

# Alone in a Group Ten Characteristics of the Live Online Critique

Jolanda D. Morkel 

*Head of Instructional Design, STADIO Higher Education, South Africa*

Johannes C. Cronjé 

*Professor of Information Technology, Cape Peninsula University of Technology, South Africa*

Received: March 7th 2022, Accepted: March 11th 2022.

Refer: Morkel, J., Cronjé, J., (2022), Alone in a Group; Ten Characteristics of the Live Online Critique, Journal of Design Studio, V.4, N.1, pp 5-19,

J. Morkel ORCID: 0000-0001-8807-2700, J. Cronjé ORCID: 0000-0002-9838-4609,

DOI: 10.46474/jds.1087021 <https://doi.org/10.46474/jds.1087021>

© JDS

This work is licensed under a Creative Commons Attribution 4.0 International License.



**Abstract:** The design critique or crit, as it is commonly known, is a prominent educational practice that involves a design tutor guiding and prompting a student to develop design expertise. Although it has become a contested practice often criticized for its teacher-dominated approaches and asymmetrical power relations, it remains at the heart of architectural education. This paper is focused on an undergraduate blended architecture studio in South Africa, that allows students to study whilst working, through online learning engagements, combined with occasional on-campus blocks and office mentorship. This experiment was conducted well ahead of the recent pandemic which led to a sudden online pivot of educational spaces and practices. It explores the characteristics of the live online crit, mediated through a webinar platform. The research instruments include online surveys completed by students, graduates, and design tutors, as well as a focus group interview conducted with the graduates only. Through a thematic analysis of the data, we discovered ten characteristics of the live online crit namely that it is internet-reliant, participant-invisible, ubiquitous, media-intensive, multi-communicational, formal, accessible, work-focused, resource-saving, and inclusive. These results are timely, given the current reliance on live online learning practices, in response to the regular need for social distancing.

**Keywords:** Design critique, online crit, webinar, architectural education, blended learning

---

## Introduction

The well-established studio practice of the crit, also known as the design critique, review, seminar or tutorial, is associated with the mastery of architectural design expertise (Kuhn 2001, Voulgarelis & Morkel 2010). The crit is the conversational vehicle (Hasirci & Demirkan 2007, Osborne & Crowther 2011, Pask 1976, as cited in Laurillard 2008) through which a student learns to design, by formulating a design proposal in response to a project brief, mediated by ‘a two-way conversation steered by the tutor’s comments and question prompts’ (Hitge 2016: 25). This happens iteratively through ‘production, manipulations of, and shifts between different representational forms’ (Lymer 2010:44), including language and

artifacts. The crit is considered one of the signature pedagogies (Shulman 2005) and a cornerstone component (Parnell, Sara, Doidge & Parsons 2007, Smith 2011, Webster 2004) of design education.

However, it is not without criticism. The crit is widely acknowledged for its adverse effect on student learning (Pope 2005, cited in Blair 2006, Schrand & Eliason 2012). Several authors (Anthony 1991, Hitge 2016, Mitgang 1999, Webster 2004) suggest that the design crit is ‘pedagogically flawed’ (Hitge 2016: 26), hindering rather than promoting learning. Quinlan, Corkery and Marshall (2007) argue that studio methodology produces teacher-dominated pedagogies and Helena Webster

(2005: 286-287) posits that students are 'coerced into reproducing staff-centred constructions of architectural habitus' and expected to display behaviour that is 'profoundly de-motivating and competitive'. It causes stress and perpetuates asymmetrical power-relations between students and tutors (Bates 2016, Blair 2006, Koch 2002, Lotz, Jones & Holden 2015, Doidge, Sara & Parnell 2004). Yet, recent studies have shown that some students and tutors (Blair 2006, McCarthy 2011, Schrand & Eliason 2012) still believe that the fear and stress associated with the design crit is necessary and an effective tool for learning. They defend the so-called 'initiation ritual as part of their identity as architectural and design students' (McCarthy 2011: 27).

These dilemmas are even more pertinent in the context of a global higher education (HE) landscape of 'worldwide growth and increasing demand for access to HE, changing learner demographics, the need for changes in cost, affordability and economic models for HE' (Cronjé 2016: 135); and in the context of a developing country where 'the relevance of current HE structures is questioned through student protests and decolonisation of education practices is called for' (Gachago, Morkel, Hitge, van Zyl & Ivala 2017:1). Whilst pervasive access to digital technologies (Cronjé 2016) have dramatically transformed our life and work, technology uptake in HE has been limited and slow (Ng'ambi, Brown, Bozalek, Gachago & Wood 2016), until the recent sudden shift to online and remote learning brought about by the Covid-19 Pandemic. This is no less true for architecture education (IUA 2017), where an over-reliance on synchronous online engagements led to 'Zoom fatigue' - a practice that deserves further investigation (Banou & Tahsiri, 2021; Morkel et al., 2021).

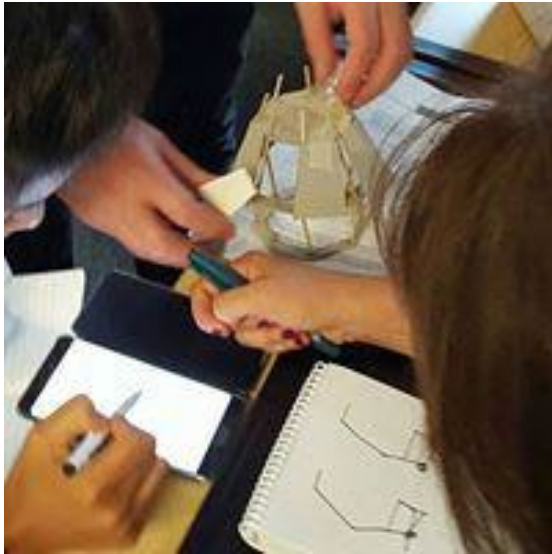
The programme that forms the focus of the study is the part-time bachelor's degree in Architectural Technology (Applied Design) that was offered by the Cape Peninsula University of Technology (CPUT) through collaboration with the South African Institute of Architects' (SAIA) Open Architecture, from 2014 to 2019 (Figure 1).



**Figure 1:** 'Open Architecture: students studying architecture in different cities together'. Tagline and graphics designed by students for a graduate exhibition (Photos: J Morkel).

The first two-year blended part-time programme in architecture in South Africa was launched in 2014 to enable working practitioners to upgrade their qualifications through a blend of office-based mentorship, on-campus blocks (Figure 2), and online learning. Mature students are based in architectural workplaces spread across South Africa and neighbouring countries, Namibia, Zimbabwe, and Mauritius.

In this paper we explored a prominent online component of the blended programme, namely the webinar-mediated synchronous live online crit. Ten characteristics were identified, namely that it is internet-reliant, participant-invisible, ubiquitous, media-intensive, multi-communicational, formal, accessible, work-focused, resource-saving and inclusive. We suggest that the live online crit, as part of a blended learning design, can address some of the challenges presented by the traditional crit, and help to enrich current crit practices, as called for by McCarthy (2011) and others, towards expanding the design studio.



**Figure 2:** *On campus face to face session employing multiple media (Photo: J Morkel)*

### **Methodology**

The purpose of the study was to explore the live online crit, to formulate the main characteristics as reported by the tutors, the 2015 graduates and the 2016 year 1 and year 2 students. The instruments that we used, were a 90-minute focus group interview with members of the graduate group (A - E), online surveys of tutors (T1 – T5), graduates (G1 – G5) and students from both cohorts (S1 – S23). These instruments showed us what characteristics the participants experienced in the live online crit and reflected in their views on the crit setting. Although the online surveys provided a broad perspective of graduates', students' and tutors' views, the rich narrative data was found in the focus group interview with recent graduates. The semi-structured questions were borrowed from Bernadette Blair's (2006) doctoral thesis on the formative critique. The focus group comprised of one student from historically disadvantaged groups (HDGs) (Republic of South Africa, 2019), out of a group of five students, which includes one female. The interview was conducted face to face and on campus, so only Cape Town students could participate. The graduate cohort of 13 is made up of 7 HDG (all male) students, which means that 38% of the graduates participated in the focus group interview, including 100% of the females, and 14% of the HDG students. The study forms part of the first author's doctoral

research and ethical clearance was obtained through the University ethical committee.

We conducted an in-depth exploration of the live online crit as a bounded activity (Yin 2008, cited in Creswell 2012), based on extensive data collection (Creswell 2007). The focus group interview was recorded, transcribed and thematically analysed using Atlas.ti v7. The online surveys were administered through Google forms, thematically coded and manually analysed. The phases of thematic analysis employed (Braun & Clarke 2006:84), included familiarizing ourselves with the data through reading and rereading of the transcribed data. Next, initial codes were generated of significant features of the data, collating data relevant to each code. The following phase was to search for themes by collating codes into potential themes, gathering all data relevant to each potential theme. The final stage, before producing the report, was to define and name the themes, generating clear definitions and names for each theme.

The first author is the University coordinator of the part-time programme and to perform this research, she acted as participant observer. This means that a degree of subjectivity was inevitable. However, it equipped the authoring team with valuable perspectives and insights. Verification strategies include triangulation using multiple data sources namely a focus group interview and online surveys; and peer review by a colleague not involved in the programme, who checked the research process and coding samples.

### **The live online crit via Webinar**

Although a lot has been written about the impact of digital technologies on the generation of architectural CAD visualization, there is limited literature on the impact of technology on the studio learning environment and the characteristics of crits conducted in online settings (Webster 2005), especially synchronous (live and real-time) sessions. There's limited precedent and empirical research to guide tutors on the use of live online technology for learning and teaching (Ochsner 2000 as cited in Oh, Ishizaki, Gross & Do 2013,

Lowenthal, Dunlap & Snelson 2017) to enhance learning.

The term ‘webinar,’ is derived from ‘web-seminar’, and it is a synchronous online presentation, seminar, lecture or workshop that comprises visual and audio components. Hsu and Wang (2008, cited in Zoumenou, Sigman-Grant, Coleman, Malekian, Zee, Fountain & Marsh, 2015) reported five advantages of using webinars. Webinar tools are affordable, enable synchronous communication, facilitate real-time multimedia demonstrations, facilitate multilevel interaction, and provide an environment in which participants can archive seminar content for personal review or for people who missed the real-time session.

The live online crit on which this study is based, forms part of a series of online learning experiences, facilitated in formal and informal online spaces, both synchronous (real time) and asynchronous (over time). Social and informal online platforms are set up in Facebook and Pinterest, and student-only WhatsApp year groups serve as private back channels. A SharePoint site, referred to by the students as ‘the portal’, contains organisational information such as study guides, institutional rules and regulations, a calendar, and announcements. Learning content is provided through interactive project briefs, recorded lectures, class notes, and video and text-based resources. The portal also houses student assignment uploads, online written and graphic feedback by tutors, records of student grades and online crit recordings. Google documents, linked from the portal, host ongoing individual student design journal updates, for feedback by tutors, in written and graphic formats.

Students meet in groups of about ten per one-hour session, with one or two tutors present in a virtual GoToWebinar space (Figure 3). The day before the session, the students are required to upload their work in pdf format, to the portal. A webinar link is sent to all participants by e mail and access to the session can be gained using a PC, laptop, tablet, or smartphone, with a headset. To save time, the lead tutor shares the student work on her screen, visible to all crit

participants, and the student whose work is being reviewed, directs the tutor to advance the slides as needed. The webcam is not used. Students and tutors are given virtual pens of different colours to point and create on-screen markings and diagrams on the work displayed on-screen.

The webinar text chat is used for comments, written input and feedback by students and tutors, and to share links to support material, including blogs and websites. The online crits are automatically recorded and made available to students to view in mp4 format, soon after the crits are concluded.

### **Characteristics of the live online crit**

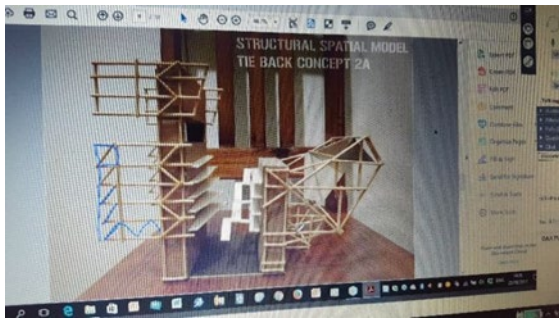
The following ten characteristics of the live online crit emerged from the data.

#### **- Internet-reliant**

The live online crit relies on power and internet connectivity. Students and graduates identified the risk of losing internet connectivity in some locations and during certain times, for example because of load shedding:

*The only disadvantage [of the live online crit] is the reliance on technology, because if there is load shedding, then crits are impossible, where as a face to face [it] may have still been possible provided the work was printed out in time. (G6)*

This supports the literature that suggest that technical difficulty, slow network transmission and speed, poor audio and loss of internet connection, negatively impact synchronous online sessions (Ng 2007, Hsu and Wang 2008, cited in Zoumenou et al., 2015). Hsu and Wang suggest that these obstacles can be overcome if the presenters familiarise themselves with the webinar tool in advance and are prepared for any technical glitches.



**Figure 3:** Online session employing multiple media  
(Photo: J Morkel)

### -Participant-invisible

The live online crit lets participants be heard rather than seen. Students and tutors use audio and digital pen markings to explore the work submitted for review. The webcam is not used.

Only one student (S8) identified communication ‘directly over a microphone’, as a challenge:

*I find online/webinar crits somewhat stressful since I find it difficult to communicate directly over a microphone instead of addressing directly in person. The flow of conversational discussion is somewhat disjointed in comparison to regular in person discussion. (S8)*

The prominence of audio as a means of communication (listening) causes some students to feel more exposed. The conversation, when turned to the presenting student, seems to be highly focused, with all attention directed at her, as explained by G6:

*...I think what made me anxious about the online crit was the fact that everyone was listening in. It was like you were under the spot light and your work was now under scrutiny by a panel of judges [tutors] and students listening in. (G6)*

At the same time, others feel more at ease and less stressed in the absence of personal visual interaction (looking), both from the perspective of looking,

*You would not be looking [at] anyone who would otherwise make you feel nervous in a face to face crit. (G5)*

and being looked at:

*The good thing about online crits is that, you don't feel pressured from the eyes of our (sic) peers. (S4)*

Because participants can't see each other, one would expect multi-tasking to occur in the online crit setting. Yet, it is not subjected to the usual distractions associated with the physical face to face studio setting, as suggested by B:

*...You know the other people are listening more, more closely, and like student A said, you don't want to make a fool of yourself. [Face to face] you can talk amongst each other ... [while] someone else is presenting... Well, I think it's a thing of you log on alone, but you're part of this group, so you [you] listen more intently, and if you're in a [physical] group like this you can sit and chat while they're critting, so I think it's better if you're alone in a group, than in an actual group. (B)*

This supports the literature, for example Ng (2007) found that the absence of physical presence online seems to relax students. In his research on the online tutorial, students reported, not only on the ease of asking questions ‘behind the veils’, but that they were able to better formulate the questions as well.

This resonates with Hassanpour, Utaberta and Zaharim's (2010: 282) findings that, in traditional crit sessions, students fear to perform ‘in front of looking eyes.’ They claim that, because of students' fear of eye contact, they often fail to hear the tutor feedback.

### -Ubiquitous

The live online crit is ‘everywhere’. This learning setting provides a virtual space for students and tutors to meet, regardless of the location of their homes and workplaces. Students, tutors and visiting experts can join

the crit from different locations and even across different time zones.

*Technology has made it possible to have crits wherever you are, provided you have a decent internet access and a computer/[or] smart phone. (G6)*

Some students reported that the freedom to choose and ‘own’ the physical space from which they participate in the live online crit, makes them feel more ‘at ease’, as explained by G5:

*Technology in my view has positively impacted the crit in that... One gets to cho[ose] and own their space in which they would do the crit, which makes one more at ease during the crit. The fact that you would be alone in you[r] own chosen environment was relaxing in itself... I could do the crit from anywhere convenient for me. (G5)*

There’s no clear evidence from the student and graduate responses that the live online crit setting significantly adds to the stress experienced in the traditional crit. Views on this issue differ. Some students argue that stress and pressure are increased because ‘everybody is listening’, and others say it is reduced because they ‘can’t see each other’. Students’ personal choice of physical learning space, coupled with physical distance, appears to reduce stress through promoting comfort and ease.

It supports the literature (Percy 2004:151) that suggests there’s a ‘reduction in the power relations between staff and students’ and that students were more ‘relaxed in their home environment’.

#### **-Media-intensive**

In their feedback, students, graduates, and tutors mention the presence of multiple media for different forms of communication in the live online crit. T4 explains how technology expands the forms of communication face to face and online:

*Technology has increased the ability to use many forms of communication whether f2f or online. (T4)*

In this virtual studio setting, all material, whether in two or three dimensions, that students and tutors engage with online, are presented in digital format (Morkel 2016, Poulsen & Morkel 2014) for discussion, regardless of the media through which these were generated e.g. physical models, hand drawn sketches, computer generated graphics, photos or graphic and text references and research. It also doesn’t matter in which of the other blended learning settings the artefacts were produced i.e. in the workplace, design journal or on-campus block. As explained by G6, all the work is in one (online) place – students don’t need to carry the drawings with them:

*With the online crits you don’t have to carry large amounts of drawings with you as all your work is uploaded. (G6)*

B refutes the common belief that the digital medium excludes engagement with analog and physical media, deemed necessary for developing design expertise:

*...I don’t think that people should be scared just because you’re doing online crits, you’re gonna lose process models because process models is like the way you’ve been taught to figure things out. So, if you’ve been taught to do it, you will know it makes your life easier, and you know... (B)*

The graphic material that forms the focus of the crit is uploaded prior to the crit, displayed on-screen during the crit and available through the recording, after the crit (Poulsen & Morkel 2016). Students value the importance of the graphic content of their crit submission, as suggested by C:

*You have to explain yourself better graphically... through your online presentation. (C)*

Although on-screen pointing and sketching may be less spontaneous and drawing with a mouse is not ideal, on-screen markings play an important role in online crit communication.

*The drawing with a mouse is not ideal... (S20)*

*...the ability to doodle on screen helps a lot in not losing too much with regards [compared] to actual face to face interactions. (S12)*

T5 argues that the live online crit helps the student to communicate her argument and design premise both verbally and graphically:

*...Argument and design premise is absolutely paramount for the student to get his/her point across clearly both verbally and graphically. No other [online] interference [sic] focusses all attention on this. (T5)*

These findings support the literature (Bailey 2005, Maftai & Harty 2015, Oh et al. 2013, Schön 1983) claiming that a range of communication media should be present and combined for best crit results; with sketching used as an important component (Goldschmidt, Casakin, Avidan & Ronen, 2014), but contradicts the literature (Oh et al. 2013) that propose synchronous online learning lends itself best to text communication.

Hsu and Wang (2008, in Zoumenou et al. 2015) suggest the webinar works well for real-time multimedia demonstrations. Although some of the graduates claim the hands-on experience, for example through model-building, does not get lost in the live online crit, Wang and Hui-Yin (2008, in Zoumenou et al. 2015) posit that hands-on demonstrations were less effective in the online environment.

#### **-Multi-communicational**

The live online crit setting accommodates multiple media, including live audio and the digital representation of two and three-dimensional graphics submitted online by the students, that are visible through screen-

sharing. It also allows for multiple tools on the webinar platform, including text chat and co-browsing, used simultaneously. The latter was highlighted by B, D and G4, in their feedback:

*And that's another thing: in an online crit, Tutor 3 used to do that a lot, he posted links... And I think most people then went on to that link, checked it out quickly, where, on a normal [traditional] crit you won't be able to... (B)... yes, you won't get that information... (D)*

*[It is] ... easy to reference to online precedents [shared] by [the] Lecturer. (G4)*

The webinar software used for the live online crit, GoToWebinar, does not allow participants to text chat with each other. They're also not able to see who else is present in the online crit. Through the Webinar text chat, participants can only interact with tutors who have organiser status. The student WhatsApp group that was used mostly for asynchronous conversation, was also used as a student back channel during the live online crit sessions, as explained by student A:

*Well, [we used WhatsApp] all the time... Normally we would be talking to each other on the WhatsApp group while we were being critted or whatever... (A)*

Through it, they provided peer to peer support by offering hints and information during the live online crit.

*Yes, we'll say 'have a look at this building' or 'why don't you try this?' It's actually very good feedback that you get from your peers. (E)*

Even though the webinar platform is best suited for one-on-one personal interaction as stated by T4,

*The one-on-one personal interaction around a design issue is what makes this mode of learning different to other modes. (T4)*

by accommodating multiple tools, like WhatsApp, parallel conversations can be conducted.

These findings support Hsu and Wang's (2008, as cited in Zoumenou et al. 2015) identification of multilevel interaction as one of the five advantages of webinar tools. It adds to the research by Anderson, Fyvie, Koritko, McCarthy, Paz, Rizzuto, Tremblay & Sawyers (2006 as cited in Ng), that found that the live online learning environment

provides multiple tools for communication and presentation. Their research, however, was focused on the internal webinar tools and didn't include external tools such as the WhatsApp chat. These findings also support Ng's (2007) view that the webinar platform is a teacher-led learning environment that works best for one-on-one communication. However, in this case, through its accommodation of multiple tools, active peer to peer interaction can exist parallel to it.

#### **-Formal**

A strong theme that emerged from the graduate focus group interview and online surveys completed by students and graduates, is the formal character of the live online crit, as suggested by B:

*I think the online webinar will be more formal again. Standing at my drawing board with a lot of bump, discussing whatever I did, is a lot less formal than presenting your work on a webinar. (B)*

Students and tutors compare it to a formal presentation, for which preparation is essential, to get proper tutor feedback. The formal and focused nature of the live online crit and rigorous scheduling, requires students to clearly present their thinking, as explained by A and T4:

*Online was definitely more like a presentation, also due to the time constraints... You really had to present it to... (A)*

*The online crit tends to be more focussed than f2f as time is limited, students have to prepare adequately beforehand and the discussion is more measured. (T4)*

Given the time constraints, as E explains, students must come prepared, be organized, properly articulate their ideas graphically, systematically compile them and carefully plan how they will be verbally presented.

*It's like when online you have to be a bit more clear, or more complete so that it... because if you come to a [traditional] crit, you can come with your scrap papers and you can still draw on that, to show your ideas, but with the online [crit] you sort of need something that's a bit more neater and a bit more resolved... you think about like 'I'm gonna start with speaking this' and you think about systematically how you will like layout your work in which order, but with the face to face crit you can just come with your pile of drawings and throw it out on the table and just work your way through it. But it needs to be much more organised with the online crit. (E)*

T5 suggested that the live online crit may be more effective if the students came even more prepared and focus on where the problems are, avoiding repeat information:

*Online crits can be improved if students are more prepared and if they can be assisted more to focus on the key aspects of what they need help with. Quite a bit of time goes into repeat information rather than focusing on where the problems are. (T5)*

Students appreciate the value of the formal aspect of the live online crit to contribute to learning as confirmed by A:

*Yes, I think so definitely [it helps with the learning] (A)*

and it helps them learn about the importance of presentation to sell ideas:



*they learn (without knowing) that presentation is key to "sell" architectural ideas. (T5)*

B suggests that this learning setting ensures that students properly articulate their ideas rather than waiting for the tutor or a peer to step in.

*... Yes, I've learnt that if you keep quiet long enough [in a traditional crit], if you get asked a question, someone will lead you into the answer, so if you do that f2f the lecturer, or not necessarily the lecturer, but someone will... I don't wanna [sic] say be be uncomfortable in the silence and then start talking, and lead you to what they were thinking, where online it's different, that you... (B)*

Yet, the formal and organised nature of the live online crit, although efficient and focused, seems to limit opportunity for informal and serendipitous learning as emphasised by T1:

*Face to face... conversations have the convenience of the actual pen to paper communication and they sometimes show some hidden thought process that the student deems irrelevant but that the lecturer [tutor] picks up. The idea of, "o[h] what is this little sketch here". (T1)*

These findings support the literature by Anderson et al. (2006 as cited in Ng 2007), that the rigorous scheduling of the synchronous online tutorial requires formal and focused interaction.

#### **- Accessible**

The live online crit provides equal learning opportunity to all students to participate in and attend all scheduled sessions, through access to the same shared screen in the synchronous session, as well as access to all the recordings afterwards.

*The strength in online crits is the ability for students to participate in each and every crit session given and benefit equally, rather than just getting your own crit, watching 2 other people's crits, and going home... I*

*personally look at (almost) everyone's work wholistically [sic] and try [t]o build a general idea of what is correct and what isn't. This would never be possible through conventional crits. Conventional crits were a nightmare. (S20)*

Not only do crit recordings help students to revisit their own crit interactions, to make sure they understand, and in case they missed important feedback,

*[The] online crit via webinar for me worked very well. First the fact that the crit was recorded meant that I could revisit at any time, those comments made about my work and listen to them word for word. (G5)*

but students can also relate the feedback that others received, back to their own projects, using the crit recording as a learning resource and thereby reducing the need for unnecessary repetition by tutors:

*I could listen in to other crits and apply some advice given to other students instead of the lecturers repeating things to each student. (G5)*

Graduate A reflects on the value of observing someone else's crit:

*I found that most of my lightbulb moments was when I was looking at someone else's stuff. (A)*

and revisiting your own crit as a 'third person':

*... by listening to other student crits, you learn as well. Being able to re-listen to previous cirt [sic] sessions at own time has been beneficial because you view your feedback as a 3rd person. (S6)*

Finally, G6 suggests that the value of the recorded crit as a resource can be more widely used for learning, teaching, quality assurance and research:

*[Crits] can now be recorded and replayed fro [sic] clarity... These can then be used to*

*educate others who join architectural schools and curriculum researchers to further refine the experience of the crit. (G6)*

Another aspect of the live online crit that relates to equal learning opportunity, is how online turn-taking helps to ensure that every student is given a turn to present her work and elicit conversation and feedback. As A and D jokingly remark, it's not so easy to avoid an online crit:

*Yes, and you can't avoid the crit. Like you know, haha...like sometimes if it's a crit in person, you get to a class where there's lots of students, you can hide. (Student A)*

*...like behind the wall (Student D)*

*... whereas you know online, like we all realized, you know, you are definitely going to be critted... (A)*

Students say that the live online crit works well with many observers (S8 refers to 'spectators') because everyone can see the work shared on-screen, on their own devices. The size of the crit group is not limited by proximity to and visibility of the crit material.

*Face to face [there is an] efficient flow of communication, [but] somewhat restrictive for spectators [whereas] online [it is] logistically very convenient, easy for large numbers or viewers to be involved. (S8)*

It supports literature that suggest that 'students hear all critiques of all projects and benefit from feedback to their peers' (Bender & Vredevoogd 2006: 119), and whenever they want it (Oh et al. 2013). It also supports literature that suggest that students get access to the same tutor feedback 'unlike the front row advantage' in conventional settings (Romiszowski 1988, as cited in Bender & Vredevoogd 2006: 119).

#### **-Work-focused**

The student, graduate and tutor respondents agree that the live online crit is focused on the work. One of the main reasons is the screen-sharing of online submitted student work, that

appears on all participants' device screens so that everybody is looking at the same image:

*You deal with the images on the screen. It's more direct. (Student C)*

*Both parties are more focused on the discussed issue or what is displayed on the screen. (G12)*

The webcam is not used (Poulsen & Morkel 2016) and therefore, instead of the participants, the emphasis is on the images and on-screen drawing activity and accompanying verbal conversation. Students and graduates reported that the absence of gesture and facial expression in the crit, avoids misunderstanding due to the misreading of facial cues. They also suggest that it helps to hold the attention of both students and tutors in the crit and limit distractions.

*Presenting your work with use of webnair [sic] software with help of audio and video helps in distance learning as well as avoiding misjudging by facial presentation but focus on work done. (S14)*

*It also helps you to stay focused. F2f sometimes someone gets distracted, where online ... everybody is focusing on the work. No distractions. (D)*

Although the literature suggests the importance of non-verbal cues in the crit (Anthony 1991, as cited in Oh et al. 2013), none of the respondents reported the absence thereof to negatively impact on the crit. On the contrary, students and graduates suggested that these can be confusing and distracting. Anthony (1991, in Oh et al. 2013) posits that the effective use of nonverbal expression can enrich the student-tutor interaction in the traditional crit, but also admits that facial expression and tone of voice can confuse students, if great care is not taken by tutors to be consistent and positive in their non-verbal communication. This view is supported by our findings.

### **-Resource-saving**

Graduates and students experience the live online crit as saving time and money; saving time through focused engagement and saving money through limiting paper(G4), printing (G6) and traveling (G5):

*Technology allows the crit to be straight to the point through the use of Webinar. No wasting of time pinning up paper or waste of paper. (G4)*

*Most of the work is in a digital format already and then creating a pdf and uploading is much easier than making costly prints for a crit. (G6)*

*It saves a lot of time which would have otherwise be spent moving and getting to venues. (G5)*

The crit remains a time-consuming, labour-intensive and costly educational model (Hitge 2006, McCarthy 2011), and therefore efficiency is paramount. Although the literature does not specifically speak to the cost benefits of online learning for students, affordability was identified by Hsu and Wang (2008, cited in Zoumenou, 2015) as one of five advantages of this medium.

### **-Inclusive**

The final characteristic of the live online crit that emerged from the graduates', students' and tutors' responses, is that it widens access and expands the range of participants. The online medium can reach more students and provide access to a broad range of experts with diverse backgrounds and skills.

*Online has the advantage of reaching more students and also an easy way to "dial in" an expert on an ad hoc basis, thus access to a wide range of opinions. (T1)*

*It can now involve a lot more people from different locations and one can get a wider diversity of views about their work. (G5)*

As explained under the points 'Media-intensive' and 'Accessible' above, the crit

recordings, through their availability to all students, provide access to all the learning conversations and no one is excluded.

These findings support the literature that suggest the online setting widens access and enhances convenience (Lowenthal et al. 2017). The findings further support Hsu and Wang's (2008, in Zoumenou 2015: 64) reported advantage of the webinar through 'archiving of seminar content for personal review or for people who missed the real-time session'.

### **Discussion**

The first three characteristics of the live online crit that were identified in this study, are presented in terms of their impact on the stress experienced by students. The reason for highlighting this theme, is the prominence given to the impact of stress caused by the traditional crit, that was found in the literature. McCarthy's study, 'Redesigning the Design Crit' (2011) identifies student anxiety as one of the main criticisms against the traditional crit, together with 'student inability to learn from the feedback given due to the heightened atmosphere of the crit' (McCarthy 2011:5).

In this study, students reported opposing views on the degree of stress experienced in the live online crit.

*I think that the crit was just a serious part of our work that one needed to prepare for, but not necessarily stressful. (G5)*

*Me being naturally an anxious/ stressing person, I found the online crit quite stressful... (G6)*

The most prominent characteristics of the live online crit found in the data, that impact on stress, include its reliance on power and internet connectivity, participant- invisibility with audio as the prominent mode of communication, that provides a setting where students are listened to rather than looked at; and that it is 'everywhere'.

The data produced ten characteristics of the live online crit. Although these may not all be

unique to the live online crit, together they present a picture of the nature of this learning setting. The live online crit is internet-reliant, participant-invisible, ubiquitous, media-intensive, multi-communicational, formal, accessible, work- focused, resource-saving and inclusive.

Its internet reliance means that technical difficulty, slow network transmission and speed, poor audio and loss of internet connection can negatively impact on synchronous online sessions, but with experience and some flexibility in terms of rescheduling, this obstacle can be overcome. Hands-on demonstrations are less effective in the online environment and the formal and organized nature of the online crit inhibits informal and serendipitous learning. Care should be taken to create opportunity for these learning experiences elsewhere, as part of a blended learning approach.

The absence of physical presence online appears to remove some of the stress barriers, reduce the imbalance in power relations between students and design tutors and help to relax students. The online use of a range of communication and interaction media and tools should be encouraged, to promote rich and multiple crit conversations. There is no limit to the number of crit participants online and students have access to all the learning conversations, so no one is excluded.

### **Conclusion**

It is hereby not suggested that the online crit should replace face to face crits entirely. Instead, it is argued that, based on the characteristics identified in this study, the live online crit may expand the current crit practices of the physical studio. An understanding of the value that it can add, and its limitations, can help educators and tutors design learning interventions suitable to specific learning contexts, towards addressing challenges related to student diversity, limited resources and a rapidly changing higher education context, exacerbated by health and climate crises. As a result, not only will learning be accessible more easily to mature and working students, but

graduates will be better equipped to navigate multiple physical and online modes of interaction, resilient to disruption and suitable to practising architecture in the 21st Century

### **Acknowledgements**

This article is based on the doctoral research conducted by the first author. We wish to thank students and colleagues for their valuable contributions to this research. The financial assistance of the National Research Foundation (NRF) towards this research is acknowledged, as well as support provided through CPUT RIFTAL funding and a writing workshop in Durban, by the South African Technology Network (SATN).

### **References**

- Anderson, L., Fyvie, B., Koritko, B., McCarthy, K., Paz, S.M., Rizzuto, M., Tremblay, R. and Sawyers, U., (2006). Best practices in synchronous conferencing moderation. *The International Review of Research in Open and Distributed Learning*, 7(1).
- Anthony, K.H., (1991). *Design juries on trial: The renaissance of the design studio*.
- Banou, S. and Tahsiri, M., (2021). Catalyst Pedagogies and the Pandemic Displacement of Architectural Education. *Charrette*, 7(1), pp.1-13.
- Bailey, R.O.N., (2005). *The Digital Design Coach Enhancing Design Conversations in Architectural Education*.
- Bates. (2018). Teaching in a Digital Age. [ONLINE] Available at: <https://www.tonybates.ca/teaching-in-a-digital-age/>. [Accessed 20 February 2018].
- Bender, D.M. and Vredevoogd, J.D., (2006). Using online education technologies to support studio instruction. *Educational Technology & Society*, 9(4), pp.114-122.
- Blair, B., (2006). Perception interpretation impact: an examination of the learning value of

formative feedback to students through the design studio critique (Doctoral dissertation, Institute of Education, University of London).

Braun, V. and Clarke, V., (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), pp.77-101.

Creswell, J.W., (2007). Qualitative inquiry and research design.

Cronjé, J.C. (2016). 'Learning Technology in Higher Education', in Rushby, N. and Surry, D. (eds), *The Wiley Handbook of Learning Technology* (Vol. 1). John Wiley & Sons, pp. 131-144.

Doidge, C., Sara, R. and Parnell, R., (2007). *The crit: an architecture student's handbook*. Routledge.

Gachago, D., Morkel, J., Hitge, L., van Zyl, I. and Ivala, E., (2017). Developing eLearning champions: a design thinking approach. *International Journal of Educational Technology in Higher Education*, 14(1), p.30.

Goldschmidt, G., Casakin, H., Avidan, Y. and Ronen, O., (2014). Three studio critiquing cultures: Fun follows function or function follows fun?. DTRS 10: Design Thinking Research Symposium 2014 – Purdue University

Hasirci, D. & Demirkan, H., (2007). Understanding the Effects of Cognition in Creative Decision Making: A Creativity Model for Enhancing the Design Studio Process. *Creativity Research Journal*, 19(2-3), pp.259-271. Available at: <http://www.tandfonline.com/doi/abs/10.1080/10400410701397362>.

Hassanpour, B., Utaberta, N., and Zaharim, A., (2010). Redefining Critique Session as an Assessment Tool in Architecture Design Studio Class., *Wseas Trans. Adv. Eng. Educ.*, Issue, 9, pp.287-298.

Hitge, L.M., (2016). *Cognitive apprenticeship in architecture education: Using a scaffolding*

*tool to support conceptual design* (Doctoral dissertation, University of Cape Town).

Koch, A., (2002). The redesign of studio culture: A report of the AIAS Studio Culture Task Force. American Institute of Architecture Students.

Kuhn, S., (2001). Learning from the architecture studio: Implications for project-based pedagogy. *International Journal of Engineering Education*, 17(4/5), pp.349-352.

Laurillard, D., (2008). Technology enhanced learning as a tool for pedagogical innovation. *Journal of Philosophy of Education*, 42(3-4), pp.521-533.

Lotz, N., Jones, D. and Holden, G., (2015). Social engagement in online design pedagogies. In: *Proceedings of the 3rd International Conference for Design Education Researchers* (Van de Zande, Robin; Bohemia, Erik and Digranes, Ingvild eds.), Aalto University, pp. 1645-1668.

Lowenthal, P.R., Dunlap, J.C. and Snelson, C., (2017). Live Synchronous Web Meetings in Asynchronous Online Courses: Reconceptualizing Virtual Office Hours. *Online Learning*.

Lymer, G., (2010). The work of critique in architectural education. Department of Education, Communication and Learning; Institutionen för pedagogik, kommunikation och lärande.

Maftai, L. and Harty, C., (2015). Designing in caves: using immersive visualisations in design practice. *International Journal of Architectural Research: ArchNet-IJAR*, 9(3), pp.53- 75.

McCarthy, C., (2011). Is the design crit worth keeping? Testing the validity of the traditional crit and potential alternatives. *Deakin Research Online*, p.246.

Morkel, J., (2013). Open Architecture – Authentic education for the future. *Architecture South Africa*, (64), pp. 19-20.

- Morkel, J., Delport, H.E., Burton, L.O., Olweny, M.O. Feast, S. (2021). Towards an ecosystem-of- learning for architectural education: Reflecting on a network of six pedagogical clusters. *Charrette Volume 7, Number 1, Spring 2021 (1 March)* pp. 15-40(26). *Catalyst Pedagogies & the Pandemic Displacement of Architectural Education* <https://www.ingentaconnect.com/content/arched/char/2021/00000007/00000001>
- Mitgang, L. D. (1999). 'Back to School: Architects Sound Off on 10 Critical Issues Facing Architectural Education'. *Architectural Record*, Vol. 187, No. 9, p. 112.
- Ng, K.C., (2007). Replacing face-to-face tutorials by synchronous online technologies: Challenges and pedagogical implications. *The International Review of Research in Open and Distributed Learning*, 8(1).
- Ng'ambi, D., Brown, C., Bozalek, V., Gachago, D. and Wood, D., (2016). Technology enhanced teaching and learning in South African higher education—A rearview of a 20 year journey. *British Journal of Educational Technology*, 47(5), pp.843-858.
- Oh, Y., Ishizaki, S., Gross, M.D. and Do, E.Y.L., (2013). A theoretical framework of design critiquing in architecture studios. *Design Studies*, 34(3), pp.302-325.
- Osborne, L. & Crowther, P. (2011). Butterpaper, sweat & tears: the affective dimension of engaging students during the architectural critique. In Association of Architecture Schools of Australasia 2011, 18 – 21 September 2011, Deakin University, Geelong, VIC. Oh, Y., Ishizaki, S., Gross, M.D. and Do, E.Y.L., 2013. A theoretical framework of design critiquing in architecture studios. *Design Studies*, 34(3), pp.302-325.
- Percy, C., (2004). Critical absence versus critical engagement. Problematics of the crit in design learning and teaching. *Art, Design & Communication in Higher Education*, 2(3), pp.143-154.
- Poulsen, L. and Morkel, J., (2016). Open Architecture: Part-time Blended Study Model. *Architecture South Africa*, (78), pp. 28-33.
- Quinlan, A., Corkery, L. and Marshall, N., (2007). Positioning the Design Tutor's presence in the Design Studio for successful student design learning. In *Connected 2007 International Conference on Design Education*, pp.1-6.
- Republic of South Africa. (2019). Inquiry and Equity Ownership by Historically Disadvantaged Groups and the Application of the ICT Sector Code in the ICT Sector. Government Gazette no. 42234, 15 February 2019.
- Rushby, N. and Surry, D., (2016). *The Wiley Handbook of Learning Technology* (Vol. 1). First Edition. Edited by Nick Rushby and Daniel W Surrey. John Wiley & Sons.
- Schön, D.A., (1983). The reflective practitioner: How professionals think in action.
- Schrand, T. & Eliason, J., (2012). Feedback practices and signature pedagogies: what can the liberal arts learn from the design critique? *Teaching in Higher Education*, 17(1), pp.51–62.
- Shulman, L.S., (2005). Signature pedagogies in the professions. *Daedalus*, 134(3), pp.52- 59.
- Smith, C., (2011). Understanding Students' Views of the Crit Assessment. *Journal for Education in the Built Environment*, 6(1), pp.44–67.
- UIA. (2017). UIA.[ONLINE]Available at: <http://www.uia-architectes.org/sites/default/files/charte-en-b.pdf>. [Accessed 20 February 2018].
- Voulgarelis, H. & Morkel, J., (2010). The importance of physically built working models in design teaching of undergraduate architectural students. *Connected 2010 - 2nd*

*International Conference on Design Education*,  
(July), pp.1–8.

Webster, H., (2004). Facilitating critically reflective learning: excavating the role of the design tutor in architectural education. *Art, Design & Communication in Higher Education*, 2(3), pp.101-111.

Webster, H., (2005). The architectural review: A study of ritual, acculturation and reproduction in architectural education. *Arts and Humanities in Higher Education*, 4(3), pp.265-282.

Zoumenou, V., Sigman-Grant, M., Coleman, G., Malekian, F., Zee, J.M., Fountain, B.J. and Marsh, A., (2015). Identifying best practices for an interactive webinar. *Journal of Family & Consumer Sciences*, 107(2), pp.62-69.