

## Untangling Strong and Weak Ties in Blended Assessment

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This paper traces the socio-technical performances of formative blended assessment. Using the notion of relational ties, it untangles the connections of ties showing how assessment dyads are formed and unformed throughout the assessment process. I argue that these attachments and detachments characterize blended learning.

### Introduction: The focus of the research

Although relatively new, electronic assessment, or e-assessment has been having an increasingly important influence on assessment in higher [1, 2] and further education. [3] This is due in part to the growing influence of information technologies in education, a greater emphasis on quality, standards, accountability and transparency in learning and assessment [4] that has meant that e-assessment can be seen as being more aligned to these values.

The sometimes contentious role of the human rater has meant that e-assessment is seen as a way of reducing the degree of subjectivity in assessment [5] resolving the 'emotional and subjectivity issues that are evident in human centered marking' [6]. The use of e-assessment in distance education can be seen as a way of improving social inclusion and access to learning opportunities [3] as well as being consistent with rising levels of digital literacy.

However, e-assessment is also problematic since 'issues of security, accessibility, identification, and plagiarism,' are a concern [7] and certain techniques frequently used in e-assessment such as multiple-choice questions can distort results jeopardizing learner success [8].

E-assessment is a term that covers a wide range of assessment strategies, tools and techniques. Two recent definitions taking into consideration the current state of e-assessment today describe e-assessment as 'a method of using information technology for any assessment-related activities' [2] or as any form of assessment using information technologies that 'has come to be known as e-assessment, which includes the entire assessment process, from designing assignments to storing the results with the help of ICT' [1]. Blended assessment is defined here as a type of assessment where the assessment mode is mixed and takes place both online (human↔machine) and in a classroom (human↔human).

### Research question

How do strong and weak ties support or contradict the performance of blended assessment?

### Background

B-Learn (a pseudonym) is a small to medium sized language school in France. B-Learn's principal activity is helping learners acquire English as a Foreign Language (TEFL). Learners spend much of their time studying autonomously with a machine or what B-Learn terms 'a blended language-learning method.' These online sessions, accessed through the 'front-office' of the LMS (Learning Management System) are then followed up with face-to-face sessions designed to develop and assess the learner's speaking ability.

### Methodology and methods

Using Fenwick and Richards ANT-informed ethnography [9], evidence of sociomaterial interactions was sought by analyzing transcripts and field notes. Additionally, when notions of turn-taking were relevant, 'applied Conversation Analysis' [10] was used to examine the way in which assessment took place within human to human interactions.

To trace and describe the sociomaterial interactions Contractor, Monge and Leonardi's [11] multidimensional network framework was also used. This allows for temporary stabilization of the shape and dynamics of the different types of sociomaterial relationships between human and non-humans in blended assessment.

Data were collected over a three-month period from November 2011 to January 2012. Observations of human to human classroom interactions, learner-machine, teacher-machine and teacher-learner

interactions in the LMS as well as focus groups and interviews with learners and teachers. The sample was purposive; one set of learners was chosen as they studied exclusively in centre, and others as they studied both in and off-centre. The teachers who participated were chosen for the range of teaching experience and experience with blended assessment. These teachers and learners gave written consent to participate in the case study and have been given pseudonyms.

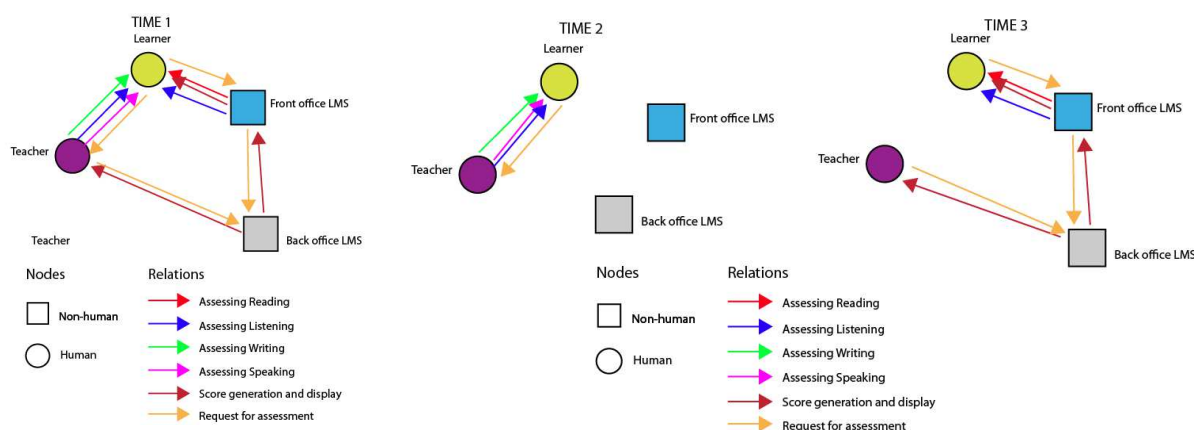
Name	Role	Site
Dave, Vicky, George, Juliette, Tom, Susan	Teacher	In-centre, off-centre
Adam, Gilles, Jean-Luc, Phillipe, Sophie	Learner	In-centre
Judy	Learner	In-centre, off-centre

Table 1. Participants in case-study

## Findings

### Performing blended assessment

This study identifies moments where blended assessment was enacted. It was at these moments, when the ties between the various actors were particularly strong that learner, LMS and teacher form a networked assessment triad (Fig. 2).



Figures 2 & 3. Tracing blended assessment using a multidimensional network diagram

Nevertheless, even though ties between all three actors were often present, they tended to act in dyads and this is where the relational ties were particularly strong. When teacher-learner dyad ties became stronger, ties with the e-learning were attenuated (Fig. 3, Time 2). However, if two or three weeks elapsed without face-to-face contact, the learner's ties to LMS would strengthen as those with the teacher would weaken. Similarly, the teacher would work with the LMS, then with the learner and back to the LMS, maintaining the strongest ties with the learner (Fig. 3, Time 3).

### Performing assessment as a teacher and learner

Vicky and Arnaud are attempting to simulate a negotiation. Throughout the lesson, Arnaud's (L) speaking and listening skills are assessed by Vicky (T), through a turn-taking procedure:

L: hhh It was a little bit hard to uh:: manage this situation

because uh:::: I liked this girl and [uh:::]

T: [hmm↓]

L: and she thought we::: cheated on her

T: Yeah↓ We cheated her.

L: We cheated her?

T: Yeah it's [um]  
 L: [CHEATED↓] it's not cheaton me? Can I say  
 T: [To cheat on someone is normally to do with eh: a relationship]  
 L: °ah oui°  
 T: and, it's °yeah.°  
 L: Okay all right No this wasn't  
 T: ((laughs))  
 (Transcript BA\_OBS1)

These negotiations of meaning [12] in the above extract, maintain the learner enrolled within the logic of assessment. The mutual recognition of his linguistic 'incompetence' [12], a high tolerance for other-correction and the teacher's expert status are agreed upon as they are both working within a shared understanding that the teacher is there to assess his language ability. The teacher's other-initiation of repair, intended to help the learner, all maintain the learner in a state of almost continuous problematization; no sooner is one error corrected but a new one is identified and corrected. At the end of the lesson, a more explicit assessment is made and the teacher informs the learner that they have made 'a lot of progress'. (Transcript BA\_OBS1)

Before leaving the classroom Arnaud is exhorted to remain within the logic of blended learning by being more assiduous in his online study. The human-human assessment dyad is not only of worth in itself, but also seen as a way of validating the work done online.

### Performing assessment as a learner and LMS

Another learner, Juliette is enrolled on a three-month blended learning course. Between November and January, she is assigned a total of 84 online assessments of which she completes 81. Each of these online lessons contain reading and listening texts followed by a variety of question types such as MCQ, matching, matrix and ordering questions for which she receives a score. She can also navigate within the lesson to see why a response may have been marked as incorrect.

The relational ties between Juliette and the e-assessment vary in strength. She decides when and where she will connect to the LMS. At some moments she will not connect and at others she will perform up to eight e-assessments in one day. Once a fortnight, Juliette has a class with a teacher that contains an assessment activity (Fig. 4).

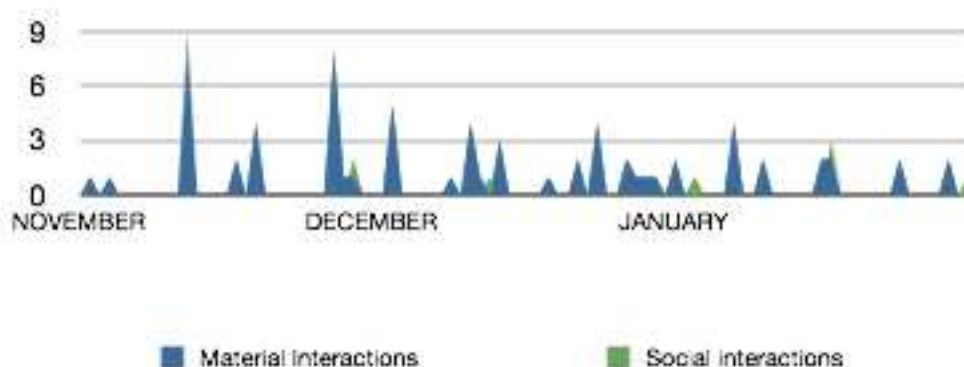


Figure 4. Socio-material interactions between a learner, teacher and e-assessment over three months

Juliette's ties with the LMS are an example of a successful performance of blended learning. The ties are strong and regular and the dyad is relatively stable as the e-learning is perceived as a partner in her learning and assessment (Transcript BA\_FG1). However, the learner-LMS interactions remain just that: complementary. Additionally, a number of learners complained that the LMS was incapable of giving immediate feedback on speaking skills (Transcript BA\_FG1).

### Performing assessment as a teacher and machine

The teacher's ability to trust the e-assessment's statements about the learner's ability is reinforced by visual displays and charts (Figure 5). The problematization initiated above by the belief that human raters are inherently subjective, helps make an ally of the e-assessment; it can help a teacher when unsure as well as vindicate his or her assessment. However, this stability, or the ability of the scores

and charts to function as stable nodes is only temporary and fragile when the experience of the teacher contradicts his or her assessment of the learner's abilities.

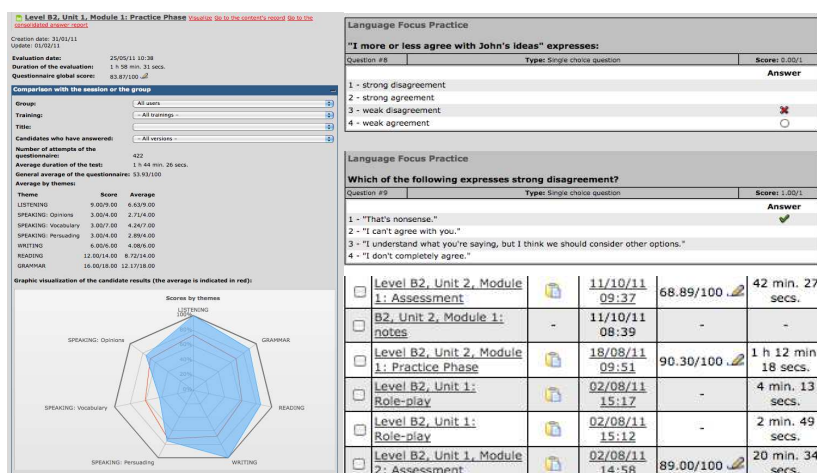


Figure 5. Visual displays generated by the e-assessment for use by the teacher

Tom, a teacher, questioned the accuracy of the e-assessment saying that in some cases 'the particularity of the question' (transcript BA\_FG3) led the learner to get a low score and is irrelevant to the language construct being assessed. The teacher's ties to the e-learning and e-assessment can further weakened by the time and effort required to access information in the LMS. Generally, teachers tend to be favorably disposed to sharing the teaching and assessment with a machine, claiming that it is like 'teaching with another teacher.' (Transcript BA\_FG3)

## Conclusion

The effort required to maintain the learner enrolled in the network is substantial; the learner is expected to interact with the e-learning demonstrate this in class. The teacher is expected by the learner to check his or her results and relate their assessment of the e-assessment in class. Blended learning needs to be continually performed, done or enacted into existence. The constant work of the assessment dyads when performing complementary roles supports this performance. Minor conflicts such as disagreements over a learner's listening ability or major disagreements over a learner's speaking ability (human-rated, low scores) compared to their reading ability (machine-rated, high scores) can make the performance falter or stop altogether.

However, this paper has shown that there is evidence to suggest that the complex composition of relational ties in this multidimensional network are able to perform blended assessment in a heterogeneous and fluid coordination of human and non-human actors maintaining a performance that becomes increasingly durable over time.

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