#OpenTeach

PROFESSIONAL DEVELOPMENT FOR
OPEN ONLINE EDUCATORS

An investigation of effective online teaching: a needs analysis of online educators and online students

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Introduction

This work arises from the [#Openteach: Professional Development for Open Online Educator](#)s project, which is funded by the National Forum for the Enhancement of Teaching and Learning in Higher Education. The #Openteach project team are based in the Open Education Unit (OEU) at Dublin City University (DCU). Formally known as the National Distance Education Centre and subsequently Oscail, the OEU is a provider of online, off-campus programmes through the DCU Connected platform. Throughout the years the mode of delivery moved gradually from that of a traditional distance education provider to incorporate more elements of online learning. A significant step in this process came in 2011, with the introduction of synchronous live online tutorials and the electronic delivery of modules in a virtual learning environment (Delaney & Farren, 2016; Farrell & Seery, 2019). Following an open and online learning philosophy, the OEU aims to afford educational opportunities to students who have not managed to access more traditional entry routes into higher education.

The main aim of the #Openteach project is to produce, and evaluate, evidence-based open professional development for part-time online educators. In an earlier phase of the project a synthesis of the relevant literature was completed in order to identify online educator roles and the associated competencies for effective online teaching. Concurrently, we conducted a needs analysis of the target population, online students and their online educators based in the OEU. This report contains the outcomes of this needs analysis and will be used, along with the literature synthesis, to guide the development of the professional development resources and course to be implemented in later stages of the project.

The OEU model of Online Teaching & Learning

DCU	• Administration, Technical and Academic supports • Student supports
OEU	• Module coordinator and/or programme chair • Administration, Technical and Academic supports
Tutor	• Group of students • Academic support and tutorials • Assignment and exam correction and feedback
Student	• Loop access • Tutor and module coordinator • Access to OEU and DCU supports
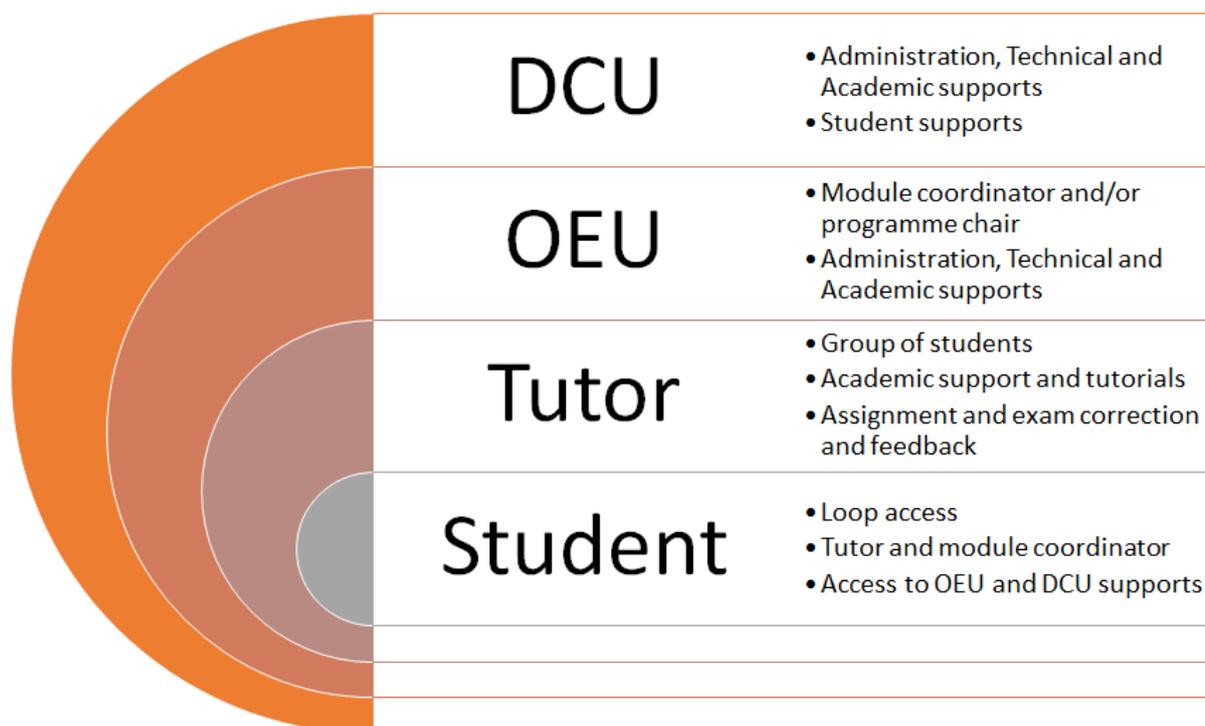
At the beginning of the academic year, students are provided with online access to self-study learning materials, resources, activities, the online classroom and discussion forums on their module page through the university virtual learning environment (VLE) called Loop. Throughout the academic year student supports are provided by a variety of personnel: online educator(s), the OEU programme team and the DCU student support teams. A number of targeted discussion forums and links to academic and university support are provided through the Loop modules. The discussion forums are also the key medium through which students communicate with their online educator, known as a tutor in the OEU, and fellow students. Each module has a number of live online/synchronous tutorials scheduled on weekday evenings, and which are recorded. These tutorials are activity-based sessions where tutors engage in limited direct instruction, use activities to explore concepts and ideas, and facilitate the discussion of the material students have been studying. Students are assessed through a combination of continuous assessment and terminal examination. Assessment types include essays, case studies, group work, contributions to online forums and discussions, multiple choice questionnaires, and learning journals. Students can use the live online tutorials, discussion forums and email to clarify assessment expectations and feedback with the tutors in addition to requesting support on the learning materials and other relevant aspects of the module.

Online Teaching Model in OEU
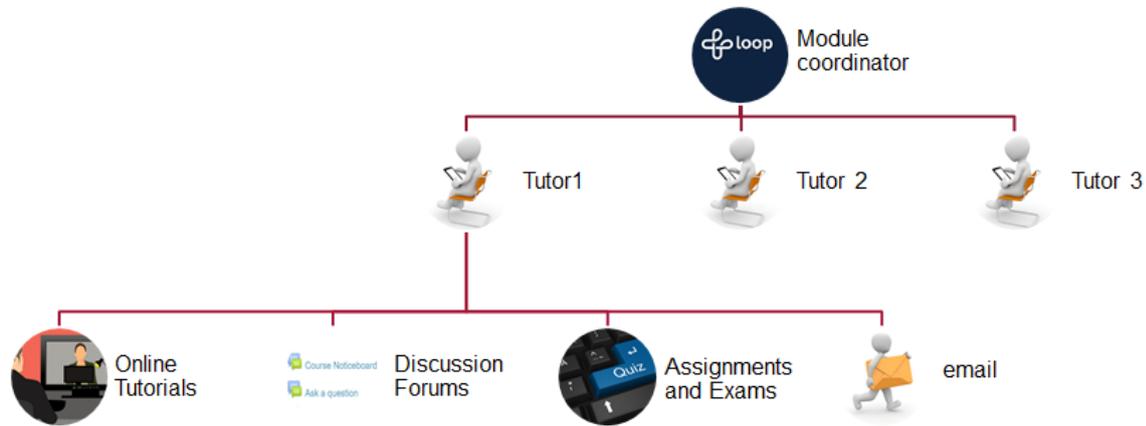
Each online programme in the OEU is assigned a programme chair and a number of module coordinators who are, in the main, academic staff within the OEU. These staff have responsibility for the development of the overall learning outcomes and the provision of the administration, technical and academic leadership and support for the programme and its associated modules. Tutors are generally employed on a part-time contract basis to provide academic support to the students. A tutor will typically be assigned to a limited group of students within a module, the number of students is dependent on the discipline. The tutor is responsible for responding to student queries within the discussion forums or by email, proactively engaging with students to promote learning through the discussion forums and through facilitating the synchronous online tutorials, correction of assignments and examinations, and the provision of feedback to students. In addition, the tutor may be required to give face to face tutorials or practicals depending on the discipline. Tutors, within the same module, are requested to coordinate activity and discuss teaching strategies with each other and with the module coordinator. Tutors are provided with access to all learning materials and are encouraged to create their own learning activities such as group discussion forums or breakout rooms within a live online classroom. Some of the tutors are involved in the creation of the learning materials and associated assessments in conjunction with the module coordinators.

Methodology

The study adopts a convergent parallel mixed methods design (Creswell, 2014) using qualitative and quantitative methods of inquiry. The study is framed by the following overarching research question: *what are the features of effective online teaching?*

Ethical approval for the study was granted by the Dublin City University Research Ethics Committee (REC Approval number: DCUREC/2019/072). Two data collection methods were adopted: online semi-structured focus groups; and anonymous online surveys.

Data was generated through online semi-structured focus groups with online teachers and separately with online students, conducted in real time online using a private adobe connect online classroom. Two focus group interview schedules were created, one for online students and another for online educators. The interview schedules contained questions about teaching online, student support, and professional development (see appendix 1).

Two anonymous online surveys were created for the study, one for online students and another for online educators. The surveys were adapted from an existing instrument (Campbell, Reedy, Baird, Baird, 2018). They include open-ended and five-point likert style scale questions about the features of effective online teaching (see appendix 2). The online surveys were created using Qualtrics and were administered through a recruitment email sent to students and staff using a generic email account.

Participants were selected based on purposive sampling. Permission for access to current online students and current online teaching staff and their email addresses has been granted by the relevant institutional gatekeeper. 55 online educators and 162 online students participated in the online survey. Three focus groups for online educators were conducted with a total of fifteen participants. Two focus groups for online students were conducted with a total of eight participants.

The quantitative data was analysed using a combination of Qualtrics and Microsoft Excel. The qualitative data were analysed using a data-led approach following Braun and Clarke's (2006) six phases of thematic analysis, which involved a number of cycles of coding, generating candidate themes, reviewing and refining themes, and assessing themes for internal homogeneity and external heterogeneity. During the analysis, the qualitative questionnaire dataset and focus group dataset were combined and analysed thematically using Nvivo 12. These themes are reported in the findings section below.

Findings

During the analysis process, the two questionnaire datasets and focus group datasets were combined and analysed thematically. The combined findings are presented thematically below, in two parts:

1. Student perspectives about teaching online
2. Educators perspectives about teaching online

Student perspectives about teaching online

This section presents the findings related to student perspectives about teaching online, first examining perceived features of effective online teaching and then perceived features of ineffective online teaching.

Effective online teaching

In the combined data set, student participants identified seven features of effective online teaching:

1. Educators that are responsive and approachable;
2. Engagement with assessment and feedback;
3. Clear communication;
4. Meaningful online interaction/community;
5. Engagement with discussion forums;
6. Active live online tutorials;
7. Peer support.

In their questionnaire responses, when asked to rate the features of effective online teaching on a likert scale, the features that students found *extremely effective* were (see figure 1 below):

- Active, online tutorials;
- Engagement with discussion forums;
- Educators that are responsive and approachable;
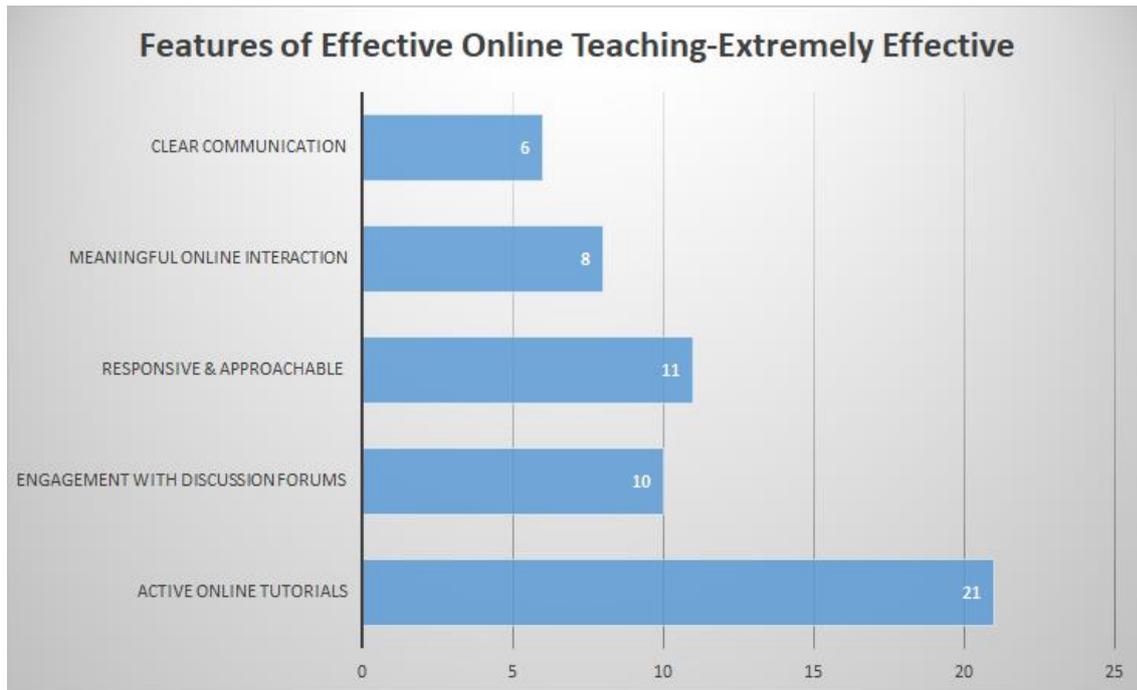- Interaction;
- Clear communication.

Figure 1. Features of effective online teaching rated extremely effective by student participants.

Active online tutorials

According to participants, effective teaching online, in the context of live online tutorials, should include a variety of teaching and learning approaches, should be well structured, and provide students with opportunities for asking questions and real time discussion. In addition, participants equated educators being competent and confident in the use of online classroom technology with effective online teaching.

The data indicated that a variety of online teaching and learning approaches were effective in the live online classroom context. Participants valued live online tutorials that had a range of structured active engagement approaches such as discussions, acquisition of content, powerpoint slides, video, diagrams and group work using breakout rooms.

> "I think tutors who have a dynamic class as someone mentioned earlier so there's a mixture of discussion and lecture and maybe picking out for a video or something like that as well as their ability to multitask and monitor that chat section to make sure that you know everyone is included and that they're answering questions."

One of the key perceived benefits of live online tutorials for student participants was the ability to ask questions and to clarify points in real time, in contrast with the waiting involved with asynchronous discussion forums.

> "I think that it's important to get a balance between the content and also group or class discussions during the tutorials. More students seemed to

engage in the live chat box during tutorials than on loop discussion boards, and it also allowed for live clarification or further explanation of concepts or ideas about the course content."

A key competence identified by participants for teaching live online tutorials effectively was that educators need to be competent and confident with the use of the online classroom technology.

"Quality online tutorials where tutors do not have broadband or pc interruptions"

Technological competence with online classrooms was described as including the ability to give students access to their microphones and web cameras during tutorials and educators active use of their own web cameras. In the data, participants reported that they wanted to participate fully in live online classes through the use of their microphone and webcam and did not want to be limited to text based communication using the chat box only.

"Yeah, so now that I think of that maybe it would be easier if people could see each other, yeah. At least you're not talking into a blankness and you can see people's faces, yeah. True. Probably would make a difference, yeah."

Engagement with discussion forums

A thematic focus for student participants related to the variety of uses of online discussion forums in their modules: to ask questions; to talk about assignments; to discuss topics; to share resources; and to get information. The social element of class discussion forums was reported by participants as contributing to the feeling of community in the group.

"forum interactions were also effective and encouraged group cohesiveness"

The prompting of discussion in the forums by educators was described as a feature of effective online teaching. A range of online educator discussion forum prompt types were reported in the data. There were prompts to encourage targeted student support.

"There's certain tutors that will ask you, like if we're going to have our next tutorial what are you struggling with? What do you want me to prioritise?"

There were also prompts used to provoke discussion of the module topics.

"Be proactive, not just from our side but also on the teacher side. Like put something up, put some interesting article or some facts or something on the discussion forum".

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Participants also described educator-led discussion forum prompts designed to encourage group interaction and peer to peer formative feedback.

> *"But I'm able to see what other people are putting up as their trial assignment and I'm learning from that. So, I find that fantastic. So, they're not forums but they're just sort of a central location where people are putting up their trial assignments. And you can see from what they're putting forward"*

Educators that are responsive & approachable

In the data, responsiveness was highlighted by students as a key feature of effective online teaching. Participants reported that educators who were responsive to their students' needs and prompt in their replies were highly valued. Educator responsiveness was described as a willingness to be helpful, available, supportive, approachable, and actively listening to student queries and concerns.

> *"This is one of the features that I think is so fantastic at DCU.The tutor is very efficient, approachable and available for questions, problems, clarifications etc."*

According to participants, educators that engaged proactively and communicated frequently with their class in online discussion forums were perceived as being more responsive. In their responses, participants valued educators who created a safe space where students feel comfortable and supported to ask questions.

> *"In the three modules I studied last year, I was satisfied with tutor - student interaction. Some tutors really nurtured and allowed for group interaction, encouraging a sense of belonging within the class. They also fostered an environment where questions and queries were welcomed"*

Meaningful online interaction

Meaningful online interactions with peers and online educators were articulated by participants as key to their successful engagement in their studies. Interactions with fellow students and online educators were reported to take place in discussion forums, at live online tutorials, during group work assignments, during collaborative activities and through informal peer-led Whatsapp groups. Interaction that was nurturing and encouraged a sense of belonging was valued by participants.

> *"In the three modules I studied last year, I was satisfied with tutor - student interaction. Some tutors really nurtured and allowed for group interaction, encouraging a sense of belonging within the class. They also fostered an environment where questions and queries were welcomed."*

Through these online interactions, participants described feeling part of the DCU community.

"And the loop actually. I'm not sure whether Loop counts for this because it's not necessarily teaching as such but I think the loop interface itself is a very solid place for a new student like me for instance to go to. I've been in courses before where you've had various moodle pages, etc. But this feels like a really online campus in that I know everything's in there. It might be difficult to find the odd bits and bobs but it's there and I think that is effective because it feels that when I'm in loop, I'm in my university."

Clear communication

A strong theme in the student participant data relating to the way in which communication is mediated by technology in the online context, with the majority of communication being written, creating a need for style, wording and tone to be carefully constructed and considered.

"the online world is an artificial one by its very nature. The absence of physical presence means that one has to be mindful of comments as they may be interpreted in a literal or alternative way rather than being a wry comment on a feature under examination!"

In the data, clear communication, as described by participants, was an important feature of effective online teaching. Clear online communication by educators involved active listening, clarity, regular contact and delivery of consistent and accurate information using unambiguous language.

"I think their style of communication obviously has to be clear, the language has to be clear, they have to be able to express themselves"

Engagement with assessment and feedback

Participants reported that a key aspect of effective online teaching, with regard to assessment, was the clear communication of assessment guidelines and expectations. With reference to feedback, student participants perceived that online educators should focus on quality, detailed personal and constructive feedback from online educators.

"Considering that students don't have much contact with tutors, feedback should be as extensive as possible. In some modules the tutors are very detailed in what they want in the assignments and this I very welcomed."

Peer support

In the student focus group data set a further theme of peer support emerged. The data indicated that participants placed a high value on the role of peer support during their online study journeys. The majority of peer interaction and support was reported as taking place in Whatsapp groups outside of the formal institutional structures of the Virtual Learning Environment (VLE) called Loop and did not involve the participation of online educators.

To me the WhatsApp group are kind of like going to the canteen after the lecture for coffee. That's what the students do and tutors don't go with them. I think the WhatsApp groups are important as well because also back to the thing about the people that [another student] was saying about some people being a little bit shy, not so confident, a bit reticent to speak up. They'll speak up much more on the WhatsApp group.

In the data, a distinction was made by participants who viewed Loop discussion forums as being for academic interaction and Whatsapp groups for social interaction. The immediate response from an informal social forum such as WhatsApp was viewed as more effective than a more delayed response through the formal discussion forum:

"I think when we talk about interactions with tutors, well discussion forums are great for academic related stuff obviously. Well like immediacy, well obviously I've to wait a few days or even hours if you're lucky but still you know, if it's answered correctly you get your answer, you get your doubt cleared. And it's not very, very effective for students' interactions though because they lack immediacy. So, if I want to share something that I'm feeling about, 'Guys, I'm feeling stuck, I don't know what to do now', whatever, you know and I need an immediate answer and I can talk with one of my fellow classmates and WhatsApp groups will be better I think".

Participants reported that class Whatapp groups were an important form of social support that enabled them to feel like a community:

"I think it's vital having made connections with people in my class through whatsapp where we can bounce ideas off one another, send links to helpful research papers and generally be a support to one another as we are all trying to complete our degrees in a manner which is relatively alone in comparison to the general college experience"

Ineffective online teaching

This section reports on the findings related to student participant perspectives on the features of ineffective online teaching. In the combined data set, student participants identified seven features of ineffective online teaching:

1. Passive online tutorials;
2. Isolation and lack of community;
3. Issues with assessment feedback;
4. A lack of online interaction;
5. Poor communication;
6. Problems with technology;
7. Unresponsive to students.

The ineffective features most reported by students were passive online tutorials, unresponsive to students and issues with assessment and feedback (see figure 2).
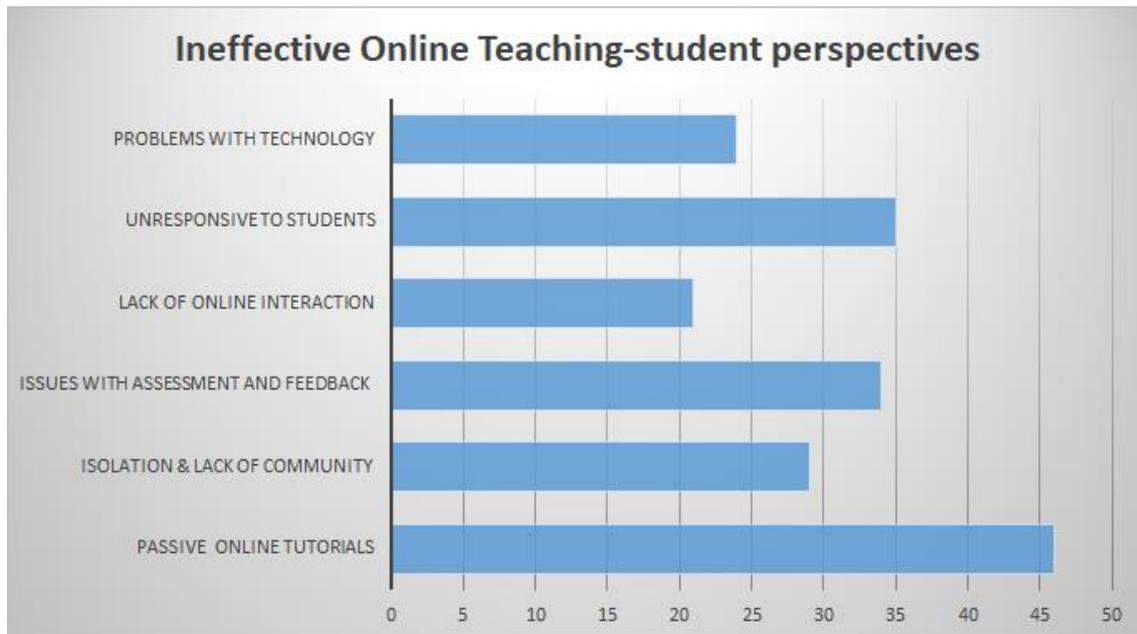
Figure 2. Features of ineffective online teaching identified by student participants.

In their questionnaire responses, when asked to rate the features of ineffective online teaching on a likert scale, the features that students found *extremely ineffective* were: isolation-lack of community; and unresponsive to student queries (see figure 3).
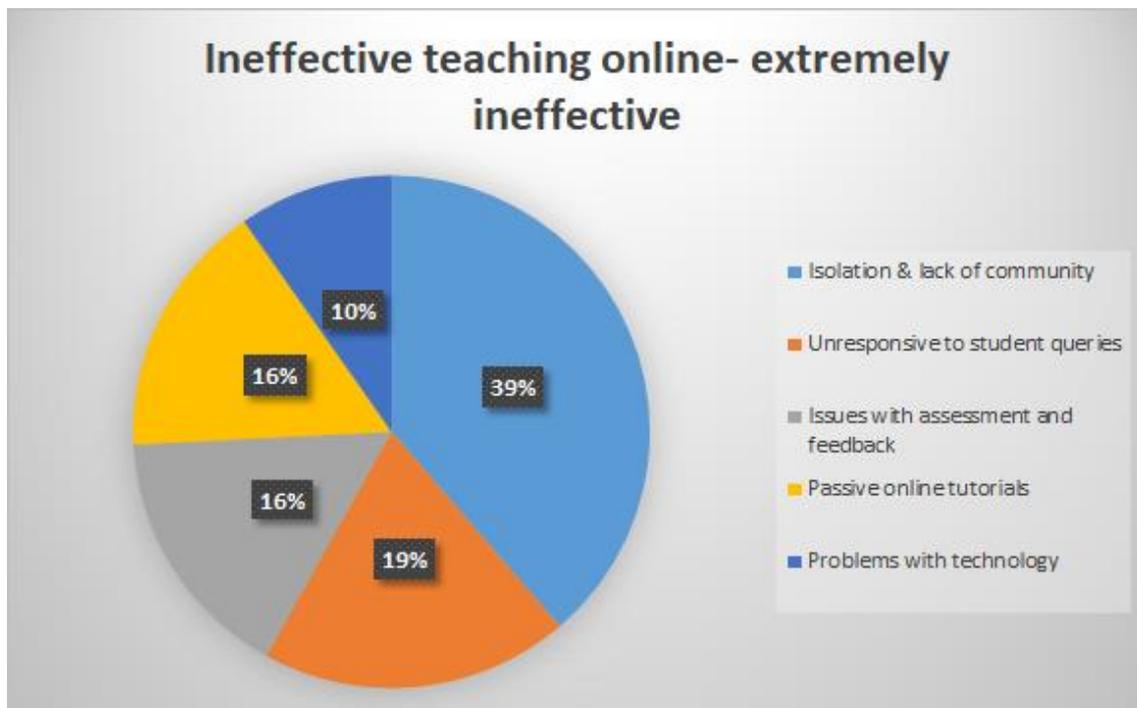

Figure 3. Features of ineffective online teaching rated extremely ineffective by student participants.

Passive online tutorials

Student participants' responses about ineffective online tutorials focused on three aspects of live online teaching: teaching approach, quality of interactions and student participation.

In this sub-theme, students reported that a transmission based teaching approach was sometimes prevalent in online tutorials they had experienced, and which they perceived as ineffective.

> *"Some tutors just read PowerPoint presentations for 2 hrs, this is very boring"*

Respondents highlighted poor quality of interaction in live online tutorials that they had experienced as a feature of ineffective online teaching, where they had no opportunity to contribute via microphone and participation via the chat box was the only means of engagement.

> *"Very limited interaction. Most tutorials use a closed microphone and rely on chat box only. This suggests that realtime open discussion is not central to learning the material."*

Data associated with this sub-theme indicated that students perceived an imbalance between content delivery and student participation in the more passive live online tutorials.

> *"poor balance between content and class discussion"*

> *"Delivery of content without student participation"*

Isolation and lack of community

Student participants who reported feeling a sense of isolation and/or an absence of community considered these to be features of ineffective online teaching. Participants described being isolated and disconnected from their peers and their tutors.

> *"a feeling of being all alone".*

In this data, the lack of time and opportunity to socialise with other online students was highlighted.

> *"No real social side to online learning"*

Building online social relationships mediated through technology was considered more challenging than in person.

> *"Hard to replace human/personal interaction"*

Issues with assessment feedback

An ineffective practice identified by student participants relating to assessment feedback centred around the quality and timing of feedback. In terms of feedback, ineffective practices were were considered to be feedback that was lacking in detail, of poor quality, repetitive and impersonal in nature.

> *"Overly repetitive feedback i.e. Same comment throughout feedback and not much else".*

Participants perceived that delays in the return of feedback by online educators to students was a feature of ineffective online teaching, as well as being a source of frustration.

> *"Delays in providing grades and feedback"*

> *"Duration of wait on results"*

Low levels of online interaction

Low levels of online interaction in discussion forums was considered to be a feature of ineffective online teaching by student participants. The data indicates that low levels of engagement and participation by students and/or educators in discussion forums engenders insufficient interaction and an underutilisation of forums. Participants reported that online educators should prompt interaction to encourage student participation in module discussion forums as well as correct misinformation when it aris in the forums.

> *"There is not quite enough interaction between both. Tutors often leave students to discuss among themselves on forum posts without then providing correct information which can cause confusion."*

Participants reported that students can be reluctant to interact online in discussion forums and live online tutorials as they can feel exposed, uncertain and fearful about communicating publically through these mediums. There was a perception that online educators should support/construct a safe environment for communication.

> *"I think the safe environment is really vital because we all. I know that I would worry if I posted some random thing that I began thinking. I would worry about how that might be perceived. Is it going to sound stupid? Is it going to sound unacademic? Is it going to sound… I think you get what I'm trying to say. There's a certain fear of asking the question. Especially if you don't feel that you're in your safe space because you don't want to feel like you're making a fool of yourself"*

Problems with technology

The data revealed that problems with technology in live online tutorials was perceived to have a negative impact on the online teaching and learning experience. Where online educators were perceived to lack the technical skills to effectively use online teaching tools such as Adobe Connect, this was perceived to negatively impact on the learning experience.

"Not knowing how to use technology"

"lacking familiarity with online presentation application"

General technical problems such as poor sound, poor picture, or unreliable internet connection were also reported by participants as impacting negatively on their online learning experience.

Unresponsive to students

In an important sub-theme, student participants articulated the perceived negative impact of an educator who was unresponsive to their students. Unresponsiveness was described by participants as an online educator who was slow to respond or did not respond to student support queries via email and in online discussion forums.

"In most instances time to respond to queries was slow, multiple days, even to simple queries and question structure. This made planning challenging in limited available time."

Further, the quality of the educator response to student support requests was highlighted by participants, with inadequate or unclear responses perceived as frustrating.

"we've had tutors that just didn't respond to your emails or were non-committal in their answers and wishy washy. I hated that."

Participants perceived the absence of a supportive environment where asking for help was encouraged to be indicative of an ineffective online environment.

"Often you get the impression you are annoying the tutor by asking questions"

Poor communication

Poor communication was also identified as a feature of ineffective online teaching. Online educators who gave what was perceived to be confusing and/or inconsistent advice, inaccurate information and who communicated unclear expectations were reported by student participants as having poor communication skills.

"Poor communication from staff"

"Bad communication with students"

"This cannot be faulted for some tutors but some respond up to a week later. Ideally the communication turnaround time should not be the gap here - there should be a way of ensuring the technology facilitates the conversation and gives the student a sense of 'connectedness'. "

Educator perspectives about teaching online

This section of the findings reports on educators' perspectives about teaching online. The section first presents the findings in relation to the features of effective online teaching, then considers the challenges of teaching online and finally professional development for online educators.

Features of effective online teaching

This section first presents the questionnaire data and then follows a combined approach reporting the findings thematically. From their questionnaire responses, the features of effective online teaching that educators found *extremely effective* were (see figure 4):

- Flexibility;
- Student engagement;
- Supportive online environment;
- Online feedback;
- Clear course structure.

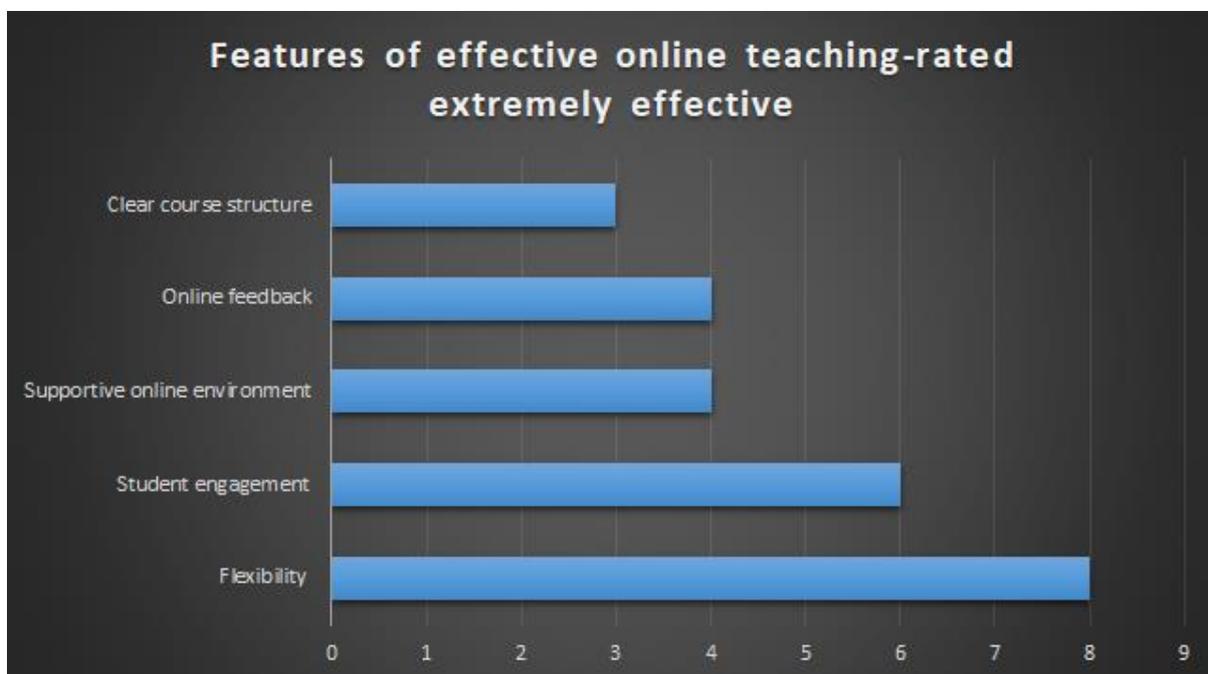Figure 4. Features of effective online teaching, rated extremely effective.

Five themes were constructed during the analytic process in relation to educators' perspectives about effective online teaching:

- Fostering a supportive online environment;
- Responsiveness;
- Facilitating discussion forums;
- Clear communication;
- Understanding online students;
- Encouraging interaction in live online tutorials.

These five themes are reported in greater detail below.

Fostering a supportive online environment

Educator participants emphasised the importance of fostering a supportive online environment as an effective online teaching practice. Creating a comfortable and open atmosphere where student questions, queries and opinions are welcomed was described by participants as crucial to effective online teaching.

> *"Try to create a supportive online community within the class, be present and active particularly when students request help or clarification on something."*

Educator participants reported on the key role that interpersonal skills such as being encouraging, caring, adaptive and having empathy for students needs have in creating a supportive online environment.

> *"Good communications skills, good emotional intelligence, and empathy for students"*

An effective online educator was described by these participants as being one who is inspirational and engaging by conveying their enthusiasm for the subject to students.

> "*Able to overcome the sterile environment of Cyberspace to bring the subject being taught to life."*

> *"Inspirational, encouraging students to participate through enthusiasm for subject. Invites student opinions. Gives confidence to students as active learners and researchers."*

Building rapport, creating a bond and personalising the learning experiences for students was highlighted by educator participants.

> *"try and be as personal as possible with the students but I don't mean you have a personal relationship but like, you know, to make sure you know their names, make sure you give the feedback you know with their names, work out the name so that they're not just, you know, kind of just some blank face behind a computer."*

> *"Build a rapport with each student"*

Educator participants reported that effective online teaching related to creating a cohesive online class community where students feel comfortable and supported promotes student to student interaction and educator to student interaction.

> *"Encourage an online community"*

Responsiveness

Being responsive to student support requests by email and in the module discussion forums, including proactively checking into the forums regularly, was reported by educator participants as a key online student support.

> *"I think communication is very important and using the forums and actually checking in online regularly and checking your emails to see if students have put any questions up there or put any comments up there"*

Some educator participants reported a perception that student expectations of responsiveness could be out of line with educators expectations.

> *"I think some of the students can be much more demanding. They have the sense that you're literally online 24/7"*

> *the presumption that you know, you literally are going to get back to an email at eleven o'clock at night or forum post at eleven o'clock at night and then there's kind of a bit of irritation if you don't.*

Facilitating discussion forums

Facilitating discussion forums was identified by educator participants as a feature of effective online teaching. Participants reported using discussion forums for a variety of purposes to: prompt discussion of the course content; communicate information; encourage student engagement; check student learning; discuss assignments; simply 'talk' to students; and provide support to students.

> *"I actually use them a lot. I use them quite a bit. I find them to be a very efficient and effective way of communicating with students. Particularly where people are asking questions. So, I encourage them very strongly to ask them through the forum and that way everybody gets the benefit of the response. So, I do, I use them quite a bit. I find them useful."*

> *"And not that I'm looking for an answer to the question I'm asking – my main goal and purpose has always been to just to try and talk to the students through the forum. Just to try and get some discussion going, trying to figure out who the Students are, what they're interested in"*

Clear communication

Clear communication in live online tutorials and module discussion forums was also emphasised as an effective online teaching practice by educator participants. They reported that language should be clear and unambiguous and that the information provided should be accurate.

"I think there's a need for a lot of precision I think with students where they're not present in a classroom where things can be discussed and clarified. So, setting assignments or things like that or asking them to do things, you can't really have much wooliness in that because if you do then there's a danger that they just go down the wrong road and there isn't an opportunity, an immediate opportunity to do any explanations etc."

Establishing expectations of communication approaches and appropriate online conduct with students was described as being important by educator participants.

"Establish clear norms in relation to acceptable channels of communication, be supportive and try to foster effective working relationships with the students."

Understanding online students

Having an awareness of the profile of online students was described as fundamental to effective online teaching by the educator participants. These participants reported that their students were a diverse group who are typically adults working full-time, balancing family commitments and may have had no previous access to higher education.

"ability to manage very diverse adult students levels of expectations/requirements and capacities and meet them at their level whilst encouraging them to stretch"

The educator participants perceived that their online students were capable and very committed to their education.

"I would just say that for the most part I would feel that these students are really, really good students, really strong students and it's exactly what you're saying (tutor name) they've committed themselves and, in a way, that 18, 19-year olds aren't usually as focussed and dedicated."

Educator participants perceived that having been an online student themselves prior to commencing teaching online would give an educator a greater insight and awareness into the experience of being an online student.

"I think like (tutor name) and (tutor name) might have it a bit easier, because I have never been an online student, so what I'm trying to do is trying to see the, you know, how is it going from the student's perspective, but of course like it's a kind of… I mean it's an exercise of imagination. So sometimes I might not be right."

Encouraging interaction in live online tutorials

Encouraging students to interact in live online tutorials was reported as challenging but important by educator participants. An interactive approach which includes a variety of activities such as polls, discussion questions, short video clips, breakout rooms were

considered effective by participants. Encouraging participation via microphone and switching web cameras on were both highlighted by participants.

> *"I think posting a question or, you know, put up a notice, you know the tutorial is going to be in two weeks' time on whatever date it is and asking a question, here's what we'll be discussing and I'd like you to come in with a question or I'd like you to look at a particular aspect. So, they're actually coming to the tutorial with a question or a remark or an opinion in mind and I think that helps. Then I would ask them one by one to contribute speaking, not just in the chat box. So, I would expect them to have something done on a topic before the tutorial and I found that really helps."*

Challenges of teaching online

The themes constructed from the focus groups and questionnaires involving online educators focused more on the challenges of teaching online than on features of ineffective online teaching. Therefore, this section reports the findings in relation to the challenges of teaching online, after first presenting the quantitative data in relation to ineffective online teaching.

From their questionnaire responses, the features of ineffective online teaching that educators found *extremely/moderately ineffective* were (see figure 5):

- Lack of interaction;
- Passivity of students;
- Technical glitches;
- Body language missing;
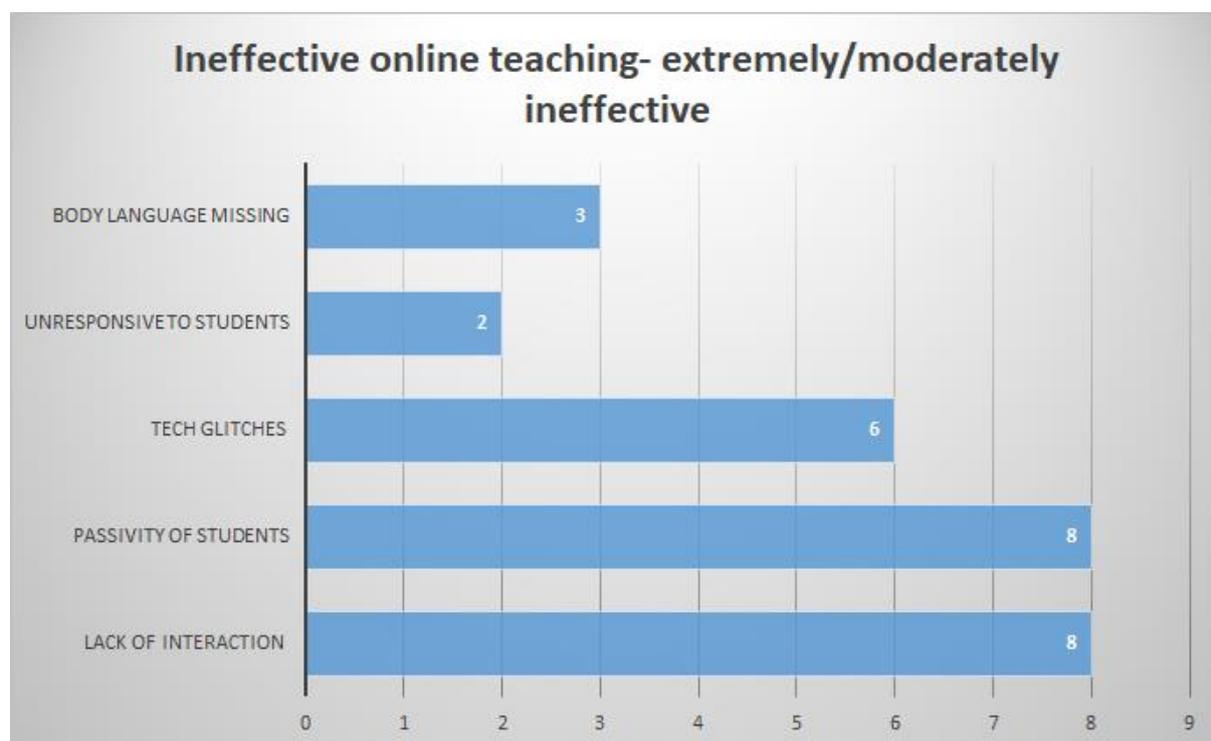- Unresponsive to students.

Figure 5. Features of ineffective online teaching, rated extremely/moderately effective.

Four themes were constructed during the analytic process in relation to educators perceptions of the challenges of online teaching:

- The silence is deafening;
- They can hide themselves;
- Becoming comfortable teaching online;
- Technology glitches and skills;

"The silence is deafening"

One of the most significant challenges reported by the educator participants was trying to get students to participate and engage online. In live online tutorials, many students were perceived to be reluctant to speak via the microphone and prefer to contribute via the chat facility, which is seen as leading to a feeling of silence in the online classroom.

> *"I'm just very uncomfortable with silences. So, I end up filling them."*

> *"I do find that my students prefer the online chat and no matter what I do, bribery, whatever, they will not use the microphone or the camera"*

Further, it was reported that many students are perceived to be unwilling to turn on their webcams during live online tutorials, which means that online educators have no non-verbal cues or body language to observe.

> *But I think you know, it's much harder to have a discussion you know, or a debate you know, when you know you're not seeing somebody's face or so I find that you know going back to that issue of a challenge.*

The absence of non-verbal cues was described as making teaching online more challenging as online educators cannot gauge whether students are understanding the material.

> *"It can sometimes feel like you're just talking to a screen as opposed to talking to people and you probably need to pedal a bit harder than you might in a classroom because nobody wants to leave long awkward pauses."*

"They can hide themselves"

Educator participants perceived that students could more easily avoid participation and interaction in an online setting.

> *"They can hide themselves a little bit more online. They can not be present. They don't have to participate. It's really difficult not to participate if you're in a classroom in front of someone."*

> *"I think it's all part of the digital lurking strategy on some people's behalf."*

This avoidance of participation online was explained by educator participants as students feeling shy, exposed, self-conscious or uncomfortable about speaking in an online tutorial or posting in a public discussion forum.

> *"I've asked students about that before, many different students in different years and this is what they've said to me that somebody else will think that they're stupid for asking a silly question."*

> *"I do think sometimes they're afraid to post online because I don't know how many times I get people emailing me and I go, 'Can you post that to the forum because it's actually a really good question?', and they'll go, 'No, will you post it for me and don't say that I submitted it?"*

Becoming comfortable teaching online

The educator participants reported that becoming comfortable teaching in the online context was challenging in terms of the technology, the lack of non-verbal cues, and feelings of uncertainty and anxiety about a different mode of teaching.

> *"Okay, so it was very difficult for me at the very beginning, probably because of the technology, because it's really different to what we are doing in class"*

Feelings of uncertainty, anxiety, isolation and stress about beginning to teach online were reported by educator participants.

> *"So, at the start I found it a very lonely process, I was very unsure about whether I was doing things correctly or not, so the more I did it, the more I gained experience, to finding it very enjoyable and a very interactive space to work."*

This anxiety is also related to the difference inherent in working with students in an online environment and concerns about the absence of non-verbal communication to gain feedback from students about their learning.

> *"I suppose my biggest anxiety about it is not having those cues and not being able to read the room and there are so many and you're not all in the one classroom so there's so much going on."*

Technical glitches and skills

One of the challenges of online teaching reported by the educator participants was technical problems and a lack of confidence in the use of technology for teaching online. As online teaching relies heavily on technology such as the Loop VLE and Adobe Connect for online tutorials, technical problems can negatively impact on the teaching and learning process.

> *"Technology does not always work properly"*

> *"For example, guys I can't put on the webcam here at the moment because every time I do the system crashes."*

Educator participants reported a lack of confidence in their technical skills in the use of the technology for online teaching, and expressed a desire to improve those technical skills.

> *"So, I find the technology sometimes a hindrance. While it's a fantastic system, I don't think it's the system's fault. I think it's my lack of maybe technical skills and know-how."*

Professional development

In this section the findings in relation to online educator participation in professional development are presented.

In figure 6, more than half of the participants reported that they had participated in targeted professional development related to their online educator role.
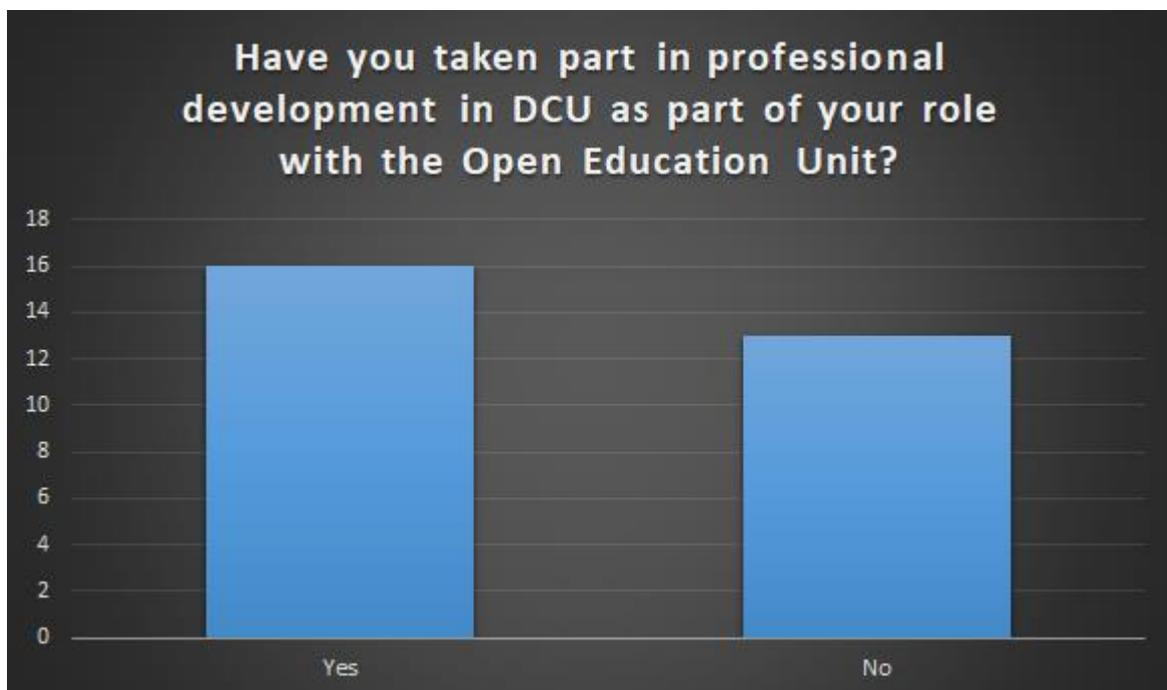

Figure 6. Participation in OEU professional development

In figure 7, the majority of participants reported that they had participated in local targeted professional development. A minority reported that they had participated in wider University professional development facilitated by the Teaching Enhancement Unit and Human Resources.
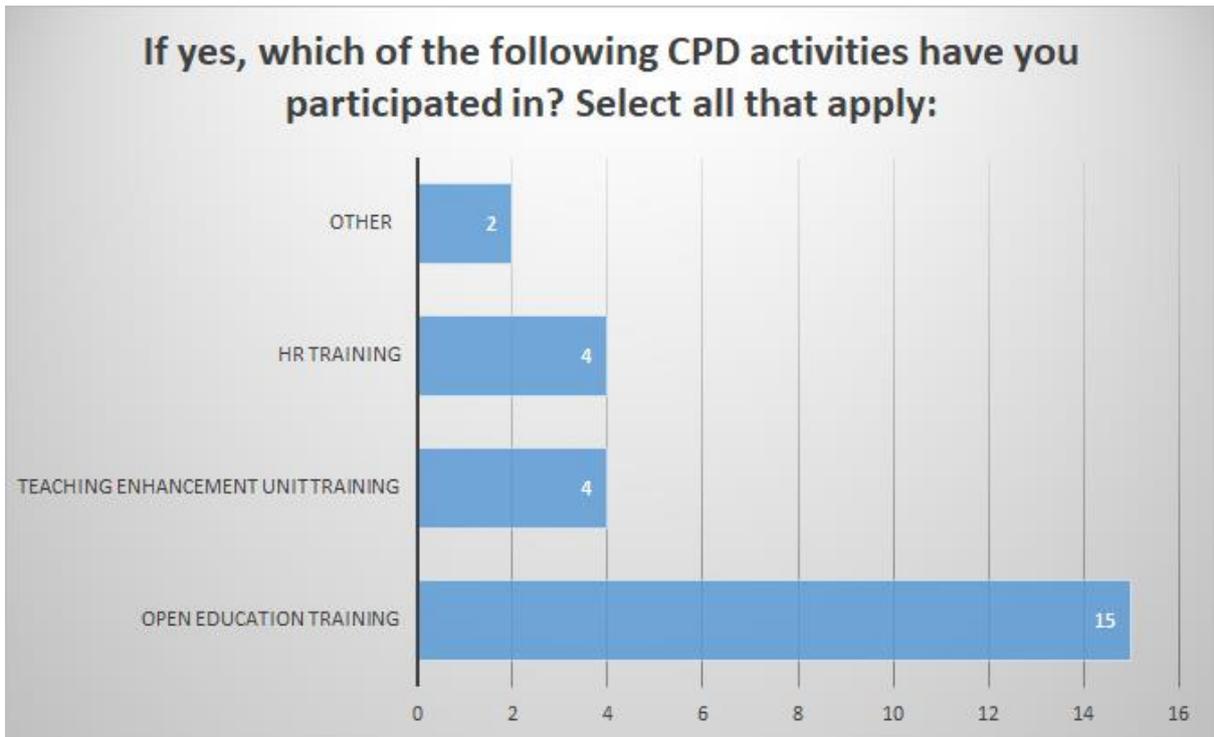
Figure 7. Participation in professional development activities.

In figure 8, online educator access to OEU professional development is illustrated. 38% of participants responded that it had been straightforward to access OEU professional development. A larger proportion 45% reported neutral (neither agree nor disagree).
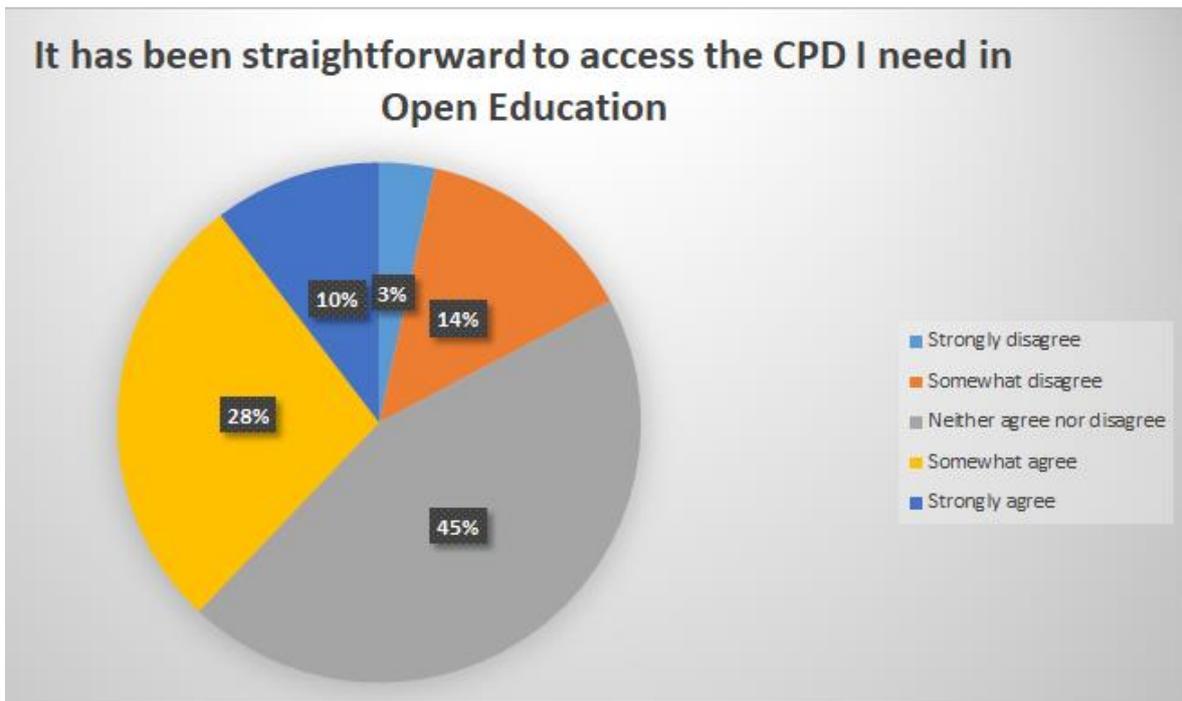

Figure 8. Access to OEU professional development.

In figure 9, online educators access to wider DCU professional development is illustrated. The majority of respondents reported neutral (neither agree nor disagree) that it had been straightforward to access professional development in DCU.
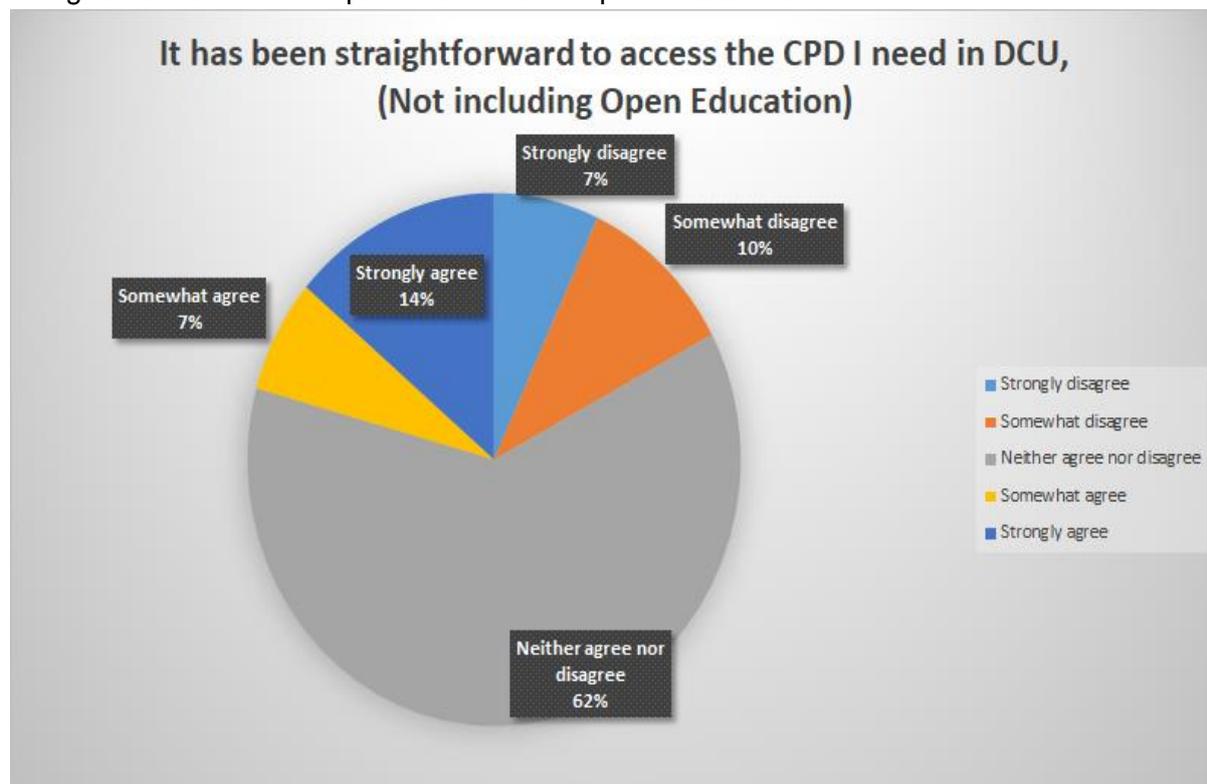

Figure 9. Access to professional development in DCU

Professional development needs identified by online educators

In the data, online educators identified five areas that they would like to develop further through professional development:

1. Technical skills for teaching online;
2. Online learning & teaching pedagogy;
3. Online facilitation skills/approaches;
4. Encouraging online interaction;
5. Community of online educators.

Conclusions

This study was undertaken to conduct a needs analysis of the target population, online students and their online educators based in the Open Education Unit in Dublin City University. This report contains the outcomes of this needs analysis and will be used, along with the literature synthesis, to guide the development of the professional development resources and course to be implemented in later stages of the project.

Bringing together the online student and online educator perspectives, this study yields a number of findings in relation to effective online teaching, which are outlined below.

Interpersonal professional skills

Overall, online students and online educators placed the highest value on the interpersonal professional skills or soft skills of the online educator. These interpersonal professional skills encompass being caring, approachable, supportive, responsive, friendly, and building rapport. The findings of this study indicate that effective online educators employ these interpersonal personal skills to foster a supportive online learning environment.

Clear communication

Both online students and online educators emphasised the importance of clear communication in the online environment for effective online teaching. Clear online communication by educators involved active listening, clarity, regular contact and delivery of consistent and accurate information using unambiguous language. This study finds that establishing clear norms and expectations for communication approaches and appropriate online conduct are key aspects of effective online teaching.

Building an online community

The findings of this study suggest that building a cohesive online class community is crucial to online student engagement, and necessary to counteract the feelings of isolation often experienced by online students. Facilitating the creation of a class community through active online engagement in discussion forums, synchronous online tutorials and through informal peer support groups is a feature of effective online teaching.

Meaningful online interaction

In this study, meaningful online interaction with peers and online educators was reported by students as a crucial ingredient in their learning. Meaningful online interactions that were perceived as nurturing encouraged a sense of belonging in students. The findings of this study indicate that creating a cohesive online class community, where students feel comfortable and supported, promotes both student-to-student interaction and educator-to-student interaction.

Final Reflection

Teaching online can be different from face-to-face teaching, and it is a challenging yet rewarding endeavour, as expressed by the quote below from an OEU online educator:

"It's something that I'm really enjoying now. I didn't when I started a few years ago. I was very iffy about the technology and that. But over the years I have grown really to be comfortable with it and when I'm more comfortable with it then I'm making more connections with the students and on a night like tonight rather than going out in the dark and the cold I can communicate from my nice warm comfortable office."

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Appendices

Appendix 1: #Openteach focus group interview schedules

Focus group interview schedule for online educators

- Welcome to the focus groups, outline of process
- Verbal reiteration of information on data collection, preparation, analysis, write up, confidentially, right to withdraw, and confirm informed consent.
- What is it like to be an online tutor?
- How is online teaching different to teaching in other study modes that you have experience of?
- Thinking back over your experiences as an online tutor, what are the features of good/effective online teaching? Can you give some examples?
- Thinking back over your experiences as an online tutor, what are the features of ineffective online teaching? Can you give some examples?
- What benefits are there to teaching online? Can you give some examples?
- What challenges are there to teaching online? Can you give some examples?
- What do you think of the means you have of interacting with students?
- What do you think of the Open Education system in place around assessment, marking and feedback?
- What do you think of the level and quality of interaction between tutors and the full-time programme team?
- What could be improved in the Open education model of teaching and learning?
- Are you aware of the professional development in DCU that you can access? What DCU professional development activities have you participated in? Has it been easy to access the professional development you needed?
- What skills and competencies would you like to develop in order to be a more effective online tutor?
- Do you feel part of the DCU/Open Education community?
- Is there anything we have missed in this discussion of the online tutor role?
- Wrap-up and debrief

Focus group interview schedule for online students
- How is online teaching different to teaching in other study modes that you have experience of?
- Thinking back over your experiences as an online student, what are the features of good/effective online teaching? Can you give some examples?
- Thinking back over your experiences as an online student, what are the features of ineffective online teaching? Can you give some examples?
- What do think about how you interact with your tutor and fellow students online?
- Do you feel part of the DCU/Open Education/class community?
- How does your tutor support you and your class?
- How are discussion forums used in your modules?
- How are online tutorials conducted in your modules?
- What makes a good online tutor?

- What skills are important to be an effective tutor?
- Is there anything we have missed in this discussion of the online tutor role?
- Wrap-up and debrief

Appendix 2 #Openteach surveys

Survey for online students

1. List 5 features of effective online teaching

Rate the intensity of each feature on a likert scale ranging from one 'not at all effective 'to five 'extremely effective'

2. List 5 features of ineffective online teaching

Rate the intensity of each feature on a likert scale ranging from one 'not at all ineffective 'to five 'extremely ineffective'

3. What do you think of the level and quality of interaction between tutors and students?

4. What could be improved in terms of teaching and learning?

Survey for online educators

1. List 5 features of effective online teaching

Rate the intensity of each feature on a likert scale ranging from one 'not at all effective' to five 'extremely effective'

2. List 5 features of ineffective online teaching

Rate the intensity of each feature on a likert scale ranging from one 'not at all ineffective' to five 'extremely ineffective'

3. How would you describe an effective online teacher?

4. Have you taken part in continuous professional development (CPD) in DCU as part of your role with the Open Education Unit? Yes/No

5. If yes, which of the following CPD activities have you participated in?

   · Open Education training

   · Teaching Enhancement Unit training

   · HR training

   · Other please specify

6. It has been straightforward to access the CPD I need in Open Education.

Rate the intensity on a likert scale ranging from one 'strongly disagree 'to five 'strongly agree'

7. It has been straightforward to access the CPD I need in DCU, (Not including Open Education) for example Teaching Enhancement Unit, HR training, etc.

Rate the intensity on a likert scale ranging from one 'strongly disagree 'to five 'strongly agree'

8. What skills and competencies would you like to develop in order to become a more effective online tutor?