Jones (2008, p.22) identified three stages of course teams’ practices in learning design: transmissive, interactive, and collaborative. They found that participants came into the Carpe Diem process with a largely transmissive view of learning, e.g., using the “VLE as a repository of materials ... [and using] discussion boards for administrative issues” (ibid. p.22). Following on from the transmissive approach to learning is the interactive, single loop design, which Armellini and Jones characterise as comprising tasks “designed to encourage students to post a single reply” (ibid. p.23). The third approach is collaborative, and is “characterised by an understanding that collaboration between learners and tutors as well as among students ... is central to learning” (ibid. p.24). As a result of the Carpe Diem workshops they note that “all [course teams who participated] showed signs of change towards the collaborative category” (ibid. p.25). Salmon, Jones and Armellini (2008, p.107) similarly claim that the Carpe Diem process has “resulted in documented examples

of improved course design and implementation.” The ability of Carpe Diem to change pedagogical designs from static, content-centred designs to active, learner-centred is also made by Armellini and Aiyegbayo (2010, p.933) who note that all “participating course teams made significant changes in the ways in which they design for student learning ... [shifting] from designs based on content repositories to task-based, learner centred approaches.” In all five papers reviewed, e-tivities are referenced as being an important design tool used in the Carpe Diem process (Armellini and Jones, 2008, p.19; Salmon, Jones and Armellini, 2008, p.98; Armellini, Salmon and Hawkridge, 2009, passim; Armellini and Aiyegbayo, 2010, passim; Salmon and Wright, 2013, p.54). The value of the e-tivity is the way it helps to shift online practices away from being content-centred to being task-centred. Salmon, Jones and Armellini (2008, p.103) note that “learning to design e-tivities proved to be a catalyst for shifting participants’ understanding of pedagogy.” Finally, all five papers noted the importance of the collaborative nature of Carpe Diem, adding that as well as the academic course team, the process involved learning technologists and academic librarians as well as a skilled facilitator (Armellini and Jones, 2008, p.19; Salmon, Jones and Armellini, 2008, p.100; Armellini, Salmon and Hawkridge, 2009, p.138; Armellini and Aiyegbayo, 2010, p.924; Salmon and Wright, p.55).

Overall, the existing literature on the subject of CAleRO and Carpe Diem establishes that the process:

- *goes considerably beyond what is generally considered staff development;*
- *is pedagogically focused, not tool focused;*
- *is collaborative, concerned with the development of activities and tasks for the learner to do, rather than with the development of static content;*
- *is transformative for participants;*
- *generates useful and usable practical outputs;*
- *requires a skilled facilitator to get the most from the process.*

5. Researching CAleRO

CAleRO participants are usually positive about their experiences, especially when talking to their facilitator during and immediately after the event. However, in order to properly evaluate the extent to which CAleRO is (or is not) a worthwhile process, we needed to discuss it with participants who had had a chance to reflect on the process, and to give them the chance to discuss it with someone other than their CAleRO facilitator. Therefore the staff that we asked to be involved in our evaluation were people who had had at least a year to reflect on their CAleRO, and had had an opportunity to try and put some of the plans drawn up in the CAleRO into practice. We offered all staff who fitted this criteria (a total of 237 people) to take part in this evaluation of CAleRO, and twenty-two staff took up the opportunity.

We used Q Methodology (Watts and Stenner, 2012; McKeown and Thomas, 1988) as our research method. In Q Methodology participants are asked to agree or disagree with a series of statements about the subject in question. They place cards with the statements on upon a grid, the choice of placement location on the grid indicating the extent to which they agree or disagree with each of the statements. The participants' responses are then quantitatively analysed, and those participants

with similar response patterns are grouped together. Groups of people with similar responses (i.e. similar feelings, beliefs and attitudes on the subject) comprise a perspective. Thus the term 'perspective' used in the discussion below refers to a specific group of people with a shared outlook on CAleRO. In this study our participants were grouped into four perspectives (i.e., four different outlooks on CAleRO were identified). Perspective one was shared by seven participants, perspectives two and three by four participants each, and perspective four by one participant. Four participants did not share any of the perspectives, and two shared multiple perspectives: thus, as required by the methodology, these six responses were not used. In addition to the quantitative responses, qualitative comments were also gathered from each of the participants, as was information about their teaching experience and role within the university.

Included in the appendices is more information relating to the research method and findings. This includes the Q sort grid design, the Q sort statements, factor array for statements and perspectives, and distinguishing statements for each perspective.

6. Perspective 1: CAleRO as an opportunity for reflection on teaching and experimentation with teaching and learning activities

Perspective one was shared by seven participants, who strongly identified CAleRO as a positive learning experience, in particular as an opportunity to reflect on their teaching and to consider teaching and learning as a more student-centred activity. These participants valued the more introspective elements of CAleRO, and described it in cognitive terms: they use CAleRO to "brainstorm issues" and "reflect", and they value having "a blank canvas to think about my module and ... to question why I had been doing things a certain way", as

well as the "space and freedom of thought to allow creativity to occur".

These comments give an insight into the cognitive processes happening in CAleRO. This perspective also places less importance on the collaborative input of others, and on the support of professional services, although both of these elements are still rated positively. Given this introspective focus, it might be assumed that participants sharing this perspective would prefer to design in isolation, but in fact the opposite is true. From the qualitative comments

it becomes clear that the process of bringing people together in a face-to-face environment is

considered “invaluable” for exploring existing ideas and practice.

“The traditional way you do it in isolation, you can kind of kid yourself a bit, whereas when you’re doing it in that form, you do have to be more ... I suppose accountable for what you’re doing ... and you have to justify yourself and really think through what you’re doing rather than short cuts to things.”

Reflecting, questioning and justifying are developmental processes familiar to learning and teaching with students, and CAleRO helps to scaffold these for teaching staff. There was strong agreement among this group that the interaction that happens in CAleRO supports both critical reflection and accountability. This suggests that for these participants, re-examining their beliefs about teaching is not a “by-product” of the workshop activities (Salmon

and Wright 2014). Rather, workshop activities are seen as a vehicle for a specific process of confrontation and reflection similar to that described by Ho (2000) as necessary to conceptual change. This collaborative exploration stage is often described as preceding and informing a more autonomous design stage, clarifying ideas and approaches before working on the detail.

“The CAleRO process has allowed me to consider and reflect on the ways students learn given the content and the context of the module, to promote engagement, interest and motivation to learn more and on a deeper level.”

The participants who shared this perspective were usually highly experienced (over 12 years’ teaching experience). They reported choosing to undertake a CAleRO rather than being required to attend, and having a strong sense of ownership of what was produced. Although this perspective recognises the development of transferable skills through CAleRO, the views expressed indicate that even experienced staff have a preference for continuing with facilitated collaborative sessions. This suggests that staff may opt to take part in CAleROs even when

they have learned the skills of good course design through attendance at previous CAleROs, because what they value about CAleRO cannot be easily replicated outside of the CAleRO process. Supporting participants who share this perspective has specific implications for the facilitation of such sessions, and also for the scalability of the model, as it calls into question the idea that once they have attended a number of CAleROs, staff will no longer want or need CAleROs to assist them with course (re)design.

“To have somebody help you with the outline and the structure and thinking how it fits together, why would you say no? And it gives you an outside perspective, doesn’t it, it gives you a view on what a learner might be thinking. Whereas if you just do it on your own you can’t see the wood for the trees.”

7. Perspective 2: CAleRO as an opportunity for social learning and to build and strengthen relationships

Perspective two was shared by four participants, all of whom placed value on the collaborative aspects of CAleRO. Although participants also valued opportunities for

reflection, for example that the workshop “reminded me to start from the student” and “allowed me to consider and reflect on the ways students learn”, many of the strongest opinions

here relate to the presence, absence or role of other people in the CAleRO. The perspective is characterised by placing a high value on the input of colleagues and the support of

professional services staff, and less value on the issues of ownership and control of what was produced in the CAleRO.

“I’d be asking about how somebody else might have done something - and could we try and use that! It’s a sharing platform as well as planning platform I think, an opportunity.”

Participants reported “cross-fertilisation” and learning from others, “getting everyone in the team working together”, and “effective communication” as explicit benefits. This perspective views CAleRO as an opportunity for team building and peer support, and prioritises the elements of the process that support consensus building, such as

preparation, presence, the contribution of support staff and students, and responsive facilitation. This difference in priorities may be partly explained by the fact that none of the participants sharing this view were leaders for the module or programme that was the focus of the CAleRO.

“You can argue that if you just sit at your desk and do it yourself it will be faster, yes ... but then you will have the other people coming back and saying, oh I don’t agree with this, and even the class as well, what are we trying to do? So I think although it may be faster, at least on the surface of it, it’s not as efficient even, let alone effective.”

Both of the perspectives discussed so far support the emphasis on collaborative design reported in the literature on CAleRO and Carpe Diem (Fitzgerald, 2016; Salmon, Jones and Armellini 2008; Dempster, Benfield and Francis 2012). This perspective gives us more insight into the specific needs of participants however, particularly those who are not responsible for module design, and what they may gain from attending the workshop.

It’s also notable that participants who shared this perspective were the most concerned about difficulties in getting colleagues to attend, and about ensuring representation from students. They were also the least likely to feel that implementing new designs might require them to challenge the practices and norms of their department or faculty, possibly because their collaborative work had been more successful, or because they were not directly responsible for implementation.

8. Perspective 3: CAleRO as an opportunity to protect time for a structured and holistic design process

Participants viewing CAleRO from perspective three shared some of the views expressed by the other perspectives, around the importance of constructive alignment and collaboration, but prioritised more procedural elements. Four participants shared this perspective, which viewed supporting constructive alignment as the most valuable element of CAleRO, but also placed a high value on storyboarding. All the

participants who shared this perspective were reflecting on a CAleRO that included designing new programmes or modules, rather than redesign, and this marked difference in priorities suggests that this process has specific requirements in relation to CAleRO. People sharing this perspective also, perhaps inevitably, saw validation or change of approval as a key driver for engaging in CAleRO.

"I would recommend CAleRO to others because the CAleRO process provides dedicated time to re-evaluating a module and physically being able to see where content fits from a student perspective and how this relates to learning outcomes and assessments."

This perspective has strong views on protected time, agreeing that booking a CAleRO helped to block out time that would otherwise have been difficult to find, and also that it enabled changes that could not otherwise have been made. This perspective expressed more strongly than any of the other perspectives that CAleRO was an efficient use of time. In addition, they felt that CAleRO did not generate a lot of additional work necessary to implement the changes.

Participants sharing this perspective reported that institutional recognition of CAleRO as a valid use of time was particularly valuable, as setting aside the time to get together and make collaborative decisions is crucial for the initial process of designing new modules or programmes from scratch. Emphasis on the planning aspects of CAleRO (constructive alignment, storyboarding) suggested that these aspects are well aligned with the needs of staff designing new modules and programmes.

"Although a CAleRO feels like a heavy time investment when you have to devote ring-fenced time to it in a busy diary, it is time very well spent because issues are addressed in the early stages of the process and the process is methodical - which ultimately means the time is used efficiently."

9. Perspective 4: People who don't see the value of CAleRO and who object to being forced to engage

Participants viewing CAleRO from perspective four felt that CAleRO took up valuable time to complete a job that they could have done more quickly on their own. Although only one person shared this perspective, their response was nonetheless significant (i.e. statistically significant in terms of the research methodology) and there are lessons to be learned from it. People who shared this perspective were those who engaged in CAleRO because they were told that they had to and felt the process was not an efficient use

of time, because, according to their own judgement, they "already know how to design courses". While this is undoubtedly also true of some of the other participants, in this case it is possible that perceiving the CAleRO as superfluous and externally enforced may have led them to say that CAleRO has not encouraged them to reflect on their teaching, that it has not helped them to think about student-centred learning, and that they would not recommend CAleRO to others.

"People were frustrated from being there [at the CAleRO], because they didn't want to be there, they don't have the time to be there, there are a thousand other things that are coming in while they were there, so it's not seen as a good use of time."

This view contrasts sharply with the sense of ownership and buy-in reported in the previous perspectives, suggesting that this may be one of the primary factors that determines the

success of a CAleRO workshop. It also links closely with the comments about protected time discussed in the third perspective, emphasising that unless participants are willing and able to

set aside time for design, the CAleRO process will not be effective. For this perspective, to make a CAleRO successful you have to have

the right people in the room, for the right reasons, and crucially, that time has to be used well.

“I think having those people in the same room at the same time is incredibly valuable. Personally, the format of the CAleRO event didn’t allow me to get the best value out of that time with those people. Having face-time with all those people was brilliant, I could’ve used it so much better.”

This last point indicates that a CAleRO can fail, not only if a course team does not have shared goals, but also if the valuable time set aside on the day is not used specifically to address those goals. This highlights the importance of the pre-CAleRO meeting not only for addressing participant expectations, but also in setting

goals, which should be negotiated between the facilitator and the academic(s) responsible for the module or programme being (re)designed. This leads us to the importance of good facilitation, as noted by Armellini and Aiyegbayo (2010, p.925) and Fitzgerald (2016, pp.126-127).

10. Facilitation

All perspectives had insights into the requirements for effective facilitation of CAleRO workshops. They all agreed that the facilitator should have some learning and teaching expertise, but that they should not be an expert in the subject of the module or programme

being designed. The latter aspect was particularly important for people sharing the second perspective, suggesting that this would have significant implications for consensus building.

“I don’t think it’s something where you can just take someone and say, “Oh, do you fancy being a facilitator for a CAleRO?” I think they need to be embedded in teaching and learning ... They have to have teaching and learning kind of coming from their core, otherwise I don’t think it’d work. I think you’d see through them.”

It is also notable that all of the first three perspectives disagreed to some extent with the statement “I want to be able to do CAleRO a bit at a time, rather than doing all the stages in one go”. While it may be tempting to make concessions to people’s schedules in order to enable module and programme design work, those with experience of the process are clear that there is more benefit in making time to

complete the whole process at once, particularly when designing from scratch.

The first three perspectives also agreed on the mode of delivery, reporting strong opposition to the idea that some of it could be carried out online rather than face-to-face. This suggests that the online approach that has been trialled for Carpe Diem at other institutions (Salmon *et al.* 2015) may not be widely applicable.

“I thought that while [CAleRO] might reveal some useful ideas, it was going to take up two days unnecessarily. Having completed the process, I became a convert.”

None of the perspectives found it easy to take the time to engage with CAleRO, and all reported that it was difficult to get all the staff

who needed to be in the CAleRO to participate. But despite these challenges, there was a broad disagreement with the idea that CAleRO

might be better if completed piecemeal, and very strong opposition to the idea that some of

it could be carried out online rather than face-to-face.

11. The benefits and limitations of CAleRO:

Our research indicates that the CAleRO process is useful for:

- developing transferable module or programme design skills and designing courses from a student-centred perspective.
- developing constructive alignment between learning outcomes, teaching and learning, and assessments.
- helping to visually represent the student journey (storyboarding).
- collaborating with and learning from colleagues, including those outside of the module/programme team.
- blocking out dedicated time to engage with programme or module design that staff might not have otherwise found.

“The CAleRO provided an opportunity to focus on learning and teaching practice rather than subject content. It reminded me to start from the student.”

The limitations of CAleRO are that:

- CAleRO was not considered to be directly transformative in terms of teaching practice (although there was strong agreement that it supported reflection on practice, there was low agreement that it had “changed the way I teach”).
- It was not seen to directly increase effective use of technology in teaching.
- It was not easy to take the time to participate in CAleRO, or to ensure all the necessary staff were there.

“I think the learning outcomes are the bits that are easy to achieve with teams. The changing of teaching is the harder bit to achieve.”

The fact that CAleRO was not perceived by participants to change their teaching practice or to increase their use of learning technologies is, on the whole, not surprising. The use of learning technologies is now ubiquitous, and, for this reason, CAleRO has moved away from its earlier emphasis on developing participants’ use of technology to support learning, to developing participants skills in designing modules for active blended learning. Furthermore, CAleRO is not an obvious teaching training workshop, rather its focus is on module and programme design. Nevertheless, because modules that have been

through CAleRO tend to be more active and student-centred than they were before, there is a strong possibility that they do change teaching practices over time, but because this process happens slowly and sometime later, CAleRO is less likely be seen as one of the causes of this change in teaching practice. And while it is noted that CAleRO is not obviously a teacher training workshop, it is our contention that most CAleRO, and, we suspect, Carpe Diem, facilitators, would strongly agree that changing teaching practice is in fact at the heart of both processes.

12. Conclusion

The main conclusion from this research project is that CAleRO is generally viewed by participants as a valuable, reflective and effective process for designing active blended

learning programmes and modules. This is evidenced by the fact that the three most strongly agreed with statements about CAleRO across the perspectives are:

- CAleRO encouraged me to reflect on and re-examine the way that I teach.
- CAleRO has helped me to think about teaching in terms of the activities students do in order to learn, rather than in terms of the content I should deliver.
- CAleRO helped me to align my learning outcomes with my teaching activities and my assessments.

While there is broad consensus about its value, the research also identified conditions and limitations. The strong emphasis placed by participants on the value of the collaborative aspects of CAleRO suggests that it needs to be facilitated collaboratively in a face-to-face environment, and also suggests that this process has value as a development opportunity for all teaching staff, not just those leading the modules being designed. And while participants are clearly already using their learning design skills in contexts outside CAleRO, even experienced staff maintain a preference for coming together with others, as well as having an objective facilitator on hand to support the design process. This has implications for the scalability and sustainability of the process, because CAleRO participants value the external facilitation and the collaboration with colleagues. Therefore, CAleRO participants are likely to want to use CAleRO each time they (re)design their programmes and modules. This is one aspect of what Armellini and Aiyegbayo (2010, p.924),

Salmon and Wright (2014, p.55) and Salmon, Jones and Armellini (2008, p.100) meant when they referred to *Carpe Diem* as being unlike traditional staff development process. Whereas traditional staff development workshops are aimed at developing a specific set of skills and enabling staff to complete a specified task without support, CAleRO is a workshop that many staff will want to come back to time and again.

There is also clear value in giving institutional support for staff to take time out of their schedule to undertake CAleROs, particularly, but not exclusively, for the design of new modules and programmes. In terms of facilitation, the evidence supports the idea that facilitators should not deliver CAleROs in their own subject area, and also that strong and flexible facilitation, properly negotiated goals, along with adjustment and tailoring of the workshop itself, is vital to the success or failure of CAleRO.

Authors

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Research ethics

Ethical approval for this project was granted by the Library and Learning Services Research Ethics Committee at the University of Northampton.

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Appendix 2: Factor array

Q sort statements and factor array for perspectives 1, 2 and 3. Note that in this and in the following tables, perspective 4 is the inverse of perspective 1.

No.	Statement	Perspective		
		1	2	3
1	As a result of the CAleRO I am now using technology more effectively to support learning.	0	-1	-2
2	As a result of the CAleRO, I have changed the way I teach.	1	-1	0
3	The CAleRO enabled me to make changes to my course/module that I otherwise would not have made.	2	0	3
4	The CAleRO supported me to develop skills that have been useful in designing other courses/modules.	3	1	1
5	Students were positive about the changes made to the course/module as a result of the CAleRO.	1	0	0
6	My CAleRO seemed to be excessively focused on technology rather than teaching.	3	-3	-4
7	CAleRO provided me with opportunities to try out new things with technology.	2	-4	-1
8	CAleRO encouraged me to reflect on and re-examine the way that I teach.	5	0	2
9	CAleRO has helped me to think about teaching in terms of the activities students do in order to learn, rather than in terms of the content I should deliver.	4	5	1
10	CAleRO helped me to align my learning outcomes with my teaching activities and my assessments.	3	3	5
11	Implementing the plans I had made in the CAleRO was more difficult than I had expected.	-2	1	-2
12	To implement the plans developed during CAleRO, I had to challenge the accepted practices and norms of my department/faculty.	0	-2	-1
13	CAleRO generated a lot of additional work for me to refine and implement the changes I had planned in the session.	0	1	-1
14	I had enough help after the CAleRO to implement the changes I wanted to make.	-1	-2	1
15	I had enough time after the CAleRO to implement the changes I wanted to make.	-1	-1	0
16	Creating the storyboard was very useful for visualising how the module fitted together from the student perspective.	2	2	3
17	I engaged in CAleRO because I had a course/module (re)validation coming up.	-3	1	2
18	I engaged in CAleRO because I was told I had to.	-5	0	0
19	I engaged in CAleRO because I needed to improve my module in response to the views of students and/or other stakeholders.	0	0	-1
20	My CAleRO was not an efficient use of time, I could have done what we did in the CAleRO in less time on my own.	-4	0	-5

21	After doing the CAleRO, I understood why it needed so much time to do all the stages properly.	1	-1	0
22	Booking a CAleRO allowed me to block out dedicated time for course/module design, that I would otherwise have struggled to find.	2	2	4
23	I found it easy to take the time to do the CAleRO.	-2	-2	-1
24	I think my CAleRO would have been a better use of time if more preparatory work had been done before we got into the room.	-1	2	-2
25	I was not able to design the best course/module that I could, due to requirements for validation/approval at the University.	-2	-2	-2
26	I was not able to design the best course/module that I could, due to University requirements for delivery at partner institutions.	-2	-1	-4
27	My line manager was supportive of my taking part in CAleRO.	0	2	1
28	I was able to get all of the academic staff who needed to be at the CAleRO to participate.	-1	-4	-1
29	The course/module design I produced in the CAleRO benefited from the collaborative input of colleagues.	1	4	4
30	It was important that the teaching team were supported by professional services staff in the CAleRO.	1	3	2
31	The CAleRO facilitator needs to be someone from outside the teaching team.	0	2	2
32	The CAleRO facilitator needs to be a specialist in my subject.	-2	-5	-3
33	The CAleRO facilitator needs to be flexible and responsive, and adapt the process rather than following it rigidly.	1	3	1
34	The CAleRO facilitator needs to have a good knowledge of teaching and learning.	2	4	2
35	In a CAleRO, it's important to keep moving and complete all the stages, rather than spending too much time on one part of the design.	-1	1	0
36	I would recommend CAleRO to others.	4	1	1
37	The CAleRO would have been better if some of it was carried out online, rather than all face to face.	-4	-3	-3
38	Students' views strongly influenced the design produced in the CAleRO.	0	-3	0
39	I want to be able to do CAleRO a bit at a time, rather than doing all the stages in one go.	-1	-2	-3
40	CAleRO was 'hands on' and helped me to create things that were of practical benefit to my teaching.	3	-1	3
41	I didn't feel I had enough ownership and control over what I produced during CAleRO.	-3	0	-2

Appendix 3: Distinguishing statements for perspective 1

No.	+/-	Statement	Perspective		
			1	2	3
8	+	CAleRO encouraged me to reflect on and re-examine the way that I teach.	5*	0	2
36	+	I would recommend CAleRO to others.	4*	1	1
7	+	CAleRO provided me with opportunities to try out new things with technology.	2*	-4	-1
2	+	As a result of the CAleRO, I have changed the way I teach.	1	-1	0
29	+	The course/module design I produced in the CAleRO benefited from the collaborative input of colleagues.	1*	4	4
1	+	As a result of the CAleRO I am now using technology more effectively to support learning.	0	-1	-2
31	+	The CAleRO facilitator needs to be someone from outside the teaching team.	0*	2	2
24	/	I think my CAleRO would have been a better use of time if more preparatory work had been done before we got into the room.	-1	2	-2
17	-	I engaged in CAleRO because I had a course/module (re)validation coming up.	-3*	1	2
18	-	I engaged in CAleRO because I was told I had to.	-5*	0	0

Distinguishing statements for perspective 1 ($P < .05$; Asterisk () indicates significance at $P < .01$)*

+/- refers to responses in pre-Q sort phase: + = agree; / = neutral; - = disagree.

Appendix 4: Distinguishing statements for perspective 2

No.	+/-	Statement	Perspective		
			1	2	3
34	+	The CAleRO facilitator needs to have a good knowledge of teaching and learning.	2	3	2
33	+	The CAleRO facilitator needs to be flexible and responsive, and adapt the process rather than following it rigidly.	1	3*	1
24	+	I think my CAleRO would have been a better use of time if more preparatory work had been done before we got into the room.	-1	2*	-2
11	+	Implementing the plans I had made in the CAleRO was more difficult than I had expected.	-2	1*	-2
8	+	CAleRO encouraged me to reflect on and re-examine the way that I teach.	5	0	2
3	/	The CAleRO enabled me to make changes to my course/module that I otherwise would not have made.	2	0	3

20	/	My CAleRO was not an efficient use of time, I could have done what we did in the CAleRO in less time on my own.	-4	0*	-5
41	/	I didn't feel I had enough ownership and control over what I produced in the CAleRO.	-3	0*	-2
40	/	CAleRO was 'hands on' and helped me to create things that were of practical benefit to my teaching.	3	-1*	3
12	/	To implement the plans developed during CAleRO, I had to challenge the accepted practices and norms of my department/faculty.	0	-2*	-1
38	-	Students' views strongly influenced the design produced in the CAleRO.	0	-3*	0
7	-	CAleRO provided me with opportunities to try out new things with technology.	2	-4	-1
28	-	I was able to get all of the academic staff who needed to be at the CAleRO to participate.	-1	-4*	-1
32	-	The CAleRO facilitator needs to be a specialist in my subject.	-2	-5*	-3

Distinguishing statements for perspective 2 (P < .05; Asterisk () indicates significance at P < .01)*

+/- refers to responses in pre-Q sort phase: + = agree; / = neutral; - = disagree.

Appendix 5: Distinguishing statements for perspective 3

No	+/-	Statement	Perspective		
			1	2	3
10	+	CAleRO helped me to align my learning outcomes with my teaching activities and my assessments.	3	3	5*
22	+	Booking a CAleRO allowed me to block out dedicated time for course/module design, that I would otherwise have struggled to find.	2	2	4
8	+	CAleRO encouraged me to reflect on and re-examine the way that I teach.	5	0	2
9	+	CAleRO has helped me to think about teaching in terms of the activities students do in order to learn, rather than in terms of the content I should deliver.	4	5	1*
14	+	I had enough help after the CAleRO to implement the changes I wanted to make.	-1	-2	1
7	/	CAleRO provided me with opportunities to try out new things with technology.	2	-4	-1
13	/	CAleRO generated a lot of additional work for me to refine and implement the changes I had planned in the session.	0	1	-1*
24	-	I think my CAleRO would have been a better use of time if more preparatory work had been done before we got into the room.	-1	2	-2
26	-	I was not able to design the best course/module that I could, due to University requirements for delivery at partner institutions.	-2	-1	-4*

Distinguishing statements for perspective 3 (P < .05; Asterisk () indicates significance at P < .01)*

+/- refers to responses in pre-Q sort phase: + = agree; / = neutral; - = disagree.

