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| **Research Degrees Administration Form RDA1a – RDC Registration Cover Sheet**  **Research Programme Approval** | | | | **Item No:**  *For office use only* | | | |
| **Applicants Details** | | | | | | | |
| Surname: | Wicks | | | | | | |
| Other names: | Andrew | | | | | | |
| Date of birth: | 24th March 1954 | | | | | | |
| **Check list:** | | | | | | | |
| 1. The Applicant has read the Academic Regulations that relate to the type of degree being applied for | | | YES | | 🗹 | NO |  |
| 2. All sections of the application form completed | | | YES | | 🗹 | NO |  |
| 3. Key Skills Development section completed | | | YES | | 🗹 | NO |  |
| 4. First and Second Supervisors have signed | | | YES | | 🗹 | NO |  |
| 5. All relevant documents attached | | | YES | | 🗹 | NO |  |
| 6. Applicant has signed the form | | | YES | | 🗹 | NO |  |
| 7. Applicant is enrolled as a student of the University and has paid the appropriate tuition fees for the current academic year | | | YES | | 🗹 | NO |  |
| 8. The Applicant’s Banner number: | | | 000061426 | | | | |
| 9. The Applicant’s programme on Banner: | | | P12846  MPhil/PhD programme | | | | |
| 10. Specific Health and Safety requirements have been addressed | | | YES | |  | NO | 🗷 |
| 11. The Applicant has read the guidance notes for Research Ethics Committee applications | | | YES | | 🗹 | NO |  |
| 12. This research includes ethical issues that should be considered by the REC | | | YES | | 🗹 | NO |  |
| I wish to apply for registration for a research degree and my signed application form together with any supporting documents is attached | | | | | | | |
| Applicant’s signature: | | Unterschrift | | | | | |
| Date: | |  | | | | | |
| Director of Research/Head of School’s signature supporting the application: | |  | | | | | |
| Date: | |  | | | | | |

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| **Research Degrees Administration**  **Form RDA1b – Application for RDC Registration Research Programme Approval** | | | **Ref:**  *For office use only* | |
| **(This form should be word-processed)** | | | | |
| **School:** | COMPUTING AND MATHEMATICAL SCIENCES (CMS) | | | |
| **Degree applied for:**  - Masters of Philosophy (MPhil)   - Masters of Philosophy with possibility of transfer to Doctor of Philosophy (MPhil/PhD) 🗹  - Doctor of Philosophy (PhD) (If PhD Direct is selected a clear justification must be provided at Section 3.3)  | | | | |
| **Section 1: The Applicant** | | | | |
| Name: | Andrew Wicks | | Title: | Mr. |
| Address: | 23, Ethronvi Road, Bexleyheath, Kent DA7 4BB | | | |
| Telephone: | 020 8304 4908 | e-mail: | lord.wicks@gmail.com | |
| Present post and place of work:  *(if applicable)* | Senior Lecturer, University of Greenwich | | | |
| Telephone: | 020 8331 8717 | | | |
| Type and source of funding *(e.g. scholarship, bursary, self-funded, etc)* | | | | |
| Self-funded | | | | |
| Qualifications gained *(include institution, course, main subjects, classification of award(s), dates and awarding bodies)* | | | | |
| Post-graduate Diploma in Computing and Information Systems  Certificate in Education  B.A.(Hons) International Marketing | | | | |
| Training and Experience *(include details of activities, with dates, relevant to this application, e.g. previous research, papers published/presented, books)* | | | | |
| |  |  |  |  | | --- | --- | --- | --- | | **Employer** | **Job Title** | **From** | **Till** | | University of Greenwich | Senior Lecturer | 2014 |  | | University of Greenwich | Visiting Lecturer | 2012 | 2014 | | Lewisham College | Lecturer | 2007 | 2012 | | Lewisham College | Advanced Practitioner | 2003 | 2007 | | Lewisham College | Programme Area Leader | 2001 | 2003 | | Lewisham College | Senior Lecturer | 1981 | 2001 | | CITB | Research Statistician | 1978 | 1981 | | Saunders Roe Developments | International Marketing Exec. | 1977 | 1978 | | Imperial Life | Salesman | 1976 | 1977 | | British Petroleum (Hamburg) | Statistician | 1974 | 1975 | | | | | |

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| **Section 2: Name(s) of any collaborating establishment(s)**  ***(see “Guidance notes on the completion of Form RDA1b”)*** |
| None |
| **Section 3: Programme of Research *(to be completed jointly between the applicant and his/her supervisor(s))*** |
| 3.1 - Title of research project/proposed thesis title: |
| An investigation of learning characteristics to support pedagogical, andragogical and heutagogical learning derived from existing research in learning styles and learning strategies, to support novel learning environment design. |
| 3.2 - Aim of research: |
| Current VLEs are used to store notes, create exercises and track basic student performance. Their effectiveness depends upon the quality of the materials and the degree of interaction the student has with these. They are all teacher/lecturer led, i.e. the instructor decides what is and is not appropriate for their students.  This study aims to investigate student learning style and learning strategy models and then create a design which fits as many of these as is practical. The intention would be to design, build and test a virtual learning environment based the idea that students should be able to travel through the syllabus in ways that suit their method of working. |
| 3.3 - Proposed plan of work: *(what is the research question including its relationship to previous work, with references). Expand to a maximum of two sides of A4. See “Guidance notes on the completion of Form RDA1B”. In addition, if the application is for PhD Direct please provide a clear justification for this decision)* |
| **Literature review**  **Introduction**  Whilst much of the literature reviewed below deals with educational matters, the purpose of this Ph.D. would be to develop the criteria for a sound virtual learning environment (VLE). There is little agreement on what constitutes a virtual learning environment. Some see it as an umbrella term for a broad range of technologies                                      (Pierre Dillenbourg 2002) whilst others feel it has a much narrower meaning                                    (Anup Kumar 1998).  The thesis here is that a list of criteria for the attributes of a VLE can be developed from the literature on learning and teaching styles. Whilst there is some disagreement about whether learning styles exist                              (Reiner & Willingham n.d.), even they concede that treating students as a homogeneous unit would be harmful to their education. The debate over whether learning styles are real or whether they are a reflection of past successes is only relevant to theorists – the student view of the materials they encounter will determine their achievement. If materials can be presented in a variety of styles then the learner can choose which they prefer (and change that preference as they go) rather than having it decided for them by their teacher/lecturer.  **Current technologies**  Current technologies                                  (James Farmer 2006) are based on how teachers teach rather than how learners learn. However, technology is moving quickly and mobile devices will change the way people access learning                                           (Bacon et al. 2012). The method of presenting materials will have to catch up. It is hoped that a taxonomy of desirable traits can be developed for VLE design which will influence these future developments and prevent “shovelware”                                       (Khoo & Cowie 2010).  Other recent research, for example Peter                                  (Peter 2012) and Swesi                                  (Swesi 2012), have argued that current VLE technologies are in need of enhancement before they take account of learner or tutor needs. The tagging system developed by Peter is a step forward, but is only part of the answer, whilst the work by Swesi indicated little correlation between learning styles and current VLEs. Current VLEs, such as Moodle, BlackBoard and WebCT, allow tutors to set up courses and add materials in any way they feel is best. However, what we feel is best may not suit our students. For example, a lecturer who is a holist will produce their materials top down, which may not suit some learners. Others will produce written materials, because that is what they prefer, but some of their learners will have other learning styles such as visual or audio.  **Learning styles (Nature)**  “*Through the policies and practices of the DfES, ALI and Ofsted, theories and models of learning styles have been identified as being examples of ‘good practice’.*”                                          (Lawrence Nixon & Spedding 2007)  Honey and Mumford                                      (Honey & Mumford 1982) created a learning style quiz which gave scores on two continua, activist-theorist and pragmatist-reflector. Felder and Silverman also created a four category system of how people learn and how each of these should be taught                                     (Richard M. Felder 1988). They decided that they had found sensing learners, visual learners, active learners and sequential learners.  Neil Fleming                                  (Fleming 1996) saw things differently. He pointed out that the majority of students learn by using more than one strategy. His VARK (Visual, Audio, Reading and Kinesthetic) categorisation has been used as the basis for structuring learning in the classroom. OfSTED have used this when tick-boxing observations                                          (Lawrence Nixon & Spedding 2007). Whilst materials are often produced as reading materials (R) and sometimes with diagrams (V) they are rarely produced as audio (A) or kinaesthetic (K) formats. Educationalists do not normally have time to create their teaching materials in all four formats together which would allow the student to choose their currently preferred.  Other learning style classifications such as the Gregorc Style delineator                                  (Gregorc 1984) and ILSA                                      (Rita Dunn 1995) are also used.  **Learning strategies (Nurture)**  There are many theories on learning styles, many seemingly contradictory. However, the situation is confused further when the student uses a variety of strategies. For example, the cyberneticist, Gordon Pask, developed the idea of learners being either serialists or holists                                     (G. Pask 1972), i.e. those who prefer the detail and then construct their overview or those who need an overview to see where the detail fits in. Other strategies can be used by teachers, for example, having students watch others being taught                                                (Chi et al. 2008). This study is useful because it compares this technique against three others; one-on-one human tutoring, observing tutoring individually, collaborating without observing, and studying alone.  **References**  Anup Kumar, J.P.W. Raj Pakala R. K. Ragade, 1998. The Virtual Learning Environment System. *Frontiers in Education Conference, 1998. FIE’98. 28th Annual. Vol. 2. IEEE, 1998.*, 2.  Bacon, L., Windall, G. & MacKinnon, L., 2012. The development of a rich multimedia training environment for crisis management: using emotional affect to enhance learning. *Research in Learning Technology*, 19.  Chi, M.T., Roy, M. & Hausmann, R.G., 2008. Observing tutorial dialogues collaboratively: Insights about human tutoring effectiveness from vicarious learning. *Cognitive science*, 32(2), pp.301–341.  Fleming, N., 1996. Coping with a revolution: Will the Internet change learning. *Lincoln University, Canterbury, New Zealand*.  G. Pask, B.C.E.S., 1972. Learning strategies and individual competence. *International Journal of Man-Machine Studies*, Volume 4, Issue 3, pp.217–253.  Gregorc, A.F., 1984. *Gregorc Style Delineator: Developmental technical and administration manual*, Gregorc associates Incorporated.  Honey, P. & Mumford, A., 1982. *Manual of Learning Styles*, London: P Honey.  James Farmer, J.E.T., 2006. The Use of Virtual Learning Environment Software in UK Universities 2001-2005. *IM+M Technical Brief*.  Khoo, Elaine Michael Forret & Cowie, B., 2010. Lecturer–student views on successful online learning environments. *Waikato Journal of Education*, 15.3.  Lawrence Nixon, M.G. & Spedding, T., 2007. Pedagogy and the intuitive appeal of learning styles in post-compulsory education in England. *Journal of Vocational Education and Training*, 59.1, pp.39–51.  Peter, S.E., 2012. *The use of tagging to support the authoring of personalisable learning content*. University of Greenwich.  Pierre Dillenbourg, P.S. Daniel Schneider, 2002. Virtual Learning Environments. *A. Dimitracopoulou (Ed). Proceedings of the 3rd Hellenic Conference "Information & Communication Technologies in Education*, Kastaniotis Editions,Greece, pp.3–18.  Reiner, C. & Willingham, D., The Myth of Learning Styles.  Richard M. Felder, L.K.S., 1988. Learning and teaching styles in engineering education. *Engineering education*, 78.7, pp.674–681.  Rita Dunn, B.G. Shirley Griggs Jeffery Olsen Mark Beasley, 1995. A meta-analytic validation of the Dunn and Dunn model of learning-style preferences. *The Journal of Educational Research*, 88.6, pp.353–362.  Swesi, K., 2012. *An Investigation into the Influence of Learning Styles and other Factors Affecting Students’ Perception of Virtual Learning Environments*. De Montfort University.  **Research question**  Can a novel learning environment be designed from characteristics identified from existing research in learning\teaching styles and strategies?  **Proposed plan of work**  Phase 1 – Complete the investigation of the literature. (December 2014)  Phase 2 – Extract the key components which affect VLE design from the literature. (June 2015)  Phase 2 – Design an experiment to assess the outcome from the literature. (June 2016)  Phase 3 – Implement the experiment. (September 2016 to July 2017)  Phase 4 – Analyse the results from the experiment. (July 2018)  I would expect to be ready to transfer from MPhil to PhD after approximately 36 months, i.e. by May 2016.  Phase 5 – Writing up the thesis. (July 2019) |
| 3.4 Details of the facilities available for the research: *(including funding, literature, laboratories, computers, etc)* |
| This project is supported by the University of Greenwich. Computer, room, software for this study (Minitab, and SPSS.) and other facilities are provided by the School of Computing and Mathematical Sciences. |
| 3.5 What is the relationship between any collaborating and/or sponsoring establishment(s)?: |
| N/A |
| 3.6 Contact with Supervisors: *(see “Guidance notes on the completion of Form RDA1B”)* |
| Regular meetings (monthly) will take place with my supervisors. |

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| **Section 4: Key Skills Development Programme and any Related Studies: *(To be completed jointly between the Applicant and his/her Supervisor(s) - See “Guidance notes on the completion of Form RDA1B”)*** | | | | | | | |
| 4.1 Has the applicant been issued with a “Research Student Logbook/Portfolio”? | YES | X | | | NO | |  |
| 4.2 Have the skills and knowledge of the applicant been assessed to identify learning needs to enable them to progress in their studies? | YES | X | | | NO | |  |
| 4.3 Having assessed the skills and knowledge of the applicant, is the applicant exempt from part or all of the Key Skills Development Programme? *(If yes, please give details of and reasons for part/full exemption below)* | YES | X | | | NO | |  |
| 4.4 Summary of the key skills and knowledge areas that need to be met to enable the applicant to successfully progress in their studies: | | | | | | | |
| 35 years of teaching experience have taught me that every student is different. A “good” teaching technique is one that engages the greatest proportion of students, but even that does not meet the needs of all.  I have therefore been experimenting with different e-learning styles since the mid 1990’s. There has been a progression from shovelware (Khoo et al 2010) to a more focussed approach which allows students to decide which learning style they prefer. The current state of thinking can be seen at [www.o-vl.com](http://www.o-vl.com).  However, whilst I think this is a good approach others may not. The purpose of this dissertation will be to examine the thesis that small learning style independent chunks of the syllabus aid learning. This is where my statistical background in economic and political modelling will aid the analysis of the results. | | | | | | | |
| 4.5 Details of any programme of related studies to be undertaken, e.g. units from taught Masters programmes: | | | | | | | |
| Whilst I have over 40 years of programming experience, I have never taken a course in programming for the Internet. It would therefore be helpful to sit in on COMP1640 (Enterprise Web Software Development) next academic year. | | | | | | | |
| 4.6 Where an integrated programme of study is proposed, provide details of any course of postgraduate study where the applicant’s performance will be formally assessed: | | | | | | | |
| N/A | | | | | | | |
| 4.7 Has the applicant attended a Research Student Induction session?: | YES | X |  | NO | |  |  |

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| **Section 5: Supervision** *(see**“Guidance notes on the completion of Form RDA1B” – Attach a Curriculum Vitae for any proposed Supervisor(s) from other institutions)* | | | |
| 5.1 First Supervisor | | | |
| Name | Prof. Liz Bacon | e-mail | e.bacon@gre.ac.uk |
| Post held | Deputy Pro-Vice Chancellor | | |
| Place of work | University of Greenwich | | |
| Previous experience of formally supervising registered Research degree students | | | |
| Currently supervising | 5 | candidates | |
| Successful previous  supervisions | 6 | candidates | |
| 5.2 Second Supervisor | | | |
| Name | Prof. Lachlan MacKinnon | e-mail | L.Mackinnon@greenwich.ac.uk |
| Post held | Head of Department | | |
| Place of work | University of Greenwich | | |
| Previous experience of formally supervising registered Research degree students | | | |
| Currently supervising | 5 | candidates | |
| Successful previous  supervisions | 15 | candidates | |
| 5.3 Other Supervisor *(e.g. second, second supervisor)* | | | |
| Name | Dr. Cos Ierotheou | e-mail | c.ierotheou@gre.ac.uk |
| Post held | Director of Learning and Quality | | |
| Place of work | University of Greenwich | | |
| Previous experience of formally supervising registered Research degree students | | | |
| Currently supervising | 3 | candidates | |
| Successful previous  supervisions | 3 | candidates | |
| 5.4 Brief details of any other Supervisors/Advisors who will be supporting the applicant: | | | |
| None | | | |
| 5.5 Research Active Supervisor: *(\*provide* ***name only*** *if 1st or 2nd supervisor. Provide* ***full details*** *if not 1st or 2nd supervisor)* | | | |
| **Name** |  | | |
| Post held\* |  | | |
| Place of work\* |  | | |
| Previous experience of formally supervising registered Research degree students\* | | | |
| Currently supervising |  | candidates | |
| Successful previous  supervisions |  | candidates | |

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| **Section 6: Details of Applicant’s registration as a student with the University** | | |
| 6.1 Initial registration date on programme | May 2013 | |
| 6.2 Mode of study | Part-time | |
| 6.3 Hours per week spent on programme | 20 | |
| 6.4 Expected duration of programme | | |
| To reach MPhil and/or transfer to PhD | 36 | Months |
| To reach PhD | 60 | Months |

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| **Section 7: Signatures** | | | | | | | |
| 7.1 Applicant | | | | | | | |
| I confirm I wish to be registered for the research degree programme detailed in this application. | | | | | | | |
| Applicant’s signature: | | Unterschrift | | | Date: | |  |
| 7.2 Supervisors | | | | | | | |
| We support this application and believe the applicant has the potential to complete successfully the programme of work proposed in this application.  We recommend that this applicant be registered for the research degree programme detailed in this application. | | | | | | | |
| First Supervisor’s signature: | |  | | | Date: | |  |
| Second Supervisor’s signature: | |  | | | Date: | |  |
| 7.3 Director of Research or Head of School | | | | | | | |
| I confirm I support the applicant’s request for registration | | | | | | | |
| Director of Research / Head of School’s signature: | |  | | | Date: | |  |
| 7.4 Confirmation | | | | | | | |
| I confirm the above application for registration was / was not\* **(\*delete as appropriate)** approved for the following research degree programme by the Research Degrees Committee | | | | | | | |
| MPhil |  | | | MPhil/PhD |  | PhD |  |
| Chair of the Research Degrees Committee signature: | | |  | | | Date: |  |
| 7.5 Confirmation of receipt by the Research Student Administrative Office and updating of the Banner record system | | | | | | | |
| RSAO Signature: | | |  | | | Date: |  |