Blended learning in ELIS's professional learning programmes: Does it work?

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Abstract

This is a report of a study on the effectiveness of the blended learning approach adopted in the professional learning programmes (PLPs) offered to teachers by the English Language Institute of Singapore (ELIS). After seven years of using blended learning in our professional learning programmes, it was timely to evaluate its benefits and to identify any challenges to our teachers' collaborative learning so that our model of blended learning could be improved to serve teachers even better in the years to come. From an analysis of the data collected from both teacher participants and facilitators of our PLPs, participants perceived clear benefits from the skilful facilitation and direction of learning experiences. What was clearly challenging to them was the demands of online tasks. Such findings would be useful to inform the PLP review process so that the benefits of blended learning can be fully realised.

Introduction

In his speech at the launch of the English Language Institute of Singapore (ELIS) in 2011, the late Mr Lee Kuan Yew called on all teachers who taught in the English language to be "the standard-bearers of the language… to encourage, stimulate and challenge students to be excellent communicators in English, able to hold their own at home and abroad" (Ministry of Education, 2011). To achieve this vision, ELIS has been providing inservice professional development services to EL and EL-medium teachers under the Ministry of Education (MOE) for the last seven years. In particular, Master Teachers of ELIS have played a key role in facilitating professional learning programmes (PLPs) to build the pedagogical competence of EL teachers. From the outset, a blended learning approach was used for the professional development of our teachers as they were well-poised to use information and communication technologies (ICT) in their own professional learning, having received ICT training and support from MOE since the launch of the Masterplan for IT in Education in 1997. The form of blended learning was intended to integrate "the best features of online and face-to-face education" (Garrison, 2011, p. 3). The blended PLPs also dovetailed well with the use of other ELIS social networking tools such as the Ning website, Facebook and Twitter in order to realise ELIS's strategy of building a vibrant online learning community. This community of EL teachers was expected to benefit professionally from the power of ICT to, first and foremost, facilitate collaborative learning for the co-construction of knowledge and building of reflective practice. Teachers could also gain easy access to a rich pool of digital resources and expert advice, especially from the Master Teachers. The technological affordance of ICT to enable anytime, anywhere access was envisioned to become a boon for busy teachers. By experiencing blended learning in their own professional development, teachers would, in turn, be more motivated to use blended learning with their own students. This presented a compelling reason for ELIS to provide a positive blended learning experience for the EL teachers. In the past

seven years, each PLP has been systematically reviewed to ensure its quality. However, there has not been a study across all the PLPs to investigate, in particular, the effectiveness of the blended learning approach. As such, this investigation sought to answer specifically the following research question:

What are the benefits and challenges of the blended learning used by ELIS for the professional learning of EL teachers?

Literature Review

Blended learning takes place whenever between 30 to 79% of the learning content of a course is delivered online, according to a report on blended learning in the USA (Allen, Seaman, & Garrett, 2007). The same report also describes how such online learning can be delivered through a wide range of activities such as forum discussions, video lectures, simulations, and readings. Beyond the quantity of learning content and the nature of online activities, it has been argued that blended learning should place emphasis on "the thoughtful integration of classroom face-to-face learning experiences with online learning experiences" (Garrison & Kanuka, 2004, p. 96). In the same paper, specific reference is made to the effective integration of the "strengths of synchronous (face-to-face) and asynchronous (text-based Internet) learning activities" (p. 96) to transform the learning experience. This highlights the importance of the quality of the blend between the two modes of delivery so that the overall learning experience becomes superior to either a traditional face-to-face or a fully e-learning course.

Compared to face-to-face instruction, the use of the blended mode has been found to be more effective in a meta-analysis of the empirical literature (Means, Toyama, Murphy, & Baki, 2013). Blended learning has also been found to be beneficial in teacher professional development programmes by "providing teachers with an opportunity for learning on the job and collaborating with other teachers" (Owston, Wideman, Murphy, & Lupshenyuk, 2008, p. 201). In this way, it is also considered especially effective in building a "community of inquiry" that engenders inquiry through "free and open dialogue, critical debate, negotiation and agreement" (Garrison & Kanuka, 2004, p. 97). Central to the community of inquiry (CoI) framework are three elements which contribute to a deep and collaborative learning experience: social, cognitive, and teaching presence. The interaction between the three elements is shown in Figure 1.
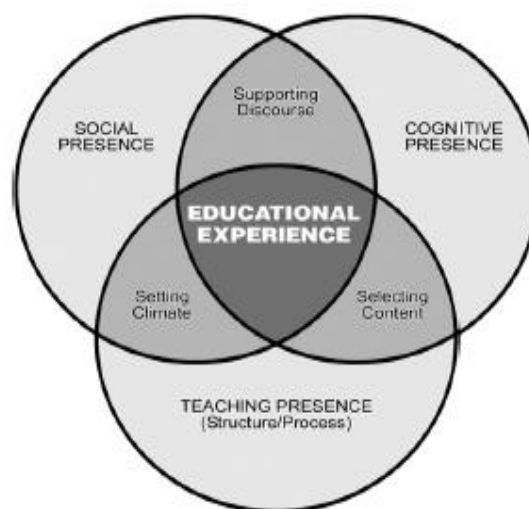

Figure 1: Community of Inquiry (Garrison & Kanuka, 2004)

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Social presence is "the ability of participants to identify with a group, communicate purposefully in a trusting environment, and develop personal and affective relationships" (Garrison, 2011, p. 23). When there is high social presence, participants of discussions display their emotions in a risk-free learning climate and have a strong sense of group identity and collaboration. In an online environment, building social presence can be especially challenging where the communication is solely written, and thus without non-verbal cues. Nonetheless, "establishing social presence is a primary concern at the outset of creating a community of inquiry" (Garrison & Vaughan, 2008, p. 21) granted that a CoI can only be sustained through the other two elements, cognitive and teaching presence. Cognitive presence is "the extent to which learners are able to construct and confirm meaning through sustained reflection and discourse" (Garrison, Anderson, & Archer, 2001, p. 5). Accordingly, high cognitive presence is apparent when online participants work together to: first, identify an issue or problem; second, explore the issue while gathering relevant information; third, make sense of the information; and finally, propose and refine a solution (Garrison & Vaughan, 2008). The third CoI element, teaching presence is defined as "the design, facilitation and direction of cognitive and social processes for the purpose of realising personally meaningful and educationally worthwhile learning outcomes" (Anderson, Rourke, Garrison, & Archer, 2001, p. 5). High teaching presence is demonstrated when there is a clear instructional design and organisation, skilful facilitation of the learners' discourse to help shape constructive exchange and the expertise to focus and resolve issues within the CoI. Of the three elements, teaching presence is considered the most critical and challenging as it "brings all the elements of a community of inquiry together in a balanced and functional relationship" (Garrison, 2011, p. 25). In the case of ELIS's PLPs, this presence would be enacted by the Master Teachers as they manage the blended learning environment and facilitate the learning experiences of the EL teachers to engage them in a critical and reflective inquiry into their professional learning and practice.

Methodology

A mixed methods approach was used in this study with data collected from not just teacher participants of our PLPs, but also from facilitators of the PLPs, in particular the Master Teachers. Including the perceptions of facilitators themselves was intended to triangulate the findings. Quantitative data was collected solely through a CoI survey of Likert items. This survey, adapted from the CoI survey instrument found in the CoI website at https://coi.athabascau.ca/ (Garrison, 2007), has 25 Likert items on a four-point scale indicating degrees of agreement (see **Appendix A**). A total of 190 teacher participants and 16 PLP facilitators were administered the CoI surveys in the middle of the year when the bulk of the PLPs were completed. Positive survey responses ('Agree' and 'Strongly Agree') to each Likert item were taken as an indication of blended learning having benefited the participant while negative responses ('Disagree' and 'Strongly Disagree') were considered as challenges to the use of blended learning.

Qualitative data was collected through two methods: first, a document analysis of PLP Feedback Forms completed by teacher participants between 2011 and 2016, and, second, an email interview with PLP facilitators to elicit from them the benefits, challenges and suggested solutions to our use of blended learning. In each PLP Feedback Form (See **Appendix B** for a sample), we found that teacher participants had occasionally written comments pertaining to blended learning in the second section of four optional open-ended items over the six years. This source of data was invaluable as participants would normally not respond to the open-ended items in the PLP Feedback Form unless they felt strongly about certain aspects of the PLP. In our document analysis, a total of 191 comments pertaining to blended learning were extracted for analysis from 90 PLPs and coded according to the CoI framework for the perceived benefits of and challenges to the teaching, social and cognitive presences. From the 191 comments, 193 codes were ascribed

as a few comments contained more than one CoI element. For the email interview sent to 15 facilitators, nine facilitators responded with written responses to three key questions:

1. How helpful has blended learning been for the professional learning of teacher participants in your PLPs? Include reasons for your view.
2. What challenges did you experience as a designer, developer and facilitator of your PLPs, especially of the online learning modules?
3. What solutions would you suggest for the challenges that you have mentioned?

The same CoI coding system used in the document analysis was also used in the analysis of the facilitators' email responses.

Results

Based on 190 survey returns from teacher participants of 16 PLPs this year, the data suggested that most participants felt that ELIS's blended learning approach had generally benefited them, with the total positive responses of all three CoI elements at 90% as shown in Figure 2 below. Of the three elements, teaching presence (TP) was considered most beneficial as it was 15 times more positively rated than negatively, compared to seven times for social presence (SP) and six times for cognitive presence (CP). This meant that the participants had felt that the "design, facilitation and direction of cognitive and social processes for the purpose of realizing personally meaningful and educationally worthwhile learning outcomes" (Anderson, Rourke, Garrison, & Archer, 2001, p. 5) of TP had enhanced their professional learning experience. Of all the 25 survey items, the top three indicators, all related to TP, are as follows, in rank order:
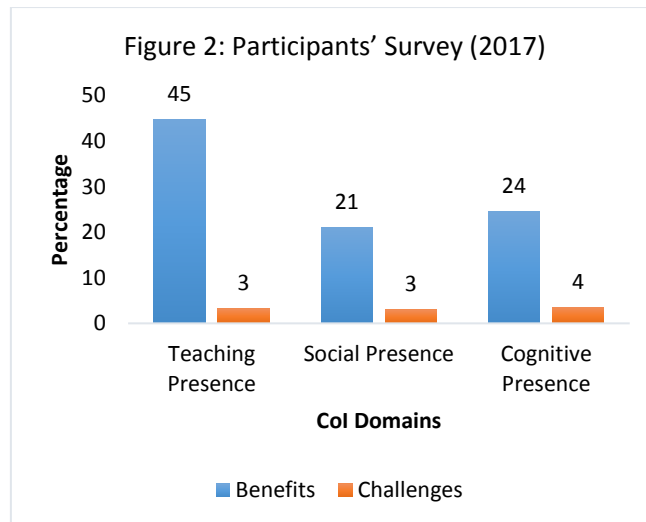
The facilitator

- …clearly communicated important due dates/time frames for the learning activities
- …provided clear instructions on how to participate in the learning activities
- …encouraged participants to explore new concepts in the course

This revealed that participants highly valued clear instructions and 'direction' especially for online tasks. For the bottom three indicators, participants' responses showed that they needed more help in the CP problem-solving processes during online discussions as expressed in the following:
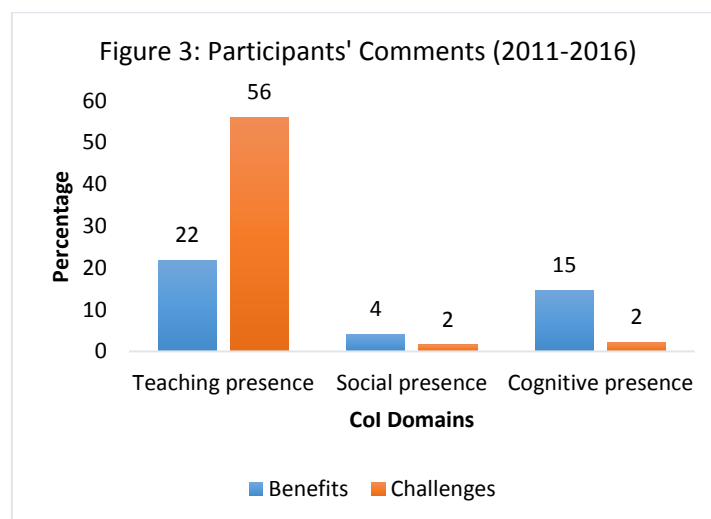
Online learning activities and discussions

- …helped me to construct explanations/solutions
- …helped me to resolve issues in this area of EL teaching

Figure 2: Participants' Survey (2017)

CoI Domains	Benefits	Challenges
Teaching Presence	45	3
Social Presence	21	3
Cognitive Presence	24	4

In contrast, qualitative data from the previous six years, showed that earlier participants' main source of unhappiness had been with TP as shown in Figure 3 below. Of the TP challenges which made up 56% of a total of 193 codes, most participants had highlighted problems to do with the task demands as seen in the following comments:

- Online module and readings were too intensive and the tasks too stressful for teachers dealing with heavy workloads especially in Term 3
- Too much work for online module

The reason for the apparent discrepancy between the quantitative and qualitative data was most probably due to the fact that in the quantitative survey instrument, there were no Likert items related to task demands, i.e. the scope and difficulty of the online tasks.

Figure 3: Participants' Comments (2011-2016)

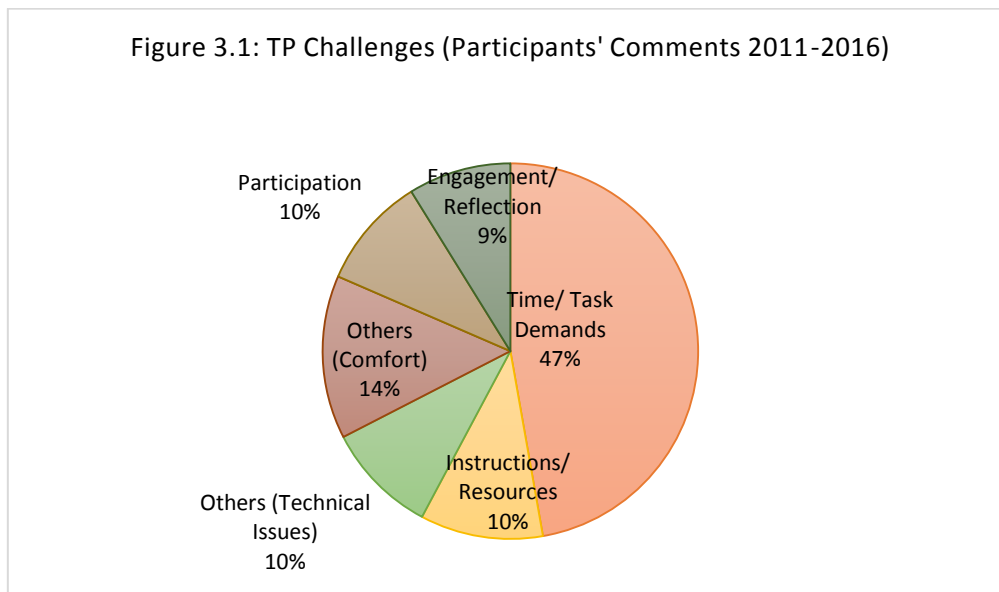| CoI Domains	Benefits	Challenges
Teaching presence	22	56
Social presence	4	2
Cognitive presence	15	2

Further analysis of the TP challenges in this set of data surfaced six types of challenges which could be grouped into three categories, namely:

1. Design-related challenges: (i) Time/task demands & (ii) Instructions/ resources
2. Facilitation-related challenges: (i) Participation & (ii) Engagement/reflection
3. Others: (i) Personal comfort & (ii) Technical issues

Figure 3.1 below shows the distribution of the types of TP challenges delineated from the '56%'

column in Figure 3. In the design-related challenges which comprise the largest segments, the main bulk (47%) pertained to the time and task demands in particular of online tasks. Comments that indicated discomfort with online learning included the following:

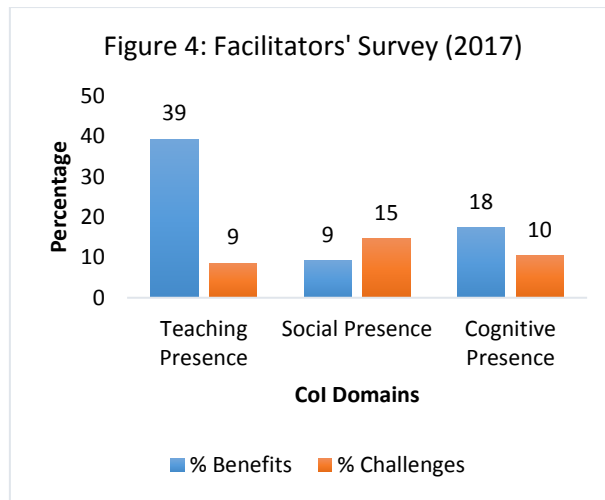- I prefer to learn through face-to-face interaction
- Remove online component

Figure 3.1: TP Challenges (Participants' Comments 2011-2016)

- Participation 10%
- Engagement/ Reflection 9%
- Time/ Task Demands 47%
- Others (Comfort) 14%
- Others (Technical Issues) 10%
- Instructions/ Resources 10%

Nonethess, when comparing the benefits across the three presences according to the participants' comments in Figure 3, of the total benefits of 41%, the highest was again TP at 22%. Examples of such TP comments are as follows:

- Learner-centred, good variety of activities including online learning
- I like the suggested readings and online modules

This suggests that, by themselves, SP and CP, comprising 23% of all the open-ended comments, were not so important to participants of our blended PLPs as TP. This mirrored the distribution in the survey data. Comments on CP benefits which made up the third highest column at 15% included the following:

- There's exchange of ideas online which allows participants to provide information, thoughts and ideas at their own pace
- The sharing by different schools provided insight into the topics discussed

In comparison to participants' survey feedback in Figure 2, survey feedback from the 16 facilitators in Figure 4 showed some similarities and differences. Facilitators had also perceived that teacher participants felt the most benefits in the TP domain. However, challenges in all three presences figured more prominently at 34%. This is much more than the 10% of challenges indicated by the participants. Furthermore, there was an unprecedented occurrence of perceived challenges outweighing benefits for SP. One explanation for the sample group differences could be the sample size where there were only 16 facilitators compared to the 190 participant survey samples. Another reason could be that facilitators had been harsher on themselves as facilitators.

Figure 4: Facilitators' Survey (2017)

CoI Domains	% Benefits	% Challenges
Teaching Presence	39	9
Social Presence	9	15
Cognitive Presence	18	10

From the nine facilitators' responses to the email interview, an analysis of their comments yielded 34 CoI codes as shown in Figure 5 below. The analysis showed nearly twice as many TP challenges as there were benefits. This discrepancy between the quantitative and qualitative data is, again, most likely due to the absence of indicators of task demands in the survey instrument. Nonetheless, as far as qualitative comments are concerned, the distribution of the columns for all three presences was similar to that of the participants' comments in Figure 3, despite the difference in sample size.

Figure 5: Facilitators' Comments (2017)

CoI domains	Benefits	Challenges
Teaching presence	21	41
Social presence	15	6
Cognitive presence	12	6
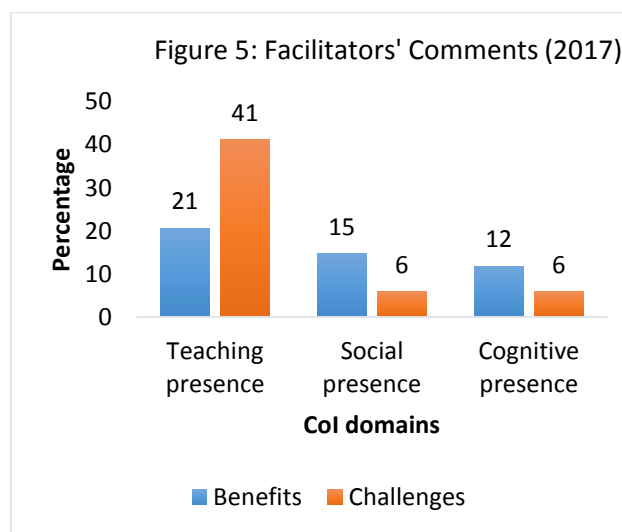
Further analysis of the types of TP challenges is shown in the following pie chart in Figure 5.1. The distribution of TP challenges identified by the facilitators were very similar to those by participants. A total of 79% of the challenges involved the time taken to design online learning tasks (43%) and to monitor task performance (36%) through facilitation and reminders. This mirrors the pie chart distribution of the participants' TP challenges with the figure standing at 76% (excluding the types under 'Others' categories) as shown in Figure 3.1.

Figure 5.1: TP Challenges (Facilitators' Comments 2017)

Monitoring Task Performance 36%

Designing Online Learning 43%

Others (Technical Issues) 21%
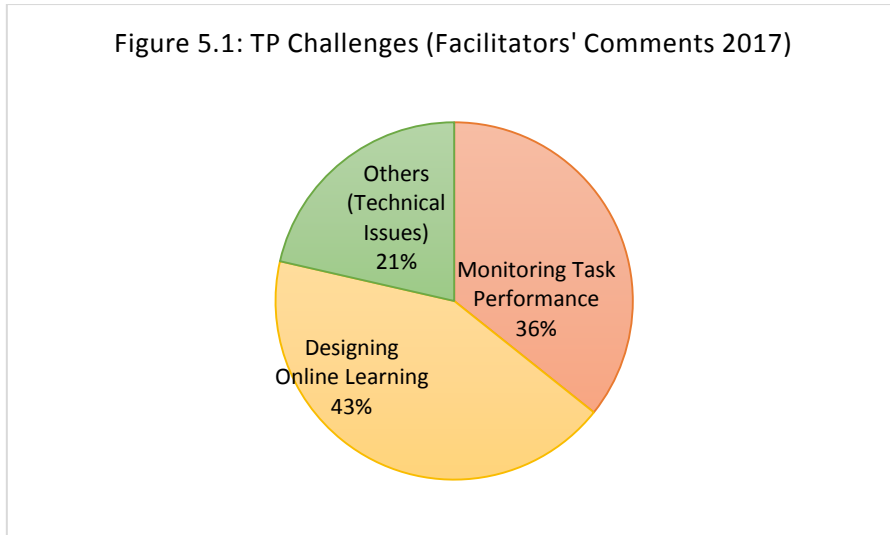
Discussion

Both quantitative and qualitative data showed that, of the three CoI elements, the TP which encompassed the "design, facilitation and direction of cognitive and social processes for the purpose of realizing personally meaningful and educationally worthwhile learning outcomes" (Anderson, Rourke, Garrison, & Archer, 2001, p. 5) was more important to participants compared to the SP and CP of blended learning. This perception was also shared by the PLP facilitators. However, as far as the benefits of TP in our PLPs were concerned, the quantitative and qualitative data showed contradictory results. This was probably due to a prominent TP 'challenge' from the open-ended comments which was not included in the 25 closed-ended survey items. This meant that the survey tool did not consider this specific aspect of participants' blended learning experience, i.e. the task demands of online activities, hence limiting the attempt to triangulate the two sets of data. Despite this discrepancy, the qualitative findings could be seen as complementing the quantitative data in that the participants perceived many benefits, in particular in terms of the clear direction and skilful facilitation of the PLPs except for the design of online tasks which were deemed too onerous.

The main limitation of this inquiry is that the quantitative and qualitative data collection tools did not collect data that could provide opportunities for as much comparative analysis as possible granted that each type of tool had its own strength, that is, quantity in surveys, and quality and depth in document analysis. Nonetheless, any future studies in this area would be well-advised to ensure that the tools were designed to yield data that measured the same things, hence providing good comparisons.

Conclusion

In conclusion, the findings of this study will be helpful to inform the PLP review process that ELIS undertakes on a regular basis. While the strengths of effective facilitation and clear direction should prevail, there should now be emphasis on more thoughtful design of professional learning especially in the planning of online tasks so that teacher participants will not feel overwhelmed by the quantity and complexity. This underscores the fact that the design of a blended learning experience is not merely a digitization of face-to-face learning. It has to involve the thoughtful design of learning that will facilitate thinking and reflection to achieve the intended learning outcomes that is most critical in creating a positive blended learning experience for EL teachers.

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Appendix A

ELiS **Professional Learning Programme**

SURVEY OF ONLINE LEARNING EXPERIENCE FOR FACILITATORS

Note to Course Facilitator
Dear Facilitator, We are aiming to improve teachers' learning experience through the way we blend our face-to-face sessions with online learning. Your responses to this survey would help us in that direction. Thank you.

Check against each statement to indicate your response.
Key: SD = strongly disagree, D = disagree, A = agree, SA = strongly agree

	Statement	SD	D	A	SA
	During online learning, I have…				
1	made clear links to the learning goals and objectives of the professional learning programme.	○	○	○	○
2	provided clear instructions to the participants on how to participate in the learning activities.	○	○	○	○
3	clearly communicated important due dates/time frames for the learning activities.	○	○	○	○
4	identified areas of agreement and disagreement in online discussions that helped participants to learn.	○	○	○	○
5	guided the online discussions in a way that helped participants clarify their thinking.	○	○	○	○
6	kept participants engaged and participating in productive dialogue.	○	○	○	○
7	kept participants on task in a way that helped their learning.	○	○	○	○
8	encouraged participants to explore new concepts in this course.	○	○	○	○
9	reinforced the development of a sense of community among participants.	○	○	○	○
10	focused the discussion on relevant issues in a way that helped their learning	○	○	○	○
11	provided feedback that helped participants understand their strengths and weaknesses.	○	○	○	○
12	provided feedback in a timely fashion.	○	○	○	○

Check against each statement to indicate your response.
Key: SD = strongly disagree, D = disagree, A = agree, SA = strongly agree

	Statement	SD	D	A	SA
During online learning, I did feel that the participants…					
13	had a sense of belonging to the group.	O	O	O	O
14	were comfortable participating in the online discussions.	O	O	O	O
15	were comfortable interacting with other participants.	O	O	O	O
16	were comfortable disagreeing with other participants while still maintaining a sense of trust.	O	O	O	O
17	felt that their point of view was acknowledged by other participants.	O	O	O	O
18	felt that online discussions had helped them to develop a sense of collaboration.	O	O	O	O
Online learning activities and discussions…					
19	increased participants' interest in this area of EL teaching through the problems or issues posed.	O	O	O	O
20	motivated participants to explore further this area of EL teaching.	O	O	O	O
21	helped participants to resolve issues in this area of EL teaching.	O	O	O	O
22	were valuable in helping participants to appreciate different perspectives.	O	O	O	O
23	helped participants to construct explanations/ solutions.	O	O	O	O
24	helped participants to reflect on the issues in this area of EL teaching.	O	O	O	O
25	can help participants to apply their learning to their work.	O	O	O	O

Appendix B

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PROFESSIONAL LEARNING PROGRAMME (PLP) FEEDBACK FORM

Title of PLP:
Dates: [indicate start and end date]
Venue:
Facilitator:

Your feedback will assist us in the future planning of our PLPs.
Please SHADE the appropriate circle.

	Overall Comments on the Professional Learning Programme (PLP)	Strongly Agree	Agree	Disagree	Strongly Disagree
1)	The PLP goals and objectives were achieved.	O	O	O	O
2)	The materials were relevant to the objectives.	O	O	O	O
3)	The PLP provided me with opportunities to be an active learner.	O	O	O	O
4)	The content met my learning needs.	O	O	O	O
5)	I am able to apply what I have learnt.	O	O	O	O
6)	I am satisfied with the overall quality of the PLP.	O	O	O	O
7)	I will recommend the PLP to others.	O	O	O	O
8)	Strengths of the PLP: _____ _____				
9)	Suggestions for PLP Improvement (in terms of objectives, content, materials, pace, duration ideas/skills learnt) _____ _____				
10)	The new knowledge/ skills I have acquired are: _____ _____				
11)	Are there any other areas of professional development in English Language teaching that you need? _____ _____				

Please turn over.

FEEDBACK FOR THE FACILITATOR(S)

Please SHADE the appropriate circle.

First Facilitator's Name:

		Strongly Agree	Agree	Disagree	Strongly Disagree
1)	There was good interaction between the participants and the facilitator.	◯	◯	◯	◯
2)	The facilitator was well prepared and organised.	◯	◯	◯	◯
3)	The facilitator has good knowledge of the PLP content.	◯	◯	◯	◯
4)	The facilitator's explanations were clear.	◯	◯	◯	◯
5)	The facilitator gave practical examples.	◯	◯	◯	◯
6)	The facilitator modelled pedagogical processes.	◯	◯	◯	◯
7)	The facilitator suggested useful resources.	◯	◯	◯	◯

(To be completed if there is more than one trainer.)

Second Facilitator's Name:

		Strongly Agree	Agree	Disagree	Strongly Disagree
1)	There was good interaction between the participants and the facilitator.	◯	◯	◯	◯
2)	The facilitator was well prepared and organised.	◯	◯	◯	◯
3)	The facilitator had good knowledge of the PLP content.	◯	◯	◯	◯
4)	The facilitator's explanations were clear.	◯	◯	◯	◯
5)	The facilitator gave practical examples.	◯	◯	◯	◯
6)	The facilitator's modelled pedagogical processes.	◯	◯	◯	◯
7)	The facilitator suggested useful resources.	◯	◯	◯	◯

I allow my comments to be quoted for the promotion of the PLP.   ☐ Yes   ☐ No

Name of participant: (optional) _____

School/Division: _____

Thank you for your invaluable feedback!