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DISCUSSION PAPER ON THE NETWORK OF BLENDED AND DIGITAL LEARNING AT AKU

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1.0   INTRODUCTION

This paper presents the concept of the Network of Blended and Digital Learning (BDL_net) at the Aga Khan University (AKU) as a physical and virtual hub to support the use of appropriate information and communications technologies for teaching and learning, and professional development programs (both on-campus and at a distance). It presents a rationale for the Network, the concept, and the way in which it might be developed at AKU.

2.0   RATIONALE FOR THE NETWORK OF BLENDED AND DIGITAL LEARNING

AKU is one of only a handful of global universities, which is multi-site, multi-country, and multi-continent. Distributed expertise over three continents (Asia, Africa, and Europe) provides opportunities for academics and students to engage in comparative, inter-disciplinary and multi-disciplinary education and research to find solutions to the problems of education, health and development. Indeed its geographic spread may be unique, in that its campuses are located in countries that suffer from political instability, security concerns and severe climatic disruptions which result in challenges in attracting students and scholars for on-campus programs. Therefore, AKU lends itself to an education strategy in which one part of the university can contribute programmatic materials and services to other parts. Such an approach would address the challenges of physical and temporal dispersion, and it would create a basis for collaboration and sharing of expertise across the University and beyond.

The use of Information and Communications Technology (ICT) for teaching and learning is not a new concept at AKU. Individuals and entities have offered courses using technology for many years. Some examples include: use of Moodle in programs at the Institute for Educational Development (IED), Pakistan; use of Elluminate Live! in courses offered by the School of Nursing and Midwifery and the Medical College, Pakistan; use of online learning resources, namely the Science of Early Childhood Development, as part of the Human Development Project; and the Examination Board's television-based learning program.

In 2011-2012, under the leadership of the Chief Information Officer a Blended Learning faculty development pilot project was implemented. The primary objective of this project was to enable faculty members to develop essential knowledge and skills to design, teach and evaluate courses offered through a blended learning (BL) approach in their areas of expertise. A related objective was to create opportunities for faculty members from different entities to engage in collaborative course design, teaching and research through the use of existing and emerging technologies.

In the first pilot, 15 faculty members from various entities worked in small teams of two to four to re-design and subsequently offer five courses through a BL approach. The second pilot was offered to faculty members from the Advanced School of Nursing in East Africa (ANS-EA) and the School of Nursing and Midwifery in Pakistan (SONAM, P). Twenty-one faculty members worked in collaborative teams to re-design and offer six courses through BL

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approaches. The third cohort has started in 2013, with faculty members from the Medical College Pakistan, Schools of Nursing in Pakistan and East Africa and Institute for Educational Development in Pakistan and East Africa.

The pilot project has helped identify gaps in services and academic quality of the programs. It has also helped establish processes to offer appropriate levels of support to the faculty for the creation and offering of courses through a BL approach. In addition, faculty and student experiences have provided sufficient evidence to support the use of blended and digital learning pedagogies at AKU. The pilot has helped identify a strong need for faculty development in the area of teaching with technology (or blended and digital learning, BDL). While each entity had plans to adopt BL pedagogies, the project brought to light that no academic policies and procedures exist to guide faculty development, resource allocation, priority setting, student support, and quality assurance of such initiatives. As well, absence of a single point of contact for operational support and leadership and management for BDL had restricted the adoption of technology-enhanced learning approaches to a small scale in terms of student numbers, faculty participation, outreach and impact, and the available resources are not utilized to their full capacity.

The pilot project provided an impetus to the creation of a University-wide distributed Network of Blended and Digital Learning (BDL_net) to consolidate dispersed pockets of innovative BDL pedagogy within AKU's diverse disciplines and bring AKU to the forefront of pedagogical innovation in BDL in developing countries. The BDL_net, facilitated by a core team within the Office of the Provost as a part of the Teaching and Learning Network and the CIO's team, will enable AKU-wide resource sharing and coordination for faculty development, program development and implementation, and innovation.

3.0 THE CONCEPT

3.1 AKU as a comprehensive university

At the heart of the BDL_net's concept lies AKU's strategy to establish an international, comprehensive university: one university over multiple campuses. To enable faculty to teach simultaneously, both in real time and in stored time, and allow any student to take any course and benefit from the expertise of any faculty member no matter which campus either the student or the faculty member belong to, appropriate and dynamic combinations of in-person and technology mediated (eLearning) teaching and learning would be adopted. This approach would allow AKU to access the knowledge of external experts and reach out to students who cannot easily be based at any of AKU's existing physical campuses.

3.2 Improving the quality of educational programs at AKU

There is ample evidence that appropriate and relevant uses of technology could bring significant improvements to students' learning in professional and higher education contexts. The various research studies have shown that: (a) the increased flexibility offered by appropriate use of ICTs allows students to participate on their own time, in any location, while at the same time benefiting working professionals; (b) students value the inclusion of some face-to-face time in their courses, which is not present in purely online courses; (c) the creation of a virtual community of practice provides professionals with a lasting international

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network of peers; and (d) using ICTs regularly increases confidence and familiarity with the tools, which can then be employed in the workplace.

The pilot has shown that incorporation of technology, in the existing courses, requires the faculty to re-think the overall design of the course. As such, the aim of technology-integration would not be to design and deliver content in digital media format or via the Internet; instead, the broader, more encompassing aim would be to enhance learning engagement by using relevant technologies and pedagogical strategies. This type of teaching and learning would promote inquiry-based approaches, problem solving, communication and collaboration, critical thinking, and independent learning. Therefore, BDL is different from traditional didactic teaching and demands new approaches to curriculum design, assessment, teaching, learning and learner support.

3.3   Scope of Blended and Digital Learning at AKU

We draw on the models proposed by Bates and Poole to define the scope of the BDL_net at AKU. As represented in figure 1 below, the BDL_net would support the use of digital media technology (DMT) in teaching, learning and student support across pedagogical contexts.
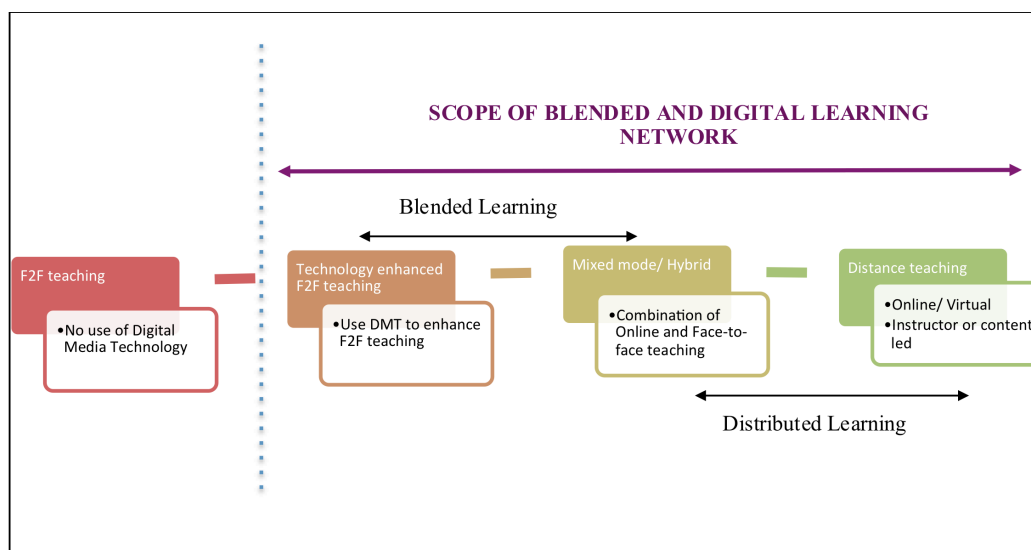

Figure 1: Scope of the Network of Blended and Digital Learning at AKU

The pedagogical contexts supported by BDL_net would include
 • Technology enhanced face-to-face (F2F) teaching
 • Mixed/hybrid learning
 • Distance teaching (virtual or online learning)

In *technology-enhanced F2F teaching*, faculty would use technology to support in-class teaching. This might involve the use of software (e.g., simulations, ActivPolls, interactive video cases) or hardware (i.e., interactive whiteboards, 3D screens, collaboration devices, Clickers) to illustrate complex concepts in F2F lectures/ tutorials or problem-based learning sessions. The pedagogy of recently established Learning Studios at IED, Pakistan and SONAM, Pakistan would be covered under this type of BDL.

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In *mixed/hybrid learning* settings, the basic idea is to design and offer a course that integrates the best pedagogical aspects of both F2F learning and online learning[1]. There are several noted limitations with pure online and distance learning, particularly for learners who are less independent and require consistent direction from an instructor[2]. Consequently, in this approach the challenges caused by completely eliminating in-person classroom contact are mitigated, while still offering the opportunity for students, faculty, and administrators to reap the benefits of online learning. In the BL pilot project, we worked with faculty to design and offer courses for this type of pedagogical setting. Other examples include:

- Flipped classrooms where students watch videos, simulations, or listen to podcasts outside the classroom, while in-the class they work with other students on solving problems or cases.
- Off-campus students work through course objectives by completing online discussions, quizzes, problem based tasks via Virtual Learning Environments (VLEs) or in low bandwidth contexts; students and faculty members use mobile phones to lecture podcasts or communicate via text messages outside the class before they meet at a central location for a F2F lab or practicum.
- An expert located in another part of the world conducts live teaching sessions via video-conferences, or desktop-based live conferences.

Distance teaching (virtual or online learning) is a context where there is no F2F (in person) contact with either the instructor or the students. In this type of learning, the participants would work through a course at their own pace or time, in their location of choice, and without F2F contact with a teacher or instructor. Technology (i.e., discussion forum, live classes, video-conference) would be used to address the concerns of learner isolation, resource limitations, and didactic modes of teaching. This type of learning is likely to be more suitable for mature learners, who are highly motivated to enhance their qualification, however are unable to take time off from work to attend courses with F2F components.

The BDL_net would be resourced over the next five years to support pedagogical and technological innovation in all of the above contexts.

3.4   Goal

The BDL_net will be a community of practice for faculty and staff who are engaged in teaching and learning with digital media technology. The goal of the Network will be to enable sharing and development of best practices and innovations in blended and digital learning pedagogy to support student centered learning (from applying digital learning software and learning management systems (LMS) to on-campus courses, through mixed digital and face-to-face delivery, to purely digital distance courses).

The BDL_net will achieve this goal by

- building capacity of the faculty and students, and the AKDN partners, to design and offer education programs through a BDL approach to improve the quality of teaching and learning at AKU and AKDN.

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[1] Bliuc et al., 2007; Dorrian & Wache, 2009; Olapiriyakul & Scher, 2006
[2] Olapiriyakul & Scher, 2006

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- supporting the academic entities in incorporating blended and digital learning strategies in their academic programs, with an ethos of creating a comprehensive multi-campus university.

The work of the BDL_net will remain grounded in the reality of the developing world served by AKU and will ensure "fitness of purpose." As such, the members of the BDL_net will be supported to engage in scholarships of discovery, integration, application and teaching and learning. It is expected that the BDL_net will test and develop innovative and contextually appropriate BDL technologies and pedagogies to achieve the desired educational outcomes.

In the years to come, core team forming the BDL_net will be called upon by the AKDN agencies, governments, donors, the academic community, industry and other policy influencing bodies in the developing counties to provide expert input on blended and digital education. As such, the BDL_net will be recognized by external experts as a proactive leader in the pedagogy of BDL in the developing countries.

3.5   Functions of the BDL_net

The core functions of the BDL_net include:
a) Faculty professional development
b) Development and management of BDL operations
c) Research and innovation

Faculty professional development

First and foremost, the BDL_net will focus on enhancing the faculty's capacity to design, develop and offer courses through BDL approaches. The BDL_net will continue to offer its flagship nine-month work-based faculty professional development program in BDL, where faculty members are mentored to re-design and offer courses through BDL approaches.

In addition, courses of shorter duration will be offered on specific new media literacies and pedagogical issues relevant for faculty; examples include:
- Small group technology enhanced pedagogy workshops for the faculty members who have completed the nine-month work-based Faculty Professional Development Program in Blended and Digital Learning (FPDP/BDL).
- Group training-on-demand or one-on-one hands on consultation on the use of technology (hardware / software) or BDL strategy to address specific teaching/learning issues.

Development and management of BDL operations

Several AKU academic entities are either offering courses through BDL approaches or are looking for on-going operational support, and they are in the process of creating new programs to be offered through blended and digital approaches and technologies. These programs would require support in one or all of the following areas:
- Curriculum and content design for integrating BDL approach
- Design and development of interactive multimedia learning resources (modules, videos, podcasts, simulations, graphic design, online quizzes, ePortfolios, copyright clearance, etc.)

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- Support for digital and blended pedagogy (student ICT literacy, Virtual Learning Environment, WebEx, Blogs, connectivity, online facilitation skills, online peer assessment, etc.)
- Access to Quality Assurance guidelines and procedures

The BDL_net will be resourced to offer support and/or advice to the academic entities in the above areas for their operational programs. Some examples of the programs currently being supported include:
- SONAM, Pakistan: Post RN to BScN program
- Use of Virtual Learning Environment and Learning Studios at IED

Future programs are likely to include among others:
- SONAM, Pakistan: Masters in Midwifery program
- SONAM, East Africa's programmes
- IED East Africa's M.Ed. program
- Use of Technology in the Undergraduate Medical Curriculum in Pakistan

Research and innovation

Knowledge generation, through scholarship of teaching, application, integration and discovery will be fundamental to the growth of the BDL_net. An action research framework will be integrated within each course design cycle to ensure that experiences gained on one course are translated to other courses. In tandem, the BDL_net will facilitate faculty to seek external funding for multi-disciplinary research and development projects in pedagogy for BDL. BDL_net's research and innovation activities will be showcased through its website.

3.6   Governance Structure

BDL_net's support would be extended to all academic units of AKU and would not be restricted to a single geographic base. The reporting relationship to the Provost (via the Network of Teaching and Learning) is, therefore, a purposeful attempt to ensure that this initiative is AKU-wide, across programs and across any barriers that current university structures might inadvertently create.

A user group on Blended and Digital Learning will be constituted to facilitate exchange and communications in both directions. TL_net advisory group will consider matters related to faculty development in BDL and create ownership of direction in this area.

3.7   How will the BDL Team in the Office of the Provost relate to the other networks and academic or non-academic entities of AKU?

Multiple teams and entities will form the BDL_net:
- The Core Team
    - Blended and Digital Learning team – as a part of the Office of the Provost
    - CIO team

- Academic Entities
    - Schools of Nursing
    - Institutes for Educational Development

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        o Medical Colleges
        o Faculty of Arts and Sciences
        o Graduate Schools
        o ISMC

- Service Entities
    - Network of Teaching and Learning
    - Network of Quality Assurance and Improvement
    - Network of Student Experience
    - University Libraries
    - Audio Visual Department
    - AKDN eHealth Resource Center

The Core Team

The BDL Team in the Office of the Provost and the CIO Team will form the Core Team for the BDL_net. The two will have a "survival relationship," where one cannot function without the other to support BDL activities at AKU. This relationship will, therefore, be characterized by blurred boundaries, where it would be difficult, at times, to draw clear distinctions between the two teams as separate entities. In time, roles and responsibilities might become better defined between the two. Essentially, the Core Team will offer services and/or advice in the following areas (for example):

- Course and content design for blended and digital pedagogy
- ICT literacy development
- Administration and use of Moodle (AKU's VLE)
- Administration and use of e-Portfolio system
- Interactive media development and use
- Web development
- Visual art and graphic design
- Education videography
- Use of mobile learning
- Hardware, software and connectivity support for BDL purposes
- Technology and pedagogy of Learning Studios
- Project management
- Advice on budget and academic plans for BDL to the deans and directors
- Advice on research methods and tools appropriate for investigating BDL pedagogy

The diagrammatic representation of the structure of the Core Team is attached as appendix A.

The BDL Team in the Office of the Provost

A team in the Office of the Provost has been established to lead the establishment of the BDL_net. The team will consist of the following:

1. Assistant Director BDL – *faculty/academic lead*
2. Educational technology designers
3. Educational technology researchers
4. Manager BDL operations (joint appointment with the CIO)
5. Coordinator for A/V resources (joint appointment with Audio-Visual Department)

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6. Copyrights Offficer (joint appointment with Libraries)
7. Faculty members serving as mentors and program facilitators (joint appointment with various academic entities)

The CIO's team

The members of the CIO's team will be a part of the BDL_net's core team. The expertise available in the CIO's team includes the following:

- Educational technology development
- System administration
- Help desk
- Technical user support
- Software and web development
- Infrastructure engineers (hardware, systems and network)
- Interactive multimedia development
- Project Management office

The teams in the Office of the Provost and CIO's office will work together with various entities/teams to create the BDL_net. The relationship of the Core Team to the academic and service entities of AKU has been discussed as follows:

Relationship with academic entities

The BDL_net has been established to support the academic entities to achieve their academic mission. First and foremost, the Core Team will support the academic vision and mission of the entities through faculty development programs. Graduates of the Faculty Professional Development Program in Blended and Digital Learning (FPDP/BDL) would continue to serve as mentors for new faculty adopting the BDL approach. In addition, faculty members would be supported to conduct research on the issues of BDL pedagogy. These collaborations would create the exchanges between different disciplines necessary to create new knowledge in the application of BDL across AKU.

The Core Team will assist academic entities in establishing course development, quality assurance, and teaching support processes for graduate/undergraduate programs for the adoption of BDL approach. For instance, FPDP/BDL trained faculty members will be able to use the Network's resources to design new courses or revise existing courses by developing new digital media learning resources or teaching tasks. In addition, the BDL_net will draw on the expertise of faculty members across all academic entities to develop this modality within their academic units and programs. For the operational support, the entities will need to have appropriate budgets and plans to support both the faculty and the students. The BDL_net will offer advice to the deans and directors in developing plans, grant writing and budget development for BDL operations in their entities. Support would also include assisting the entity head with budget line estimates and advising on BDL strategies and technologies for the operational programs.

It cannot be emphasized too strongly that the core team of the BDL_net will *support* the academic entities in the integration of blended digital technology and pedagogy in their

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programmes but that the operational responsibility for academic programmes remains, of course, the core responsibility of those entities.

Relationship with the Network of Teaching and Learning (TL_net):

The BDL_net is a part of the TL_net. As such, BDL_net will support the TL_net in its overall goal of promoting excellence in teaching at AKU in order to engage students and enhance their learning experience by:
1. Helping TL_net instructors to design and offer faculty induction and professional development programs through the use of technology.
2. Incorporating the resources developed by the TL_net on constructivist pedagogies into the BDL_net faculty development program.

The work of the TL_net in developing the faculty's skills in good pedagogy will strengthen the BDL_net faculty development activities. The two networks will build on each other's expertise and will adopt a mechanism to share experiences on a regular basis.

Relationship with the Network of Quality Assurance and Improvement Network (QAI_net)

The BDL_net would work within the academic policies and quality framework of AKU and implement them throughout the course design, development and teaching support cycle. As such, the core BDL team would support the academic entities on seeking clarification on policy or practice guidelines for quality assurance and improvement processes at AKU.

Relationship with the Network of Student Experience (SE_net)

The student support for BDL can be academic, administrative or IT related. Many aspects of the student support will be coordinated directly by the entity in close collaboration with the SE_net. The Core Team would work in close collaboration with the SE_net for the development and implementation of ICT and Blended Learning literacy programs for AKU students. The BDL_net and SE_net will establish mechanisms for regularly sharing experiences on the student learning requirements for the BDL approach. The timely exchange of information will enable the BDL Core Team and SE_net team to develop appropriate support programs and structures for faculty and students, respectively.

Relationship with the University Libraries

The University Libraries and Core Team will collaborate on the following activities:

- Copyright clearance: In the initial years, a copyright clearance officer will be a part of the BDL_net's Core Team. This position will help to establish an effective copyright clearance process and offer appropriate training program to faculty and students regarding copyright practices.
- Repository for digital teaching materials: The Libraries will develop and house the repository for digital teaching and learning materials. In this area, library staff working on the development and implementation of the repository will be a part of the BDL_net.
- Information literacy: The Libraries offers an information literacy course to AKU faculty and students. The Core Team will share lessons and new pedagogical

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approaches with the information literacy program team to help improve the relevance of the program to students' needs.

Relationship with the Audio-Visual (AV) Department

AV Department is a part of the Library. The BDL Core Team will collaborate with the videographer/editor for the development of educational videos and graphics for courses offered through the BDL approach. As such the Core Team is likely to be the user of the services offered by the AV Department. Over time, the AV Department will be re-positioned and appropriately resourced with material and human expertise to design and develop high quality educational videos and simulations

Relationship with AKDN eHealth Resource Centre

There are many touch points between the AKDN eHealth Resource Centre and the BDL_net. The AKDN eHealth Resource Centre would be a user of the Network's services for designing and offering online training programs for healthcare providers. At the same time, the BDL_net will use the Centre's expertise in the development and implementation of mobile applications, and infrastructure for eHealth activities for course design and delivery to remote locations. Other areas of collaboration will be explored.

4.0   PARTNERSHIP

Over the next five years, the BDL_net will build many alliances and partnerships to strengthen and promote its work. First and foremost, the BDL_net will establish stronger ties and mutually beneficial partnerships with AKDN institutions. For example, the students from Aga Khan Academies and Education Services might well be engaged to work with AKU faculty on the development of multimedia content. Likewise, the BDL_net could support the Academies and Education Services to develop and implement appropriate eLearning programs at the school levels. The BDL_net will also strive to initiate partnerships with local- or country-specific IT and eLearning institutions in the countries and regions where we serve.

5.0   ACKNOWLEDGEMENT

This discussion paper draws on the groundwork done by Azra Naseem, Falak Madhani and Chris Handley in 2010.

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7.0   CONSULTATION PROCESS

How can you provide feedback on the Networks discussion papers?

The discussion papers on QAI_net and TL_net, SE_net, and BDL_net will be distributed to academic entity heads and other members of the Academic Council at its November meeting.

Deans, academic directors and programme heads will be asked to distribute these papers widely within their units to faculty, staff and students and to table the documents at their respective faculty council or similar meetings for discussion in December 2013 and the first two weeks of January 2014. Group discussions should provide an opportunity for interested students and staff as well as faculty to contribute responses.

Entity heads will be asked to summarize the comments, suggestions and questions that arise from these group discussions and submit them to Vice Provost Kweku Bentil.

Although we do not wish to limit the range of issues addressed in feedback, consideration of the following questions would be useful:
   • Do the networks meet the needs of students, faculty and academic programmes?
   • Are there areas not mentioned in the discussion papers that should be emphasized?
   • What specific expertise already exists in AKU's academic entities and among members of faculty that could contribute to the work of any of the networks?
   • Are there areas of ambiguity that require clarification?

We also encourage individual members of faculty, staff and students to submit their own feedback for consideration by the network leaders and authors of the papers.

Please submit all feedback to Vice Provost Kweku Bentil (kweku.bentil@aku.edu) by the end of the day on Friday, January 31, 2014.

Once these responses have been reviewed we will consider the possibility of creating a discussion forum for community members and the network directors to engage in a dialogue regarding issues raised in the discussion papers. In addition, should the response warrant it, we will also explore the possibility of holding one or more virtual town hall meetings.

The feedback received from the university community will shape the final versions of these papers, set the directions for the networks and shape the priorities for the network leadership and their advisory committees. As a result of this process, QAI_net, TL_net, BDL_net and SE_net will be better able to serve the needs of our programmes, faculty and students in our collective efforts to establish the very best learning and teaching environment at Aga Khan University.

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APPENDIX A

Proposed structure of the Core Team

NETWORK OF BLENDED AND DIGITAL LEARNING - **CORE TEAM**