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Impact of MOODLE platform on the pedagogy of students and staff: Cross-curricular comparison

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Abstract In the current Information Age, technology is taking the lead in moving teaching and learning beyond that which was once viewed as typically didactic approach to knowledge acquisition. The outcome of this research paper have explored the importance of MOODLE learning platform and its contribution in promoting flexible teaching, and the need for supported action (through bespoke CPD) to assist teachers / tutors develop differentiated learning resources that has a dual purpose of improving flexibility in learning and assessment outcomes for students. There is also the need to foster collaborative working partnership between curriculum areas through management intervention in appointing dedicated ILT Champions to increase teacher confidence in developing interactive teaching and learning resources. In order to make MOODLE learning platform an effective medium for the enhancement of teaching and learning, it is recommended that management incorporate into the college strategic plan(s), a focused induction at the beginning of the academic year for students to familiarise themselves with relevant features of learning / interactive tools available on the platform.

Keywords MOODLE · Collaboration · Socialisation · Qualification · Subjectification · E-Learning

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1 Introduction

Christ the King Sixth Form College (CTKSFC) is a 16–19 provider of education located in the south of London with three campuses; Brockley, Lewisham and Sidcup. The college caters for over 85 % of Level 3 learning provision, and with the remaining 15 % at Level 2. It has wide range of learning facilities, with recognition as one of the best provider of 16–19 education. Virtual learning provision [MOODLE] makes it possible for staff to develop their creativity in preparing differentiated resources to improve students' scope of surpassing their learning potential, both inside of the classroom environment and 'virtually'[1], with the use of an internet connected 'M-Learning device'[2], thereby enhancing the scope of their ability to work flexibly .

The research explores staff usage of MOODLE in fostering collaborative learning with colleagues and also students enhance opportunities of reaching out to users beyond the remit of the classroom environment. In addition, the research have helped the researcher gain first-hand information from students about their perception on how MOODLE platform can enhance their learning.

This research is an opportunity for the researcher to develop an open approach to students' perception on the use of MOODLE to support enhance learning experiences. It also created an opportunity for a discourse on staff concerns / reservation about their usage of MOODLE to foster good teaching and learning, with a great deal for interactivity and flexibility.

2 Research question

How effective is MOODLE platform in impacting on the outcome(s) of teaching and learning?

3 Research aim and objectives

The overarching aim of this project is to explore how effectively MOODLE platform / technology is used in the identified courses to enhance students' learning experience.

4 Objectives

- To identify ways by which staff and students can engage collaboratively to enhance active teaching and learning experiences across the college.
- To explore ways by which MOODLE can be used to promote effective teaching and learning in a flexible way that support progression and achievement.
- To explore possibilities for sharing good practices across the entire college.

[1] That is from home or with the use of a hand-held facility like tablets or even a mobile phone.

[2] According to Jackson (2015), M-Learning is a common phenomenon used by researchers in the current Information Age, in which all aspects of people's lives is determined by access to portable devices of some sort [e.g., iPad, Smartphones, etc.].

5 Literature review

5.1 Introduction

This section provides critical review of literature in relation to the impact of ICT / enhance learning technology on teaching and learning in the context of students and teachers at Christ the King College. Issues addressed in this section covers widely the use of technology in schools and colleges across the UK and globally.

5.2 Impact in schools

Research conducted by Steps (2007, p. 4), identified some positive impact of technology on learners basic skills acquisition in key areas like reading, writing and calculation, and in addition, on the wider educational goals like students' attendance, behaviour, motivation, attitudes, confidence and engagement. This also confirms improvements on learning outcomes for disadvantaged students. From the 18,000 primary schools teachers and heads interviewed in the Steps research (ibid, p. 5), 75 % of responses indicated positive feelings about the benefit of using ICT in teaching through easy and varied adaptation of materials to suit learners' needs.

The Teaching and Learning Research Group (TLRP 2006) produced its critical findings on the impact of ICT for different age group of children in schools across the UK. The Interactive education Project 7 report demonstrated an improvement in students [ages 10 - 11] use of spreadsheet which seemed to have enhanced their grasp of statistics, with similar outcomes shown for students on German language courses [ages 13 – 14] in the enhancement of their writing skills as a result of using ICT (ibid). This research complement the fact that students were able to dedicate longer time in concentrating on ICT, but the focus was more on the investigation of what students were learning while using ICT as a means of furthering their learning. The research which was videotaped, found out that one student who was supposed to be studying the Renaissance was concentrating on finding out about Florence, a city based in the USA instead of Florence in Italy (TLRP 2006).

Higgins et al. (2012) findings from experimental and quasi-experimental designs, more so combined in '*meta-analyses*'[3], indicated that technology based intervention on the pedagogy of learning have produced just slightly lower level of improvements in comparison to other interventions and approaches, which include peer tutoring or something else that provide feedback to learners. The critical question raised from the findings was not so much about whether technology was used or not, but more about the level of impact it made on learners and their progression rate.

The overall outcome from Higgins et al. (2012) correlational and experimental study conclude an overwhelming evidence of the impact technology makes in terms of improving learning outcomes. This makes the case for technology more questionable, as the focus of technology to support learning must be supported by identified learning

[3] Meta-analysis as used in this case refers to a method that uses statistical techniques to combine results from different studies and obtain a quantitative estimate of the overall effect of a particular intervention or variable on a defined outcome—i.e., it is a statistical process for pooling data from many clinical trials to glean a clear answer. Meta-analysis produces a stronger conclusion than can be provided by any individual study. In http://medical-dictionary.thefreedictionary.com/meta-analysis (Accessed: 16/2/201).

goals so as to help students make effective use of their learning opportunities with technology. The study revealed some critical concerns about the impact of technology on a global scale which is addressed in summative assessment schemes like 'Programme for International Student Assessment (PISA)'. Issues emanating from the findings, and equally highlighted in Striker and Pollock (2003) citation, revealed health related problem like Repetitive Strain Injury (RSI) for children.

5.3 Impact on FE sector

A compilation from 2010 OFSTED report produced by Judges (2011), portray some positive outcomes about the use of technology in post-16 establishments across the UK, with the extract revealing the following about Christ the King College:

> Information learning technology is often used well to enhance learning. Teachers make good use of information and communication technology (ICT) to enhance learning. Teachers make particularly effective use of ICT to stimulate debate, engage students' interest.
>
> (What learners would like to see improved) - Information learning technology is used well in science lessons (Science and mathematics) Teachers use good learning resources and technology to support student learning (History, philosophy and theology). Students use information and communication technology with ease and to good effect. Lessons are fun. Excellent use is made of information learning technology to-enliven" lessons. Resources for information learning technology are of a high standard (Business, administration and law).

While this document have highlighted some positive outcomes from the OFSTED report, it is lacking in detailed about the extent of usage in technology enhanced learning to foster collaborative learning, both inside and outside of the classroom environment.

Attwell and Hughesm (2010) extract from BECTA's 2006 report indicated that 34 percentage of colleges make use of ICT as a traditional means of classroom delivery across the UK. However, it is not entirely clear what form or medium of technology was used, and the purpose for which it was employed. Thirty-one percent [31 %] of colleges reported combining ICT and e-learning with traditional learning resources to produce blended learning, a figure which had increased steadily over the years.

A survey conducted by the Association of Learning Technology (ALT) on behalf of ETAG (Education and Technology Action Group[4], outlined issues surrounding the use of technology in FE institutions across the UK. In as much as strategic leaders in colleges are requesting evidence of technology usage by staff to demonstrate differentiation in teaching and learning outcomes, concerns about managers' lack of support in allocating time for staff CPD to improve skills in the use of technology is continually being raised.

The recommendation of the ALT report which comes under the section 'Capability and remit of FE and Skills Providers' was set out to: "*encourage the development of*

[4] FELTAG – this group was established in 2013 by the Secretary of State for Education

programmes to professionalise FE governors, principals', managers' and teachers' use of learning technology, building on the best current models."[5]. This revealed fundamental barriers with the use of learning technology, and more so in the area of strategic actions needed to help make an improvement in the effective use of enhanced learning technology with the aim of enhancing students' learning experiences.

In view of barriers as outlined in the research, there were also highlights of prescribed remedies to help foster positive change innovation in the use of learning technology in the Further education sector[6]. Some of the highlighted innovative actions are grouped under the following headings (Laurillard and Deepwell 2014):

- support to teachers as collaborative innovative action researcher
- Encouraging and supporting teaching innovation
- Incorporating time for continuing teacher development
- Leaders at all levels to continue taking a strategic approach
- Recognise and reward teacher innovation in education
- Engaging students in active participation

The above mentioned points about barrier to the effective use of learning technology are also common phenomenon explored by different researchers across different sectors in the profession (Joseph 2013 and Bingimlas 2009). There are still fundamental issues needing collaborative dialogue with 'stakeholders'[7] concerned with teaching and learning process.

6 Research methodology

Methodology in this research explains the rationale for making choices about specific techniques used in the collection of data throughout the project. In the context of this study, the researcher triangulated using mixture of Qualitative methods to increase validity in order to unearth feelings about the wider impact of technology enhanced learning [MOODLE[8]] on teaching and learning at Christ the King college.

7 Research population / scope

Due to the limited timescale of the research, the population was mainly drawn from Business / ICT, History, Science / Mathematics and Health & Social Care curriculum areas from St. Mary's campus at Christ the King College. Participating staff in the interview process consisted of mixture of novice and proficient users of MOODLE technology. In a similar note, a random selection of learners were also drawn from ICT, Health and Social Care and Business courses with the aim of soliciting their opinions about MOODLE's impact on their learning.

[5] Ibid
[6] Ibid
[7] Stakeholders as used in this situation incorporates students who are on the receiving end and professionals on the other hand as distributor of knowledge and finally, strategic leaders who makes decision.
[8] CTK learning platform

8 Methodological approaches

In this research, the focus of methodology[9] was centred on triangulation, with the use of two qualitative methods. The researcher's justification for choosing qualitative research methods is based on the need to unearth high quality response[s] from participants on their use of MOODLE at CTK. It is an expectation that the use of the chosen methods would help to unearth quality on how Moodle platform is used by teachers to support students' learning (differentiated on the basis of choices of resource usage) both in the classroom environment and remotely, through the use of home Internet accessible PC or M-Learning device.

The use of two method-approaches as already stated above for this research, is based around the concept of '*Triangulation*' (Robson 1997); the rational for this is to increase validity which simply concerns the relationship between theoretical (concept) and empirical (indicator) variables (Brown and Dowling 2001, p. 26). As explained by Bryman (n/d), it is hoped triangulation using two methods as outlined below, will enhance confidence in the outcomes of the research findings as a way of addressing the stated research questions.

Observational Focused group interviews with staff. This method is particularly focused at teachers usage of Moodle platform during lessons. The rationale for choosing this method is to allow the researcher to identify key areas for the development of staff use of the platform, particularly those who are less confident, whiles at the same time fostering collaborative working partnership within curriculum areas in the college. On the basis of this, themes were then established by encouraging teachers to demonstrate and express their views in using MOODLE to improve teaching and learning, both within and outside of the classroom environment. The use of identified themes was also a way of enabling teachers to probe further as a way of making it possible for them to explore their effective use of the platform in enhancing outcomes of students' progression rate at the college. In order to enhance the quality of the research process, particular attention was focused on the use of O'Leary's (2014a, b) '*differentiated observation*' approach, to allow practitioners' strengths and weaknesses to be addressed with the aim of improve their confidence through recommendation(s) for collaborative structured CPD at the college. In the case of this study, teachers use of Moodle technology will not be graded but observational outcomes will address a more structured approach in helping all staff to be comfortable at using the platform in improving students' outcomes, both formatively and summatively.

Diagnostic assessment technique – This technique was targeted at students with the rationale of exploring their feelings and perception about the use of MOODLE technology to foster flexibility in their approach to learning whiles studying at Christ the King College. As explained in the QIA Skills for Life Improvement Programme document (2008), diagnostic assessment technique can be used to identify specific learning strengths and needs. The process involved active participation of the researcher with students during selected lessons in

[9] Methodology in the context of this study is described as the process by which inquiry into the topic is pursued through a decision about different methods (Rajasekar et al. 2013).

Health and Social Care and ICT courses, where the technology is constantly in use by students and teachers. A small number of students enrolled in courses like Government / History, Science, Maths and Business Studies; identified curriculum areas where the requirements of MOODLE is effectively in use. In this, students use of Moodle technology were randomly assessed as a way of unearthing the wider picture of their needs in enhancing their learning opportunities at the college.

Justification for the choices of research method(s) used - As with most 'research'[10]involving human participants, it is perceived that structured survey / questionnaire is the easiest and convenient means of capturing information from research participants, and interpreting pictorial illustration of analysed results with charts and graphs. In this study, the use of structured survey (other than the chosen methods) would have been considered too restrictive, with high level of possibility for responses to questions tailored to either '*Yes or No*'. Hence, the selected qualitative methods have been chosen specifically so as to explore in detailed respondents views about their perceived usage of Moodle platform in enhancing the pedagogy of teaching and learning, and its relevance to Biesta's (2011) three educational discourse in the current information age, and particularly its usage at Christ the King College.

9 Ethical consideration

The research was conducted with the active participation of students and teachers, including the researcher as a teacher-practitioner. Hence, in order to adhere to strict ethical codes, the researcher extensively briefed participants about the purpose of the research, explaining how the outcomes would be used to support improvements in enhanced learning technology [MOODLE].

As explained by Brown and Dowling (2001), *confidentiality* of information is a very important aspect of ethics that was addressed throughout this study and hence, the researcher made efforts to engage colleagues and students about the purpose of the study to help improve practice, and without reference to when analysing responses from data collected.

10 Data analysis and discussion

The appendix (Tables 1 and 2) shows analysed summary of results from interviews held with teachers and students at CTK, St. Mary's campus. A basic amount of NVIVO was applied in categorising themes emerging from the interviews. Curriculum areas covered include ICT/Business, Health and Social Care, Mathematics/Sciences and Government & Politics / History (Table 1). Students were allowed to express their views with the assurance of keeping names confidential about concerns raised during the interview process (Table 2).

[10] Research is a way of enquiry that seeks to explore a topic or concept that is currently unknown to the researcher or needing further clarification using various approaches / methods of investigation.

10.1 Extended discussion in regard to the analysed interview outcomes with teachers and students

With reference (Table 1) to the theme: *'Use of MOODLE to display relevant course information, e.g., handbook',* the outcome shows that all relevant curriculum areas interviewed demonstrate efforts in ensuring that relevant 'course materials'[11] are embedded on MOODLE for students access both in the college environment and remotely. This is in conformity with the college's leadership strategy to justify efforts in sufficiently meeting the '*OFSTED framework on teaching and learning*' [12]. At the beginning of the academic year, teachers are required to demonstrate evidence in uploading relevant course materials to get students' prepared for the delivery of their course[s] and which, also makes it easier for spot checks to be carried out as part of the college's quality assurance for Lesson Observation[s] or 'Learning Walk'[13].

The identified question / theme (Table 1): '*frequency of usage of MOODLE to inform students about its relevance*' unearth differences in the level of MOODLE usage by teachers. An extended category explaining infrequent usage by teachers in curriculum areas like Maths/Science and Government and Politics / History has been explained on the grounds of *lack of time and insufficient understanding of using the technology* relevant to support differentiated teaching and learning. Teachers would like to make better use of MOODLE platform, but insufficient time is making it impossible for them to get their heads around the technology.

In relation to '*MOODLE usage for assessment* (Table 1)*',* only two curriculum areas make use of the learning platform as a medium for providing feedback and assessing students' work. With reference to the previous point, allocation of dedicated time and continuous application of skills learned are the only way in which teachers can gain mastery of the technology. This relates the next theme, '*foster easy means of collaboration with students and colleagues*'. Collaboration is most likely be fostered through sharing of good practices or through open discussions with colleagues to initiate ideas in capturing students' attention, through the development of varied teaching and learning materials to support differentiation. In view of the above themes, the idea of CPD to help staff develop their skills is considered one of the most important steps in exploring the identified objectives for this study [*the exploration of ways to promote effective teaching and learning [flexibly] through the use of MOODLE that will help support progression and achievement]*.

Interview responses with students (Table 2) indicated reasonable level of progress is already made across the entire college, particularly in ensuring that course materials [handbook, SOW, Mark Scheme and past papers] are linked to relevant course pages on MOODLE at the beginning of the academic year. The main issue with this, is based on the fact that majority of students enrolled are not familiar with MOODLE platform, particularly AS and minority of Level 2 students. This posed additional problems in

[11] *Theme ONE on the teacher interview analysed table teacher interview.* These include relevant information like course handbook, detailed breakdown of Scheme of work covering in most cases, the entire duration of the course delivery in the academic year, examination materials like Past Papers and Mark Scheme

[12] OFSTED (2014). The New OFSTED Framework 2014.

[13] This is a type of lesson observation, but done informally to ensure learning is taking place in lessons.

their ability to use the collaboration tool on MOODLE to communicate with subject / course teachers when needing help or assistance.

10.1.1 Discourse analysis in relation to BIESTA'S pedagogical theory

Based on the outcome of the analysed interview results, this section seeks to provide analysis of the application of relevant pedagogical theory to the study, and in this case, Biesta's (2011) three interconnected discourses of good education; qualification, socialization and *subjectification* as illustrated in the diagram below.

Diagram Source: 21st Century Learners[14]

MOODLE as a learning tool, provide the medium through which students can improve their knowledge (qualification discourse) as a result of the active and collaborative support from teachers. In some curriculum areas, particularly in Business, ICT and Health & Social Care, students' learning is continuously complemented with useful resources geared towards improving their knowledge beyond the classroom environment. Teachers in these areas, have also gained vital knowledge through collaboration [*socialization discourse*] and the sharing of expertise by allowing staff with knowledge to create and display active learning resources on MOODLE for students to use flexibly.

With reference to the analysis, both teachers and students have expressed their views on how they wish to develop their independence [*subjectification discourse*], through dedicated CPD for teachers, and in the case of students, the recommended means would be through '*INDUCTION*' as expressed from interviews conducted with students. In the case of teachers, it is a possibility that dedicated CPD will help address shortcomings in skills and confidence which is currently preventing some staff from using MOODLE to express their creativity in producing differentiated resources for the benefit of improving students learning of subject knowledge [*Qualification discourse*], both within and outside of the classroom environment.

In subject areas like ICT and Health & Social Care, where MOODLE technology is used effectively by teachers, it has enabled students to increase their level of confidence and independence, as the wide range of resources provided, creates an opportunity for

[14] 21st Century Learners [Online]. Biesta, the Trivium and the unavoidable responsibility of teaching. Available at: <http://21stcenturylearners.org.uk/?p=492>. [Accessed: 28th February, 2015]

students to challenge their knowledge, not only in preparing for examinations, but also for the wider world of work [*differentiation, but also linked to* subjectification' discourse].

11 Conclusion & recommendations

In conclusion, the research has been carried out with a view of addressing the main premise of the research question. In view of the methodology used to gather relevant data, it is quite obvious that both teachers and students are benefiting from using the MOODLE technology, though currently at varying degree. MOODLE is a powerful tool that is used to support learning in variety of ways, for example, enabling creativity of individual teachers to develop differentiated materials for students and at the same time enhancing flexibility in their learning potential.

The outcome from the research shows that MOODLE platform, is used to varying degrees in the college, and highlights the extent to which it has been used in Health and Social Care to improve the pedagogy of teaching and learning in a concerted way that supports Biesta's three discourses of good education. One could assume that learning technology like MOODLE can only be used creatively by specialist ICT teachers, but the extent of creativity displayed in Health and Social Care signify potential for its exploration by each and every teacher to foster excellent practice[s] across the three campuses at Christ the King College.

Outcomes from the summarised interviews with teachers, and in addition, diagnostic assessment with students has focused attention on key areas that made it possible for identified objectives to be addressed, and for which teacher willingness to actively engage themselves in continuous learning of the application, will make it possible for students in return to feel the need to challenge their approach to learning.

11.1 Impact indicator outcomes for recommendation

The purpose of this is to ensure that priorities of the research, particularly the research question is addressed sufficiently to make adequate provision for better use of MOODLE by students and teachers in enhancing the pedagogy of teaching and learning across the entire college three campuses. In this regard, the indicators have been grouped into two categories, namely '*Soft and Hard*'; with the former (Soft Indicators) addressing aspects of Moodle affecting learners and practitioners (teachers) use of the platform, whiles the latter (Hard Indicators), is specifically focused on strategic approach on how best the leadership can support the effective use of Moodle platform to address improvement in teaching and learning. Below is a summary of the outcomes of indicators, identified as recommendations for enhancing collaborative approach to improving teaching and learning through the use of a dedicated Moodle learning platform at Christ the King College.

11.1.1 Soft indicator [SI] outcomes

1. Improved or dedicated collaborative means of communication between students and teachers; this can be done through visible messaging tool[s] provided on MOODLE. This can be moderated by dedicated ILT champions, most probably

within departments / curriculum areas in the college. In this case, teachers would be able to make use of available tools on MOODLE to build a community of support to improving their understanding of developing high quality differentiated materials while at the same time, sharing good practices with colleagues.

2. Fostering bespoke CPD in addressing the specific needs of users, particularly teachers. In this regard, teachers or other users of the platform can request CPD support so as to address the nature of their specific teaching requirements, whiles at the same time, focusing attention on the need for developing interactive differentiated resources to cater for the wide range of students ability.
3. Targeted assessment and feedback – with the availability of the right support provision for teachers, MOODLE platform can provide a means of monitoring quality of assessment and feedback provided by instructors / teachers, and also; a fantastic opportunity for sharing good practices across the college. In a situation where the assessment tool is used effectively, it will help facilitate students' progression which can be monitored by ensuring deadlines for the submission of work required are met, and with timely constructive feedback provided to students so as to enable them to make sufficient progress throughout their time of study.

11.1.2 Hard indicator [HI] Outcomes

4. Management to support visible display of additional tools on Moodle for parents / carers to access progress and constructive feedback provided by individual subject teachers / instructors. This will certainly serve as a way of monitoring progression and where possible, intervention incorporated to minimise drop-out from courses.
5. Appointment of 'ILT (Information and Learning Technology) champions' in departments / within curriculum areas so as to make it easier for good practices to be shared in a coordinated manner, and ultimately leading to an improvement in the quality of dedicated CPD sessions in meeting the specific needs of teachers and students learning.
6. College management to designate induction training on the use of Moodle for new students (and also at specific time in the academic year for continuing students) at the start of the academic year. This will help teachers / instructors market the relevance of MOODLE to students so as to enable them to be well prepared for learning, particularly in ensuring attention is paid to submitting and checking marked work, and in addition, the use of additional features in MOODLE to collaborate with subject teachers and peers whenever there is a need to do so.

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Appendix

Table 1

Reference to analysed summary of interviews with teachers at CTK: ST. Mary's

Themes based on use of MOODLE	Curriculum A (ICT/Business)	Curriculum B (Health & Social Care)	Curriculum C (Maths/Science)	Curriculum D (History / Government and Politics)
	USE OF MOODLE TO SUPPORT TEACHING AND LEARNING.			
Use of MOODLE to display relevant course information , e.g., handbook, etc.	Teacher responses: Include relevant course materials like Scheme of Work [SOW], individual unit / course handbooks, exam past papers and mark scheme displayed for students to access both in college and outside of the learning environment.			
Frequency of usage to inform students about its relevance.	Teacher response[s]: A requirement for students to use resources provided on MOODLE to progress with their work. In Business, particularly in the case with BTEC provision, majority of research work are provided online and for which links are provided on MOODLE.	In Health and Social Care, MOODLE is an essential part of the learning process, through embedding of relevant materials like videos and URL links to external websites such as Planet e-stream. Use of MOODLE in Health and Social Care course vary amongst teachers and so an area that is worth addressing.	Teacher response[s]: Not used frequently, but effort is also made in core science subject areas to embed resources to external websites to support learning [e.g., examining board and tutorials to help students gainfully engaged in learning, both inside and outside of the formal learning environment]. Similarly in Mathematics, teacher also confirmed use of websites like '*ixl.com*' to foster independent learning.	Teacher response[s]: Very rarely makes use of MOODLE as a complementary tool to learning and tracking students' progress. The main issue is to do with *limited skills* and also *lack of time* to be able to gain mastery of it to support teaching.
Use of it as a medium to assess and update students about progress.	Teacher response[s]: In areas like ICT and Health & Social Care, MOODLE has formed the basis on which students' assessment is focused. This incorporate online marking by teachers with constructive feedback provided to students, thereby making it flexible for students to be able to submit and check feedback flexibly, using handheld devices like iPAD and even iPhone. Students liked the idea, and particularly the flexibility of spending weekends and holidays to		Teacher response[s]: In these areas, assessment is only done through the traditional means of constructive comments provided using pens in providing comments and constructive feedback. Based on feedback responses, it is an area that teachers would wish to explore, and more so in ensuring that relevant interactive materials like videos relevant to the subject areas are embedded for students' usage in lesson.	

Table 1 (continued)

	submit tasks, rather relying on college resources like computers. Its use as a means to providing online feedback in area like Health and Social Care is effectively done by few members of staff. Reasons for this is to do with staff workload and also, with the fact that not all members of staff explore by taking risk in learning more about MOODLE features to make learning flexible and interactive. Similarly in Business, marking and assessment is done through hard copy of students' work, but assignments are mostly set on MOODLE with specified deadline requirements for hard copy submission.	
Usage for collaboration with students, for example, emailing / communicating answers relating to students' concerns.	Teacher response[s]: In ICT and Health & Social Care, it is used frequently, particularly in circulating vital information like workshop timetable and also as a means of notifying students when a work is being assessed. In Business, the traditional means is used to disseminate information to students. Based on response from teachers, it is also an area that teacher would like to use so as to make it quicker and easier, rather than having to rely on just a face-to-face meeting with students.	Teacher response[s]: In the sciences, notification set, particularly when dealing with coursework deadline dates. In Mathematics, History / Government & Politics, no such use is made, but teachers welcome the idea of expanding their knowledge of Moodle learning platform. Teachers have also expressed the need for the allocation of *additional time to help support the learning process of MOODLE technology.*
	ISSUES SURROUNDING USE OF MOODLE FOR TEACHING AND LEARNING	
Skills required to make it worthwhile for moving teaching and learning forward.	Teacher response[s]: Despite high level of usage of MOODLE in areas like ICT and Health & Social Care, there is still the need for teacher[s] continue to the *exploration further opportunities* and with some *administrative rights provided* to make it possible edit and adapt contents which will also have positive implication for the college through sharing of skills. In curriculum area like Business where it is not so highly used, there is a general consensus in	Teacher response[s]: The general views from teachers in areas like Maths/ Science and Government & Politics / History is such that *extended time* is needed for staff to be able to make effective use of the technology given the workload in dealing with administrative responsibilities as personal tutors in tracking attendance and performance progress.

Table 1 (continued)

	ensuring that staff are allocated specific time to enhance their usage of MOODLE technology.
Time relating to CPD	Teacher response[s]: In progression with the previous theme, this is an area well supported by teachers and responses have incorporated the following suggestions: Allocation of CPD days for MOODLE technology training to deal with specifics of areas pertinent to teacher progression of developing differentiated materials. Encouraging the use of *ILT champions* in different course areas or teams so as to make it possible for curriculum or departmental meetings to address areas of concerns that deals with the pedagogy of teaching and learning using MOODLE technology.
Curriculum support to brainstorm ideas for improving students' access to the remote service.	Teacher response[s]: Themes in relation to this area include the following suggested points: Ensuring *good practices are shared* with staff and this relates particularly to resources that can be used simultaneously by other curriculum areas. A dedicated day in the induction week to ensure students know more about remote access using MOODLE in providing extended support to learners.

Table 2

Themes and discussions based around students differentiated interviews	
Use of MOODLE to access relevant course materials and other relevant information remotely	*Student action + response[s]*: Materials are always available on MOODLE which makes it easier for '*US*' to access materials in college and at home. Majority of students interviewed demonstrated understanding, in using the technology to access relevant course materials like SOW and course handbook. In Health and Social Care, ICT and Business courses, teachers embed video materials relevant in stretching students' critical minds on topics and this have been used very well by students, particularly in Health and Social Care. Students also demonstrated their understanding in using the remote facility in MOODLE technology when required to submit for marking and also during the process of checking for feedback, which is more common in areas like ICT and Health and Social Care. Remote access to teacher note in courses like History/Government and Politics and Maths/ Sciences is not always forthcoming and their wish is to ensure that this is done likewise across the board.
Collaborative skills in emailing or sending messages when in difficulty.	*Student action + response[s]*: Some students find the process easier, particularly those enrolled on ICT, Business Studies and Health and Social Care and on a handful in Business Studies who in most cases, are also offering ICT / Health and Social Care as an option. They consider it necessary as at times when they get into difficulty, they can contact their teachers. Whiles some are able to send message[s] via MOODLE to teachers requesting support on how to progress with work, it is an area that needs more attention in making it possible to develop effective usage of the lcollege's remote provision, especially when it comes to preparing for examination and meeting deadline dates. In other subject areas like Maths/Science & History/Geography, students expressed their excitement to use collaboration tools in communicating with teachers whenever they face difficulties.
Submitting work for marking and checking marked work.	*Student action + response[s]*: In areas like ICT and Health & Social Care courses, students' responses indicated that the main submission medium for coursework is via MOODLE. They demonstrated evidence of the nature of critical feedback received which normally helps them to make improvement. In the other subject areas, it is also something that students will welcome. This might be due to the nature of the courses, for example, History/ Government and Politics and the Sciences,.
Students' opinions about things they will like to gain from using MOODLE to improve their learning experience at CTK.	*Student action + response[s]*: This include: Allocate time to learn essential skills in using MOODLE, and particularly the flexibly of exploring when at home through accessing course information to expand knowledge. There was also some responses emerging in relation to *induction session* so as to make it possible to learn more about MOODLE during the beginning of the academic year rather than struggling in the middle of the year.

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