

# Artful roles in blended learning: reflections on collaborative digital arts and Zimbabwe

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## INTRODUCTION

### Digital technologies, learning & the arts

Just recently it was e-learning and now it's already blended learning. How terms fly. Blended learning has been coined to cover the mix of face-to-face, on-site engagement and distance related communication typical of online modes of interaction. The term does not give primacy to one mode over others; instead, it accentuates the merger of elements from different information and communication systems through and in which learning occurs. In this paper, I refer specifically to the hybrid mediated 'texts' or artefacts which provide insight into both processes and products of such mixed activities. I also concentrate on fine art and the performing arts and the generation of mediating artifacts on the part of students in higher education. These are artifacts which are produced through collaboration, via the uptake of new tools, and as inscriptions of earlier and in the form of new ways of expression. This collaboration is characterised by a blending of different roles as will be shown. Artful roles in the title therefore refers to both the considered



Figure 1: Nyasha Maradzika & Britta Maseleteluni (art students) with paint tins, the computer room, Harare Polytechnic 1997; Fasoni Sibanda: 'Zengeza-4 Market' 49 x 16 cm Zimbabwe Heritage Exhibition 1994

and the improvised co-construction of these roles in art making and analysis. This refers to the student uses of a hypertext system and their contribution to a cd-rom production, to mixed media and mixed reality performance works and to online contextual and research mediation on these works.

I begin this paper by returning to 1994. That now seem long ago in in my own experience as an educator and researcher. At the time, it was very hard to learn about digital media in higher education in the southern African region. The World Wide Web was in its commercial infancy and there were very few examples of how

hypermedia might be situated in a resource-strapped African university. As a member of staff in the Linguistics department and the Academic Communication programme (called Communication Skills in Zimbabwe), I'd begun formally researching the possible uses of hypermedia in the Humanities. My curiosity about hypertext, visual communication and media preceded this date and contributed to seeing how hypermedia might be used to involve students in a double articulation. This would be learning about content and its constructions and about modes of learning with and through technology. Having worked with genre analysis, critical discourse studies, collaborative teaching and student process based writing as part of my own critical pedagogy, I was motivated to see how we might learn together as teachers and students in the selective and creative application of digital technologies in higher education.

At the Communication Skills Centre at UZ, we had already had considerable experience in the student directed uses of computer concordancing (Mparutsa et al. 1991) and assisting students in genre analysis and lexical orientations in 'reading the disciplines' (Morrison et al. 1993). However, I was fascinated by the potential for convergence of different media types and modes of discourse in early hypermedia systems (see e.g. Landow 1992). Further, I was motivated to investigate how such systems might shift between having already been designed for use in the shared practices of teachers and students and how they might

be collaboratively constructed by student peers. This was a distinction Michael Joyce termed exploratory and constructive hypertext respectively (Joyce 1996). However, I was also motivated to delve into the more critically deconstructive aspects of hypertext as outlined by Moulthrop (1994). Here, I saw hypertext as more than a text based means for generating intertextuality. I envisaged it as a meta-mediational means for bringing a range of text and media types and modes of discourse into our academic communication classes. I saw visual communication as central to much learning and research in the Humanities, though at the time written discourse, largely as product, was given primacy over oral and especially visual communication. What Kress has since written about as multimodal discourse (Kress 1998, Kress & van Leeuwen 2001) was what we began to construct collaboratively.

I quickly realised that there were two key aspects to learning with and about information communication technologies in our local higher education setting. The first was that we needed to relate the claims of the potential transformatory power of hypermedia to the specific contexts in which we were teaching about academic communication and the various disciplines of the humanities. The second was that demonstrating how to 'write the technology' (e.g. Haas & Neuwirth 1994) in our context would involve us all — teachers, students, researchers and artists alike — in processes of changing our own literacies; we would need to learn new modes of converging media and content just as we would need to pay attention to our own emerging practices of meaning making.

### Local discourses, contexts & needs



Figure 2: untitled painting Boniface Ndlovu, student Harare Polytechnic 1996; Chikonzero Chapunguza (lecturer print making) Harare Polytechnic & Prof George Landow (hypertext scholar) Brown Univ. USA, outside Fine Art & Graphics staffroom, Harare Polytechnic 1997.

So, as you might have guessed by now, I'm going to tell you something about the journey into this new 'territory'. But mindful of this metaphor and its troublesome history, this is not a journey into some utopian and technology determinist stretch of the north western America. Instead, it's an early collaborative investigation of our own mappings and meaning making. In context. As localisation. This was an investigation framed in a socio-cultural approach to learning (Vygotsky 1962, 1978; Wertsch 1991, 1995) in which students' agency and creative voices would be

important. They would be encouraged and studied in a situated approach to learning (Lave and Wenger 1991). This would also be experience which would travel between and from one higher education institution to another. Untypically, this would be from 'south' to 'north', that is from the University of Zimbabwe and the Harare Polytechnic to two institutions in Oslo, The University of Oslo and the National College of Dance.. While I switched universities from south to north, I did not foresee that early in this move there would be two innovative projects involving Zimbabwean students of choreography based in Oslo. These would be projects concerned with mixed or augmented reality (e.g. MacIntyre et al. 2001, Manovich 2003) in which a blend of stored and live digital scenography would be combined with dance to produce hybrid performative works.

### On electracies and collaboration

My approach is concerned most with how students may be involved in building their own scaffolding and resources for learning, through which they may generate reflective understanding of their own practices and conceptualisations, not only for themselves individually, but as a collaborative group, as well as for their peers and those who come after them. In order to present this material, I draw on Activity Theory and in particular Engeström's model of expansive learning (e.g. Engeström 1987, 1998, 2001). Before outlining this model, I will first refer to the notion of multiple electronic literacies or, as I have termed them, electracies (Morrison 2001, 2003a, 2003b). I developed the term electracies to refer to a compendium of

literacies in higher education, not only written communication (Wysocki and Johnson-Eilola 1999), which may be combined to form new forms and practices. I draw this term from the work of Gregory Ulmer (e.g. 1998). I refer you to his website for further details and to Morrison (2001).

These literacies are multimodal: they demand our ongoing work and competence with a range of software and systems, they include still and moving images, illustrations and texts written for scenespaces, to mention a few. Traditional pedagogy in higher education does not encourage process based experimentation with new genres, forms and expressions through and as multimediated communication. In terms of collaboration, though, art, design and performance studies offer a medley of modes of communicating which may be usefully added to and combined in our changing electronic discourses. I will now explain a little more about the constructions of blended learning referred to in the paper which themselves point to such literacies in-the-making.

The three projects to which I refer are examples of collaborative blended learning as follows. The first on traditional pottery concerns a mix of student collaborative based production of a hypermedia web, with support from peer tutors. Their pottery web is a hybrid of media types and discourse modes: print text, photographs and video; face-to-face and electronic interviews, on screen categorisations, narrative and drawings, hyperlinking. In summary, this student work was an example of 'rearticulating hypertext writing.' (Johnson-Eilola 1997) that would break out of known modes of formal project presentation in the institution. The students developed work in the form of an emergent hypermediated portfolio.

The second project involved six choreography students in the collaborative design of a dance work with digital media scenography produced by three media researcher-designers. Here there was a blend of face-to-face communication, live workshopping and improvisation with video feedback, and choreography and performance with stored digital media. This mixed or augmented reality approach took the media off the desktop computer screens and into a shared collaborative devising and development space with the overall goal of live performance. In terms of documenting this project, a website was developed containing 80 video files and corresponding texts from three perspectives. This website has been used to reflect on the processes of the project as will be shown.

In the third project this approach to blended learning between media and dance was extended from a group of choreographer-dancers to a partnering of choreography and media students. Through this partnering, four works were developed, each an experiment in blended learning and hybrid performativity in which both media and dancers were active contributors to an overall creative co-construction. Here, blended collaborative learning extended to that of media students and the negotiations with individual choreographers. The group of students developed a website which will be presented more fully below.

Research papers have been written for each of these projects, both in print and online form. These are referred to in the sections below as examples of reporting on and analysing blended learning with Zimbabwean students. The main argument across these three projects is that blended learning is first and foremost about identifying and embodying ICTs appropriate to a context, that is an emerging, contested techno-cultural one in which attention to learning, participation and reflection is not completely overwhelmed by a focus on software and infrastructures. To follow my colleague Gunnar Liestøl (2004), our attention needs to be on meaningware and not just software and hardware.

### **Activity Theory, collaboration and expansive learning**

Activity Theory is one of the prominent strands of educational theorising in the field of Computer Supported Collaborative Learning (CSCL) and its blended configurations. Lipponen et al. (2004) refer to three main frameworks within CSCL: acquisition, participation and knowledge creation. I refer largely to the third of these frameworks. Although participation is central to such an approach, Activity Theory provides powerful multi-level conceptual apparatus for getting at the role of technology as a mediating tool which helps facilitate expansive cycles of learning (see below). In this knowledge creation framework, collaboration is that '... process mediated by shared objectives on which the participants are working.' (Lipponen et al. 2004: 41). For these researchers, what defines creative collaboration is its focus on

‘...certain shared objects, knowledge-laden or conceptual artifacts and the agents’ relationships to them.’ (Ibid.)

Activity Theory sees the activities of learning as occurring in a context and a community. In this context, the subjects’ actions are influenced by rules and roles. Through intersecting with dynamic relationships with divisions of labour and the functioning of mediating artifacts and tools, additional activities or artifacts may result, that is as outcomes (Engeström et al. 1998). Most recently Engeström (2001) has described Activity Theory as passing through three phases, culminating in multiple activity systems. In the first phase, centred on Vygotsky, relationships were posed around subject-object-mediation relations. In the second phase, influenced by Leont’ev, differentiation between individual and collective action was made. The third phase now ushers in concern with multiple, interrelated activity systems.

In this third phase, Engeström (2001: 135) suggests we need to develop concepts and tools to account for dialogue, multiple perspectives and networks of these intersecting systems. Boundary crossings occur when the outcomes of these systems overlap. For Engeström (2001: 139) the learning challenge therefore ‘is to acquire new ways of working collaboratively’. Engeström has conceptualised this third and synthetic phase in an expansive theory of learning (2001). In his model of expansive learning, Engeström outlines the following stages in cycles of transformation: 1) Questioning existing practices, 2) Analysing existing practices, 3) Collaboratively building new models, concepts and artifacts for new practices, 4) Examining and debating the created models, concepts and material and immaterial artifacts, 5) Implementing these, 6) Reflecting on and evaluating the process, and 7) Consolidating the new practices. (Engeström 2001, Lipponen et al. 2004: 35). (somewhat elaborate? – principles below used in analysis, though useful as Engeström backdrop?) In the expansive theory of learning it is acknowledged that learning is continually taking place for both persons and organisations. Engeström argues that we can identify five main principles that summarise Activity Theory: 1) The activity system as the unit of analysis; 2) multi-voicedness; 3) historicity; 4) contradictions; and 5) expansive transformations. These five principles will be applied to the three project cases presented in this paper. First, however, a little more on the principles.

## **On transformation**

For Engeström, learning is in a state of becoming; it is unstable, ill-defined and often not yet understood. There is a transformative component to this theory in that we need to learn new forms of activity which are not yet crystallised, but are in the process of emergence. For Engeström (2001: 139), ‘Expansive learning activity produces culturally new patterns of activity’. These patterns need to be seen against the summative dimensions of the entire system just a learning needs to take place in interconnecting, dynamic activity systems (see also Wells 1999). He argues that activity systems reproduce and realise themselves by the generation of actions (see also Wertsch 1995a, 1995b, 1998). The activity system needs to be seen as the unit of analysis.

Such interconnectivity may also be understood through the concept of multi-voicedness developed from Bakhtin and more recently articulated by Wertsch (1991). Communities have variation in points of view and interests, and the ‘division of labour’ creates differentiated perspectives. Further, the activity system has multiple layers and variations inscribed within its artifacts as well as its conventions. When networks multiply, so too do voices within, across and between them. This can lead to issues around ‘translation’ and negotiation, but also to innovation.

It is also important to study the background and context of these activities. Historicity is therefore one of the main characteristics Engeström argues we need to include in a thorough model. In a southern African setting this need is part of daily enactment of understanding inherited structures and constraints as well as developing alternatives to evade, erase and replace them. Engeström also argues that we should add to this approach acknowledgement and analysis of contradictions which arise in overlapping relations and outcomes. Here disturbances, conflicts and challenges posed by intersecting systems need not be seen as negative; they are part of processes of negotiation and transformation. This he takes up in the final component of expansive transformations. When cycles of change are lengthy, individuals may begin to deviate from conventions and their individual secure practices and concepts. For Engeström (2001: 137)

‘An expansive transformation is accomplished when the object and motive of the activity are reconceptualised to embrace a radically wider horizon of possibilities than the previous mode of activity.’

In summary, (following Lipponen et al. 2004: 35), in expansive cycles of learning, the activity system is transformed and along with it new motives and objects are generated. In this change process, actors in the activity system reflect on their own reconceptualisations of the system. They assess shared objects and relations. The actors ‘... negotiate a shared understanding of the new activities and artifacts, and in this process something new is created and emerges.’ I will now apply this framework to the three experimental, innovative projects in which Zimbabwean students were primary collaborative actors. In each case, their shared meaning making clearly demonstrated the dynamics of expansive learning. The cases offer examples of creative co-construction and reflection about digital media in the arts. Similar cases are still hard to find in the rapidly expanding field of Computer Supported Collaborative Learning (CSCL). The cases also pay attention to the mediated nature of collaboration, a focus which in their state of the art article Lipponen et al. (2004) describe as being ignored by many prevailing accounts of CSCL.

Engeström (2001) positions these five principles of activity systems against four questions in the shape of a matrix. The questions focus on the learners. The questions are: Who are learning? Why are they learning? What are they learning? And how are they learning? This matrix is shown in the Powerpoint slides to which I refer you. I shall apply this matrix to elements of the three creative arts projects involving students from Zimbabwe. First, however, I outline the learning context in which experimenting with collaborative hypermedia was initiated.

## HYPERLAND

### Critical perspectives on land, disciplinarity and representation



Figure 3: Benjamin Kazuru, final year student 1997; painting created for Zimbabwe International Book Fair by Pottery Project students

In carrying out doctoral research as a member of the academic staff at UZ, I had selected land in Zimbabwe as a theme, mindful of local issues and needs, and motivated to engage students in a critical appreciation of various disciplinary discourses connected to land, as concept, metaphor, representation and resource in a diversity of subjects such as history, social geography, literature and media. I called the project *HyperLand* so as to indicate the need to develop interdisciplinary and nuanced understandings of complex relations. These were relations between tradition and modernity, between contemporary and customary law, between government and various interest groups, and between different artistic, literary and cultural

perspectives and accounts. Most important was to involve students themselves in learning about and with hypermedia at the same time as understanding more about their own contexts and learning ‘landscapes’. Over the next three years I led the development of three expansive hypertext systems in the software *Storyspace*. As the name of this early compositional tool suggests, we were motivated to investigate the various social, cultural and political compositions and constructions of our landscape. In a ‘post-colonial’ frame this meant comparing present debates and representations with those of earlier times and contexts. But it also meant developing a parallel curriculum, keyed into but also opening out from those so carefully and critically constructed since Independence.

In essence, each of these three projects involved students in a dialogical approach to learning (Wells 1999) in which they were engaged in the collaborative critical assessment, implementation and performance of hypermedia in articulating their own emergent electronic literacies. This was to interlace their shared

understandings about given information and competencies, but to thread them together in new patterns of knowledge making and connection, not only as writing and drawing, (or later as dance), but as multimodal compositions, generated via production based learning (e.g. Buckingham et al. 1995, Johnson-Eilola 1998b). In keeping with ethnographic and post-structuralist approaches to meaning making, this was not simply to 'mess with method' (Law 2003); it was to take up communicative potential and frustrations in shaping articulation via messy texts, through learning to communicate via process and in common risk taking and iterative design. In terms of the pottery project below, I wrote about this as a process of letting go of the known in order to look into and after new ways of understanding (Morrison 1997). This publication refers to students comments of their experience.

## HYPERVISION & POTTERY PROJECT

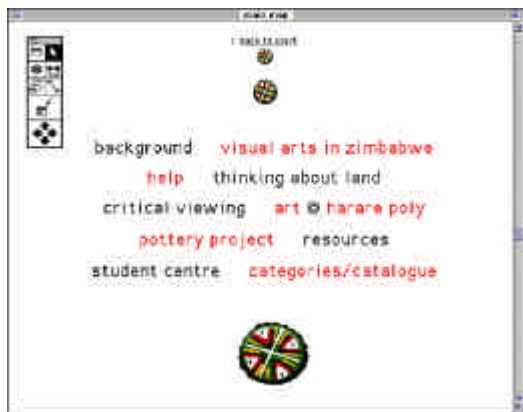


Figure 4: Start screen of the *HyperVision* web

The *HyperVision* web was developed to support learning about visual arts in Zimbabwe at the Department of Graphics and Fine Art at the Harare Polytechnic. The web was developed subsequent to ones begun at the University of Zimbabwe in the areas of academic communication and gender and law. As can be seen in Figure 4 to the left, background was given to visual arts in Zimbabwe along with material on critical viewing. This was to introduce students to a hypermediated environment for learning about representation, identity and politics (e.g. Atkinson and Breitz 1999). It was also to gather resources difficult to locate in libraries and to develop the first digital images of Zimbabwean visual art in an educational context. The web was also designed to introduce students to debates about aesthetic and culturally informed interpretation in an

hermeneutics of seeing (e.g. Davey 1999) and to take an active role in discussing these as multi-voiced or multi-pictured. This CD-ROM project prefigured others online (e.g. Schmidt et al. 1999). Resources were drawn from books, the national Gallery of Zimbabwe and an excellent new publication, *Gallery*.

The project was concerned with the changing character of Art History (Billingham 1989). It was to do with the potential of a hypermediated environment for picturing and questioning art making and education (Taylor 1992, Brown and Korzenik 1993) and encouraging students to adopt critical, reflective modes of inquiry concerning discipline-based art education (Eisner 1989). Given the fact that since Independence in 1980 much art interpretative discourse has been written by white English-speaking Zimbabweans and European scholars sensitive to local context, the project also aimed to encourage students to see art criticism and visual literacy in cross-cultural perspectives (e.g. Phillipson 1995, Messaris 1997). Their own expansive learning would contribute to this discourse, content-wise and rhetorically. Later in the decade in the region there were vibrant, challenging publications on interpretation, visual arts and identity (e.g. Deepwell 1997, Enwezor 1997). These publications were not available at the time; instead, local texts, images, gallery visits and video material were hyperlinked to produce a novel structure and a resource for expansive learning.

In terms of the *who of learning*, this was a group of six students, five women and one man. They were all taking a course in ceramics and made use of the HyperVision web with guidance from specially trained peer tutors (as the *HyperLand* system included). The project was supported by the head of department, Jane Shepherd, and her staff. The ceramics lecturer, Alison Brayshaw, was taken with the *HyperLand* project and saw a possible connection to her course in ceramics. Of British origin, she admitted she had little knowledge of the forms and functions of traditional Zimbabwean pottery. We discussed how a student-

based hypermedia production might involve the ceramics students in moulding more than just clay but build an experimental web of material and reflection on traditional pottery.

On the *why of learning*, the students were asked to develop a hyperweb of their own to investigate the cultural context, design, uses and production processes of traditional pottery. This was to research a specific domain of material culture and to build resources for interpretation. The pottery project therefore aimed to develop situated, local knowledge alongside the students' own practice in pot-making.

On the *what of learning*, the students developed a novel and information-rich web in which they demonstrated their own work processes and results. Their web included written texts, summarised from the few print publications they were able to locate in libraries and the National Archives, but also written by them. There were tables categorising, naming and describing a range of pots and their functions. A hypermedia story was developed with illustrations by the students. Special attention was given to the role of women in making pots and in their handing down of knowledge to novices. The project was patterned



Figure 5: Section on oral tradition, showing student drawing, video by male student on gender and pot-making, and photograph from lecturer on firing

around the categories of Background, Usage, Process and Interpretation. The group learned that knowledge about traditional pots lay not only in books and their classroom. They visited their families in rural parts of the country and through interviews learned about the value of oral culture as a repository of knowledge. This was echoed in their own spoken contributions to the web. The project clearly introduced a range of voices and perspectives and the possible contradiction between oral culture and techno-determinism of a hypermedia system was avoided through the production of a synthetic text. The group also learned to work together collaboratively in contributing material to a structure they presented in progress and which was

redesigned with help from the lecturer and researcher and educational designer. In terms of hypermedia, the students developed a multimodal text of their own, drawn to different modes of presentation and cross linking by virtue of the material they gathered. However, they were also able to use the functions in *Storyspace* and quickly alter how content was linked. They clearly demonstrated skill in how to think and link across factual content, narrative, photographic and hand drawn representations.

Concerning the *how of learning* and historicity, these students were actively involved in meeting and translating their own cultural heritage and representing it as a digital cultural one. They were involved in conducting primary research, the documentation of field interviews, and the generation of new textual representations. They did this with support from their lecturer with her background in education as well as from the researcher-designer and the three peer tutors in the *HyperLand* project. The students also consulted other lecturers in the department and, most challengingly, in terms of Engeström's conflictual questioning, gave a diskette with interview questions to one lecturer who had designed a series of postage stamps on Zimbabwean pottery. The students asked her to give an account of her own knowledge making on Zimbabwean pottery! The lecturer's replies were included in the web. The students also included the photographic documentation by one of their lecturers who had previously recorded the how of pot making not in the classroom but in its traditional context of production (from shaping to firing). The students also made their own voices heard through short videos to annotate their work but to reflecting on it. For example, the male student reflected on how he had learned more about the value of women as bearers of cultural and artistic knowledge through researching gender in pot making. As part of composing their web, the students had several sessions in the networked computer lab at the University of Zimbabwe. Here they were able to work collaboratively in structuring, linking and annotating their material. In terms of multiple activity systems, this student project was also incorporated in the many sessions on the *HyperLand* project for students in the Humanities at UZ. It crossed over, for example, into the web developed for and with law students on land, gender and changing practices and procedures for inheritance by women.

As an instance of expansive learning, the students all commented favourably that the experience had given them insight into their own cultural heritage, to how to use digital media as a research and recording tool for reflection, to new ways of understanding visual arts as multiply constructed discourses and especially to the role of women as bearers of traditional culture. As an educator and researcher interested in the transformative aspects of an activity theoretical approach to socio-cultural learning, the project most clearly was a case, in Engeström's words, of developing 'a wider horizon of possibilities.' These possibilities were also evident in the discussions and professional practices of the educators involved, and in my own future work with performing arts and learning in Norway. Here the inter-institutional aspect of intersecting activity systems challenged the usual contradiction of the 'digital divide' as being weighted from the 'north'.

## BALLECTRO



Figure 6: Startscreen of BallelectroWeb, with options for Project Context and Project Documentation

Such a changing horizon of possibilities was also enacted through collaboration on dance and digital media. This is an emerging area of innovation and experimentation in digital arts and culture in which performance and performativity are themselves being reconstituted (e.g. Carlson 1996, Birringer 1998, Schieffelin 1998) in new modes of expression and screen based mediations (e.g. DeLahunta 2002).

This involves participants in collaborative design processes based on methods from the performing arts but also from experimental digital media production (e.g. Halskov Madsen 2003) and iterative design. The merger or realtime and recorded mediations of both dance and digital media may result in

a different, hybrid digital poetics (Qvortrup 2003). As Seaman (2002) argues, it is the potential and practice of the recombination of elements in such a poetics which challenges us to see performativity differently. This is a performativity in which the relationships between human performer and media-as-actor alter earlier notions and expectations of stage and staging (Sparacino et al. 1999). These are environments which are labelled mixed or augmented reality and extended to media as responsive participants through sensors and location aware technologies (e.g. Sha et al. 2000).

On the *who of learning*, the *Ballelectro* project (see Figure 6) was a collaboration between six final year choreography students at the National College of Dance in Oslo and InterMedia. Two of these students were financed on a collaborative study programme between Norway and Zimbabwe. There were three male dancer-choreographers in this group, two of whom were from Harare. The group were taught by a freelance choreographer and dancer as well as by three media researcher-designers from InterMedia at the University of Oslo. The aim of this partnering was originally to provide some video-based documentation of dance performance. However, in practice, this collaboration was quickly extended to a shared process of designing, learning and performing a dance work over one semester. As media and education researchers we have published several print pieces on this project (e.g. Skjulstad et al. 2002). We have also attempted to communicate the project online in the form of a seminar presentation (Morrison et al. 2001) and a website. This website is a resource for contextualising the project especially via video (see Figure 7). It links research publications to contexts of production and performance-based learning. I encourage conference participants to refer to it.



Figure 7: Item on video feedback is selected from one of the three tracks (dance, media, learning), with accompanying explanatory text

introduce students to digital media in dance as an asset and as a complement their own competences and dancers and as new, learner choreographers. For the Zimbabwean students in particular, this was an introduction to digital media in performance as well as to a shared, iterative design process in dance making. It also involved them in direct collaboration with designer-researchers.

On the *what of learning*, the student and development group learned about the complex and recursive possibilities in developing a dance performance work in which digital media elements could be included and at different levels of centrality in a final performance. They saw how improvisation with video feedback (as seen in Figure 8 above) could generate ideas for designing movement. Such aspects were included in the final performances. For further examples of the what of learning as process and as product, please see the project website. The students learned about the cycles of transformation in the varied intersections between digital music, animations in the software Flash, and their dancing with live projected images of themselves. The videos in the website show, for example, links between rehearsals and final performance material by Koshiwayi Sabuneti.

About the *how of learning*, the project explicitly faced a number of potential contradictions on learning and performance design as process. These centred on the negotiation of real-time, recorded dance and media and their intersections as mixed or augmented reality performance. Here students were working with new modes of intersecting composition. We used workshoping sessions, with improvisation of both dance and



Figure 8: Live video projection of one of the dancers in an ensemble

Concerning the *why of learning*, we wanted to involve choreography students in critical, recombinatorial practices in dance design in which mediated scenography would be a part of their designing along with attention to other para-performative aspects such as lighting and music. For the choreography teacher, the project was a means of providing a collaborative, experimental space for dance making in which students could develop their own contributions in a horizontal and sideways rather than vertical one of expert to novice learning process (Engeström 2002: 153). This was to see how to relate their own solo and duet components to those of other participants and to produce an integrated, varied whole. We were concerned to

media. One of the contradictions we quickly encountered was that dance students were able to turn on their heels and rework movements while it took more than a few hours to change some of the digital media elements. Initially, the dance students were impatient; they however came to understand that other than the immediate and playful character of video feedback, much digital scenography took time to generate and to re-design.

The project went through many cycles and reordering elements. At first, some of the students commented that this was confusing; towards the end of the experience, Willson Phiri commented that this was a completely different way of

learning to dance and to choreograph: improvisation and expressivity were not necessarily centred around a musical score. The website demonstrates the variety and cycles of process driven creativity which were evident throughout this difficult, yet invigorating collaborative experience. In addition, and particularly for the Zimbabwean students, the choreography teacher herself was open to exploring alternative solutions and framings of parts of the dance piece. They were able to see a choreographer at work with experimental media. Further, these students could extend their experience from that of their traditional classes at their own dance school to include collaborating with researcher-designers at an educational research and experimental media lab. This was similar to Engeström's concept of change laboratory.

The project resulted in a variety of video recorded material which was then selectively placed in an innovative interface. This interface allows users to trace comments on the videos from three perspectives, while at the same time scrolling across the menu of videos. This project thus also crossed over into reporting on experimental research; it has been invaluable in explaining such inquiry as exhibition (Morrison and Skjulstad 2003), as performance and as creative co-construction, that is not only as dance but as movement in the interface (Morrison and Skjulstad 2004 under review). This indicates a double cycle of expansive learning from a pedagogical to a research mediational domain.

## EXTENDED



Figure 9: Starts of student initiated and designed website developed in Flash, with term papers and video

Concerning the *who of learning*, a second project with choreography students was initiated between the National College of Dance and InterMedia. This time, however, the four dance students involved were choreographers and they did not themselves necessarily need to dance their works. One of these students was from Zimbabwe. Four individual works were developed and it is the one by Jimu Makurumbandi called *Ngirozi* which is featured here. In contrast with the *Ballettro* project, the media elements of these works were designed, developed and performed by two masters students in Media and Communication at the University of Oslo.

On the *why of learning*, the concept *Extended* was introduced to deliberately challenge both choreography and media students to rethink their notions of performativity and to find ways of reaching beyond their given experience and competencies by way of collaboration. For the choreography students this was to think creatively about how the body and movement might be extended performatively. For the media students taking a course in new media production and critique the aim was to investigate by production and performance methods and designs the ways in which digital media could be included scenographically.

In the student developed website, the students listed the following questions as part of their process of defining their joint creative experimentation: What is integration? Where does the physical room end? Can it be extended into a virtual one? Is there an overlap between the rooms? If so, what happens to the dancer? Is the extended body within reach? What is digital scenography? How can we use it? The students were explicitly asked to face one of the main contradictions experienced in the *Ballettro* project, namely that the choreographers design took primacy over the media. In this new project the aim was to find out how movement, space, body and media could complement one another and play off one another. This was to give the students a difficult challenge in developing not only their own blended and collaborative learning experience; it was to ask that they achieve this artistically and for live performance. In doing this we were also concerned as researchers to see how production-based learning and collaborating in a production and a performance could raise new issues and perspectives for critical theory and new media (Bolter 2003). Here,

with little work published on digital scenography (Morrison et al. 2004 under review), the students needed to draw on their own ingenuity in devising, workshoping and reformulating dance and digital media as composition and simulation (see e.g. Penny 2004). As researchers we have attempted to analyse their works and to develop further the concept of performativity.

On the *what of learning*, Jimu Makurumbandi chose to design and dance his work as a solo. He was the only student who was not Norwegian and a male choreographer. He wanted to develop a work which would be an invocation of ancestral spirits in the setting of a cave. This led to discussion about how to create a cave like scenography in which animated figures would dance on the rockface as the dancer himself moved. This raised many questions about the ethics and aesthetics of such mediations and for the



Figure 10: Stills from *Ngirozi*. On the left, digital scenography fills the right hand side of the image; the dancer in full motion is pictured in a still from a digital camera

available online (Morrison 2003b).



Figure 11: Reworked scenography for *Ngirozi* with altered colour palette and increased scale of animated figures

to see. While the dancer commented that he saw new relations and dimensions to his performance because he almost felt the figures dancing on his skin, audiences did not have this experience. This led us to reconsider the entire scenography. This was possible as part of a project on multimodal discourse and augmented space and we termed the work *Extended+*. As can be seen in Figure 11, the earlier sepia and ochre tones have been replaced by figures much more visible and all the more so on the dancers moving

Norwegian media students a wish not to produce hackneyed images disrespectful of tradition, a different local context and culture and their co-developer's views. There was much debate on this and the students were asked not to merely reproduce images from key print texts on San rock painting in the region. The students learned how to develop a compressed work in which a small screen was placed at the front of the stage to demarcate two different narrative zones in the movement. The choreographer reflected on his own learning and performing experience in terms of the media and figures dancing on his body. The works and its accentuation of local culture is analysed in a paper also

On the *how of learning*, in addition to the same modes of improvisation, sketching, and workshoping collaboratively, the media students also came with prepared scenography for discussion and adaptation. There were compromises on the depiction of the cave and the character of the animated figures. Despite the openness to experiment on the part of this Zimbabwean choreographer who had not worked with digital project and blended movement with digital scenography, we encountered a major contradiction.

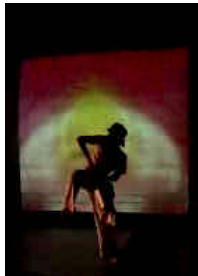
This was that the main animated figures were not easy for audiences

body. This scenography was developed by one of the original media researchers in the Balletto and Extended projects, Synne Skjulstad, and one of the media students from *Extended*, Idunn Sem. The result was performed three times in a choreography festival in Spain. For us this reworking was a clear marking of an expansive learning cycle and a shift from a student to a professional production, one in which similar collaborative workshopping methods were used.

## CONCLUSIONS

### Some reflections

These three projects demonstrate that the theory and model of expansive learning provides a useful if not exhaustive frame for understanding the emergence of digitally mediated communication in higher education in the southern African region. Students own roles in acquiring individual literacy knowledge and practices may be seen. Their participation in co-constructing new knowledge about content and fine arts and modes of performing are crucial to building a fuller understanding about the multimodal discourses and literacies which may be blended in experimental blended learning processes. Students' own reflections

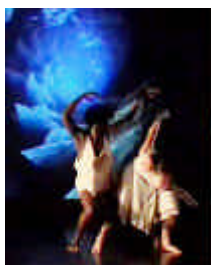


(see publications listed) about their learning to 'compose' via information communication technologies may now inform emerging pedagogies and analyses of them. However, it is the hybrid, mixed reality mode of designing and articulating that this paper also offers as a part of the scope of CSCL. Attention which is needed on understanding and analysing the multiple constructions of hybrid mediating artifacts may benefit from further inquiry into fine and performing arts.

I now return to Engeström's Matrix of Expanded Learning. Instead of verbally summarising a trajectory of roles already outlined in the previous sections, useful as this might be, I have chosen to insert key images included in both the Powerpoint presentation and this formal print oriented paper. I have placed them into the matrix as a deliberate discourse move. This is a move directed towards inviting the reflection and rephrasing on the part of readers who have access to both these texts and the online discussion functions of *E/merge*. For economy of presentation and file size, please do refer to the Powerpoint presentation for this image.

### Artful integration in blended educational discourse

In our own academic communication, we are perhaps increasingly likely to see a merger of still images and logo-centric texts, with shifts of text types and modes of depiction and analysis from slides and oral presentation into formal written documents. In this sense, I borrow and transfer the concept of artful integration from Lucy Suchman (e.g. 2003). Suchman uses this term more strictly to refer to asymmetrical



relations between humans and machines in an Actor Network approach. She relates the term to core concepts of translation, border crossing of disciplines and negotiation of relations in meaning making. Here I use artful integration to refer to the shaping of a hybrid of media types and expository discourse in a visual-verbal professional rhetoric.

In addition to the distinct layers of student participation in production based learning and this written academic paper, there lies an interstitial text: this is the presentation designed for this online conference. It is an instance of a metamedia literacy (Lemke 1998). It contains selected images accompanied by voice-over track. The paper is an attempt to generate a written text from my Powerpoint slides and not the other way round as is usually the case for conferences where compression rather than elaboration is needed. However, I have not simply developed a full outline, with discrete points and clearly labelled sub-sections and used them as a schema for writing. Instead, cropping images from the three projects, I have used pictures as story prompts and as memory markers for a 'live' presentation, recorded as sound for *E/merge* as if my audience were visibly co-present. This is to interrupt the usual formal academic paper writing process, hands now poised over keys, eyes drifting away from screenspace to the room in

which I sit. I'm also not writing a hypertext document but I am drawing on a decade of doing so. This is to take a risk. It is to attempt to write differently (Richardson 1994), to draw on experience in a range of discourse modes and types and to try to integrate them.

'Artful roles in blended learning' is also what I aim for in this reflexive reporting and analysis. The students who contributed to the projects certainly integrated digital media technologies into their artistic expression. We have heard this from different audiences, educators and researchers as well as course evaluations. However, whether I have managed such an 'artful integration' in the shape of a research document referring to students' own expansive transformations, in Engeström's terms, is open for discussion in the conference. In keeping with its theme, I hope that the paper at generates some debate about genres and modes of academic communication as blended texts and ones which are in emergence. My interest here is not to separate knowledge between students and teachers, but to see them as co-present in expansive cycles of collaborative blended learning.

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