

Publications

Educational Strategies for Sustainable Futures: Revealing the Priorities and Perspectives of Engineering Students

d'Escoffier, L. N., Guerra, A. & Longen Zindel, M. T., 26 Jul 2024, *International Symposium on Project Approaches in Engineering Education*. Rodriguez Mesa, F. J., Roma, M., Lopez, X., Sousa, R. M., Alves, A. & Lima, R. M. (eds.). Department of Production and Systems – PAEE association & School of Engineering of University of Minho, Vol. 14.

What does it mean to be engaged? The engagement of student engineers with sustainability: A literature review

Guerra, A., Jiang, D. & Du, X., 9 Jul 2024, In: *International Journal of Sustainability in Higher Education*. 25, 9, p. 213-233 21 p.

Sources Contributing to Engineering Students' Academic Well-Being: An exploration using the Q methodology

Chen, J., Du, X., Guerra, A. O. P. D. C., Silva, F. M. F. D. & Chaaban, Y., Jul 2024, In: *Journal of Engineering Education*. 113, 3, p. 576-602 27 p.

Mentorship in a long-term PBL-based university academic development program in Denmark: Views of subject and pedagogy mentors

Du, X., Chen, J., Stegeager, N., Thomsen, T. L., Telléus, P. K., Guerra, A. & Juhl, L. B., 17 Jun 2024, (Accepted/In press) In: *International Journal for Academic Development*.

Middle Management Leadership Experiences of a Mission-Driven Innovation University Strategy

Christiansen, S. H., Du, X. & Guerra, A. O. P. D. C., 6 Jun 2024, In: *Education Sciences*. 14, 6, 20 p., 609.

Examining Engineering Design Students' Perceptions of Agency for Sustainability in a Problem- and Project-based Learning (PBL) Context - A Q Methodology Study

Guerra, A. O. P. D. C., Jiang, D., Du, X., Abou-Hayt, I. & Pineda, A., Jun 2024, (E-pub ahead of print) In: *International Journal of Technology and Design Education*.

Engineering educators' professional learning for educational change in a PBL-base and cross-institutional programme in Africa: a Q-study

Nørgaard, B., Chen, J., Smink, C. K., Guerra, A. & Du, X., 3 Mar 2024, In: *European Journal of Engineering Education*. 49, 2, p. 236-256 21 p.

Do good intentions lead to expected outcomes? Professional Learning Amongst Early Career University Academics in a PBL-Based Program

Stegeager, N., Traulsen, S. J., Guerra, A. O. P. D. C., Telléus, P. K. & Du, X., 17 Feb 2024, In: *Education Sciences*. 14, 2, 205.

A review study with a systematic approach: Pedagogical development for educators in higher engineering education

Chen, J., Du, X., Jiang, D., Guerra, A. O. P. D. C. & Nørgaard, B., 2024, In: *European Journal of Engineering Education*. 49, 2, p. 299-329 31 p.

Engineer students' views on competencies for sustainable development: a case from a systemic PBL environment using Q methodology

Ney d'Escoffier, L., Jiang, D., Guerra, A., Pineda, A. & Abou-Hayt, I., 2024, In: *European Journal of Engineering Education*. 49, 5, p. 928-944 17 p.

Problem-based learning and engineering education for sustainability: Where we are and where could we go?

Ney d'Escoffier, L., Guerra, A. & Braga, M., 2024, (Accepted/In press) In: *Journal of Problem Based Learning in Higher Education*.

Review on empathy in engineering education: Conceptions, interventions, and challenges

Baligar, P., Amashi, R., Vijayalakshmi, M., Chen, J., Guerra, A. & Du, X., 2024, *10th Research in Engineering Education Symposium: Connecting Research-Policy-Practice for Transforming Engineering Education, REES 2024*. Baligar, P., Mallibhat, K., Kandakatla, R. & Amashi, R. (eds.). Research in Engineering Education Network, Vol. 1. p. 90-99 10 p.

Teacher's agency in education for sustainable development: an East-West collaborative Erasmus programme using Q methodology

Guerra, A., Chen, J., Du, X., Nielsen, H. & Kørnøv, L., 2024, In: International Journal of Sustainability in Higher Education. 25, 9, p. 155-176 22 p.

The role identities of South African academic middle leaders in a PBL-focused PD program for educational change

Jiang, D., Smith, L., Hattingh, T., Guerra, A. & Du, X., 2024, (Submitted) In: Educational Management, Administration & Leadership.

Supporting change in Polish higher education: Academic middle leaders' perspectives

Du, X., Guerra, A. O. P. D. C., Chen, J., Lindsay, E. & Nørgaard, B., 28 Oct 2023, (E-pub ahead of print) In: Educational Management, Administration & Leadership. p. 1-26 26 p.

An Exploration of Sources Fostering First-year Engineering Students' Academic Well-Being in a PBL Environment

Chen, J., Du, X., Chaaban, Y., Velmurugan, G., Lyngdorf, N. E. R., Nørgaard, B., Routhe, H. W., Hansen, S., Guerra, A. O. P. D. C. & Bertel, L. B., 1 Oct 2023, In: I E E E Transactions on Education. 66, 5, p. 421-430 10 p., 10126080.

Building Collaboration and Learning Mechanisms for Sustainable Development

Guerra, A. & Jiang, D., Sept 2023, *SEFI 2023 - 51st Annual Conference of the European Society for Engineering Education: Engineering Education for Sustainability, Proceedings*. Reilly, G., Murphy, M., Nagy, B. V. & Jarvinen, H.-M. (eds.). SEFI: European Association for Engineering Education, p. 3158-3162 5 p.

University Educators' Professional Learning in a PBL Pedagogical Development Programme

Guerra, A. O. P. D. C., Nørgaard, B. & Du, X., 17 May 2023, In: Journal of Problem Based Learning in Higher Education. 11, 1, p. 36-59 24 p.

A Scoping Review: Examples on Mission-Driven and Mission-Oriented Innovation in Engineering Education Research

Christiansen, S. H., Markman, A. O., Guerra, A. & Du, X., 2023, *SEFI 2023 - 51st Annual Conference of the European Society for Engineering Education: Engineering Education for Sustainability, Proceedings*. Reilly, G., Murphy, M., Nagy, B. V. & Jarvinen, H.-M. (eds.). European Society for Engineering Education SEFI, p. 1813-1829 17 p.

Transforming Engineering Education

Guerra, A. (Editor), Chen, J. (Editor), Lavi, R. (Editor), Bertel, L. B. (Editor) & Lindsay, E. (Editor), 2023, OA ed. Aalborg Universitetsforlag. 321 p. (International Research Symposium on PBL).

Who am I and why am I here? Academic staff viewpoints on CBL and towards a sustainability mindset

Guerra, A. O. P. D. C., Ruge, G. & Ranito, J. J., 2023, *Transforming Engineering Education*. OA ed. Aalborg Universitetsforlag, p. 138-142 4 p. (International Research Symposium on PBL).

Student Agency for Sustainability in a Systemic PBL Environment

Guerra, A. O. P. D. C., Jiang, D. & Du, X., Nov 2022, In: Sustainability. 14, 21, 19 p., 13728.

Towards Active Evidence-Based Learning in Engineering Education: A Systematic Literature Review of PBL, PJBL, and CBL

Sukacké, V., Guerra, A. O. P. D. C., Ellinger, D., Carlos, V., Petronienė, S., Gaižiūnienė, L., Blanch, S., Marbà-Tallada, A. & Brose, A., 27 Oct 2022, In: Sustainability. 14, 21, 31 p., 13955.

University Teachers' Change Readiness to Implement Education for Sustainable Development through Participation in a PBL-Based PD Program

Du, X., Guerra, A., Nørgaard, B., Chaaban, Y., Lundberg, A. & Lyngdorf, N. E. R., 24 Sept 2022, In: Sustainability (Switzerland). 14, 19, 18 p., 12079.

A Research Program About a Short-term PBL Approach Based on the SDG

Braga, M., d'Escoffier, L. & Guerra, A. O. P. D. C., 19 Sept 2022, *Towards a new future in engineering education, new scenarios that European alliances of tech universities open up : SEFI 2022*. Järvinen, H.-M., Silvestre, S., Llorens, A. &

Nagy, B. (eds.). SEFI: European Association for Engineering Education, p. 988-996 9 p.

When problem based learning becomes entrepreneurial – a facilitator view on student challenges

Holgaard, J. E., Du, X. & Guerra, A. O. P. D. C., 19 Sept 2022, *SEFI 2022 - 50th Annual Conference of the European Society for Engineering Education, Proceedings: 50th Annual Conference in September 2022 4 Towards a new future in engineering education, new scenarios that European alliances of tech universities open up*. Jarvinen, H.-M., Silvestre, S., Llorens, A. & Nagy, B. V. (eds.). SEFI: European Association for Engineering Education, p. 315-323 9 p.

Guest Editorial Project- or Problem-Based Learning (PBL) in Engineering Education: Variations and Prospects

Chen, J., Guerra, A., Du, X. & Kolmos, A., 2022, In: *International Journal of Engineering Education*. 38, 4, p. 876-878 3 p.

Academic Staff's Motivation, Outcomes and Challenges in a Pedagogical Training Programme of PBL

Chen, J., Kolmos, A., Guerra, A. & Zhou, C., 2021, In: *International Journal of Engineering Education*. 37, 4, p. 900-914

Educate for the future: PBL, Sustainability and Digitalisation 2021

Guerra, A. (Editor), Chen, J. (Editor), Winther, M. (Editor), Kolmos, A. (Editor) & Nielsen, S. R. (Editor), 2021, Aalborg Universitetsforlag. 230 p. (International Research Symposium on PBL).

Educating engineers 2030 – PBL, social progress and sustainability

Guerra, A. & Rodriguez, F., 2021, In: *European Journal of Engineering Education*. 46, 1, p. 1-3 3 p.

Foreword

Guerra, A., Chen, J., Winther, M., Kolmos, A. & Nielsen, S. R., 2021, *Educate for the future: PBL, Sustainability and Digitalisation 2021*. Aalborg Universitetsforlag, 1 p. (International Research Symposium on PBL).

Computer-aided curriculum analysis and design: Existing challenges and open research directions

Teixeira, A. M. H., Guerra, A. O. P. D. C., Knorn, S., Staffas, K. & Varagnolo, D., 21 Oct 2020, *2020 IEEE Frontiers in Education Conference, FIE 2020 - Proceedings*. IEEE Signal Processing Society, 9274292. (Proceedings - Frontiers in Education Conference, FIE, Vol. 2020-October).

Best practice for embedding the united nations sustainable development goals in engineering education programs

Larsen, S. B., Flyger, C., de Carvalho Guerra, A. O. P. & Coral, J. S., 20 Sept 2020, *SEFI 48th Annual Conference Engaging Engineering Education, Proceedings*. van der Veen, J., van Hattum-Janssen, N., Jarvinen, H.-M., de Laet, T. & Ten Dam, I. (eds.). European Society for Engineering Education SEFI, p. 1411-1413 3 p. (SEFI 48th Annual Conference Engaging Engineering Education, Proceedings).

Educate for the future: PBL, Sustainability and Digitalisation 2020

Guerra, A. (Editor), Chen, J. (Editor), Winther, M. (Editor) & Kolmos, A. (Editor), 2020, 1. ed. Aalborg Universitetsforlag. 618 p. (International Research Symposium on PBL).

Educating Engineering Educators for Sustainability – a case of online resources for staff development

Holgaard, J. E., Smink, C. K., Guerra, A. O. P. D. C. & Servant, V. F. C., 2020, *Educate for the future: PBL, Sustainability and Digitalisation 2020*. Guerra, A., Kolmos, A., Winther, M. & Chen, J. (eds.). 1 ed. Aalborg Universitetsforlag, p. 66-75 10 p. (International Research Symposium on PBL).

Foreword

Guerra, A., Chen, J., Winther, M. & Kolmos, A., 2020, *Educate for the future: PBL, Sustainability and Digitalisation 2020*. Guerra, A., Chen, J., Winther, M. & Kolmos, A. (eds.). Aalborg Universitetsforlag, p. 3-3 1 p. (International Research Symposium on PBL).

PBL to foster integration of company projects in engineering curricula – A case example

Garmendia, M., Alberro, G. & Guerra, A. O. P. D. C., 2020, *Educate for the future: PBL, Sustainability and Digitalisation 2020*. Guerra, A., Kolmos, A., Winther, M. & Chen, J. (eds.). 1 ed. Aalborg Universitetsforlag, p. 110-122 13 p. (International Research Symposium on PBL).

Preparing engineering students for collaborative project-work: Piloting an online course on PBL and project management
Guerra, A. O. P. D. C., Schoefs, F. & Chevreuil, M., 2020, *Educate for the future: PBL, Sustainability and Digitalisation 2020*. Guerra, A., Kolmos, A., Winther, M. & Chen, J. (eds.). 1 ed. Aalborg Universitetsforlag, p. 30-42 13 p. (International Research Symposium on PBL).

Using different taxonomies to formulate learning outcomes to innovate engineering curriculum towards PBL: perspectives from engineering educators

Staffas, K., Knorn, S., Guerra, A. O. P. D. C., Varagnolo, D. & Teixeira, A., 2020, *Educate for the future: PBL, Sustainability and Digitalisation 2020*. Guerra, A., Kolmos, A., Winther, M. & Chen, J. (eds.). 1 ed. Aalborg Universitetsforlag, p. 310-320 11 p. (International Research Symposium on PBL).

Examining exemplarity in problem-based engineering education for sustainability

Servant, V. F. C. & Guerra, A. O. P. D. C., 16 Sept 2019, *Varietas delectat...Complexity is the new normality: SEFI 47th Annual Conference Proceedings*. Vince Nagy, B., Murphy, M., Järvinen, H.-M. & Kálmán, A. (eds.). SEFI: European Association for Engineering Education, p. 1022-1032 11 p.

Sustainable Industry 4.0

Guerra, A. O. P. D. C. & Nørgaard, B., 16 Sept 2019, *Varietas delectat...Complexity is the new normality : Proceedings SEFI 2019*. Vince Nagy, B., Murphy, M., Järvinen, H.-M. & Kálmán, A. (eds.). SEFI: European Association for Engineering Education, p. 501-510 10 p.

Contextual Learning for Sustainability

Guerra, A. O. P. D. C. & Holgaard, J. E., 2019, *Encyclopedia of Sustainability in Higher Education*. Leal Filho, W. (ed.). Springer

Students' Perspectives on Sustainability

Guerra, A. O. P. D. C. & Smink, C. K., 2019, *Encyclopedia of Sustainability in Higher Education*. Leal Filho, W. (ed.). Springer

Aalborg UNESCO Certificate: Staff Development and Challenges in PBL Training Programme

Chen, J., Kolmos, A., Guerra, A. O. P. D. C. & Zhou, C., 2019, In: *Journal of Engineering Education Transformations (JEET)*. 33, 1, 8 p.

7th International Research Symposium on PBL: Innovation, PBL and Competences in Engineering Education

Sunyu, W. (Editor), Kolmos, A. (Editor), Guerra, A. (Editor) & Weifeng, Q. (Editor), 2018, Aalborg Universitetsforlag. 615 p. (International Research Symposium on PBL).

Academic staff expectations when enrolling in pedagogical development course for curriculum change

Guerra, A. & Spliid, C. C. M., 2018, *7th International Research Symposium on PBL: Innovation, PBL and Competences in Engineering Education*. Sunyu, W., KOLMOS, A., GUERRA, A. & Weifeng, Q. (eds.). Aalborg: Aalborg Universitetsforlag, p. 562-572 11 p. (International Research Symposium on PBL).

Engineering 2030: Conceptualization of Industry 4.0 and its implications for Engineering Education

Nørgaard, B. & Guerra, A. O. P. D. C., 2018, *7th International Research Symposium on PBL : Innovation, PBL and Competences in Engineering Education*. Sunyu, W., KOLMOS, A., GUERRA, A. & Weifeng, Q. (eds.). Aalborg, Danmark: Aalborg Universitetsforlag, p. 34-47 (International Research Symposium on PBL).

Aalborg UNESCO Centre Certificate: A new approach to staff training and curriculum innovation

Guerra, A., Spliid, C. C. M. & Kolmos, A., 2018, *7th International Research Symposium on PBL: Innovation, PBL and Competences in Engineering Education*. Sunyu, W., KOLMOS, A., GUERRA, A. & Weifeng, Q. (eds.). Aalborg: Aalborg Universitetsforlag, p. 573-585 13 p. (International Research Symposium on PBL).

Introduction

Ulseth, R. & Guerra, A., 13 Sept 2017, *PBL in Engineering Education: International Perspectives on Curriculum Change*. Brill | Sense, p. vii-x

PBL in engineering education: International perspectives on curriculum change

Guerra, A., Ulseth, R. & Kolmos, A., 13 Sept 2017, Brill | Sense. 140 p.

Empowering students to co-construct the PBL environment

Holgaard, J. E., Dahms, M. L., Kolmos, A. & Guerra, A., 3 Jul 2017, *6th International Research Symposium on PBL: PBL, Social Progress and Sustainability*. Aalborg Universitetsforlag, p. 386 – 398 12 p. (International Research Symposium on PBL).

PBL and Engineering Curriculum Change in Latin America: 10 examples and the lessons learned

Guerra, A., Rodriguez-Mesa, F. & González, F., 3 Jul 2017, *6th International Research Symposium on PBL: PBL, Social Progress and Sustainability*. Aalborg Universitetsforlag, p. 268 – 278 10 p. (International Research Symposium on PBL).

Aprendizaje basado en problemas en ingeniería: Teoría y práctica

Rodriguez-Mesa, F. (Editor), Kolmos, A. (Editor) & Guerra, A. (Editor), 2017, Aalborg: Aalborg Universitetsforlag. 276 p.

Aprendizaje basado en problemas y educación en ingeniería: Panorama latinoamericano

Guerra, A. (Editor), Rodriguez-Mesa, F. (Editor), González, F. A. (Editor) & Ramírez, M. C. (Editor), 2017, Aalborg: Aalborg Universitetsforlag. 240 p.

Control del problema en un entorno de PBL

Holgaard, J. E., Petersen, L. S., Guerra, A. & Kolmos, A., 2017, *Aprendizaje basado en problemas en ingeniería: Teoría y práctica*. Rodriguez-Mesa, F., Kolmos, A. & Guerra, A. (eds.). Aalborg Universitetsforlag, p. 130-167 37 p.

Engineering grand challenges and the attributes of the global engineer: a literature review

Guerra, A., Ulseth, R., Jonhson, B. & Kolmos, A., 2017, *Proceedings of the 45th SEFI Annual Conference 2017: Education Excellence for Sustainability*. Quadrado, J. C., Bernardino, J. & Rocha, J. (eds.). Belgium : SEFI: European Association for Engineering Education, p. 1222-1235

Getting a hold on the problem in a problem-based learning environment

Holgaard, J. E., Guerra, A., Kolmos, A. & Petersen, L. S., 2017, In: *International Journal of Engineering Education*. 33, 3, p. 1070-1085

Guest Editorial I

Arana Arexolaleiba, N., Guerra, A., Kolmos, A., de Graaff, E. & Lima, R. M., 2017, In: *International Journal of Engineering Education*. 33, 3, p. 940-941

Integration of Sustainability in Engineering Education: Why is PBL an answer?

Guerra, A., 2017, In: *International Journal of Sustainability in Higher Education (Print Edition)*. 18, 3, p. 436-454

Los cambios hacia el PBL: Lecciones aprendidas

Guerra, A., Rodriguez-Mesa, F. & González, F. A., 2017, *Aprendizaje basado en problemas y educación en ingeniería: Panorama latinoamericano*. Guerra, A., Rodriguez-Mesa, F., González, F. A. & Ramírez, M. C. (eds.). Aalborg Universitetsforlag, p. 212-225 14 p.

PBL in Engineering Education: International Perspectives on Curriculum Change

Guerra, A. (Editor), Ulseth, R. (Editor) & Kolmos, A. (Editor), 2017, Rotherdam: Brill | Sense. 152 p.

PBL, Social Progress and Sustainability

Guerra, A. (Editor), Rodriguez, F. J. (Editor), Kolmos, A. (Editor) & Reyes, I. P. (Editor), 2017, 1. ed. Aalborg: Aalborg Universitetsforlag. (International Research Symposium on PBL).

Perspectives on Engineering Curriculum Change

Guerra, A. & Ulseth, R., 2017, *PBL in Engineering Education: International Perspectives on Curriculum Change*. Guerra, A., Ulseth, R. & Kolmos, A. (eds.). Rotherdam: Brill | Sense, p. 119-134

Principios de aprendizaje y organización curricular en el PBL

Guerra, A., Rodríguez Mesa, F. & González, F. A., 2017, *Aprendizaje basado en problemas y educación en ingeniería: Panorama latinoamericano*. Guerra, A., Rodríguez-Mesa, F., González, F. A. & Ramírez, M. C. (eds.). Aalborg Universitetsforlag, p. 2-18 17 p.

"Revolución" en la educación de ingeniería: ¿Cómo puede contribuir PBL?

Guerra, A. & Rodríguez Mesa, F., 2017, *Aprendizaje basado en problemas en ingeniería: Teoría y práctica*. Rodríguez-Mesa, F., Kolmos, A. & Guerra, A. (eds.). Aalborg: Aalborg Universitetsforlag, p. 1-11 11 p.

Sustainability accreditation in Engineering Education: Comparison between Danish and French contexts

Guerra, A., Holgaard, J. E. & Jolly, A. M., 2017, *Proceedings of the 45th SEFI Annual Conference: Education Excellence for Sustainability*. Quadrado, J. C., Bernardino, J. & Rocha, J. (eds.). SEFI: European Association for Engineering Education, p. 137-144

Trends in Engineering Education Research: A systematic database analysis

Rodríguez-Mesa, F., Guerra, A., de Graaff, E. & Peña-Reyes, I., 2017, *7th Research in Engineering Education Symposium*. Curran Associates, Inc, Vol. 2. p. 835-844

Barriers towards Sustainability Integration in Engineering Education

Guerra, A., Holgaard, J. E. & Smink, C. K., 2016, *Proceedings for the 8TH conference on engineering education for sustainable development (EESD), 2016, Bruges, Belgium..*

Enhancing Critical Thinking in a PBL Environment

Guerra, A. & Holgaard, J. E., 2016, In: *International Journal of Engineering Education*. 32, 1(B), p. 424-437

Organisational learning and integration of sustainability in engineering education

Guerra, A. & Holgaard, J. E., 2016, *Proceedings SEFI Annual Conference 2016, Tampere, Finland..* European Society for Engineering Education SEFI

Strategies for education for sustainable development - Danish and Australian perspectives

Holgaard, J. E., Hadgraft, R., Kolmos, A. & Guerra, A., 2016, In: *Journal of Cleaner Production*. 112, 4, p. 3479-3491 13 p.

Development of a Global Network for PBL and Engineering Education

Guerra, A. & de Graaff, E., 2015, *Global Research Community: Collaboration and Developments*. de Graaff, E., Guerra, A., Kolmos, A. & A. Arexolaleiba, N. (eds.). Aalborg Universitetsforlag, p. 257-266 9 p.

Global Research Community: Collaboration and Developments

de Graaff, E. (Editor), Guerra, A. (Editor), Kolmos, A. (Editor) & Arexolaleiba, N. (Editor), 2015, 1 ed. Aalborg Universitetsforlag. 537 p.

How to make Engineering Students master problem identification and problem formulation

Guerra, A. & Bøgelund, P., 2015, *Active Teachers - Active Students: Proceeding of The International Joint Conference on the Learner in Engineering Education (IJCLEE' 2015) and 13th Active Learning in Engineering Education Workshop (ALE)*. de Graff, E., Farreras, M. & Arexolaleiba, N. A. (eds.). Aalborg Universitetsforlag, p. 77-81

Problem Based Learning: The Aalborg Example: The visitors workshop at AAU

de Graaff, E. & Guerra, A., 2015. 1 p.

Use of ICT tools to manage project work in PBL environment

Guerra, A., 2015, *Global Research Community: Collaboration and Developments*. de Graaff, E., Guerra, A., Kolmos, A. & A. Arexolaleiba, N. (eds.). Aalborg Universitetsforlag, p. 445-455 10 p.

Problem Based Learning and Sustainable Engineering Education: Challenges for 21st Century

Guerra, A., 4 Jun 2014, Department of Development and Planning, Aalborg University. 439 p.

Problem Based Learning and Sustainability: Practice and Potential

Krogh Hansen, K., Dahms, M.-L., Otrell-Cass, K. & Guerra, A., May 2014, Faculty of Engineering and Science, Aalborg University. 136 p.

Good Examples Catalogue: "Problem Based Learning and Sustainability in Engineering and Science Education – Practice and Potential"

Krogh Hansen, K., Otrell-Cass, K., Guerra, A. & Dahms, M.-L., Apr 2014, Faculty of Engineering and Science, Aalborg University. 60 p.

Sustainability in engineering education from a programme perspective

Kolmos, A., Guerra, A., Haase, S. & Møller, S., 1 Jan 2013.

Evaluating potentialities and constrains of Problem Based Learning curriculum: Research methodology

Guerra, A., 2013, *PBL Across Cultures*. Mohd-Yusof, K., Arsat, M., Borhan, M. T., de Graaff, E., Kolmos, A. & Phang, F. A. (eds.). Aalborg: Aalborg Universitetsforlag, p. 238-244

Information technology for sustainable development: a problem based and project oriented approach

Holgaard, J. E., Guerra, A., Knoche, H., Kolmos, A. & Andersen, H. J., 2013, *Re-Thinking the Engineer*. Engineering Education for Sustainable Development 2013, University of Cambridge, UK, 8 p. 21

Project-organized learning and the development of competences in Engineering Education for Sustainable Development

Guerra, A., Holgaard, J. E. & Kolmos, A., 2013, *Proceedings of ERSCP-EMSU 2013*. 21 p.

Student's perspectives on Education for Sustainable Development in a problem based learning environment

Guerra, A. & Holgaard, J. E., 2013, *Re-Thinking the Engineer*. Engineering Education for Sustainable Development 2013, University of Cambridge, UK, 33

Problem Based Learning and Education for Sustainable Development: An overview in Engineering Education

Guerra, A., 2 Jul 2012, *EDULEARN12 Proceedings*. International Association of Technology, Education and Development (IATED), p. 557-565 (EDULEARN Proceedings).

What are the common knowledge & competencies for Education for Sustainable Development and for Engineering Education for Sustainable Development?

Guerra, A., 2012, *Engineering Education 2020: Meet the Future: SEFI 40th annual conference*. SEFI: European Association for Engineering Education, 8 p.

What are the common knowledge & competencies for education for sustainable development and for Engineering education for sustainable development?

Guerra, A., 2012, *Proceedings of the 40th SEFI Annual Conference 2012 - Engineering Education 2020: Meet the Future*. European Society for Engineering Education SEFI, (Proceedings of the 40th SEFI Annual Conference 2012 - Engineering Education 2020: Meet the Future).

Assessing Learning Outcomes and Engineering PBL Project Reports

Guerra, A. & Kolmos, A., 2011. 7 p.

Comparing problem based learning models: suggestions for their implementation

Guerra, A. & Kolmos, A., 2011, *PBL across the disciplines: Research into best practice*. Davies, J., de Graaff, E. & Kolmos, A. (eds.). Aalborg: Aalborg Universitetsforlag, p. 3-17

A Aprendizagem Baseada na Resolução de Problemas e a Reabilitação das Ribeiras de Gaia: Um estudo de Avaliação
Guerra, A. & Vasconcelos, C., 2009, *Acta - XIII Encontro Nacional de Educação em Ciências*. Castelo Branco-Portugal: Escola Superior de Educação, Instituto Politécnico de Castelo Branco, p. 1100-4521

Aprendizagem Baseada na Resolução de Problemas e a reabilitação de cursos de água
Guerra, A., Espinha Marques, J. & Vasconcelos, C., 2009, In: Enseñanza de las Ciencias. Número Extra - VIII Congreso Internacional sobre Investigación en Didáctica de las Ciencias, p. 1089-1097

Aprendizagem Baseada na Resolução de Problemas e Construção de Materiais Didáticos: Reflexões sobre um estudo de avaliação
Guerra, A. & Vasconcelos, C., 2009, In: Electronic Journal CAPTAR.

Aprendizagem Baseada na Resolução de Problemas: A Reabilitação das Ribeiras de Gaia
Guerra, A. & Vasconcelos, C., 2008, *Actas del XV Simposio sobre Enseñanza de la Geología. Cuadernos del Museo Geominero*. Calongue, A., Rebollo, L., López-Carrillo, M. D., Rodrigo, A. & Rábano, I. (eds.). Instituto Geológico y Minero de España, Vol. 11. p. 225-232

Aprendizagem Baseada na Resolução de Problemas: construção de materiais didáticos sobre a problemática ambiental das Ribeiras de Gaia
Guerra, A., 2008, 300 p. Department of Geology, Faculty of Science, University of Porto.

Projects

Advanced PBL Training in Problem Design and Facilitation Skills: Lodz University of Technology

Guerra, A. (PI) & Holgaard, J. E. (CoI)
01/01/2020 → 30/06/2020

Analysis of sustainability competences developed by engineering students in a Project-based Learning environment.

d'Escoffier, L. N. (PI), Matos Lopes, R. (Supervisor) & Guerra, A. (Supervisor)
01/11/2022 → 31/08/2025

Collaboration, leadership, and sustainability in higher education: How universities operate and align sustainability in education

Christiansen, S. H. (PI), Du, X. (Supervisor) & Guerra, A. (Supervisor)
01/03/2022 → 01/03/2025

Enhancing Institutionalized Transformation through Design, Implement and Evaluate a PBL Pedagogical Development Certificate Program for HITAM, India

Du, X. (PI), Chen, J. (CoPI) & Guerra, A. (CoPI)
15/03/2024 → 31/12/2027

Integration of Sustainable Development in Engineering Education

Guerra, A. (Project Participant) & Holgaard, J. E. (Project Participant)
31/03/2015 → 31/03/2018

PBL Pedagogical Program for Institutional Transformation (India)

Du, X. (PI), Guerra, A. (PI), Lyngdorf, N. E. (CoI), Chen, J. (CoI), Ulseth, R. (CoI) & Johnson, B. (CoI)
22/08/2022 → 31/07/2025

Pedagogical development and Learning: A training program for University of Foggia

Guerra, A. (PI)
01/06/2022 → 31/03/2023

Professional Learning and Development for PBL and Course Design: Universidad del País Vasco UPV/EHU

Guerra, A. (PI)
01/10/2018 → 30/09/2019

Professional Learning and Development on PBL and Higher Education: CATZ Poland 2023

Guerra, A. (PI), Du, X. (CoPI) & Lindsay, E. (CoPI)

01/04/2023 → 30/04/2024

Retention and Drop out amongst 1 year bachelor students at the Faculty for Engineering and Science

Bøgelund, P. (PI), Kolmos, A. (PI), Bylov, S. M. (Col) & Guerra, A. (Col)

01/08/2015 → 01/07/2016

The ECIU University

Guerra, A. (Contact)

01/11/2020 → 31/10/2022

Aalborg Certificate on Basics of PBL and Curriculum Change: Colombia 2018

Guerra, A. (PI), Spliid, C. M. (CoPI), Ulseth, R. (Other) & Kolmos, A. (CoPI)

01/03/2018 → 28/02/2019

Aalborg Certificate on Basics of PBL and Curriculum Change: NEU 2018/ 2019

Kolmos, A. (PI), Zhou, C. (PI), Guerra, A. (CoPI) & Chen, J. (Col)

01/03/2018 → 31/12/2021

Aalborg Certificate on the Basics of PBL and Curriculum Change: Colombia 2021

Guerra, A. (PI), Du, X. (CoPI), Nørgaard, B. (Col), Lyngdorf, N. E. (Col), Ulseth, R. (Col) & Jonhson, B. (Col)

21/10/2021 → 31/05/2023