

Identifying the contradictions in the technology enhanced language classroom

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Abstract

This study takes place in the context of a federal laptop-mediated English language pre-university course in the United Arab Emirates. Despite predictions and claims from policy makers and practitioners that 1:1 classroom devices would revolutionise teaching and learning, student results remain static and student attrition remains high. Through the lens of activity theory this paper identifies ten contradictions, and their discursive manifestations, potentially causing failure and attrition. This paper contributes to the fields of technology enhanced learning, 1:1 device initiatives, English language teaching, computer assisted and mobile assisted language learning and activity theory by highlighting several problematic experiences in teachers' practices and mapping these within the activity system context. The paper also questions the positive impact of a 1:1 laptop initiative in this particular context, with implications for future research.

Keywords: laptops, English language, ESL, activity theory, activity systems, UAE, technology enhanced learning, CALL, MALL

Introduction

From policy makers to practitioners, there is a wider view in education taking a positive stance on classroom technology as a 'desirable outcome' leading to increased learning (Scanlon & Issroff, 2005, p. 431). However, is classroom technology actually increasing student success or is the 'state-of-the-art' distracting from the 'state-of-the-actual' (Selwyn, 2011, p. 715)? Through the lens of activity theory, this study focuses on one federal institution in the United Arab Emirates (UAE) and attempts to identify the causes of attrition and failure in a laptop-mediated pre-university preparatory English language course.

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Identifying the contradictions in the technology enhanced language classroom

Governments increasingly see technology and classroom device implementation as the key to educational achievement nationally and globally. The UAE is no different, and a 'first rate education system', feeding human capital into a knowledge based economy non-reliant on oil revenue, is crucial to its future and position in the world (UAE, 2010).

Technology is a core component in this drive for educational excellence, 'a key element in modernisation and reform of education' (Lightfoot, 2016, p. 1). Laptops were introduced to UAE universities in the early 2000s, while 2012 saw the iPad Initiative, a project affecting 14000 students in preparatory English courses across three federal institutions. This initiative was expected to revolutionise teaching and learning through the adoption of a single, mobile device that would personalize education and make mobile learning a reality. Initially research reported teachers firmly moving towards this goal. (Cavanaugh, Hargis, Kamali, & Soto, 2013b; Cavanaugh, Hargis, Munns, & Kamali, 2013a; Hargis, Cavanaugh, Kamali, & Soto, 2014). Laptops replaced iPads in 2017, but classroom delivery remains via 1:1 devices.

This positivity is echoed elsewhere. Tubaishat and Bataineh (2009) Mokhtar, Al Bustami and Elnimeiri (2009) and Raddawi and Bilikozen (2018) claim major improvements, particularly in English second language (ESL) writing scores, following laptop implementation in UAE classrooms. Grimes and Warschauer (2008) and Park and Warschauer (Park & Warschauer, 2016) also cite improvements in ESL writing abilities in standardized tests in the USA.

This research takes place in the context of a preparatory English course at one campus of a large federal tertiary institution in the UAE. Students wishing to enter degree programs must achieve the equivalent of an International English Language Testing Systems (IELTS) band 5.0 on a national English proficiency test, the EmSAT. Those that fail to do so enroll in a one-year preparatory English language course, delivered face-to-face via laptops and a learning management system (LMS). Technology is central to the preparatory classroom. However, actual student results in the classroom do not support these positive claims. The successes reported in research are neither being replicated in practitioner's experience nor institutional statistics. Laptops are deployed 1:1, yet scores on standardized tests remain largely static. Failure and attrition see many students leave before their academic careers have begun. Pass rates of 72% in 2016 dropped to 63% by 2018. Why are almost 40% of students failing? What contradictions in this technology enhanced environment are contributing to failure and attrition? This paper aims to identify these contradictions.

Following a brief discussion of the literature, I will outline the theoretical framework underpinning the research. The methodology and methods employed are discussed in some detail. The findings are then presented as ten distinct contradictions. The paper takes a critical perspective, underpinned by theory at all stages, and aims to represent the reality facing teachers and students, the state-of-the-actual as opposed to the state-of-the-art.

Literature Review

The English preparatory course occupies a unique position between K12 and tertiary education. Therefore, literature from both school and university contexts has been considered, and from the wider international context as well as that focusing on the UAE. Three main themes relate to the context of this research, namely Computer-Assisted Language Learning (CALL), the positive impact of classroom devices and research into negative impacts of one-to-one (1:1) devices in the classroom.

Computer-Assisted Language Learning

The combination of computers and language learning is not new. Computer-assisted language learning (CALL), defined by Beatty (2013) as ‘any process in which a learner uses a computer and, as a result, improves his or her language’ came into common usage as a term in the 1980s. CALL is both a ‘middle-aged multidisciplinary field’ (Warschauer, 2013 in Tafazoli, Abril, & Parra, 2019) yet ‘filled with areas that are unknown and in need of exploration’ (Beatty, 2013). CALL acts as an umbrella term for a diverse field. As new technologies emerge new areas and acronyms emerge for investigation. A summary of the current terms can be seen in Table 1.

Table 1: CALL and related acronyms

CALL	Computer-assisted language learning	Focuses on the learner
CAI	Computer-aided instruction	Focuses on the instructor, teacher centred
CALT	Computer-assisted language teaching	Focus on the teacher
CAT	Computer-assisted teaching	Any subject, not limited to language teaching
CBT	Computer-based teaching	Computers used to teach discrete language skill
CMC	Computer-mediated instruction	L2 learners communicate with L1 speakers via computer
CMI	Computer-mediated instruction	Distance learners use computers for communication with tutors
ICALL	Intelligent computer-assisted language learning	Computer software gives feedback on performance
WELL	Web-enhanced language learning	The Internet is the medium for instruction

MALL	Mobile-assisted language learning	Mobile devices are used by learners for language learning
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(Tafazoli et al., 2019)

Research reflects this plurality. Areas include telecollaboration and distance learning (Lamy, Thomas, Reinders, & Warschauer, 2013; O’Dowd, 2013), ‘vodcasting’ (self-selected video casts) among distance learners (Faramarzi, Tabrizi, & Chalak, 2019), virtual worlds (Sadler, Dooly, Thomas, Reinders, & Warschauer, 2014) and digital feedback (Ware & Kessler, 2013). Other areas include CALL and learner autonomy (Bahari, 2019; Blin, 2004; Reinders & Hubbard, 2013; Schwienhorst, 2012), the use of automatic writing evaluation (AWE) (Li et al., 2019) and interactive courseware for writing (Tsai, 2019). Research has also taken place into autonomous learners and corrective spoken grammar feedback (Penning de Vries, Cucchiarini, Strik, & van Hout, 2019), as well as the flipped classroom in different international contexts (Webb & Doman, 2019). However, while the research carried out in this paper concerns face-to-face classrooms, much recent CALL research focusses instead on autonomous and distance learning. There is a gap in terms of what students and teachers are actually doing in class with computers and classroom technology.

The Positive Impacts of Classroom Devices

Research in the UAE and beyond suggests 1:1 devices are having a positive effect, at least on ESL writing abilities (Grimes & Warschauer, 2008; Park & Warschauer, 2016; Raddawi & Bilikozen, 2018; Tubaishat & Bataineh, 2009). Research in Saudi Arabia cites the potential of 1:1 devices, particularly smartphones, to increase ESL students exposure to English (Alfarwan, 2019). For others, 1:1 devices allow teachers to replace the ‘plain talk and chalk’ of the conventional classroom with online student response systems such as Kahoot! to promote ‘entertaining and fun’ learning environments (Azman & Yunus, 2019). The widespread use of laptops, smart phones and tablets means that traditional classroom based ESL is giving way to ‘alternative, rapidly evolving’ styles of teaching (Ghareb, Sate-Askew, & Mohammed, 2017). Whilst there is some recognition that increased availability of technology does not automatically mean better learning (Andrei, 2017), research still leans towards the positive effects of 1:1 devices. Criticality is perhaps lacking.

The Negative Impacts of Classroom Devices

Research taking a negative stance often focuses on distractions caused by devices. In the UAE, teachers described iPads as a distracting ‘smorgasbord of fun’ (Miles, 2019), while Awwad, Ayesh & Awwad (2013) found UAE undergraduates almost exclusively using laptops in class for non-college related tasks such as chatting or browsing websites. This is described as ‘unsanctioned use’ by Tallvid, Lundin, Svensson, & Lindström (2015). For Leander and Frank (2006 in Knobel & Lankshear, 2007) unsanctioned use demonstrates

Identifying the contradictions in the technology enhanced language classroom conflicting mindsets in the classroom. Teachers expect 100% attention, while today's students are actually perfectly capable of multi-tasking and can carry out 'self-selected purposes' such as browsing websites alongside classroom work. This clash of mindsets could be a cause of conflict in the modern 1:1 classroom. In the UAE, research often focuses on teachers rather than students, particularly the barriers to training teachers to use technology (Ali, 2013; Saunders & Quirke, 2002; Schoepp, 2005) or a specific device such as the iPad (Cavanaugh et al., 2013b; Cavanaugh et al., 2013a; Donaghue, 2015; Hargis et al., 2014). What students are actually doing with their laptops in class has been secondary.

A Gap in the Literature

Recent CALL research focusses on distance learning and learner autonomy, not device use in face-to-face classrooms. Research into actual 1:1 devices in classrooms takes a largely positive stance. Where there is criticism the focus is on specific, isolated problems such as classroom distraction or teacher training. The wider context and systems that teachers and students find themselves part of is not considered. This is a specific, but important, gap in the literature. At a crucial point between K12 and undergraduate level, classroom 1:1 device deployment is not leading to increased success. Many students are failing and leaving college before their academic careers have begun. Considering the activity system as a whole, what are the problems causing this failure and how are they being experienced? That is the gap this paper seeks to address.

Research questions

The following research question has been identified.

RQ1: What contradictions are experienced by English language teachers in a laptop-mediated federal pre-university English language program in the UAE?

Findings are presented in a later section.

Theoretical framework

This paper takes activity theory and activity systems analysis as the theoretical framework. Rather than focusing on isolated elements activity theory allows consideration of the whole system. Vygotsky (1986) uses the following example. Imagine a student is trying to understand why water extinguishes fire. The individual elements, hydrogen and water, are flammable and fire-sustaining. The extinguishing qualities of water are lost when you break the system into components (Virkkunen & Newnham, 2013, p. 31). Similarly, we cannot truly understand how technology is being used in education by considering isolated

Identifying the contradictions in the technology enhanced language classroom elements. Each element and complex interrelation needs to be considered in terms of the whole system. The complex and multi-faceted problem of student failure needs a complex theory that considers the multiple elements at play. Activity theory has this utility. It provides the language and conceptual tools to describe and analyze the complexity of social situations like education (Bligh & Flood, 2017; Hopwood & Stocks, 2008; Murphy & Rodriguez-Manzanares, 2013).

In activity theory, the unit of analysis is the activity system. An activity system could be a team, a department, an institution, a social system or practice. Regardless of size or scope, it is represented by the activity system. See Figure 1.

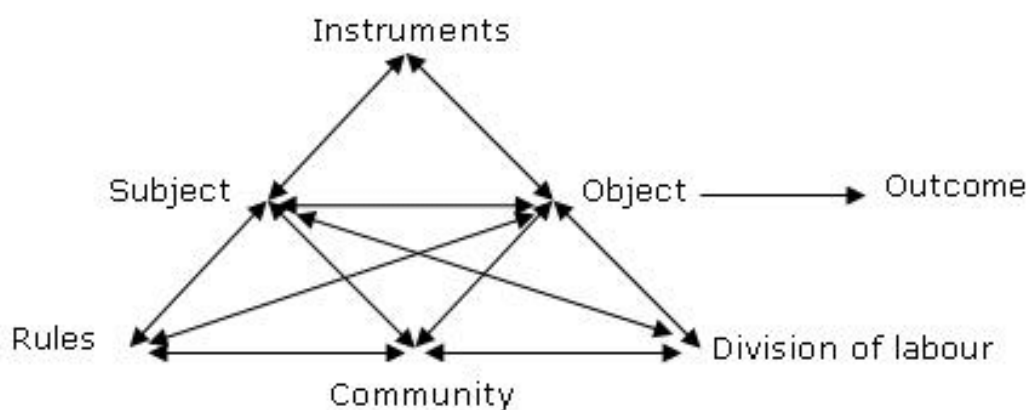


Figure 1: the activity system (Engeström, 1987)

All activity is social, and has an object with intended outcomes. The interaction between the subject (the individual, group or organisation) and object (the aim of the activity) is mediated by tools, which can be physical objects, concepts and ideas or social others. The activity system also includes rules, community and division of labour. Rules mediate between the subject and the community, while the division of labour mediates between community and object.

Classroom teaching in a school can be simplified as an activity system according to Table 1. The different elements are interdependent and mediate between each other.

Table 1: elements of a school activity system

Subject	Teachers, teaching assistants etc.
Tools	Syllabus & curriculum, course books, assessment instruments, pedagogy etc.
Object	Successful learning, often measured via standardised tests.

Rules	Class timings, behaviour, modes of addressing teachers etc.
Community	Students, school management, governors, family, other teachers etc.
Division of labour	Who does what – lesson preparation, homework, schedules, curriculum design etc.

When the activity system is working in harmony, the object – successful learning – is achieved. However, a change in any element can cause a disruption, or contradiction, leading to unintended outcomes, such as increased student failure and attrition. A new tool such as a revised course book may not sufficiently cover the curriculum, or a new examination may replace the current object. These changes may cause contradictions, and the consequences are unintended outcomes.

In the preparatory English course, the unintended outcomes of failure and attrition become reality for many. This means that systemic contradictions are occurring. Activity systems analysis enables the identification of these systemic contradictions.

Systemic contradictions take four forms:

- *Primary contradictions* occurring within one element of the system.
- *Secondary contradictions* occurring between elements of the activity system.
- *Tertiary contradictions* occur between an existing system and attempts to apply a new model
- *Quaternary contradictions* between neighbouring activity systems.

(Engeström, 1987/2015 in Bligh & Flood, 2015)

For Engeström & Sannino there is a ‘risk that contradiction becomes another fashionable catchword with little theoretical content and analytical power’ (2011, p. 368). They identify four ways in which subjects experience systemic contradictions as discursive manifestations. See Table 2.

Table 2: discursive manifestations

dilemmas	An expression or exchange of incompatible evaluations in discourse, typically reproduced rather than resolved.
conflicts	These manifest as resistance, disagreement, argument and criticism. Resolution involves compromise or submitting to authority.
critical conflicts	These cannot be resolved by subjects alone. Feelings of guilt and inner doubt are emotionally and morally charged.

	Resolution may require emancipation and liberation.
double binds	Alternatives are pressing and equally unacceptable. Resolution requires practical transformation.

(adapted from Engeström & Sannino, 2011)

Discursive manifestations are subjective experiences represented verbally by those experiencing the contradictions, and allow a more nuanced and personalised account of systemic contradictions within the activity system being studied. Note that there is no mechanical on-to-one relationship between discursive manifestations and contradictions. Several manifestations may, for example, point towards the same underlying contradiction.

The phenomena of failure and attrition in a laptop-mediated preparatory English course is complex and concrete. Activity systems analysis can make sense of ‘complex real-world data sets in a manageable and meaningful manner’ (Yamagata-Lynch, 2010, p. 5) and guides the design of the research, data collection and data analysis.

Methodology

Activity theory is a framework for qualitative research, consequently qualitative research methods were employed. By its collective nature, an activity system is always a community of multiple viewpoints. In the preparatory English course, potential stakeholders include teachers, students and management. Ideally research would reflect this multi-voicedness, but practical limitations meant only teachers were included in this study.

The research site is one of 16 campuses across the UAE and was chosen for largely practical reasons. As a teacher on the preparatory course I am based at this campus, facilitating access to students and faculty. The campus is representative; it is single-sex (female), and the catchment area is both rural and urban. The teaching body is also representative, with 21 teachers at the time of the study representing 11 nationalities. While the majority are from the UK or USA and classified as native speakers, a number of teachers are from second language backgrounds, with 5 native Arabic Speakers. The research site is bound as a case study by its location in one Emirate, its particular student cohort, the teaching body and their shared object of student learning. The employment of activity theory as the theoretical framework underpinning the research further binds the case study analytically. This activity system forms the unit of analysis for this study.

Being an insider to the research site presents several advantages. I am already ‘immersed in the organization and have built up knowledge of the organization from being an actor in the processes being studied’ (Brannick & Coghlan, 2007). I possess a level of pre-understanding that would take an external researcher a potentially prohibitive amount of

Identifying the contradictions in the technology enhanced language classroom time to acquire (Smyth & Holian, 2008 in Unluer, 2012). Awareness of potential issues is needed. Insider researchers need to avoid over-assumption during interviews and consequently failure to probe, and must consider the duality of roles balancing institutional duties with research. However, the benefits of greater understanding, established intimacy and insider knowledge should outweigh the disadvantages.

This insider knowledge informed participant selection. Students in the preparatory course are grouped into ‘sections’ of up to 25 students and taught by three teachers who see the group for 8 periods each for a total of 24 class periods. The teachers then divide the teaching of each week’s learning objectives between themselves. Typically, this is based on language skills, for example one teaches writing and grammar, another reading and vocabulary, and one listening and speaking. Two focus groups were chosen, consisting of three teachers teaching the same section. Therefore, each teacher in the focus group was sharing the same phenomenon – each was teaching the same group of students on the same course, experiencing the same successes and failures. All teachers had at least 5 years teaching experience in the region, with at least one year in the preparatory course. The diverse teaching population in the UAE was reflected in the focus groups, with the UK, Australia, Jordan, Colombia and the USA represented. Two further experienced teachers, both from the UK, were chosen for individual interviews. These individual interviews took place via email due to participant preference.

Each teacher has been granted a pseudonym for anonymity. See Table 3.

Table 3: interviewees

Focus Group 1	Edward, Peter, Ben
Focus Group 2	Geraldine, Heather, Tania
Individual Interviews	Johnson, Anna

Methods

Institutional ethical approval was granted prior to commencing data collection.

The interviews were artifact mediated in order to potentially provide new contextual information to explain and verify interview findings (Yamagata-Lynch, 2010). Actual teaching materials were chosen as artifacts to initiate discussion among the participants, to add relevant authenticity to the process and complement the interview protocol.

Modules of teaching material were opened on the LMS and displayed. The groups were prompted to discuss how they were using these materials. The main page (Figure 2) is expanded to show all the material contained within (Figure 3) and an example of an online

Identifying the contradictions in the technology enhanced language classroom reading activity (Figure 4).

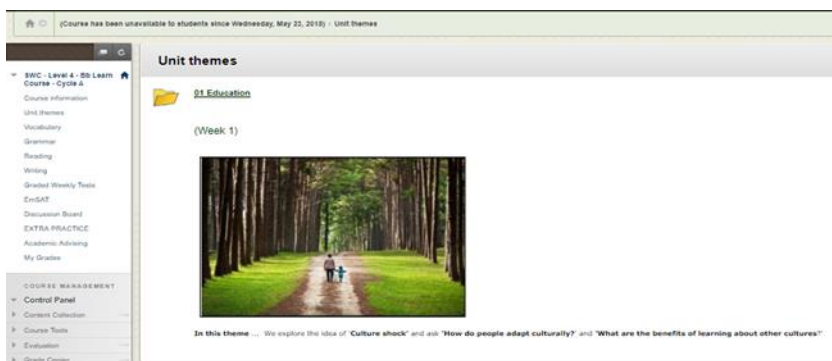


Figure 2: example theme on LMS

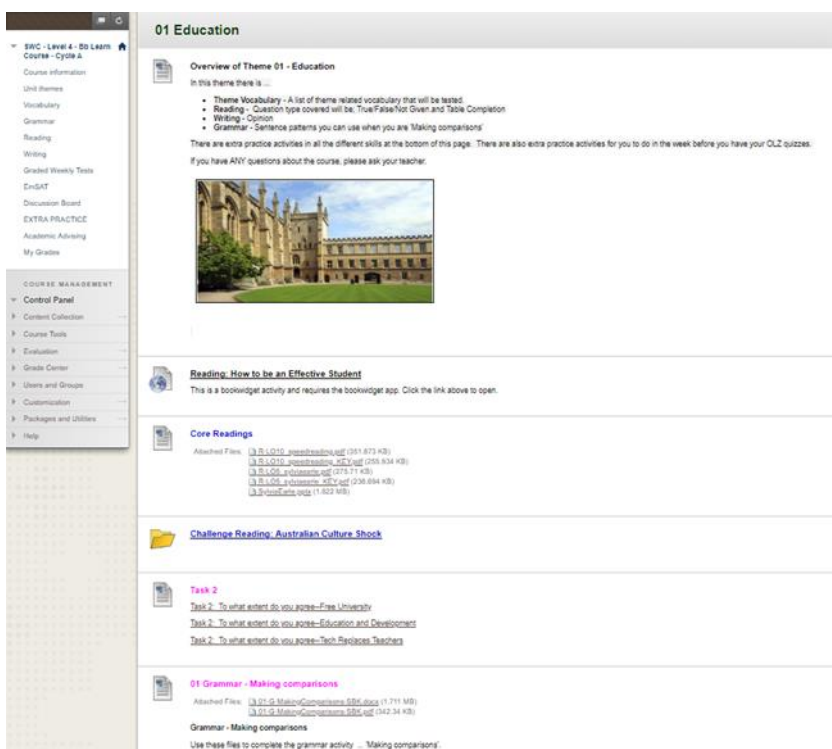


Figure 3: expanded theme



Figure 4: example online reading activity

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These materials were discussed in terms of a 6-point interview protocol. The protocol aims to address all elements of the activity system and the mediation between them.

An interview protocol based on Marken's (2006) adaptation of Mwanza's eight-step-model (2002) was adopted. See the original in Table 4.

Table 4: Marken's interview protocol

What <i>tools</i> do the <i>subject</i> use to achieve their <i>objective</i> and how?
What <i>rules</i> affect the way the subjects achieve their <i>objective</i> and how?
How does the <i>division of labour</i> influence the way the <i>subjects</i> satisfy their <i>objective</i> ?
How does the <i>tools</i> in use affect the way the <i>community</i> achieves the <i>objective</i> ?
What <i>rules</i> affect the way the <i>community</i> satisfies their <i>objective</i> and how?
How does the <i>division of labour</i> affect the way the <i>community</i> achieves the <i>objective</i> ?

(Marken, 2006)

Questions were rephrased and broken into sub questions to avoid issues with terminology. For example, the original question remains in bold with prompts for the interviewer to ask the focus groups. See Table 5.

Table 5: actual interview protocol example with prompts

Question
What <i>tools</i> do the <i>subject</i> use to achieve their <i>objective</i> and how? Why are you teaching the students? What's your purpose? <i>Is that all? Nothing else?</i> <i>Look at the materials – go through each item.</i> How would you use....? Talk me through how you would deliver this to students. Is there anything you would adapt? Is there anything you wouldn't use / that wouldn't work? Why? Is there anything missing or anything you would add? What? Influence of the laptop. Influence of LMS.

The interview protocol focusses on each element of the activity system and also the relationships and mediation between the elements. This enables the identification of systemic contradictions occurring within the activity system. Discursive analysis then

Identifying the contradictions in the technology enhanced language classroom allows for identification of experiential manifestations of the contradictions as dilemmas, conflicts etc.

The animated nature of the group interviews meant they quickly became semi-structured and the protocol a guide rather than a rigid framework, although all elements were covered. The interviews were recorded and transcribed.

Two further individual interviews took place, taking the form of ‘interview to the double’ (ITTD). Teachers wrote a monologue as if instructing a double to take their place in the classroom (Lloyd, 2014; Nicolini, 2009).

This is the actual question asked for the ITTD:

Imagine you are going to train a ‘double’ to take your place tomorrow. It is very important that your colleagues, students and management do NOT detect the double as an imposter, so you must provide them with as much information as possible. The double looks – and sounds – exactly like you.

Now, I want you to imagine you are teaching this double all the things they will need to know to replace you at work tomorrow, specifically in the classroom, without arousing suspicion and being exposed as an imposter.

What will you tell them?

This method should allow for understanding and representation of actual practice that can be mapped onto the activity system in combination with the data from the focus groups. The ITTD’s were originally intended to take place orally, but the participants preferred to write their answers in email to allow for more thought and reflection.

Combining focus groups with the ITTDs allows for contradictions to be identified wherever they occur in the activity system, directly as experienced by the teachers in their own words. Findings

Findings

Overview

The following section describes the findings. Following a brief overview, the current activity system for the preparatory course is illustrated. Each contradiction is then detailed and described in terms of its discursive manifestation as a dilemma, conflict, critical conflict and double bind.

Overall, contradictions are clearly occurring in the activity system. Ten distinct contradictions are identified, manifested as two dilemmas, three conflicts, three critical conflicts and two double binds. These contradictions and discursive manifestations are

Identifying the contradictions in the technology enhanced language classroom discussed in more detail following a description of the current activity system.

The Current Activity System

The individual and collective activity of the preparatory course teachers is the context for the research. This context forms the current activity system, as shown in Figure 5

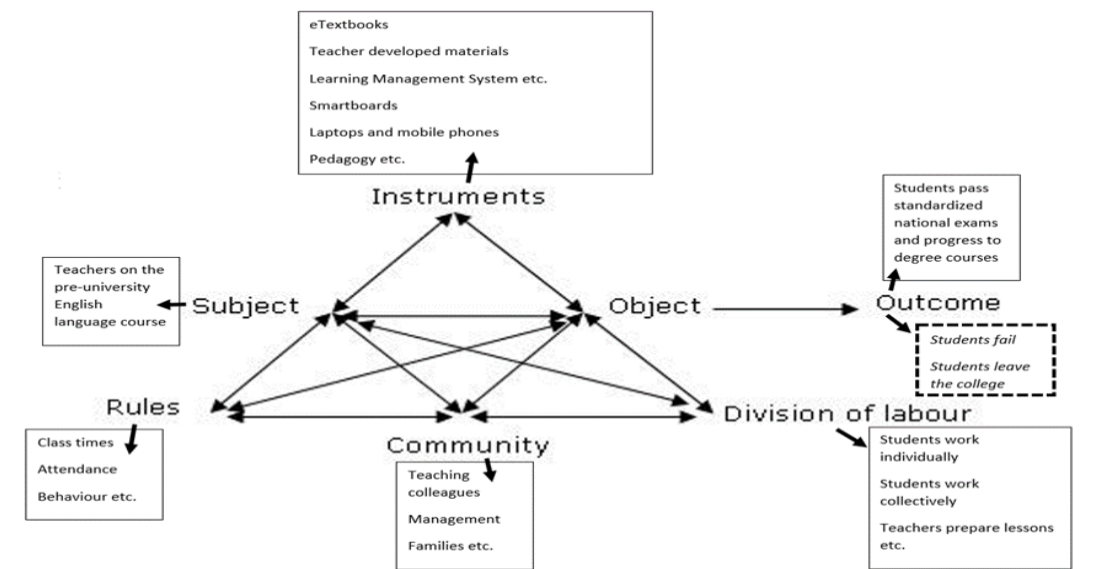


Figure 5: the current activity system

The intended outcome of this activity is that students pass the preparatory course and progress to degree programs. Unfortunately the unintended outcomes of failure and attrition mean that contradictions are occurring. The discursive manifestations of these contradictions are now discussed.

Dilemmas, Conflicts, Critical Conflicts and Double Binds

Analysis identified two dilemmas, three conflicts, three critical conflicts and two double binds. As previously mentioned, there is not an automatic one-to-one relationship between manifestations and contradictions. While the ten manifestations are attributed here to ten contradictions, this represents merely the unfolding of the empirical analysis in this paper rather than a general principle.

Classroom materials

The first issue relates to classroom materials. Official teaching material is kept on a Learning Management System (LMS). However, this is largely ignored by teachers who prefer to use bespoke resources or online alternatives. For example,

Ben: I don't use any of the materials on Blackboard, even though some of them are mine...because I like to tailor the materials exactly to what I want...

Materials are moved to LMS sub-sites or other platforms such as Edmodo , and various

Identifying the contradictions in the technology enhanced language classroom online tools such as Kahoot !, Quizlet , Flipquiz and ReadWorks are employed. The general consensus is that bespoke, tailored materials are superior to anything on the LMS.

This is an example of a dilemma as the discourse between teachers signifies incompatible evaluation, a difference of opinion over what materials should be used, a phenomena that is typically reproduced rather than resolved. When mapped onto an activity system, this dilemma appears as a secondary contradiction between the subject and tools, illustrated as Dilemma A in Figure 6.

Pedagogy and vocabulary teaching

The next phenomenon refers to the teaching of vocabulary. A major tool in the teacher's armory is pedagogy, yet there is pedagogical disagreement over vocabulary teaching. Vocabulary is presented out of context, and practiced via online tools. While such tools are recognized as fun and engaging their long-term efficacy is unproven. There is disagreement between the participants.

Peter: Word's meanings are words in context. Words alone don't have meanings...

Edward: Yes they do...if I didn't have words I wouldn't be able to make a sentence in the first place...

Ben: But would you then learn how to put that in a sentence?

Again, there is incompatible evaluation between teachers that suggests a dilemma, but also healthy debate that is reproduced rather than resolved. When mapped to the activity system, this dilemma manifests as a primary contradiction in the tools, principally pedagogy, illustrated as Dilemma B in Figure 6.

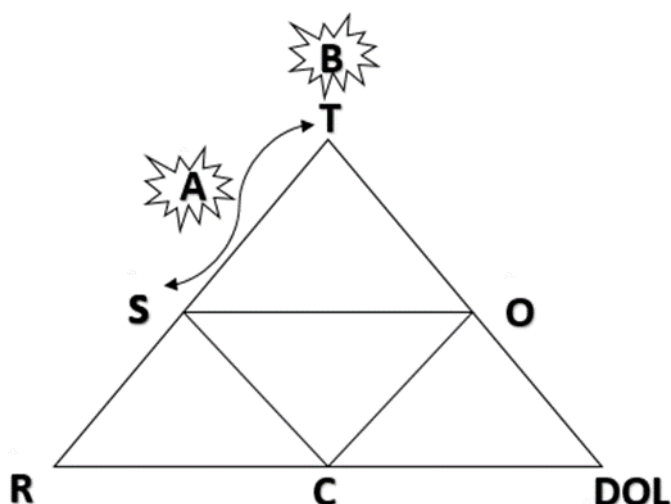


Figure 6: dilemmas

Student keyboard skills and online exams

This item concerns the potentially negative impact of student keyboard skills on online exams. Students take the national standard EmSAT test, an online exam that requires keyboard input. However, typing is not taught, and poor keyboard skills hinder the students.

Edward: If they are typing like this [mimes single finger typing] they are not going to get anywhere near 200 words...

Ben: That's true. We can't teach them to type in six weeks...

Peter: Computer skills and typing should be a completely different subject.

Participants demonstrate resistance and criticism, classifying this particular contradiction as a conflict.

This is a secondary contradiction between tools and object experienced by teachers as Conflict A, illustrated in Figure 7.

Laptops and classroom management

This phenomenon sees teachers resorting to paper for efficiency and more importantly classroom management. Using paper means students are on task more quickly, and prevents them watching videos, chatting online or browsing other websites. Participants are clearly frustrated, and express the resistance, disagreement, argument and criticism typical of an experienced conflict.

Heather: I do use online, I do, but this past week I just happen to use hard copy because I've had enough of having to put a stop to ladies watching their Turkish films, you know.

Tania: Or it's they're talking to their pals

Heather: They're on the wrong paper, they're not following along.

Tania: Yeah, yeah, yeah.

Heather: -you know, but this way, when they get a hard copy, I know they're working on that.

When mapped onto the activity system, this can be seen as a secondary contradiction between the rules of appropriate laptop use and the tools, illustrated in Figure 7 as Conflict B.

The nature of the course

This area concerns the course itself. For management the course is remedial, aimed solely at achieving the required English proficiency. For teachers, however, the course should be developmental. One teacher uses reading lessons about the Taliban banning education for

Identifying the contradictions in the technology enhanced language classroom females, to show students that:

Ben: ...they are getting their education for free...they should take full advantage of that.

Another urges students to see beyond the test:

Geraldine: It's not just about the EmSAT...they need to improve the way they do things.

However, the course, driven by management, remains focused on exam results as

Ben: ...otherwise they would let us teach proper foundations items like research and APA and all that.

The discursive disagreement, resistance and criticism is typical of a conflict.

When mapped to the activity system, this appears as a quaternary contradiction between the participants' activity system and management, illustrated as Conflict C in Figure 7.

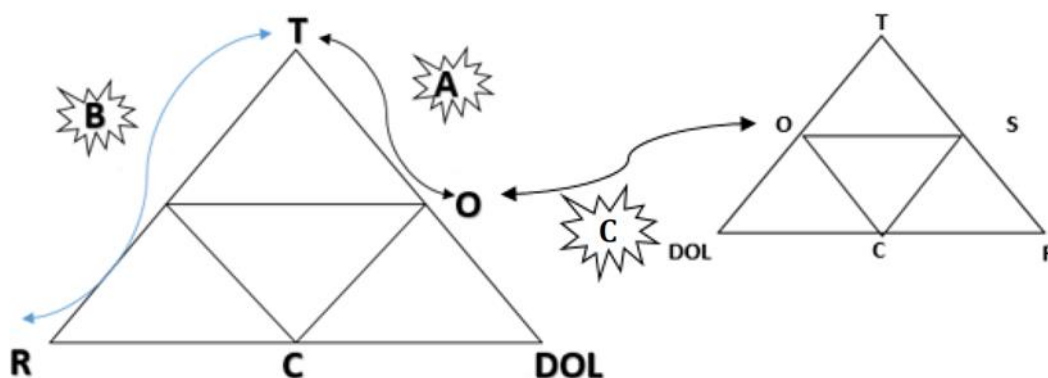


Figure 7: conflicts

Mobile phones in the classroom

This concerns the major distraction posed by mobile phones in class. This is an example of a critical conflict as the participant's language is emotionally charged and shows the inner doubt typical of a critical conflict. For example, Johnson and Anna mention the need to 'ask students to put away phones' and to check students are not 'staring at their phones' during tasks. There are also conflicting attitudes among teachers in terms of expectations. Some teachers insist phones are out of sight and not used in class. Others see them as a second device to be utilized in class. Teachers are 'trying to enforce behaving like adults' (Peter) although the same teacher cites an internet video where a teacher dropped phones in a bucket of water if they were used in class. Geraldine even questions her own teaching, thinking 'maybe I need to come over to their side of things...using phones' and admitting that 'maybe I need to do things differently'. Teachers are struggling.

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This secondary contradiction between rules and use of tools is mapped to the activity system as Critical Conflict A, illustrated in Figure 8.

Teacher and student expectations

This point concerns the differences of teacher and student expectations over classroom roles and learner independence. Students see good teaching as ‘teach me – help me – learn for me’, while teachers expect more learner autonomy. Language is emotionally charged indicating critical conflict:

Heather: They come from the background where all learning is-

Tania: Spoon-fed.

Heather: Yeah...so then they come to college and all of a sudden they’ve got to plough the earth themselves

Lack of learner autonomy is exacerbated by students’ inability to follow instructions and lack of independence:

Tania:...you can’t just like sit back... and trust them to work independently...

Teachers want independent learners, but teacher-centred learning is required. This is a difficult juggling act. This maps to the activity system this as a secondary contradiction between the subject and the division of labour, illustrated as Critical Conflict B in Figure 8.

Student motivation

This point concerns the teachers’ belief that students do not have clear objectives or motivation. The language used is morally and emotionally charged denoting a critical conflict.

Heather: Students have no enthusiasm, no interest...they don’t see the value of education...

The class is a holding pen for students who are killing time until they can retake the exam.

Tania: Every time I asked her to do an activity, she would just, excuse my English, she would just half-arse it

The students are only interested in taking the test, not in working towards it.

Gillian: I struggle to get the students to understand that it’s not just about an EmSAT test, it’s about being successful once they’ve moved on to their programs.

In the activity system this maps as a quaternary contradiction between the teachers’ and students’ objectives illustrated as Critical Conflict C in Figure 8.

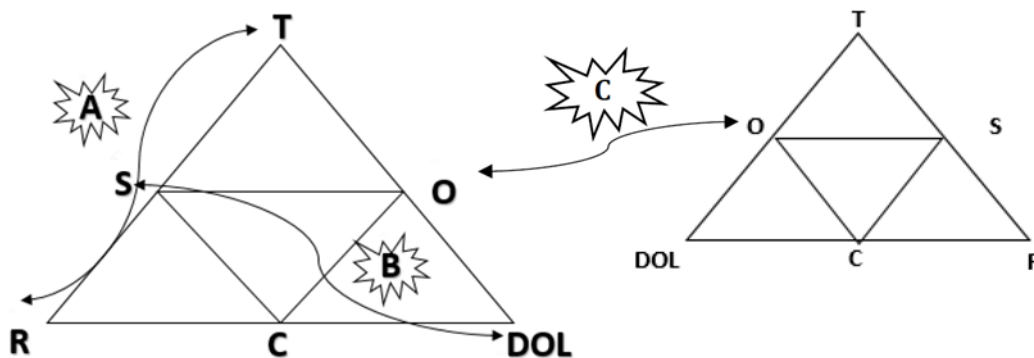


Figure 8: critical conflicts

IT policy and classroom technology

This phenomenon concerns institutional IT policies and the practical use of classroom technology. Material is displayed in class via a classroom desktop and a touch screen. IT policy means that the desktops log out after two minutes for security reasons. This interrupts lessons, and teachers need to log in multiple times during classes. It is:

Edward:... is the single biggest problem...some stupid policy...it's just insane...

The language shows the depth of feeling and frustration, indicators of double binds. The strong language is echoed by other teachers:

Peter: It's an insurmountable problem that is driving me nuts...

Coupled with this are smart lighting systems which turn off if rooms are unoccupied. This often occurs during class, plunging rooms into darkness mid-lesson. Repeated requests to management have not led to resolution, and the physical environment remains a source of disruption. As a double bind, resolution would involve practical transformation.

This can be mapped onto the activity system as a quaternary contradiction between management and teachers concerning tools illustrated as Double Bind A in Figure 9.

Open access and student success

The final phenomenon is not connected to technology. While many are successful – 72% in 2016/17 went on to degree programs – there is a significant minority that are not 'bookworm ready' (Heather) who we are 'not giving enough time' leading to them being 'sacrificed' (Peter). This strong language for strong feelings is typical of a double bind, where the alternatives are pressing and resolution requires practical transformation. Students are accepted who will never pass. For some, the mountain is too high to climb. Open access means the college accepts everyone, but this sets many up for failure. There is

Identifying the contradictions in the technology enhanced language classroom a limit to what the preparatory English language can achieve.

When mapped to the activity system, this is a secondary contradiction between the community (Ministry of Education) and the object experienced as Double Bind B, illustrated in Figure 9.

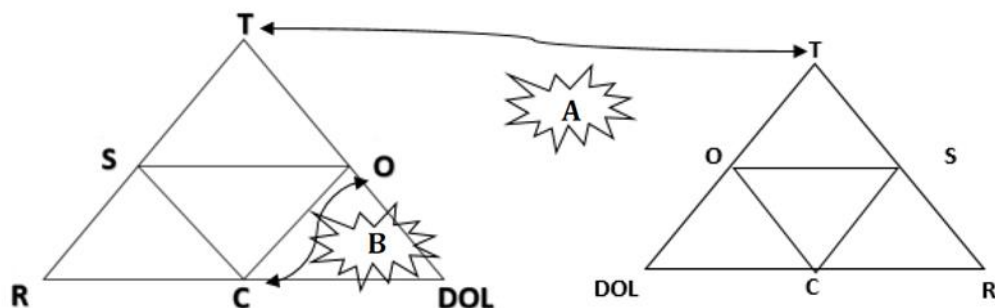


Figure 9: double binds

Discussion

This paper aims to answer the following research question:

RQ1: What contradictions are experienced by English language teachers in a laptop-mediated federal pre-university English language program in the UAE?

It is clear that teachers are experiencing ten main contradictions that may be contributing to failure and attrition. These are listed in Table 6 and illustrated in figure 10.

Table 6: summary of contradictions

Issue	Manifestation
Classroom materials	Dilemma A
Pedagogy and vocabulary teaching	Dilemma B
Students keyboard skills	Conflict A
Laptops and classroom management	Conflict B
The nature of the course	Conflict C
Mobile phones	Critical conflict A
Teacher and student expectations	Critical conflict B
Student motivation	Critical conflict C
IT policy and classroom	Double bind A

technology	
Open access policy	Double bind B

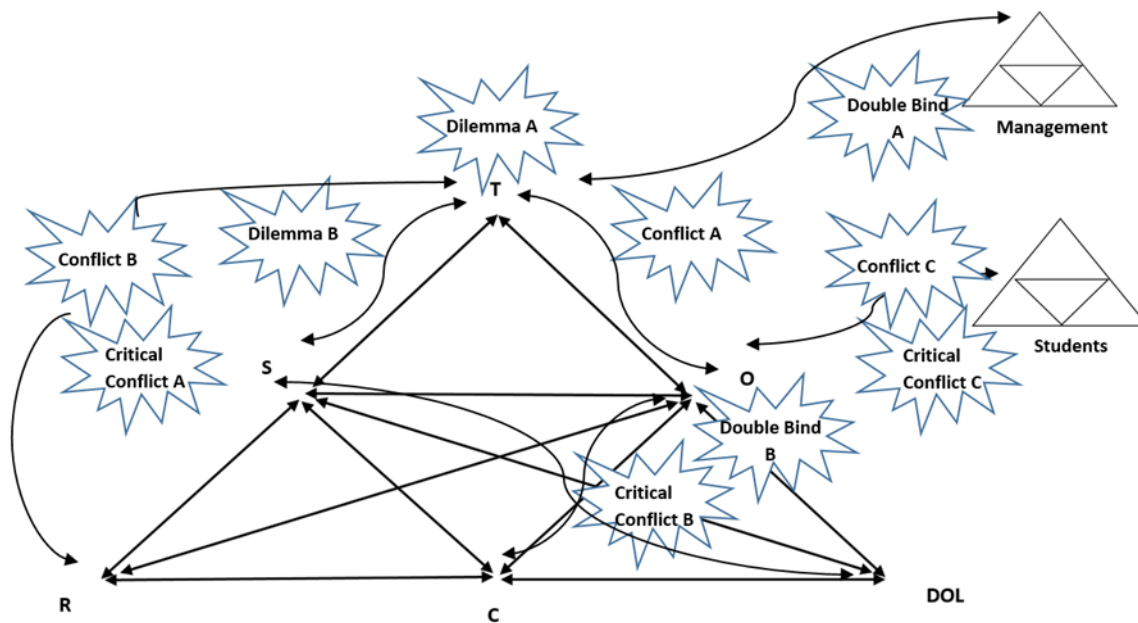


Figure 10: Contradictions mapped to the activity system

Dilemmas

The dilemmas could be connected. The desire for autonomy over materials, Dilemma A, and disagreement over pedagogy, Dilemma B, show that teachers are employing alternatives to earlier ‘talk and chalk’. Classroom practice is evolving to engage students via classroom devices and online tools such as Kahoot! and Flipquiz etc. (Alfarwan, 2019; Azman & Yunus, 2019; Ghareb et al., 2017). The disagreement evident shows that teachers do not necessarily accept that more technology necessarily leads to more learning (Andrei, 2017).

Conflicts

Three main conflicts were identified. Firstly, concerns were expressed over student keyboarding skills, in direct contradiction to research claiming improvements to ESL students’ writing following 1:1 device implementation (Grimes & Warschauer, 2008; Mokhtar et al., 2009; Park & Warschauer, 2016; Raddawi & Bilikozen, 2018; Tubaishat & Bataineh, 2009). 1:1 devices are perhaps an impediment to success in this case.

Secondly, teachers are resorting to paper for efficiency and classroom management. Perhaps this is further evidence that the state-of-the-art is not the state-of-the-actual (Selwyn, 2011), and argument against the idea that more technology means more learning (Scanlon & Issroff, 2005). At times perhaps chalk and talk trumps technology.

Thirdly, and unrelated to technology, while teachers feel the course should be developmental, the leadership sees it as purely remedial. Activity theory does not

Identifying the contradictions in the technology enhanced language classroom concentrate solely on technology, so is able to identify this important contradiction. A disagreement between two important interrelated activity systems can only have a negative effect on the course and student success.

Critical Conflicts

Classroom devices, in particular mobile phones, are a major distraction. Teachers report students are off task and slow to actively participate, further evidence of the distracting nature of classroom devices such as iPads (Miles, 2019), off task students (Awwad et al., 2013) and the conflicting mindsets of teachers and their classes (Knobel & Lankshear, 2007). While researchers in KSA may report the potential benefits of devices such as mobile phones (Alfarwan, 2019), this is not the experience of the participants in this research.

The other critical conflicts are technology related. Teachers and students have very different expectations over the division of labour in class, a fundamental disagreement deserving further research in this context. Furthermore, students cannot see beyond the exam and are perceived as unwilling to work hard. Is this another example of Knobel and Lankshear's conflicting mindsets (2007), or something else? An interesting area for future research perhaps.

Double Binds

The first double bind reports a situation not reported here in the literature. 'Smart' classrooms are not enhancing learning but are instead a major hindrance and source of frustration. State-of-the-art classrooms are causing a dysfunctional state-of-the-actual, a situation that is surely unintentional. This deserves further investigation in a wider context.

Finally, an open access policy is seen to condemn many students to failure. This is a controversial area that would need discussion and resolution at policy maker levels.

To conclude, ten contradictions, manifested as dilemmas, conflicts, critical conflicts and double binds, may be contributing to the unintended outcomes of failure and attrition among students on a laptop-mediated pre-university English language course. Teachers do not lack prowess or training (Ali, 2013; Donaghue, 2015; Saunders & Quirke, 2002; Schoepp, 2005), but clearly know not only how to use devices engagingly, and also when to employ 'chalk and talk'. However, attrition and failure are occurring, and technology is at times a distraction and hindrance to learning. This is the state-of-the-actual.

Conclusion

In conclusion, it is clear that the introduction of 1:1 devices to preparatory programs in the UAE has not revolutionized teaching and learning, and brings into question the argument

Identifying the contradictions in the technology enhanced language classroom that sees the introduction of technology as beneficial and desirable. If this were the case, students would be passing the preparatory English course in ever increasing numbers, yet failure and attrition remain considerable. The ten contradictions identified by this modest project suggest that there is clearly room for policy makers to work with practitioners in order for these issues to be addressed and successfully resolved.

A state-of-the-art where technology is at least part of the solution is an ideal goal, but we need to recognize when technology does not enhance learning and may even contribute to failure. We need to consider all the elements of an activity system, from pedagogy to policy to student to teacher in an interrelated network when considering 1:1 device initiatives. Further critical research in this area is imperative. This research has been approached from the perspective of the teachers, but future work should aim to be multi-voiced, including students, management and where possible the wider community, broadening the potential impact and benefits. By recognizing contradictions, we can seek solutions to real problems in real contexts. This is a worthy goal deserving our efforts, both locally and worldwide.

Acknowledgements

This research was undertaken as part of the PhD in eResearch and Technology Enhanced Learning in the Department of Educational Research at Lancaster University. I am pleased to acknowledge the contribution of tutors and peers in supporting the development of this study and its report as an assignment paper

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