Dialogue in the Studio: Supporting comprehension in studio-based architectural design tutorials

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Abstract

This article examines perceptions regarding the purpose and delivery of tutorials in the architectural design studio that can support how students comprehend feedback. It draws on literature on 'dialogic feedback' and theoretical accounts of 'dialogue', framing the notion of the dialogic as one in which meanings and identities are realized through a multi-voiced state, questioning the extent to which studio-based tutorials can be considered dialogic. The study uses thematic analysis to reflect on 212 accounts of educators and students at a UK-based architecture school. The article highlights that a comprehension-oriented praxis as opposed to an assessment-oriented praxis can better enable dialogic practice, allowing learners to realize, position and comprehend their own voice amongst the divergent views. The article extends the critical body of work dedicated to evaluating feedback delivery in one-off review sessions, to the context of tutorials and their longitudinal implications on the learning experience.

Keywords

dialogue; dialogic; dialectic; comprehension; tutorial; feedback

Introduction

Assessment and feedback has been reported to be one of the most problematic areas of the student learning experience (Beaumont et al. 2011; Carless et al. 2011) and an aspect of higher education most resistant to change (Sambell 2016). It often comes late in the process of learning, focuses on error correction and knowledge transmission and affects the students' ability to comprehend and act upon the information (Carless 2006; Higgins et al. 2001). Such an approach has been reported to hinder students' ability for self-regulation and independent learning, creating a state of confusion, anxiety, tension (Austerlitz and Aravot 2006; Pope 2005) and an unsustainable and unethical mode of education. In this light, a need for reconceptualizing feedback as a tool for continual learning has been recognized (Merry et al. 2013), which is that of *dialogic feedback*.

Dialogic feedback is defined as an 'interactive exchange in which interpretations are shared, meanings negotiated and expectations clarified' (Carless et al. 2011: 397). In order to foster an environment for dialogic feedback, literature suggests that educators should become facilitators for learning, creating a friendly atmosphere, which invites contribution and elaboration, through frequent interactions. This atmosphere should be infused with high expectations, positivity and empathy in approach as well as provide clarification of expectations in terms of high-quality performance in order to motivate deep learning, criticality and self-assessment (Carless 2013; Juway et al. 2004).

If students' comprehension can be regarded as one of the key goals of dialogic feedback, it comes as a surprise that there are seldom any evidence-based studies exploring the impact of the prescribed dialogic strategies on comprehension. This gap in knowledge extends to the context of scholarly work on architectural education. Whilst there is a significant body of critical work on the delivery of one-off formal review sessions (Dannels et al. 2008; Flood 2018; Goldschmidt et al. 2010; Nicol and Piling 2000; Sara and Parnell 2013; Scagnetti 2017; Smith 2011; Uluoğlu 2000), the effectiveness of tutorial practices on students' comprehension within the design studio is less examined.

Notably, most of the recommended strategies for dialogic feedback appear to be common practice in studio-based architecture tutorials. Whilst developing a design project, students are required to converse on their ideas with numerous tutors, exposing them to a diverse range of tutoring approaches. Tutorials, conducted regularly over the course of a project, usually on a one-to-one basis, are believed to provide a structured process for educators to work together with the students to construct knowledge through a shared critical investigation (Volakos 2016) as well as a suitable context for building an effective working relationship with the students (Webster 2004). Nonetheless, in practice, students at times comprehend the feedback differently to what the educator perceived to have been mutually agreed, or they express confusion and lack of clarity regarding the feedback received. Consequently, progress from one tutorial to the next becomes limited. This may be partially due to the nature of the creative process and acknowledging fixations and divergence as attributes of the process. However, it could also be due to a lack of adequate comprehension resulting from limited considerations of underlying cognitive, affective and behavioural factors shaping the space of the tutorial: 'the dynamics and complex nature of this relationship [between educator and student] is

seen to contribute to the "emotional knowledge" a student develops and integrates with their own "emotional biography"' (Belluigi 2016: 37).

Respectively, it has to be noted that dialogic feedback is at foremost a trust building exercise in terms of both competence and communication (Carless 2013). Arguably, the purpose of this is to empower the voice of the learner and to overcome some of the power dynamics that may underlie monologic modes of teaching and feedback. If dialogue is to be taken as an ethical mode of communication, each party should seek to engage in the dialogue on equal grounds with an effort to recognize one another's values rather than to achieve specific goals and outcomes (Kent and Taylor 2002). Nonetheless, a number of studies on architectural studio suggest this not be the case. For example, Webster (2006) discusses how students learn and develop strategies to comply and attain the outcome they seek. Additionally, McClean and Hourigan (2015) show that whilst architecture students perceive educator-led tutorials instrumental to progression of their projects, opportunities for critical enquiry and reflection are deemed more feasible in the absence of the educator, and through conversations with peers. Such a condition where a student may not fully reveal their thinking process or intentions and may feel obliged to agree with the educator on grounds that remain unclear and ambiguous to them suggests a praxis that is distanced from dialogic principles and values.

Although, the manifestation of power dynamics may be due to the top-down authority society imparts on the relationship between educators and students (Dutton 1991), it also denotes a distance between strategies used for curating an environment for dialogue and behaviour that can truly be considered dialogic (Gunson and Collins 1997). The roots of the dialogic can be traced back to the works of literary critic, Mikhail Bakhtin. For Bakhtin (1986, 1981), dialogue is a multi-voiced state, wherein our very being in the world is dialogic as we are constantly positioning ourselves within a sphere of different views. This means that meanings are created through the realization of identities, concepts and values within the space of difference. However, another interpretation of dialogue use, which at times is also considered dialogic, is that of Vygotsky (1986, 1978). As will be discussed in this article, the Vygotskian account focuses on the synthesis of voices involved in dialogue and fundamentally reflects a dialectic rather than dialogic account. The nuances in these two accounts can also shed light on how a practice that may seem to be dialogic does not fully support students' comprehension.

In light of the above, this article questions how dialogic existing praxis in studio-based architecture tutorials are and what factors affect the comprehension of feedback.

If dialogic means to include voices of those involved in shaping the space of interaction, it would seem that an initial step towards creating an evidence-based understanding of the relationship between feedback strategies and students' comprehension is to draw on the voices of educators and students actively involved in the design studio, reflecting not only on similarities between views but also on the differences. To this end, the article reports on findings of a thematic analysis of an open-ended questionnaire involving eighteen educators and 35 graduating year undergraduate architecture students, at a RIBA (Royal Institute of British Architects) accredited architecture school in the United Kingdom, as a case study for manifesting the type of tutorial space that may be commonplace within architectural education.

The dialogic and dialectic use of dialogue

The immediate definition of dialogue may seem very clear to be that of exchanging ideas and thought mediated by a system of signs such as that of verbal language, that is a form of communication. Nonetheless, works of two scholars, Vygotsky (1986, 1978) and Bakhtin (1986, 1981), on human consciousness have led to ontological interpretations of dialogue, which has created divided schools of thought on the topic of dialogic education (see inter alia Eun 2018; Leiman 2002; Matusov 2011; Pietikainen and Dufva 2006; Shotter 1993; Sidrokin 1999; Wegerif 2008; Wertsch 1993; Williams and Ryan 2019). At the heart of both Vygotsky's and Bakhtin's ontological take on dialogue was the idea of social primacy (Holquist 2002), in that our consciousness is defined, shaped and realized by the presence of the multiple others.

For Vygotsky, as a psychologist interested in cognitive development, dialogue facilitates a proximal zone in which 'the voice of the less competent [merge] with the voice of the more competent to arrive at a qualitatively higher form of understanding of the world' (Eun 2018: 498). In this light, meanings arise due to the synthesis of multiple voices, drawing together thesis and antithesis into a novel configuration that semantically cannot be reduced to its parts (Sidrokin 1999), but one that bears notions of the old, allowing the past to be ingrained into the present (Williams and Ryan 2019). This progression towards a unified consciousness is argued to reflect Hegelian notions of dialectics that were shaped as an opposition to monologism. In this sense, multiple voices are in interaction long enough as to reach a resolution, in which use of language and signs is seen as a mediation tool (Wegerif 2008).

Bakhtin as a literary critic, nonetheless, was interested in the polyphonia of voices. For him, meanings arise when one positions their own voice within a sphere of other voices, similar to a musical chord: 'In a chord, voices remain different, but they form a different type of music, which is in principle unachievable by a single voice' (Sidrokin 1999: 23). Bakhtin advocated a heteroglossic account of language, meaning that 'to speak or write is always to reveal the influence of, refer to, or take up in some way, what has been said/written before, and simultaneously to anticipate the response of actual, potential or imagined readers/listeners' (Martin and White 2005: 92). The physical presence of another is not a prerequisite to a dialogic scenario, as our sole use of words always carries the voices of those who have used it before (Bakhtin 1981). Language in this sense acts as a bridge (Leiman 2002) between the co-dependent identities that shape the space of dialogue. This enables us to infer meaning through realizing the position of a word within the dialogic sphere, similar to how we would read or interpret a poem, which we approach by trying to understand the poet, the audience, the context and time of the literary piece.

In principle, for Bakhtin meaning is engendered through hearing the differences that coexist in the dialogic sphere, rather than through replication of voices of others, until internalized and unrecognizable from our own voice. This explains his critique of a dialectical account: 'take a dialogue and remove the voices (the partitioning of voices), remove the intonations (emotional and individualizing ones), carve out abstract concepts and judgements from living words and responses, cram everything into one abstract consciousness – and that's how you get dialectics' (Bakhtin 1986: 147, cited in Wegerif 2008).

Some scholars argue for similarities between Bakhtin's and Vygotsky's views, where Bakhtin's work is seen as a further elaboration on Vygotsky's or that the two views are complementary whereby the Bakhtinian interplay of voices can be placed within Vygotsky's developmental framework (Eun 2018; Shotter 1993; Wertsch 1993; Williams and Ryan 2019). In particular, in the context of education that is conscious of development, this Neo-Vygotskian rendering of what it means to be dialogic has been well received. However, arguably, what makes the two accounts incompatible (Matusov 2011; Wegerif 2008), is that the notion of dialogue in the Bakhtinian account 'takes the role of an ethical ideal' (Sidrokin 1999: 19), in which all voices are of equal standing. In this sense, because identities are formed within the interaction itself, power dynamics do not precede the interaction. However, any practice in which reaching a singularity is aimed (such as a dialectical one), inevitably is steered by the more prominent voice within the space of interaction. Therefore, to be dialogic in Bakhtinian terms is to transgress towards a more ethical form of being. For Bakhtin, we exist because of dialogue and for Vygotsky we exist through dialogue, which are fundamentally irreconcilable. Consequently, akin to scholars holding a similar view, this article associates notion of dialogic to Bakhtin's account and dialectic to Vygotsky's account.

Based on the above, in an educational context, arguably, dialogue can be both dialectically or dialogically practised. In a dialogic mode of practice, dialogue will be used to hear the voices and orchestrate them into a meaningful whole, through positioning, so that individuals realize the distance between their own thoughts and others and learn by analysing the differences. In a dialectic mode of practice, dialogue will be used in search of a shared voice that partially and proportionately reflects the society of voices, so that individuals learn to harmonize and refine their voice best resonating the shared values. In a dialogic practice, the roles of the educator and student in how they contribute to knowledge creation will be in constant flux and interchangeable, dependent on the cognitive, affective and behavioural scenario of the interaction; what one student takes away from a learning session may most probably be different from the other. In a dialectic practice, the educator more or less maintains their role and teaching style, allowing the shared knowledge to be disseminated with more parity amongst students.

In this light, a dialogic mode of practice can be more beneficial for nurturing of the individual whereas a dialectic mode of practice can benefit the development of the society of learners as a whole, placing dialectic practice as a more practical approach in context dealing with large cohorts of students. Nonetheless, the one-to-one tutorial framework that lies at the heart of architectural pedagogy affords great opportunities for a dialogic practice, as it can enable the educator to nurture effective working relationships individually with each student.

Methodology

Prescribed architecture programmes in the United Kingdom adhere to the subject benchmarks set out by the QAA (the Quality Assurance Agency for Higher Education) in compliance with the ARB (Architects Registration Board), meaning that all programmes loosely operate within the same pedagogical framework. Respective to the design studio, this entails the production of design portfolios that demonstrate students' learning against the outlined goals set out in the subject benchmarks. Therefore, the assessment criteria for studio-led projects across the

country are generally the same. The described context enables a sampling of the population, focused on tutorial practices and perceptions within one UK-based institution, as a representative of the wider population. The study was taken out with a population of 23 educators and a cohort of approximately 90 graduating year undergraduate architecture students, using an open-ended questionnaire. Informed by arguments of Morse (1994) and Creswell (1998) regarding suitable study group size in qualitative studies, as well as considering the number of participants available, the study aimed to recruit at least fifteen educators and fifteen students, which culminated in eighteen educator and 35 student participants.

In designing the questionnaire for this study, psychological determinants such as question order effect, the assimilation effect and respondents' mental construal (Schwarz et al. 2008), in order to encourage inclusive responses, were considered. In addition, importance was given to the length of the questionnaire (Galesic and Bosnjak 2009) and the method of execution (Sahlqvist et al. 2011) to ensure the expected participation. The questionnaire, outlined below, was carried out through a web-based platform:

1.What do you think is the purpose of design studio tutorials?

2.What do you think students expect from their tutors in delivering tutorials?

3.What do you think affects how well students comprehend feedback given in tutorials?

4.What do you think can be done to improve students' comprehension of feedback from tutorials?

As displayed in Figure 1, the first two questions were designed to enable participants to elaborate on their understanding of tutorials. The first question enables the participant to recall on personal experiences, moving onto the second question, encouraging the participant to position their view amongst that of others and elaborate on the tutorial space that they believe best reflects the collective perception. According to Schwarz et al. (2008), when faced with a topic, participants will assume that what comes to their mind bears relevance to the topic and unless propelled to think about issues excluded from this initial thought, there is a likelihood that the same attitude assimilates onto responses to further questions. Therefore, the first two questions collectively were designed to guide participants to mentally construct a representation of tutorials that mediates between observations and expectations, in order to bring attention to the distance that may lie between the observed and the expected. Questions 3 and 4 were then designed to allow participants to voice the reasons underlying the identified gap from the viewpoint of students' comprehension.

To be able to depict how dialogic tutorial practices are, it was deemed important that the method of enquiry takes on a dialogic approach in its own right. In the last section, it was highlighted that being dialogic is an ontological concept, where our being in the world is recognized in relation to others. Therefore, unlike purely constructivist approaches, a dialogic approach evades from synthesizing voices into a shared meaning. The research would, therefore, place the focus of the analysis on the interaction between distinct perspectives, rather than the perspectives themselves and look for emerging themes and patterns that give meaning to the interactional space shaped by the multiple perspectives.

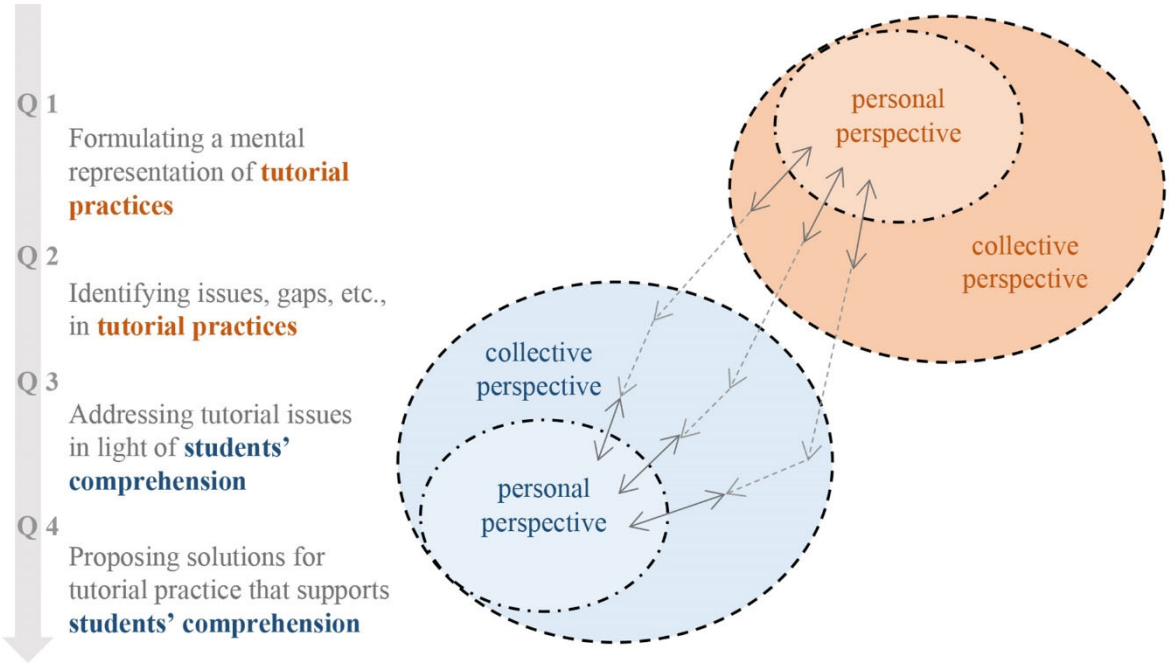

Figure 1: The structure for the questionnaire.

Within this framework, thematic analysis (Braun and Clarke 2006) was used as a tool to elicit inductive, latent themes within the responses, as illustrated in Figure 2. It began with memo-writing as an act of familiarization with the data. Initial coding began with identifying keywords as codes in responses to each question (focused coding). The keywords were then used to cross-compare responses addressing the same issue for the same participant across different questions, between participants within the same group (i.e. educators or students) and in between groups. Memo-writing was used to identify how different keywords relate to one another, resulting in a series of relational codes (axial coding). This in turn allowed the search for themes to commence unbounded to the question category. First, axial code categories were relationally positioned and structured distinguishing themes into two modes, whereby it became evident that the themes and their underlying code categories could be further categorized based on whether they responded to an interactional context that is founded on perception of the tutorial or one that is founded on the need for supporting comprehension. Second, higher-level codes (theoretical coding) that collectively and conceptually represent the overarching themes shaping the diversity of views regarding the interactional context for tutorial practice were derived.

Findings

Collectively 212 individual responses were generated in this study, suggesting the interactional context of architectural tutorials to be perceived as a space shaped by three theoretical themes, namely (1) mentorship, (2) knowledge transmission and (3) professional exchange. The determinants informing the named themes were also recognized to be threefold and comprised (1) the perception of the roles of educators and students, (2) mapping of the interactional

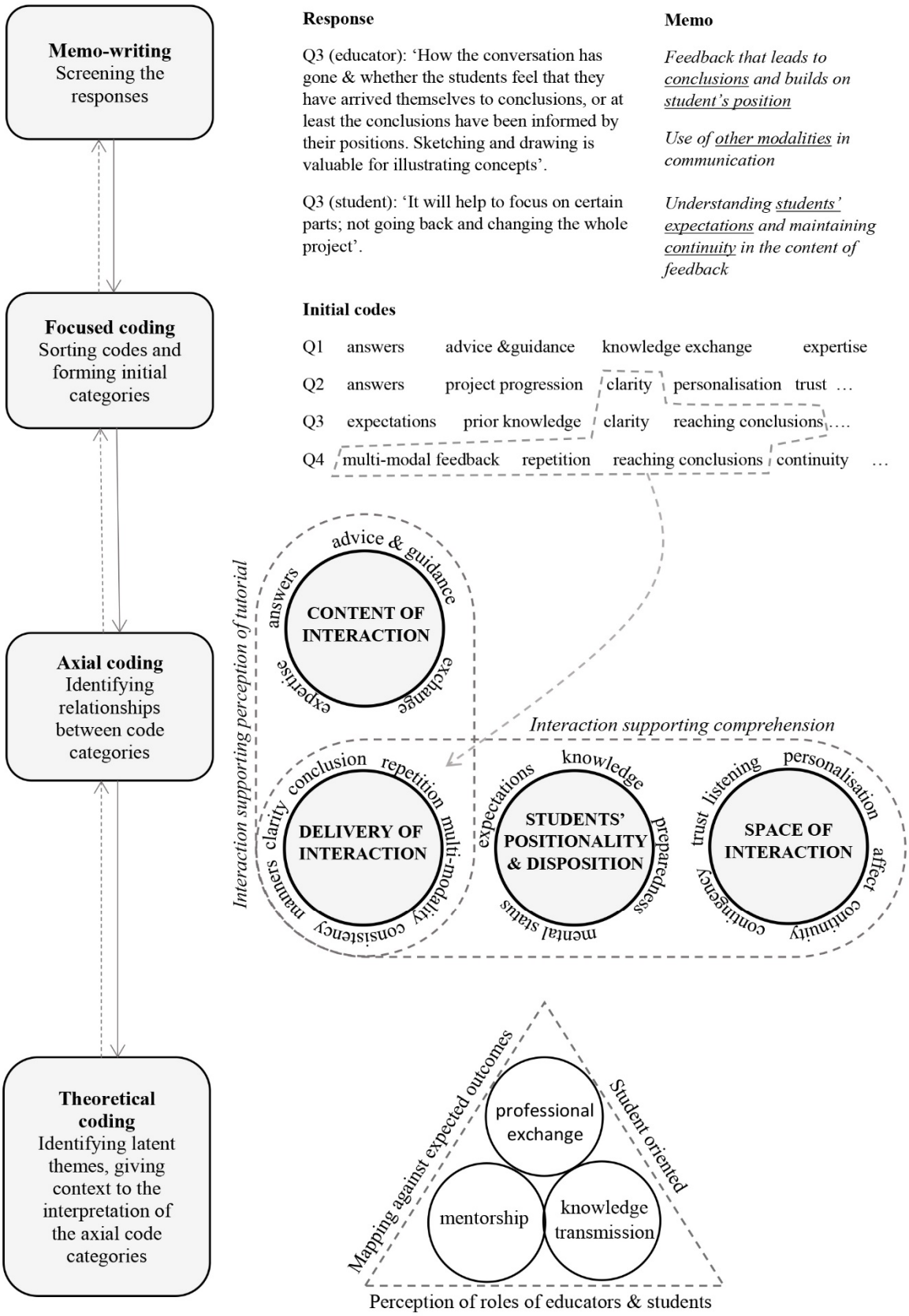

Figure 2: The coding process and identification of themes.

Q1: what do you think is the purpose of design studio tutorials?	
Tutorial as mentorship	'To advise, guide, help progress student's work. To answer student's questions and clarify the task, and suggest ways forward based on student work. To respond to student work; to question, test, interrogate that work through discussion. To point out shortcomings and suggest alternatives. To identify strengths. To mentor and coach'.
Tutorial as professional exchange	'A design tutorial is a conversation between two people (tutor and student) over the possibilities for development of a design proposal being developed by one of those people (the student). The discussion should take benefit from both people's experience of design with the tutor providing their experience to help the student find a positive way forward with their design work. There is, I believe, an element of co-learning in this relationship; as well as the use of the tutor's design skill in developing a student's approach to design. Thus, a design studio tutorial requires at least three things: two people in conversation and some work'.

Table 1: Example of educator's response to question 1

context against expected outcomes of tutorials (i.e. assessment) and (3) positioning the student as the beneficiary of the interactional context.

The theoretical code categories together with the determinants provided a basis for understanding and evaluating tutorial practices outlined within the axial code categories. For example, within a mentorship framework, the content of interaction may be more inclined towards advice and guidance provision, compared to a professional exchange framework that may predominantly focus on expertise provision. Additionally, the meaning of each factor shaping the content of interaction (e.g. advice and guidance) was seen to be nuanced depending on the framework in which it was presented. Table 1 shows an example of two educators' responses in relation to Q1, in which the nuanced meaning of advice and guidance can be seen.

The first view, placed within the mentorship framework, sets a prerequisite for work to have been produced by the student in enabling advice to be given by the educator– the educator responds to the work. The second account – of a more professional exchange nature – gives prominence to the conversation and exchange of ideas between two people. Although, in this account the work produced by the student also plays an important role, the co-learning implication of the tutorial comes to the forefront of attention. The mentorship framework, in particular, demonstrated how a significant number of the participants perceived the purpose of tutorials. Respectively, the three theoretical codes were used to code responses to Q1. After two rounds of coding and attaining a high intra-coder reliability of $K > 0.8$ using Cohen's Kappa (1960), 56 per cent of the educators and 66 per cent of the students were shown to perceive tutorials as a space for mentorship.

How mentorship was defined nonetheless varied, with notions of mentorship as validation and mentorship as providing guidance and advice being dominant. When comparing responses to Q1 and Q2 (refer to Table 2), that is the purpose of tutorials and students' expectations of tutorials within the thematic category of mentorship, a notable observation was made.

Whilst educators unanimously perceived the purpose of tutorial to be one of advice and guidance, a considerable number of students' responses both in their perception and expectation of tutorials suggested it as a space for

Q1: what do you think is the purpose of design studio tutorials? **Q2: What do you think students expect from their tutor in delivering tutorials?**		
	Educators' responses	*Students' responses*
Mentorship as advice and guidance	Q1: 'To nurture the student's confidence and ability to develop their design project/objectives. To develop the student's ability to communicate and reflect on their work'.	Q2: 'Help with any issues and problems and recommendations on the pathway to follow as well as further reading and research that they should pursue'.
Mentorship as validation	Q2: 'Knowledge of architecture and answers to their questions as well as confirmation of the righteousness of their design'.	Q1: 'The design tutorial is a chance to validate my work. To make sure that what I am creating makes sense and is grounded in reality. It is an opportunity to make sure I am on the right track and if I am stuck to get myself moving'.

Table 2: Example of responses from students and educators on tutorial as a space for mentorship

validation. Some educators in response to Q2 also acknowledged that there can be an expectation of validation in tutorials. This expectation amongst students for validation reflects the hidden curriculum known to be in inherent in higher education, whereby students tailor their learning experience based on their understanding of assessment (Snyder 1971; Gibbs and Simpson 2005; Nicol and Piling 2000). In this light, even where an educator envisages a tutorial as a space for explorative discussions and challenging ideas, the students' expectations paired with the value given to students taking ownership of the work produced inevitably skew towards an assessment-focused space for tutorials. The differences evident in perceptions and expectations of tutorials between educators and students have also been reported in a number of other studies both in and outside of architecture (Carless 2006; Sara and Parnell 2013), and it is often discussed in relation to how well students and educators communicate their assumptions and expectations (Carless 2006). Educators within this study also acknowledged the need for the clarification of the meaning and expectations of tutorials as well as highlighting differences between feedback and tutorial at the outset of a tutorial. As implied, this would allow assessment-oriented comments to be provided but at the same time facilitate opportunities for a dialogic engagement with a topic during the tutorial – one educator's comment in response to Q4 provides a good reflection of this:

Irrespective of the movement towards feedback as omnipresent, we might consider differences between the tutorial and feedback: 'you haven't used the right convention for level changes' is feedback but 'let's spend some time talking about level changes' is a tutorial –…[the latter] may well be highly useful and cause the student to think more carefully about their work.

Additionally, some of the students' responses to Q2 denoted a distance between expectations and perceptions of the tutorial, as their response elaborated on shortcomings they considered in tutorial delivery. For example, issues such as variance in feedback received by multiple tutors were raised here ('all tutors should give the same information to students and shouldn't be conflicting', student response to Q2).

Addressing the question, by drawing on perceived shortcomings and challenges carried through to Q3 and Q4. Notably, the importance of reaching a conclusion (progressing towards an outcome) and documenting the feedback were recurrent amongst both educators and students. In other words, the lack of convergence towards the end of a tutorial and leaving the content produced, open to interpretation was commonly deemed defiant of the purpose of the feedback given in a tutorial.

If we allow ourselves to distinguish between feedback and tutorial and if feedback is to be taken as something provided during a tutorial, the value given to convergence and goal-oriented strategies in supporting comprehension by participants in this study showcases the dominance of feedback within this interactional context. Therefore, whilst a tutorial in itself may afford dialogic interaction, the dominance of feedback overall renders the tutorial experience as dialectic. In this space, the educator and student would be regarded as independent identities, with defined roles that cooperate in the act of making connections between different ideas and synthesizing the collective knowledge towards a convergence. Therefore, regardless of the thematic framework in which tutorials were perceived to operate in, in almost all responses the educator was placed as the facilitator of the interaction and the student as the recipient and the implementer of the feedback to the work, as is common-place in education in general. In no scenario were the roles of students and educators explicitly seen to be dynamic and formed during and as a result of the tutorial, which would be expected if tutorials were perceived more dialogically. As highlighted earlier, the process of synthesis inevitably calls on certain contributions to become discarded and others to bear more weight in favour of the synthesized idea, which can impart an unnecessary power dynamic, empowering the voice of the party with the most 'relevant' contribution. Given this, the converged outcome can be effectively implemented by the student (who we already discussed has taken on the implementer role), only if the process of synthesis maps closely to the intentions and expectations of the student. However, if the student's voice becomes subordinated, the student will have to both reassess and readjust ideas and values to best resonate the synthesized outcome or seek a more aligned pairing with their initial ideas and intention through other tutorials with other educators/peers.

Responses to Q3 and Q4 in part resonated a dialectic inclination in strategies suggested for supporting comprehension. For example, the use of repetition (refer to Figure 2), where the student or the educator would repeat the key points complemented by different forms of communication (besides verbalization), such as note-taking, was commonly suggested. However, the responses to these questions also shed light on a facet of the interactional context of the tutorial that was not reflected in respect to its purpose. Understanding the students' positionality and disposition as well as the space that is created for the interaction were identified as two key themes (example of which can be seen in Table 3). Under these two themes, the responses overall acknowledged that having a good understanding of what the student knows, their expectation, preparedness and mental status delivered in a pace that is built on trust and values relationship building and a personalized and contingent plan tailored to each student is key in the uptake of information.

Arguably however, the interest dialectic practice has in convergence provides little affordance for exploring conversations beyond the boundaries of a topic for which synthesis should be attained.

Q3: what do you think affects how well students comprehend feedback given in tutorials? **Q4: what do you think can be done to improve students' comprehension of feedback from tutorials?**	
Educators' responses	*Students' responses*
Q3: 'Their previous experiences in learning and the consequent understanding of feedback; Their confidence levels'.	Q3: 'The more personal the review is (the fewer the students in the tutorial session) the more the student understands their issues and how to solve them'.
Q4: 'Listen more, invite more conversation in groups, encourage students to sketch more and prepare well for the tutorial'.	Q4: 'Speaking clearly, showing care about students' success in university, giving them clear advices that are easy to comprehend and follow but do not change the students' design'.

Table 3: Example of responses from students and educators, commenting on issues related to students' positionality and disposition and space of interaction in supporting comprehension of feedback in tutorials

The factor of time, in particular, plays a vital role in establishing trust between parties involved, in order to reveal and realize aspects of each other's dispositions, attitudes and values. Notably, we see that scenarios in which students have not had the chance to build an effective working relationship with the educator, such as formal crit sessions, are most subject to criticism. Additionally, the formal crit is a good example that places pressure on the student to try and harness the direction of the discussion and feedback to enable them to progress forth, rather than open the design to new possibilities. However due to limited time, and factors such as stress levels and communication skills, the feedback derived from a crit may not be fully comprehended and of much immediate use to the student in progressing their design.

By extension, although much more subtle, in studios with multiple educators where the student becomes exposed to different educators' feedback in consecutive sessions (or within the same session) can also be considered to hinder opportunities for building the working relationship required for effective comprehension. Although, at face value, exposure to multiple educators' feedback may seem supportive of a dialogic approach, but without a more fundamental dialogic agenda that considers the tutorial as a longitudinal practice nurtured with time, it can lead to confusion for the student. In effect, because the student does not have adequate opportunities to understand and realize the experiences, values and thought processes of each educator, it becomes very difficult to orchestrate the multiple voices and position their own amongst them. The students' responses in this study respectively depict and confirm such paradoxical situation: on the one hand, they commented on the need for better resonation between different educators' feedback, and on the other, their appreciation for being exposed to different views was evident.

Arguably, what can be alluded from this study is, if tutorials are practised with the purpose of comprehension, there can be a clearer inclination towards dialogic practice, whereas when tutorials are outcome-oriented and are practised to satisfy expectations for feedback, that is progressing and preparing students for an end goal (such as the assessment), a dialectic atmosphere becomes prominent. Respectively, the theme of delivery of interaction manifested itself at the intersection between both modes (refer to Figure 2). What this displays is that similar strategies can be used to explore and perform in both dialectic and dialogic spheres of interaction.

For example, in a dialectic scenario (prioritizing feedback), strategies such as summarizing and concluding will enable the student and/or educator to bring together multiple feedback. In this scenario, comments of other educators need to be set out on the table as part of session as a guideline for the feedback in process and the educator and student work together in negotiating a line of action that best reflects the collective ideas. In a dialogic scenario (prioritizing tutorial), the conclusion technique will be used to organize and clarify the ideas discussed without necessarily trying to draw a collective synthesized conclusion, as a way of enabling the student to position and formulate their own understanding rather than it be imparted on them. This scenario is very contingent and rests on considering both the affective and cognitive status of the student in guiding them through the position finding. In other words, when the delivery of interaction attunes itself with factors affecting the students' positionality and disposition as well as considering factors affecting the space of interaction, it can better facilitate a tutorial praxis that supports comprehension.

Conclusion

What this study displayed through its case study was that the interactional context of architecture tutorials, steered towards convergence and synthesis of ideas. In this sense, the tutorial practice was discussed to be dialectic: divergence is valued so as long as it culminates in convergence, enabling the learner to progress. Notably, student-led learning was repeatedly emphasized, which is also a common value within contemporary education in general. In this light, a tutorial was seen dependent on the student having progressed and produced work and culminates in the student ensuring they have understood the feedback through note-taking for example. This, in turn, spoke of a distinction between roles of the student and the educator, where the educator is very rarely seen to take on a learner capacity. The findings suggested the perception of tutorials to be mainly a space for mentorship, in either forms of advice giving or validation, which arguably assigns a more active role for the educator and passive for the student who awaits directions from the educator. Nonetheless, the space of interaction was discussed to be shaped by the students' expectations for feedback that support progression towards an end goal (i.e. assessment). Consequently, in this scenario, the dialogue that manifests was suggested to not be one of collaboration and co-production, but one of an interchange of questions and responses.

The article also highlighted that in order to support comprehension, the employed strategies should take into account a range of factors broadly categorized under themes of the students' positionality and disposition and the space of interaction, which calls upon a dialogic mode of practice. As outlined, a dialogic practice relies on trust and an elimination of power dynamics to enable both parties to position their voices and realize their designer identity. By drawing on the participants' responses, the article made a distinction between two types of activities that coincide in the interactional context – one being the tutorial and the other the feedback. The tutorial itself was discussed to afford a dialogic engagement and the feedback activity was recognized as the assessment-oriented element. In light of this, the responses showed that in existing praxis, the feedback activity dominates the interactional context, which in turn renders the overall tutorial experience dialectic. Nonetheless, it was discussed that the same categorical strategies could be used in both dialectic (feedback focused) and dialogic (tutorial focused)

modes of practice. This leads to the promising conclusion that to move towards dialogic practice in architectural education, and provide an ethical and sustainable means for learning through nurture, substantial change in strategies for tutoring is not required – in fact, what is required is a revaluation of the infrastructure upon which the students and educators engage in tutorial sessions, which should support the building of an effective working relationship between the educator and the student over time.

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