The BTech Research Module for Journalism: Theoretical Aspects of Course Design in Developing Research Capacity through Blended Learning

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Abstract: This paper addresses two key issues in Higher Degree learning at a University of Technology, namely, how to facilitate the development of students into independent researchers, and how to harness ICT to this end. The BTech level is a critical one for developing research capacity, as at this stage that basic research procedures need to be mastered in preparation for masters, and, later, doctoral study. Currently the BTech Journalism course is offered on a part time basis only, and use of an online component in the module facilitated communication for both lecturer and students and led to the development of a "community of practice" where learners not only shared resources but constituted a resource for each other. The blended learning approach outlined here is experiential and outcome-based: learners mastered research processes by completing the tasks which more experienced researchers perform in preparing a research proposal. While the above course features are commonly accepted best practice, what is thought to have made this course particularly successful is the theoretical underpinning of the course design. The course is based on a communicative principle formulated in doctoral research, which can be seen to have implications for not only communicative but also pedagogical and investigative social processes, and which gave the course thematic coherence. Thus while the course is easy to follow at face value, and is presented as a series of straightforward research tasks, at a deeper level learners tap into a generative mechanism which can be seen to operate at a number of different levels. The approach described here attracted expert supervision from outside the university and resulted in improved throughput as well as better quality research reports. In view of its success and its generic nature, the course has been cloned for use in other BTech, MTech and DTech programmes.

Key words: blended learning, research capacity, modelling, outcome-based education, experiential learning

1. Background

The BTech Research Module for Journalism is run within the context of the Basic Research Course for Journalism, which has its own more traditional syllabus and content. The Module itself is run in mixed mode, and could be said to follow an andragogical model of learning (Pellone 1995:1). This is because it gives learners far more autonomy than is usually allowed to novice researchers, but within a carefully scaffolded framework which offers guidance, structure and support at all stages (see Reigeluth 2004). The course can also be made more directive (or "pedagogical") depending on learner needs, which are monitored carefully throughout the course. The offline delivery of the Research Module is carried out in after-hours weekly workshops and seminars, which not all students, however, are able to attend regularly. The online section is mainly a shell Moodle course (i.e. with procedures and minimum content, Milton 2000) fitting Mason's Type C (the Integrated Model, in Mason 1998). The procedures are carefully staggered in the cyclical pattern which will be familiar to experienced academics as the recursive process typical of research (see Figure 3). However, the cyclical pattern does not just reflect the regular recursion which occurs in the research process, but is carefully scaffolded so that the module tasks increase in complexity and scope as well as integrating the results of previous tasks (see Boyle 2001). Assessment of student work is partly formative (Higgins et al 2002), using peer and self assessment, and partly summative, by formal assessment of the research proposal. The module makes innovative use of Forum discussion as both an assessment tool and for public display of student work. The course is outcome-based, learner-centred, project-based and makes use of experiential learning. There is a minimum course content, mainly to give novice researchers direction and guidance, and most of the resources are added by facilitators, supervisors and students as the course progresses. The true course content is in fact the research process, encapsulated in the tasks which learners work through in the course of developing their Basic Research Project and writing up a Research Proposal. While most of the above elements are recognisable as features of "best practice" in blended learning, at face value the BTech Journalism course is just one more course using blended learning delivery, ostensibly because many of our students work irregular hours and are not always based in Durban. Use of an online component in the course therefore facilitates communication for both lecturer and part time students. What this

paper will attempt to show is that this course is more than well-endowed theoretically, and that it is the theoretical underpinning at various levels which has made course design effective, and not an ad hoc assemblage of various "best practices", which at best operate at an empirical and not a theoretical level.

2. Theoretical aspects of course design

The theory underpinning the design of the Research Module is derived from a long term investigation into communication in written mode (Pratt 2007) in which a theoretical model of communicative functions was formulated and empirically validated. The doctoral research which led to the formulation of the communicative principle was carried out within a critical realist orientation, which, though it postulates a real (i.e. external) world, is anti-positivist, and views reality as complex, layered and dynamic. Critical realism is often - incorrectly - referred to as a "paradigm", when it is a complex and profound philosophy with ecological implications (Bhaër 1990) developed mainly by Roy Bhaskar (1978, 1979, 1986, 1989, 1994) and Rom Harré (1979,1986), with significant contributions by Margaret Archer (1995, 1998, 2002). Critical realism promotes the idea of social transformation by praxis: according to Bhaskar, social science "always consists in a *practical intervention* in social life" (1986:169). Critical realist research investigates the deep structure of social practices so as to transform society. This can be done by arriving at the "essences" of social processes so that the theories thereby formulated - however tentative or local these "truths" may be - might assist in transforming everyday life. A typical realist preoccupation is modelling in order to provide concepts which might give people more control in both replicating and, ultimately, transforming social practices (Bhaskar 1994:92). These concepts have been termed "conceptual mechanisms" (Pratt 2007:72), and it is suggested that they share affinities with the social algorithms identified by the social psychologists (Blunt Bugental 2000). However, learners need pedagogical models, or models *for* and not just *of* a social practice (McCarty 2003:3).
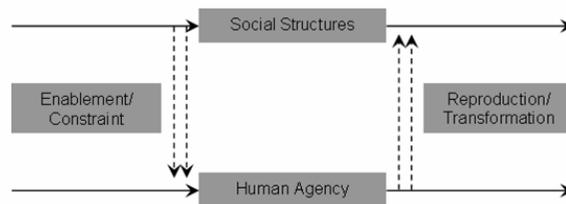

Figure 1: Bhaskar's transformational model of social activity (Bhaskar 1994:92)

In the modelling process followed (Franck 2002), a type of classical induction is used to arrive at the system of functions underpinning a social process. The system of functions (i.e. theoretical model) thus identified is validated by means of an empirical (i.e. practical) model which can been seen to be grounded in real life social functioning. It is customary in such a process for several cycles of reflection, further testing and reformulation to take place, very much in the manner of the reflective practice described by Zuber-Skerritt (1992a, 1992b, 2001), Wenger (1998a, 1998b, 2004), or by Corbin and Strauss, in their account of grounded theory methodology (1994,1999). Franck's modelling process acknowledges the systemic nature of social processes, yet grounds these "social mechanisms" in real life observations or experiences. The aim of the investigation was to identify the social mechanism involved in communication, so as to validate a pedagogical model of written composition which had proved effective in actual teaching and learning practice. The resulting theoretical model of "essential" communicative functions comprised the contextual, ideational, interactive, social and reflexive functions. What this means is that, for effective communication to occur, it must be *contextualised*, *ideational* content must be generated by means of an *interaction*, the interaction itself being governed by *social* factors, and the whole process being regulated by means of *reflexivity* (see Pratt 2007:157-171). This "architecture of functions" is congruent with Franck's definition of a generalisable principle in social science (2002:297-298), as it can be seen to have implications for not only communicative but also pedagogical and investigative social processes. It provided the basis for three empirical (or "applied") models, of:

- written communication
- blended learning delivery and
- research processes

It should not be surprising that the above systems should be inter-related (see Zuber-Skerritt 2001:13-15). However, the system of communicative functions is not intended to be a "grand theory", but is in the nature of a distillation of elements essential for communication to occur, what Franck (2002) terms a "theoretical model". According to Bhaskar, a theory is "a model conceived, and meant to be taken as true; i.e. a model in which the entities posited and mechanisms described are conceived as real" (1978:192). The system of communicative functions is then a true theory, or model with "existential commitment", as the functions can be observed to be carried out in real-life instances of communication.
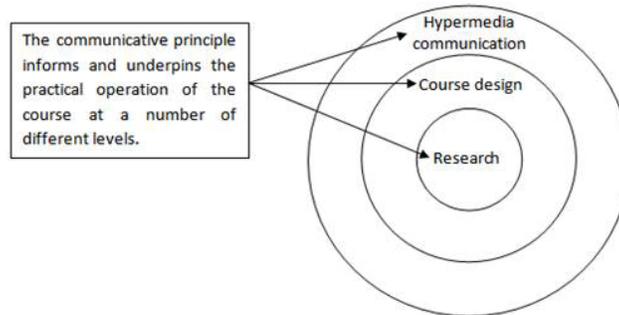

Figure 2: Levels at which the communicative principle operates in the *BTech Research Module*

All three empirical models have implications for the course design of the Research Module. The model of written communication throws light on the distinctions between electronic communication and writing per se and, as a result, offers insights into the nature of hypermedia communication (Pratt 2008). In particular, it shows how the nature and extent of distancing involved in communication are more significant factors than synchronicity/asynchronicity per se, and suggests that the latter dichotomy is not only simplistic but misleading when applied to either writing or electronic communication. The model of blended learning delivery contains the pedagogical principles on which the research module is based. The course tasks are structured around the model of research processes (which is also supplied as a "map" for students to follow, in Figure 3). It must be emphasised that all of the applied models are not linear or simplistic but complex, layered and recursive, catering for the infinite variety of individual performance in terms of the interplay of extra - and intra-systemic causal factors. Moreover their application in the course is also layered and complex (Figure 2): the underlying communicative principle resonates at a number of different levels, providing a thematic coherence which underpins the - apparently - inchoate variability in the actual working out of social practices in real time.

3. Analysis of design features

The design features discussed here arise out of the insight that the communicative principle identified above informs a description of the research process as well as the model of blended learning given in Table 2. The communicative principle also offers insights into the nature of hypermedia communication, which, we believe, has contributed to effective use of the Internet in the course. The analysis will work from the central motif, the research process, outwards (i.e. to features of hypermedia communication), as shown in Figure 2.

3.1 Modelling research processes

The prerequisites for the carrying out of research can be seen to follow the principle contained in the five communicative functions. The investigation needs to be *contextualised* (in terms of both previous research and local academic parameters); the researcher needs to *interact* with peers, supervisor, the body of research available and various data sources; *ideational* content needs to be generated (i.e. in both the data generated and the resulting analysis in the thesis), and subsequent oral/written research presentations); international and local conventions (i.e. *social* criteria) need to be satisfied; and assessment (which performs a *reflexive* function) needs to be carried out initially, by the university, and ultimately, by acknowledged experts in the field. It must be emphasised that the "social" function refers to the carrying out of social conventions, and not social *interactions* (covered by "interactive"). It must also be noted that the social constraints/parameters (including assessment criteria) are features of a specific *context*, that is they are part of *contingent input* into the system (at the level of the contextual function). They

therefore need to be distinguished from the social *function* in research processes, i.e. where the social parameters are *performed* as per local specifications. It can be seen that the functions are interlinked: for example, if local social requirements are not identified when the research is contextualised, it is unlikely that the social function will be performed adequately later on in the process (if at all).
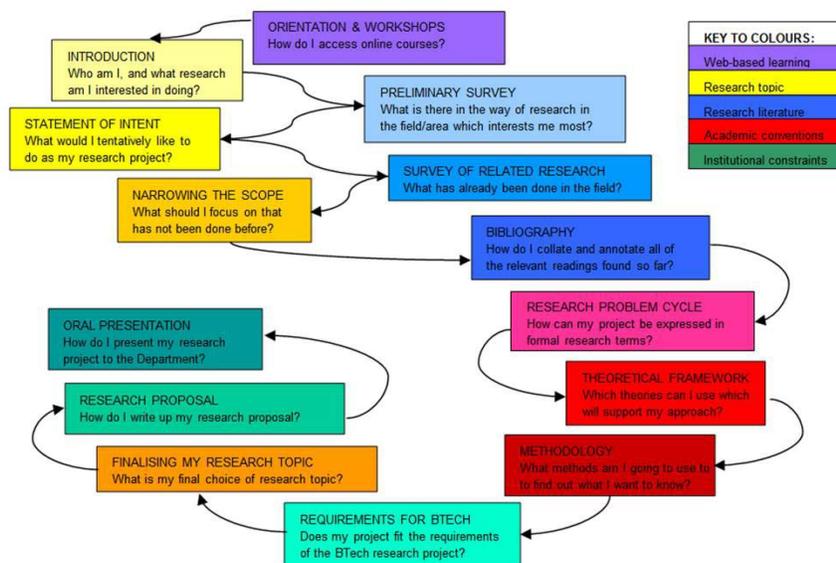

Figure 3: Research map illustrating cyclical research processes

The tasks shown in Table 1 represent an empirical (i.e. practical) model) of the research process up to the writing/presentation of the formal proposal, wherafter the core process repeats itself at more length in the actual working out of the investigation. It is presented as a pedagogical model, that is a practical series of activities, so that learners see research as a series of tasks leading to a determined end: research is demystified. Learners also experience the recursivity of the investigative process as the tasks loop back on themselves, which forces a kind of "reflection in action" (Schön 1983). At later levels the tasks also increase in complexity and scope, scaffolding the student's intellectual development (see Ryder 1994).

In Table 1 the main *focus* of each task is shown (all of the communicative functions are in fact involved in each task). While traditionally "Research Methodology" courses have been predominantly top-down transmission of content and/or a large volume of traditional product, the above analysis shows that the Research Module produces far less formal student output, but that more time is spent on preparing for the formal output. The results so far, as assessed independently by external examiners, have suggested that better quality work is produced than by using traditional delivery. Informal output occurs on a regular basis, but only inasmuch as it contributes to the investigative process and the final formal output. The most significant feature here is that students are involved in a continual process of self-reflection forced by recursion and constant peer and lecturer feedback. It is the reflexive process which governs and regulates the interaction (Pratt 2007:169,181) and, when properly managed, leads to quality formal output. The public posting of tasks on the Moodle discussion forums is the key design strategy facilitating this process: traditional supervision tends to occur in isolated "silos" and with limited scope.

3.2 A model of blended learning delivery

Gutteridge's model of blended learning (Table 2) helps to explain both the nature and effectiveness of mixed mode courses. In particular, it helps the course designer to see how different elements might be emphasised when a course feature changes. For example, the *BTech Research Module for Journalism* is based on the *CALT Research Module,* which was designed as a prerequisite course for the coursework Masters in Language Practice, Computer Assisted Language Teaching. The analysis of the *CALT Research Module* (Pratt 2008), suggested that its effectiveness lay in exploiting the *ideational* potential of the Internet as an information resource. It set the lecturer free

from knowledge telling, and expedited the process of the students becoming independent learners and researchers (as in Pellone's andragogical model of learning, 1995:1). One of the important lessons learned here for the course designer was that moving to a different administration shell can cause not only cosmetic changes, but can transform a course, provided that the potential of the new medium is recognised and exploited. The "re-loading" of the research module on Moodle, with public discussion forums used for task presentation instead of the WebCT presentation area, and the resulting expanded opportunities for peer and facilitator feedback, meant that communicative functions other than the ideational were emphasised, namely the interactive and the reflexive. Students had more opportunities to interact with each other and form a true community of practice where useful models and resources were provided. In a UoT in particular, where the supervisor may have academic rather than Industry-specific expertise, feedback from practising Journalists was particularly valuable. The intensification of the reflexive function gave students feedback at all levels, so that students were not only supported by their peer and staff group, but could also learn to be discriminating about various judgments and could apply this new critical awareness to their literary sources.

Table 1: The main focus of each research module task

	Tasks	Contextual	Ideational	Interactive	Social	Reflexive
1	Orientation session	X				X
2	Introducing yourself	X				X
3	Preliminary survey of area/field			X		X
4	Statement of research intent		X			X
5	Detailed survey of other research in the field/area			X		X
6	Narrowing the scope of your research	X				X
7	Compiling a bibliography				X	X
8	The research problem cycle				X	X
9	Theoretical framework	X				X
10	Choosing your research methodology			X		X
11	Requirements for BTech research projects				X	X
12	Finalising your choice of research topic			X		X
13	Writing up your research proposal		X			X
14	Giving an oral presentation on your research topic			X		X

Table 2: Gutteridge's empirical model of the blended learning delivery system (in Pratt and Gutteridge 2006:7)

	BLENDED DELIVERY			
FUNCTIONS	**Traditional delivery**	**BLEND EFFECTS**	**eLearning delivery**	**FUNCTIONS**
contextual	Actual classroom	← comfort zone outer limits →	Virtual classroom	contextual
ideational	Oral/written texts	←limited resources unlimited resources →	Hypermedia texts (but: online discussion rooms)	ideational
interactive	Small group face-to-face interaction/ reading-writing	←personal warmth more interactivity →	Predominantly reading-writing (but: chat rooms)	interactive
social	Teacher precepts, parochial group mores	←rule-governed socially mediated →	Global social awareness	social
reflexive	Teacher/peer feedback (including formal tests)	←narrow feedback wide range feedback →	Teacher/peer/public feed-back, online tests/self-tests	reflexive

3.3 Implications of modelling for hypermedia communication

Condon and Cech (1999) reported that their analysis of online communication was inconclusive because they were unable to distinguish between features of written communication and features of Internet communication. According to Spitzberg (2006) one of the problems hindering the formulation of a model of computer-mediated-communication competence is that there was no satisfactory model of communication which could explain it. The formulation of both a model of composing and the underlying communicative principles has gone some way to clarifying the similarities/differences between written/Internet communication and hypermedia communication in general. It is currently the vogue to describe communication over the Internet as "asynchronous", and face-to-face communication as "synchronous". Understandably, as the issue of synchronicity/asynchronicity can be seen to have important consequences for the performance of the communicative functions, whether in hard print writing or Internet communication. For

example, asynchronicity hinders the performance of the reflexive function, and hence the maintenance of the interaction. It must be noted, however, that other forms of distancing, such as spatial, also hinder timeous feedback, and to characterise speech as "synchronous" and writing (hard print or electronic) as "asynchronous" sets in place a misleading dichotomy (Tannen 1984:21) which does not take into account the actual range of genres available (see Pratt 2008:710). Speech can be distanced and/or asynchronous, and writing, immediate and synchronous (or distanced and synchronous): none of these instances is a particularly special case. The levels of complexity can be seen to go some way beyond a linear continuum. Only a small sample of communicative genres (along only two axes) is shown in Figure 4 (note that "film" and "broadcast lecture" pose problems). This small sample should illustrate those genres which might be viewed as mirror images in virtual form are in fact very different qualitatively. This is because immediacy - as opposed to distancing - does not automatically equate with intimacy. Finally, while "asynchronous" would seem to suggest distancing, the synchronous genres (as in the virtual sector) can be seen to be of mixed quality in terms of their user-friendliness and familiarity.

The synchronous/asynchronous dichotomy also obscures some of the distance issues impacting on hypermedia communication. An application of the communicative principle to various instances of communication suggests that it is *the degree and type of separation which are involved* which affect the operation of the functions rather than synchronicity or asynchronicity per se. This accounts for the anomalies provided by very formal speech or very casual writing, which present difficulties to the establishing of an oral/literate continuum (Tannen 1982, 1984). It has been noted earlier (Pratt 2008:710-711) that (at least) three types of distancing can be seen to influence the way in which the communicative functions are carried out, namely temporal, spatial and valence (value-loaded, see Fielding 1993, 39-40) distancing. The implications of different kinds of distancing for hypermedia communication suggest that use of the Internet in education, rather than being a "distance" option, may in fact more "immediate" than much of the on-campus education taking place in large institutions. It must be remembered that massed students numbers also cause a type of distancing. Educational institutions regularly use distanced communication modes by use of textbooks, notes and written examinations. Large numbers also contribute to the distancing effect of formality (i.e. valence distance), as in mass lecture situations. An online classroom set up for a large group of students can create a sense of immediacy and intimacy and offer more opportunities for individual communication than a mass lecture, and online quizzes and self tests can give students far more in the way of individual attention than live teacher feedback.

As Table 1 shows, far from being a "distance" option, an online option in the Research Module gives more opportunities for feedback than either individual supervision or traditional Research Methodology lectures. Moreover, feedback is far more varied and far more supportive on the whole. As far as valence distancing goes, it must be noted that most of the online tasks require informal postings, so that students do not lose face by not initially knowing research conventions. Very few of the forum postings were edited by the lecturer or corrected formally (except for Tasks 7, 13 and 14). This meant that actual social pressure acted as a mechanism for social research conventions being observed. As a response to this social pressure, students moved into the role of researcher, with a concomitant increase in formality and orthographic correctness. Finally, as has been mentioned elsewhere (Pratt 2008), writing in electronic mode is more like a conversation than a hard text exchange because it offers the option of immediate feedback. It also reduces the need for formality and detailed message content, as the writer does not have to re-explain the context each time, and the discussion forum (or email) structure removes the necessity to write headings to replies. The result is that the reflexive function can be performed more effectively in electronic postings than in hard print mail, which moves the interaction forward. There are also negative aspects of Internet communication (e.g. unedited messages, or messages that should not, on reflection, have been sent, as well as the ubiquitous junk mail), but these were not apparent in the running of the Research module, perhaps because Moodle offers multiple delete/edit options.

4. Conclusion

It should be clear that the success of the Research Module, and its subsequent use for BTech Television (as well as its proposed use for masters and doctoral degrees run at DUT) was not just the result of using a blended learning approach, but of using course design informed by a principle which had relevance for research, learning and hypermedia communication. One of the results of using this approach was that students appeared to have less trouble in choosing an appropriate

research project fairly early on, as they were encouraged from the start to pursue their own interests, and the approach encouraged them to explore topics at their own pace. The approach used also obliged students to work through the consequences of choosing a specific topic, so that they could jettison unsuitable options early on. We believe that the good results obtained from using this approach had much to do with the fact that the topics had intrinsic interest for the students and were articulated - and delimited - clearly relatively early on in the course. This resulted in challenging and interesting projects, such as the social impact of Kwaito music (Blose 2007), the ANC succession race as reported in the Press (Goge 2007), and the authenticity/authority of online journals (Martin 2007). The variety of diverse topics proposed, while desirable in providing intrinsic motivation and encouraging independent learning, initially posed a problem in terms of finding specialist supervision. Fortunately the novelty of an online option in the course, as well as the fact that potential supervisors could preview the students' proposed research topics online, meant that all students but one were able to obtain suitable supervisors, including Professor Jonathan Jansen, Professor Sioux McKenna and well-known TV presenter and personality, Alan Khan. Professor Jansen (then DUT Administrator) not only participated in the course as supervisor but also publicly commended the BTech Research Module as an exemplary teaching and learning practice. The results bore out our faith in the approach used. While course effectiveness cannot be measured in terms of examination results only, throughput is a crucial issue for both students and the institution, and it was very reassuring to find that there was a significant improvement in not only in the Research Report marks, but also in the overall Basic Research Course result. This was a marked improvement on the results obtained in 2006 (with the same set of Examiners and Moderators), when a traditional lecture/workshop approach was used: then five out of ten students completing the course passed, with the highest mark being 61%. In 2007 all ten out of the ten students completing the course passed (two, however submitted their reports after the deadline had expired, and were required to repeat the course in 2008). Of those who passed in 2007, four students obtained marks over 61%, with the highest mark being 71%. The student who obtained the highest mark used the advanced computer literacy skills she acquired during the course to research online publishing, and to construct and carry out an online survey as part of her data collection (Martin 2007). In view of its success, the course, which is generic in modelling research processes, has been cloned for use in other BTech, MTech and DTech programmes.

Figure 4: Synchronicity/asynchronicity vs. actual/virtual (Pratt 2008:710)

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