#### **Curriculum Vitae**

Justus O. Inyega, Ph.D.

Associate Professor, Science Education, Department of Educational Communication and

Technology

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#### Director,

Centre for Pedagogy and Andragogy (CEPA), University of Nairobi, P. O. Box 30596-00100, Nairobi. justus.inyega@uonbi.ac.ke

#### Academic and Professional Qualifications

- 2005 (May) Ph. D., Science Education University of Georgia, U.S.A Title of Dissertation Study: A Multi-site Analysis of Secondary School Chemistry Teachers' Practices and Experiences following Professional Development in Kenya.
  Major Professor: Dr. Norman Thomson Graduate Committee Members: Drs. Mary M. Atwater, Judith Preissle, Malcolm B. Butler, and Lynn A. Bryan.
- 2005(May) Interdisciplinary Qualitative Studies Graduate Certificate, University of Georgia, U.S.A
- 1998 Certificate in Chemical Education, Hiroshima University, Japan
- 1998 Certificate in Project Cycle Management, Japan International Cooperation Agency (JICA), Tokyo, Japan
- M. Ed., Educational Administration, Kenyatta University, Nairobi, Kenya Thesis title: *Primary School Administrative Constraints with Special Reference to Headteachers: Kisii District Case Study.* Supervisors: Dr. N. M. Karagu and Dr. F. Muchira
- M. Ed., Science Education
   University of Leeds, United Kingdom
   Thesis title: Assessment of Students during Teaching Practice at Kenya Science
   Teachers College, Nairobi-Kenya
   Major Professor: Geoff Welford
- 1990 B. Ed., Primary Education Option, Second Class Honours, Upper Division (Chemistry major, minor in mathematics), Kenyatta University, Nairobi, Kenya
- 1983 Dip. Sc. Ed. (Pass with Credit), Chemistry, Mathematics and Physical Education, Kenya Science Teachers' College, Nairobi, Kenya
- 1980 KACE (2 principal and 2 subsidiary passes), Njumbi High School, Murangøa, Kenya

- 1978 EACE (Division One), Sameta Secondary School, Kisii, Kenya
- 1974 C.P.E., Nyamagwa, S.D.A. Primary School, Kisii, Kenya

## **Work Experience**

Senior Lecturer, Science Education 2013 to date Department of Educational Communication and Technology, School of Education, College of Education and External Studies, University of Nairobi **Postgraduate Courses Taught:** • TEC 604: Research methods in education • TEC 614: Science, mathematics and early childhood development **Undergraduate Courses Taught:** TEC 207: Science for pre-school • • TEC 305: Methods of teaching science **TEC 313: Practicum** • TCT 340: Teaching practice I • • TCT 341: Teaching practice II TEC 411: Research project • TCT102: Instructional methods • TCT 332: Subject methods (Chemistry) • HNS 301: Educational communication and technology • 2008 to 2012 Lecturer, Science Education Department of Educational Communication and Technology, School of Education, College of Education and External Studies, University of Nairobi Postgraduate Courses Taught: TEC 604: Research methods in education • • TEC 612: Curriculum development and implementation • TEC 614: Science, mathematics and early childhood development • HNS 660: Nursing education • LDP 603: Research methods **Undergraduate Courses Taught:** • TEC 207: Science for pre-school TEC 305: Methods of teaching science • **TEC 313: Practicum** • TEC 408: Educational research • TEC 411: Research project • • TCT 310: Methods of teaching agriculture TCT 331: Subject methods (Biology) • TCT 332: Subject methods (Chemistry) • TCT 340: Teaching practice I • TCT 341: Teaching practice II HNS 301: Educational communication and technology

# Diploma Courses Taught:

	2015: Science in early childhood education 2025: Research methodologies
August 2007 to Jan. 2008	Principal Lecturer, Department of Applied Sciences The Kenya Polytechnic, Nairobi, Kenya
August 2007 to Dec.2007	Part-time Lecturer: Methods of teaching science and Research methods in education in undergraduate courses Tangaza College, Nairobi, Kenya
April 2007 to Nov. 2007	<i>Part-time Lecturer (science education courses)</i> Department of Educational Communication and Technology College of Education and External Studies, University of Nairobi
August 2006 to July 2007	Senior Lecturer/Science Education Specialist Centre for Mathematics, Science and Technology Education in Africa (CEMASTEA), Nairobi, Kenya
August 2005 to July, 2006	<ul> <li>Academic Professional in Science Education, and Program Director, Professional Alternative Certification for Secondary Science (PACSS) Teachers, Department of Mathematics and Science Education, University of Georgia at Gwinnett, U.S.A</li> <li>Administrative work (51%): Coordinated the science education program, and was in charge of student recruitment, advisement, procurement of materials for the program, and supervision of school- based student internships</li> <li>Teaching science education courses to undergraduate and graduate students and classroom science teachers (49%): Methods of science teaching, Curriculum in science education, Philosophy and leadership of science education in classroom practices.</li> </ul>
Sept. 2001 to May 2005	<ul> <li>Teaching/Research Assistant</li> <li>Department of Science Education, University of Georgia, U.S.A <ul> <li>Teaching Assistant, Gwinnett University Center, University of Georgia (2004/2005)</li> </ul> </li> <li>Teaching Assistant, Gwinnett University Center, University of Georgia (2003/2004)</li> <li>Research assistant for Dr. Thomas Koballa, Jr., Professor and Head, Science Education Department, University of Georgia. Dr. Koballa was involved in research on mentoring of beginning high school physical science teachers in the State of Georgia (2003/2004)</li> <li>Teaching/Research Assistant for Dr. Norman Thomson, who was involved in professional development programs for science teachers in the State of Georgia and research on</li> </ul>

July 1998-August 2001	<ul> <li>indigenous science knowledge in Kenya, Department of Science Education, University of Georgia (2002/2003)</li> <li>Teaching/Research Assistant in the Learning Performance and Support laboratories (LPSL) College of Education, University of Georgia (2001/2002)</li> <li><i>Counterpart Personnel/Senior Lecturer</i></li> </ul>
	<ul> <li>Strengthening of Mathematics and Science in Secondary Education (SMASSE) Project in Kenya (funded by the Governments of Kenya and Japan), Kenya Science Teachersø College (KSTC), Nairobi, Kenya</li> <li>In-serviced secondary school science teachers at the national level and in the SMASSE pilot districts</li> <li>Headed the Administration Division of the National SMASSE Project In-service Training Unit</li> <li>Headed Chemistry Education In-service Training Unit in the SMASSE Project</li> </ul>
1990 to August, 1998	<ul> <li>Lecturer, Chemistry</li> <li>Kenya Science TeachersøCollege (KSTC)</li> <li>Taught college chemistry, subject methods in chemistry to first and second year pre-service diploma teachers</li> <li>Supervised pre-service diploma teachers during teaching practice</li> <li>Coordinated student teaching practice- Kikuyu Zone (1996- 1998)</li> <li>Coordinated the Chemistry Subject Course (1995)</li> </ul>
Sept. 1983- May 1987	<ul> <li>Secondary School Chemistry and Mathematics Teacher</li> <li>Taught high school chemistry and mathematics (Form 1 to Form 4) at Sironga GirlsøHigh School, Kisii-Kenya (January 1985 to May 1987)</li> <li>Taught high school chemistry and mathematics (Form 1 to Form 4) at Migingo Girlsø Secondary School, Kisumu-Kenya (September 1983 to 1984)</li> </ul>
1985-1986 Examina	er, Kenya National Examinations Council
•	Examiner õOö Level Chemistry Practicals for the Kenya National Examinations Council (1985-1986)
1996-1997 Examina	ations' Moderator, Kenya National Examinations Council
•	Moderated the national chemistry practical examinations papers for technical institutions in Kenya

# Academic and Professional Appointments

Aug. 2018 to date	Director, Centre for Pedagogy and Andragogy (CEPA), UoN
2015 to 2018	Deputy Director, Centre for Pedagogy and Andragogy (CEPA), UoN
2016 to Date	Member, Board of Management, Moi Gesusu High School, Kisii County
2016 to Date	Member, Board of Management, Nyamagwa SDA Mixed Secondary School, Kisii County
2013 to 2015	<i>College Website Strategist</i> , School of Education, College of Education and External Studies, University of Nairobi
2013 to 2016	<i>Member</i> of the School of Education Deanøs Performance Contracting Committee
2013 to 2015	Member, School of Education Postgraduate Committee
2013 to date	Member, College of Education and External Studies ExhibitionsøTeam
2013 to 2016	<i>Member</i> , The Fountain Journal Committee, School of Education, College of Education and External Studies, University of Nairobi.
2013 to date	CEES nominated member to the Kenya National Academy of Sciences, KNAS
2011 to 2017	Teaching Practice Zone Coordinator, University of Nairobi
2009 to 2015	<i>Departmental Coordinator</i> , Educational Communication and Technology Courses in the School of Educationøs B. Ed (Science) at the Kenya Science Campus, College of Veterinary and Agricultural Sciences at Kabete Campus, and School of Nursing Sciences at Kenyatta National Hospital Campus, University of Nairobi
2009 to 2016	Reviewer of The Fountain (a publication of the University of Nairobi)
2009 to 2015	Member, Board of Governors/Management, Moi Gesusu High School, Kisii County
2009 to 2015	Member, Board of Directors, Gateway Complex Academy, Ekerenyo, Nyamira County
2009 -2011	Member of Editorial Board, Kenya Institute of Education (KIE)

2005-2006	<i>Program Coordinator/Director,</i> Professional Alternative Certification for Secondary Science (PACSS) Teachers, Department of Mathematics and Science Education, University of Georgia at Gwinnett
1999-2001	Head of Administration/Deputy Head of INSET Unit, SMASSE Project, KSTC, Nairobi, Kenya
1998-2001	Member, Kenya Institute of Education Secondary Course Panel
1997	<i>Member,</i> Kenya Science Teachersø College (KSTC) Diploma Syllabus Review Committee
1996-1998	Teaching Practice Zone Coordinator, KSTC, Nairobi, Kenya

# **Other Appointments**

2019	Member, UoN Curriculum Review Committee
2019	Member, UoN StudentsøMentorship Committee
2019	Member, UoN StatutesøReview Committee
2017-20	19 Staff Commissioner, Independent Electoral Commission, UoN Studentsø Association (UNSA)
2017	Member, Pre-CUE Audit Senate Inspection Team
2017	College of Education and External Studiesø Representative, University of Nairobi Strategic planning team, 2018-2023
2016	Returning Officer, Tallying Centre, University of Nairobi Studentsø(SONU) Elections
2015	Returning Officer, Tallying Centre, University of Nairobi Studentsø(SONU) Elections
2014	Returning Officer, Tallying Centre, University of Nairobi Studentsø(SONU) Elections
2013	Returning Officer, Tallying Centre, University of Nairobi Studentsø(SONU) Elections
2012	Returning Officer, Tallying Centre, University of Nairobi Studentsø(SONU) Elections

# **Recognitions and Outstanding Achievements**

Awards 2005	The Society for Information Technology and Teacher Education & Fourth Annual U.S. National Technology Leadership Initiative Fellowship in Science Education and Technology for 2005
May 3, 2005	First Place Award in the Qualitative Research Division, during the Second Annual Graduate Student Research Conference, College of Education, University of Georgia, U.S.A
1984	Third Best Graduating Student in Chemistry, Kenya Science Teachersø College, Nairobi, Kenya
Scholarship	
2001	Graduate Teaching/Research Assistantship to pursue doctoral studies in science education, Department of Science Education, University of Georgia, U.S.A
1998	Japan International Cooperation Agency (JICA) scholarship to undertake individual training in chemical education at the University of Hiroshima, and Project Cycle Management in Tokyo, Japan.
1993	Guinness Brewing Worldwide and Foreign and Commonwealth Office Scholarship, to undertake a master's degree in science education at The University of Leeds, United Kingdom.
Nominations	
2005	Outstanding Doctoral Dissertation Award Nominee, National Association for Research in Science Teaching (NARST)
2005	Association for the Education of Teachers in Science Outstanding Paper Award Nominee: Inyega, J. & Thomson, N. (2005, January). <i>Strengthening high school chemistry teaching through in-service</i> <i>programs in Kenya</i> . Paper presented at the annual conference of the Association for the Education of Teachers in Science (AETS), Colorado Springs, Colorado, U.S.A.
Grant Awards	
2018/2019	PI: USAID funded Tusome Case Study, Kenya
2017 -2024	Co-applicant with Centre for the Study of Learning and Performance, CSLP, Concordia University, Canada, for SSHRC partnership grant titled õUsing educational technology to develop essential educational competencies in sub Saharan Africaö

2015-2017	CO-PI: ESRC-DFID-funded research project entitled implementing cross- age peer tutoring in the teaching of reading in Kenyaö by University of York, UK, Concordia University and University of Nairobi.
2013-2016	CO-PI: EU-funded project entitled -Enhancing the quality of graduates of agriculture to meet tomorrows food security challenge (PREPARE-BSc)ø at the University of Nairobi.
2012 -2014	PI: United States Agency for International Aid (USAID) Grant Award to develop, pilot-test and infuse a comprehensive results-oriented Early Grade Reading Instruction Curricula (EGRIC) in Teacher Education Programs in Kenya.
2006	University of Georgia, African Studies Institute Research Award to Drs. D. Tippins, N. Thomson, M. B. Butler, & J. Inyega to study use of modern technology in testing water quality in Kenya and student involvement through science education curricula.

### **Consultancy Services**

2018/19	USAID funded Tusome Case Study, Kenya.
2015-2017	ESRC-DFID-funded research project entitled <i>implementing</i> cross-age peer tutoring in the teaching of reading in Kenyaö by University of York, UK, Concordia University and University of Nairobi.
2015	Technical consultant on measurement and evaluation, Kenya National Examinations Council (KNEC).
2014-2015	Consultant, postgraduate studies program at University of Hargeisa, Somaliland.
2013-2016	Science education specialist, PREPARE-BSC Project funded by European Union.
2012-2014	Early Grade Reading Instruction Curriculum Project funded by USAID
Travel Awards	
2005	NARST Equity and Ethics Committee Travel Award to attend an Annual Meeting of NARST, Dallas, Texas, U.S.A.
2003	NARST Travel Award to attend an Annual Meeting of NARST, Wyndham Franklin Plaza Hotel, Philadelphia, U.S.A.

#### Association/Affiliations

2013 to date	Member, University of Nairobi Alumni
2012 to 2014	Member, Teaching Practice and Educational Leadership Consortium, (TPeLC)
2007 to Date	Member, University Academic Staff Union, University of Nairobi
2001-2006	Member, Georgia Science Teachers Association, GSTA
2003-2006	Member, National Association for Research in Science Teaching, NARST
2005-2006	Member, Association for Science Teacher Education
1986-2007	Member, Kenya National Union of Teachers

#### Publications Books/Book/Module Chapters (Peer reviewed)

- Inyega, H. N., &Inyega, J. O. (2017). Infusing Reading Instruction into Early Childhood Teacher Education Programs: The Case of University of Nairobi.In M. N. Amutabi (ed.). *Africa at development crossroads*, Chapter 9, pp. 111-126. Nairobi: Centre for Democracy Research and Development (CEDRED). (ISBN: 978-9966-1933-5-3)
- Inyega, H. N., & Inyega, J. O. (2017). All teachers teaching reading all children reading: A pedagogical shift in teacher education in Kenya. Nairobi: Jo-Vansallen Publishing Company (ISBN: 978-9966-1794-32)
- 3. Inyega, H. N., & Inyega, J. O. (2016, in press). Six Ts for effective and efficient early grade literacy instruction. (Book Chapter) In Ross Graham (Eds.). *Developing languages in Africa: Social and educational perspectives*. London: Cambridge University Press.
- 4. Inyega, J. O. (2016). *TEC 207: Science for early childhood education*. A module published by UoN, CODL. Nairobi: CODL. (ISBN: 978-9966-1773-0-8).
- Inyega, H. N., Inyega, J. O., Wangamati, A. S. (2014). Communication skills for academic excellence. Nairobi: Jo-Vansallen Publishing Company (ISBN: 978-9966-1794-18)
- 6. Inyega, J. O. & Gunga, S. O. (2014). Methodology for science teaching in higher education. In University of Nairobi, Centre for Open & Distance Learning Training in Pedagogy Manual: Interactive Teaching Materials for University Lecturers and Professors in Pedagogy, 1, 54-82. Nairobi: CODL. (ISBN: 978-9966-1773-0-8).

- Inyega, J. O. (2011). Teachers' Practices and Experiences Following Professional Development: A Kenya Multi-site Analysis. Saarbrucken, Germany: VDM óVerlag Dr. Muller. (372 pages; 8 Chapters) (ISBN: 978-3-639-32625-3). Online available: <u>www.amazon.com</u>
- 8. Inyega, H. N., & Inyega, J. O. (2011). *Learning to read and reading to learn: A practical teacher's guide.* Nairobi: Riverbrooks Communications Network. (ISBN: 996-67336-3-9).
- Inyega, J.O., & Okpoko, A. (2011). Research design. Chapter 5. In Ezeliora, B., Ezeokana, J.O., & Inyega, H.N. (Eds.). *Principles of research in education and social sciences*. Enugu, Nigeria: Forth Dimension Publishing Co. Ltd. (ISBN: 978-049-853-2)

#### Children's Books

- 1. Inyega, H.N. & Inyega, J.O. (2016). *My sister was born yellow*. Nairobi: Association of Reading of Kenya. ISBN: 978-9966-17945-6
- 2. Inyega, H.N. & Inyega, J.O. (2016). *Gentle gracing giraffes*. Nairobi: Association of Reading of Kenya. ISBN: 978-9966-17944-9
- 3. Inyega, H.N. & Inyega, J.O. (2016). *My sister has got mumps*. Nairobi: Association of Reading of Kenya. ISBN: 978-9966-17947-0
- 4. Inyega, H.N. & Inyega, J.O. (2016). *The girl whose feet could not stop growing*. Nairobi: Association of Reading of Kenya. ISBN: 978-9966-17946-3

#### Journal Articles (\*\* peer reviewed)

- 1. Bulinda, D. M. & Inyega, J. O. (2019). <u>Pre-service graduate teachers' perceptions on</u> <u>instructional supervision in relation to students' classroom involvement and assessment</u> <u>in Kenya</u>. International Journal of Creative Research and Studies. 3(1):9-14.
- Inyega, J. O. & Bulinda, D. M. (2019). <u>Pre-service graduate teachers' perceptions on instructional supervision in relation to preparation and planning for teaching and learning in Kenya</u>. International Journal of Innovative Research and Knowledge. 4(1):26-31.
- Inyega, H.N. & Inyega, J.O. (2018) \*\*. The nuts and bolts for effective literacy instruction in early childhood. *Papers in Education, University of Dar es Salaam Journal, Issue 35*. (ISSN: 0856-4027). Online available: <u>http://journals.udsm.ac.tz/index.php/ped/article/view/1489</u>
- 4. Inyega, J. O. (2017) \*\*. Pre-service teachersøattitude towards secondary school student assessment in science after undergoing teaching practice in Kenya. *International Journal of Literacy and Development*, 3 (1), 17-25. (ISSN: 3212-4938)

- Inyega, J.O. & Inyega, H.N. (2017) \*\*. Teachersø pedagogical content knowledge following in-service training in Kenya. *International Journal of Humanities and Social Studies*, 5(5), 8-13. (ISSN: 2321 ó 9203). Online Available: <u>http://theijhss.com/wpcontent/uploads/2017/06/2.-HS1705-009-Updated.pdf</u>
- Inyega, J.O. & Inyega, H.N. (2017) \*\*. Teachersøattitude towards teaching following in-service teacher education program in Kenya. *International Journal for Innovation Education and Research*, 5(4), 93-102. (ISSN: 2411-2933). Online available: <u>http://www.ijier.net/ijier/article/view/666/561</u>
- 7. Inyega, H.N. & Inyega, J.O. (2017) \*\*. Experiences of student teachersø on placement. *International Journal of Educational Policy Research and Review*, 4(5), 90-102. (ISSN: 2360-7076). Online available: <u>https://journalissues.org/wp-content/uploads/2017/05/Inyega-and-Inyega.pdf</u>
- 8. Inyega, H.N. & Inyega, J.O. (2017) \*\*. Empowering children and teachers through literacy: the case of children¢s book project (CBP) for Tanzania. *Education Research Journal*, 7(5), 94-102. (ISSN: 2026-6332)
- Mageto, I. G., Omoni, G. M., Cabelus, N. B., Inyega, J. O. (2017, in press) \*\*. Preparedness and practice of forensic nursing in Kenya. *International Journal of Nursing Education*. ISSN: 0974-9357 (online), 0974-9349 (print). Online available: <u>http://www.indianjournals.com/ijor.aspx?target=ijor:ijone&volume=9&issue=3&article</u> <u>=015</u>
- Mageto, I. G., Omoni, G. M., Cabelus, N. B., Inyega, J. O. (2017) \*\*. Training needs assessment for forensic nursing in Kenya. *Kenyan Journal of Nursing and Midwifery*, 2(1), 54-63. (ISSN: 2518-8631). Online available: <a href="http://www.kjnm.co.ke/index.php/kjnm/article/view/6">http://www.kjnm.co.ke/index.php/kjnm/article/view/6</a>
- Maonga, T. W., Inyega, J. O., & Inyega, H. N. (2017) \*\*. Inquiry-based learning and secondary school student performance in map work in two selected Counties of Trans-Nzoia and Uasin Gishu in Kenya. *International Journal of Innovative Research and Knowledge*, 2(4), 15-22. (ISSN: 2278 ó 0211). Online available: <u>http://ijirk.com/archive\_v2i4\_paper\_pdf/IJIRK-2.4.03.pdf</u>
- 12. Inyega, J. O. Inyega, H, N. & Hardman, F. (2017) \*\*. Implementing cross-age peer tutoring in the teaching of reading in Kenyan primary schools. *International Journal of Humanities and Social studies*, *5*(4), 16-22. (ISSN: 2321 6 9203).Online available: http://theijhss.com/wp-content/uploads/2017/04/3.-HS1704-026.pdf
- Inyega, J.O. & Inyega, H.N. (2017) \*\*. Mainstreaming early grade reading instruction in early childhood teacher education. *International Journal for Innovation Education and Research*, 5(4), 103-119. (ISSN: 2411-2933). Online available: <u>http://www.ijier.net/ijier/article/view/669/562</u>

- Inyega, H.N. & Inyega, J.O. (2017) \*\*. Psychotherapy, (il)literacy and information communication and technologies: building bridges to literacy excellence. *Journal of Education and Human Development*, 6(2), 128-138. (ISSN: 2334-2978). Online available: <a href="http://jehdnet.com/journals/jehd/Vol\_6\_No\_2\_June\_2017/14.pdf">http://jehdnet.com/journals/jehd/Vol\_6\_No\_2\_June\_2017/14.pdf</a>
- **15.** Inyega, H. N. & Inyega, J. O. (2016) \*\*. Revamping early childhood teacher education and professional development: nuts and bolts for effective literacy and numeracy instruction. *University of Dar Es salaam School of Education Journal of Education and Development.*
- 16. Inyega, H. N., Inyega, J. O., & Matula, P. D. (2014) \*\*. Enhancing college studentsø literacy skills: adopting an interdisciplinary approach. *International Journal of Literacy* and Development. 1(1), 25-44. (ISSN: 3212-4938)
- 17. Digolo, O. O., Inyega, J. O., & Inyega, H. N. (2011) \*\*. University academics reexamine their pedagogical and people-skills: insights from capacity-building in-service program in Kenya. *The Fountain: Journal of Educational Research*. University of Nairobi Publication (ISSN: 2079-3383).
- 18. Gatumu, J.C., Inyega, J.O., & Inyega, H.N. (2011) \*\*. Teaching practice experiences: Invaluable insights from video cases in Kenya. *The Fountain: Journal of Educational Research*. University of Nairobi Publication (ISSN: 2079-3383).
- Inyega, J. O., Thomson, N., Butler, M.B., Inyega, H. N. (2010) \*\*. In-service teachersø classroom practices and experiences. *The Fountain: Journal of Educational Research*. 4(1), 1-21. University of Nairobi Publication (ISSN: 2079-3383).
- 20. Chomchid, P., Inyega, J., and Thomson, N. (2009) \*\*. Secondary high school chemistry teachersø perspectives on the difficulties of teaching the atomic structure. *Songklanakarin E-journal of Social Sciences and Humanities* 15(4), 577-594. Songkla University Publication (ISSN: 0859-1113).
- 21. Inyega, J., Butler, M.B., & Thomson, N. (2006, January) \*\*. A Multi-site analysis of teachersøpractices on the õmole conceptö following professional development programs. *Conference proceedings: Annual Conference of Association for Science Education (ASTE)*, Portland, Oregon, U.S.A.
- 22. Panwilai C., Inyega, J., & Thomson, N (2006, January) \*\*. Secondary high school chemistry teachersø perspectives on the difficulties of teaching atomic structure and periodic table: Views from Thailand and Kenya. *Conference Proceedings: Annual Conference of Association for Science Education (ASTE)*, Portland, Oregon, U.S.A.
- 23. Inyega, J., Thomson, N., & Butler, M. B. (2005, April) \*\*. Evidence-based chemistry unit lesson plan designing and implementation following in-service programs: Multi-site cases of teachers in Kenya. *Conference Proceedings: National Association for Research in Science Teaching*, Dallas, Texas, U.S.A.

#### Conference Presentations Paper presentations (\*peer reviewed, \*\* peer reviewed and invited papers)

- Inyega, H. N. & Inyega, J. O. (2018) \*\*. Implementing a school-based teacher support system for sustainable education development in Kenya. A paper presented at the International Conference on Research and innovation in Education from 24<sup>th</sup> to 26<sup>th</sup> April, 2018 in the College of Education and external Studies, University of Nairobi, Kenya.
- Inyega, H. N. & Inyega, J. O. (2018) \*\*. Leveraging for ICTs to improve sexual health literacies of university students in Kenya. A paper presented at the International Conference on Research and innovation in Education from 24<sup>th</sup> to 26<sup>th</sup> April, 2018 in the College of Education and external Studies, University of Nairobi, Kenya.
- Inyega, J. O. & Inyega, H. N. (2018) \*\*. Machine learning. A paper presented at the International Conference on Research and innovation in Education from 24<sup>th</sup> to 26<sup>th</sup> April, 2018 in the College of Education and external Studies, University of Nairobi, Kenya.
- 4. Mutai, W. K. & Inyega, J. O. (2018) \*\*. Impact of level of education on small scale dairy farmeersølivelihood in Longisa, Bomet County, Kenya. A paper presented at the International Conference on Research and innovation in Education from 24<sup>th</sup> to 26<sup>th</sup> April, 2018 in the College of Education and external Studies, University of Nairobi, Kenya.
- 5. Inyega, J. O., Hardman, F. & Inyega, H, N. (2016) \*\*. Implementing cross-age peer tutoring in the teaching of reading in Kenyan primary schools. A paper presented at the *Nairobi Innovation Week* from 1<sup>st</sup> 5<sup>th</sup> August, 2016 in the University of Nairobi, Kenya.
- Maonga, T. W., Inyega, J. O., & Inyega, H. N. (2016) \*\*. Inquiry-based learning and secondary school student performance in map work in two selected Counties of Trans-Nzoia and Uasin Gishu in Kenya. A paper presented at the *Nairobi Innovation Week* from 1<sup>st</sup> - 5<sup>th</sup> August, 2016 in the University of Nairobi, Kenya.
- 7. Hardman, F., & Inyega, J.O. (2016, March 17) \*\*. Implementing cross-age peer tutoring in the teaching of reading in Kenya. A paper presented at the *Lessons from a Decade's Research on Poverty: Innovation, Engagement, and Impact Conference* from 16<sup>th</sup> -18<sup>th</sup> March, 2016 in Pretoria, South Africa. Online available: <u>https://www.slideshare.net/theimpactinitiative/3-implementing-crossage-peer-tutoring-inthe-teaching-of-reading-in-kenya-frank-hardman-and-justus-inyega</u>
- 8. Inyega, H. N., & Inyega, J.O. (July, 9<sup>th</sup> 2015) \*\*. Revamping early childhood teacher education & professional development: nuts and bolts for effective literacy and numeracy instruction. Paper presented at the Literacy and Numeracy Conference held at the University of Dar es Salaam from 8<sup>th</sup> to 10<sup>th</sup> July 2015.

- 9. Inyega, H. N., & Inyega, J.O. (18<sup>th</sup> June, 2015) \*\*. Revamping Early Childhood Teacher Education and Professional Development: Nuts and Bolts for Effective Literacy and Numeracy Instruction. Paper presented at the 2<sup>nd</sup> Africa for Research in Comparative Education (AFRICE) International Conference held at The University of Nairobi from 18<sup>th</sup> to 19<sup>th</sup> June, 2015.
- 10. Inyega, H. N., (May 22<sup>nd</sup> 2015) \*\*. Language of Education in Early Childhood: Nuts and Bolts for Effective Emergent Literacy Instruction. Paper presented at British Association for Applied Linguistics Language in Africa Special Interest Group held in Aston University, Birmingham in the United Kingdom.
- 11. Inyega, H. N., & Inyega, J. O. (April 13<sup>th</sup> to 16<sup>th</sup> 2014) \*\*. Transforming early childhood teacher education in Kenya: Early Grade Reading Instruction Curriculum (EGRIC). Paper presented at the 2<sup>nd</sup> World Literacy Summit in Oxford, UK.
- Inyega, H. N., & Inyega, J. O. (February 18<sup>th</sup> 2014) \*\*. Lest we forget their first teachers: Family-based ICT interventions for struggling readers. Paper presented at the UNESCO Mobile Learning Week (MLW) in Paris, France.
- 13. Inyega, H. N., & Inyega, J. O. (August 12<sup>th</sup> to 16<sup>th</sup> 2013) \*\*. Family-based interventions for struggling readers: A reading parent a literate offspring. Paper presented at the 8<sup>th</sup> Pan-Africa Reading for All (PARfA) International Conference in Nairobi, Kenya
- 14. Inyega, H. N., & Inyega, J.O. (2013, February 18) \*\*. Mobile phones and quality of teacher, early grade reading and literacy in Kenya. A paper presented at the UNESCO Symposium on Mobile Learning held at UNESCO Headquarters from 18<sup>th</sup> -19<sup>th</sup> February, 2013 in Paris, France. Online available:

http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/ED/ICT/pdf/Inyega1.pdf & http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/ED/ICT/pdf/Inyega2.pdf

- 15. Inyega, J.O., Khatete, I., & Gakunga, D. K. (2010, September 18) \*\*. Pre-service teacher preparationsøinfluence on teaching practice experiences: A case of bachelor of education (science) students, University of Nairobi, Kenya. A paper presented at the *Teaching Practice Conference* held at MARIST International College. Nairobi, Kenya.
- 16. Digolo, O. O., & Inyega, J.O. (2008, November) \*\*. University Academics Re-Examine their Pedagogical and People-Skills: Insights from Capacity-Building Inservice Program in Kenya. Paper presented at the *International Conference on Social and Human Development Outcomes on Education and Poverty*, Kenyatta University. Nairobi, Kenya.
- 17. Inyega, J., Butler, M.B., & Thomson, N. (2005, October) \*\*. Teaching high school electrochemistry: A multi-site analysis of teachersø practices following in-service programs. Paper presented at the *Annual Conference of the Southern Association for Science Education (SASTE)*, University of Georgia, Athens, Georgia, U.S.A

- 18. Koballa, T., Upson, L., Mince, C., Inyega, J., & Parlor, A. (2005, April) \*\*. Examining the link between mentor teacher advice and protégé classroom practice within a physical science context. Paper presented at the *Annual Conference of NARST*, Dallas, Texas, U.S.A.
- 19. Koballa, T., Upson, L., Minchew, C., Inyega, J., & Parlo, A. (2005, April) \*\*. Inside science teacher mentoring. Paper presented at the *National Science Teachers Association* (*NSTA*) *National Convention*, Dallas, Texas, U.S.A.
- 20. Inyega, J. & Thomson, N. (2005, January) \*\*. Strengthening high school chemistry teaching through in-service programs in Kenya. Paper presented at the *Annual Conference of AETS*, Colorado Springs, Colorado, U.S.A.
- 21. Koballa, T., Upson, L., Minchew, C., Inyega, J., & Parlo, A. (2005, January) \*\*. Using technology to support evidence-based science teaching and mentoring. Paper presented at the *Annual Conference of AETS*, Colorado Springs, Colorado, U.S.A.
- 22. Inyega, J. & Thomson, N. (2004, October) \*\*. Teacher beliefs and experiences about chemistry in-service teacher education programs in Kenya. Paper presented at the *Annual* conference of the Southern Association for the Education of Teachers in Science (SAETS), University of Florida, Gainesville, Florida, U.S.A.
- 23. Minchew, C., Upson, L., Koballa, T., Parlo, A., & Inyega, J. (2004, October) \*\*. Idealized versus realized: Teacher beliefs regarding the role of mentor in science teaching. Paper presented at the *Annual Conference of the Southern Association for the Education of Teachers in Science (SAETS)*, University of Florida, Gainesville, Florida, U.S.A.
- 24. Koballa, T., Upson, L., Minchew, C., & Inyega, J. (2004, April) \*\*. Improving beginning teacher mentoring experiences: Georgia systemic teacher education framework as a guide for using direct evidence to improve practice. Paper/poster presentation at the *Research Symposium on the Preparation of Educators*, sponsored by The Georgia Systemic Teacher Education Program, University of Georgia.
- 25. Inyega, J., Sikes, C. K., Bryan, L., & Gootman, E. (2003, February) \*\*. Why are torque and work so similar? Paper presented at the *Annual Meeting of the Georgia Science Teachers Association*, Jekyll Island, U.S.A.
- 26. Inyega, J., & Thomson, N. (2002, October) \*\*. Change in attitudes toward teaching strategies in secondary school teachers in Kenya following in-service professional development. Paper presented at the *Annual Meeting of SAETS*, Kennesaw University, Kennesaw, Georgia, U.S.A
- 27. Thomson, N., Inyega, J., Narayan, R., & Park, S. (2002, February) \*\*. Phytoremediation and genetic engineering in Georgia. Paper presented at the *Annual Meeting of the Georgia Science Teachers Association*, Jekyll Island, U.S.A.

#### Seminar/Training Workshop Paper Presentations (Peer reviewed)

- 1. Inyega, J. O. (2017). Approaches and strategies of teaching science/technology in higher education during the training of the University of Nairobi CHS lecturers and professors on pedagogy held at the Central Catering Unit Hall, University of Nairobi from May 3 to May 5, 2017.
- 2. Inyega, J. O. (2017). Methods and techniques of teaching science in higher education during the training of the University of Nairobi CHS lecturers and professors on pedagogy held at the Central Catering Unit Hall, University of Nairobi from April 5 to April 7, 2017.
- 3. Inyega, J. O. (2017) \*\*. Secondary school surveys: A case of Kenya. A paper presented in the Regional Dissemination PrepareBsc Workshop held in Arusha, Tanzania, from February 6 to February 10, 2017.
- Inyega, J. O. (2016). Approaches, methods and techniques of teaching science/technology in higher education during the training of the University of Nairobi lecturers and professors on pedagogy held at the Central Catering Unit Hall, University of Nairobi on June 29, 2016
- Inyega, J. O. & Wahome, R.G. (2016) \*\*. Mentorship programmes for lecturers and students. A paper presented in PrepareBsc workshop in the College of Agriculture and Veterinary Sciences, University of Nairobi, from 8<sup>th</sup> to 11<sup>th</sup> August, 2016
- 6. Inyega, J.O. (2015, November) \*\*. Effective teaching in health sciences. A presentation made at a Workshop on Improving Academic Excellence State of the Art Research and Quality Clinical Services by Department of Oral and Maxillofacial Surgery/Oral Pathology and Oral Medicine, held at Gelian Hotel, Machakos Town from 27<sup>th</sup> to 28<sup>th</sup> November, 2015.
- Inyega, J. O., & Onyango C. M., (2015, September) \*\*. Teaching in higher education institutions: Problem-based learning method. A presentation made at the *Prepare-BSC Project Workshop*, held at the College of Agriculture and Veterinary Sciences (CAVS), University of Nairobi, from 24<sup>th</sup> to 25<sup>th</sup> September, 2015.
- 8. Inyega, J. O., & Wahome, R. G. (2015, September) \*\*. Mentorship of university staff and students in higher education institutions. A presentation made at the *Prepare-BSC Project Workshop*, held at the College of Agriculture and Veterinary Sciences (CAVS), University of Nairobi, from 24<sup>th</sup> to 25<sup>th</sup> September, 2015.
- 9. Inyega, J. O., Onyango C., Ekere, W., & Eilu, G. (2015, June) \*\*. Teaching in higher education institutions: Problem-based learning method. A presentation made at the *Prepare-BSC Project Trainer of Trainers' Workshop*, held at Sokoine University of Agriculture, Morogoro, Tanzania.

- Inyega, J. O. (2012, February) \*\*. Innovative pedagogy in chemical education. A presentation made at the Second Conference of International Year of Chemistry 2011(IYC 2011): Chemistry Our Life Our Future, held at the Central Catering Unit, University of Nairobi, Nairobi, Kenya.
- 11. Inyega, J. O. (2012, February) \*\*. Enhancing Mathematics and Science Education in Africa through ASEI-PDSI Approach. A Keynote address paper presentation made at the *Third Country Training Program (TCTP) attended by participants from Angola, Uganda, Tanzania, Zanzibar, Rwanda, Cameroun, and Mali* on 9<sup>th</sup> February, 2012, at CEMASTEA, Nairobi, Kenya.
- 12. Inyega, J. O. (2010, October 29) \*\*. Methods of teaching. A paper presentation made at the *Training Workshop on Information Literacy for University of Nairobi Library Staff* held at the Jomo Kenyatta Memorial Library Computer Laboratory, University of Nairobi, Nairobi, Kenya.
- 13. Inyega, J. O. (2009, November) \*\*. Project work and research as a method of teaching. Paper presented at the *Training of Trainer of Trainers in Pedagogy* at the KEPHIS Headquarters, Nairobi, Kenya.
- 14. Inyega, J. O. (2009, November) \*\*. Methods of teaching science. Paper presented at the *Training of Trainer of Trainers in Pedagogy* at the KEPHIS Headquarters, Nairobi, Kenya.
- 15. Inyega, J. O. (2009, March) \*\*. Methodology for teaching education: Teaching practice. Paper presented at the *Training of University Lecturers in Pedagogy at the University of Nairobi*, Nairobi.
- 16. Inyega, J. O. (2009, January) **\*\***. Methodology for teaching medicine: Projects, practicals and laboratory teaching. Paper presented at the *Training of University Lecturers in Pedagogy at the University of Nairobi*, Nairobi.
- 17. Inyega, J. O. (2008, February) \*\*. Projects, practicals, and laboratory teaching. Paper presented at the *Training of University Lecturers in Pedagogy at the University of Nairobi*, Nairobi.
- 18. Inyega, J. O. (2007, September/October) \*\*. Methodology for science teaching. Paper presented at the *Training of University Lecturers in Pedagogy at the University of Nairobi*, Nairobi.
- 19. Koballa, T., Upson, L., Minchew, C., & Inyega, J. (2004, April) \*\*. Improving beginning teacher mentoring experiences: Georgia systemic teacher education framework as a guide for using direct evidence to improve practice. Paper/poster presentation at the *Research Symposium on the Preparation of Educators*, sponsored by The Georgia Systemic Teacher Education Program, The University of Georgia.

20. Inyega J. O. (2003, December) \*\*. Graduate assistants' teaching experiences in teaching science education courses in pre-service teacher education: A case of international students at the University of Georgia. Paper presented at *The Interdisciplinary Qualitative Studies Advanced Seminar, Second Annual Mini-conference* at The University of Georgia.

#### **Interactive Poster Presentations**

- 22. Inyega, J., Thomson, N., & Butler, M.B. (2005, April) \*\*. Evidence-based chemistry unit lesson plan designing and implementation following in-service programs: Multi-site cases of teachers in Kenya. A Poster session presented at the *Annual Conference of NARST*, Dallas, Texas, U.S.A.
- 23. Chepyator-Thomson, R. J., Inyega, J., & Thomson, N. (2003, March) \*\*. Establishing and conducting collaborative research on indigenous science education, language, and culture in Kenya. A Poster session presented at the *Annual Meeting of NARST*, Wyndham Franklin Plaza Hotel, Philadelphia, Pennsylvania, U.S.A.

#### Workshops/Seminars Attended/facilitated

- 1. University of Nairobi Master of Research and Public Policy (MRPP) Stakeholdersø Workshop held at the Silver Springs Hotel, Nairobi, September 22, 2016.
- 2. Prepare-BSc. Project Workshop on mentorship held in the College of Agriculture and Veterinary Sciences (CAVS), University of Nairobi, from 8<sup>th</sup> to 11<sup>th</sup> August, 2016.
- 3. Workshop on Cross-age Peer Tutoring in the Teaching of Reading in Kenya held at the University of Nairobi, Kisii Extra Mural Centre, Kenya, from 23<sup>rd</sup> to 26<sup>th</sup> February, 2016.
- 4. Workshop on Improving Academic Excellence State of the Art research and Quality Clinical Services by Department of Oral and Maxillofacial Surgery/Oral pathology and Oral medicine, held at Gelian Hotel, Machakos Town from 27<sup>th</sup> to 28<sup>th</sup> November, 2015.
- 5. Workshop on Cross-age Peer Tutoring in the Teaching of Reading in Kenya held at the Kenya Science Campus, University of Nairobi, Kenya on 30<sup>th</sup> October, 2015.
- 6. Prepare-BSc. Project Workshop held in the College of Agriculture and Veterinary Sciences (CAVS), University of Nairobi, from 24<sup>th</sup> to 25<sup>th</sup> September, 2015.
- 7. Trainer of Trainers Prepare BSc Project Workshop held in Dar Es Salaam/Morogoro, Sokoine University of Agriculture, Tanzania from 22<sup>nd</sup> to 26<sup>th</sup> June, 2015.

- 8. Workshop on Cross-age Peer Tutoring in the Teaching of Reading in Kenya held at the Kenya Science Campus, University of Nairobi, Kenya from 4<sup>th</sup> to 6<sup>th</sup> June, 2015.
- 9. Trainer of Trainers Prepare BSc Project Workshop in Arusha, Tanzania from 1<sup>st</sup> to 6<sup>th</sup> March, 2015.
- 10. Trainer of Trainers Prepare BSc Project Workshop in Copenhagen, University of Copenhagen, from 8<sup>th</sup> to 15<sup>th</sup> February, 2015.
- 11. Workshop to Strategize on Improvement of Academic Programs, Research and Consultancy in the School of Education, College of Education and External Studies, University of Nairobi held at Maanzoni Lodge in Machokos County from 17<sup>th</sup> May to 19<sup>th</sup> May 2013
- 12. Reviewersø workshop organized by the Center for Open and Distance Learning, College of Education and External Studies, University of Nairobi, held at the Kenya Wildlife Service Training Institute, Naivasha, Kenya, from 22<sup>nd</sup> to 26<sup>th</sup> October, 2012.
- 13. Second Conference of International Year of Chemistry 2011(IYC 2011) Celebrations: Chemistry-Our Life Our Future, held at the Central Catering Unit, University of Nairobi from 15<sup>th</sup> to 17<sup>th</sup> February, 2012 in Nairobi, Kenya.
- Workshop on Comparative Education Methodologies held at QC Boardroom, College of Education and External Studies, University of Nairobi from 16<sup>th</sup> to 17 February, 2012 in Nairobi, Kenya.
- 15. Writerøs Workshop organized by the Center for Open and Distance Learning, College of Education and External Studies, University of Nairobi, held at the Kenya Wildlife Service Training Institute, Naivasha, Kenya, from 10<sup>th</sup> October to 15<sup>th</sup> October, 2011.
- 16. Training Workshop on Research and Grant Proposal Writing organized by the University of Nairobi at the Chiromo Conference Center, University of Nairobi, Nairobi, Kenya, from 26<sup>th</sup> to 30<sup>th</sup> September, 2011.
- 17. Writing Workshop organized by the Center of Open and Distance Learning, College of Education and external Studies, University of Nairobi, held at the Multimedia University College of Communication and Technology, from 4<sup>th</sup> to 8<sup>th</sup> April, 2011.
- 18. Department of Educational Communication and Technology Curriculum Review Workshop held at the Kenya Wildlife Service Training Institute, Naivasha, from 20<sup>th</sup> to 25<sup>th</sup> March, 2011.
- 19. School of Education Bachelor of Education Science Curriculum Review held at the Kenya Commercial Bank Training Center, Karen in February 2011.

- 20. Training workshop on gender violence against women organized by the Department of Educational Administration at Kenya Institute of Education from 26<sup>th</sup> to 30<sup>th</sup> July, 2010.
- 21. Three-day workshop titled õTowards Effective Research in Innovative Pedagogy in Science Educationö by Professor (Dr.) Miles Barker, University of Waikato, Hamilton, New Zealand, Held at Centre for Mathematics, Science and Technology Education in Africa (CEMASTEA) from 17<sup>th</sup> to 19<sup>th</sup> June, 2010, Nairobi, Kenya.
- 22. Training Workshop on Education in Emergencies organized by the Department of Educational Administration and Planning at Sportsview Hotel-Kasarani in Nairobi from 16<sup>th</sup> to 19<sup>th</sup> March, 2010.
- 23. Facilitated lecture presentations on methodologies of science teaching during the training of the University of Nairobi lecturers and professors on pedagogy held at the Central Catering Unit Hall, University of Nairobi during the 2007/2008, and 2008/2009 academic years. Nairobi, Kenya.

#### **Academic Supervisions**

Master's degree:

- -Thesis (graduated, September, 2011) 2. Eunice Gateria Ochenge -Thesis (graduated, September, 2011) (graduated, September, 2010) 3. Kyatha Onesmus Musyoki -Project 4. Ondieki George Morara -Project (graduated, September, 2010) 5. Mageto Shem Migosi -Project (graduated, September, 2010) 6. Njue Olympia Karimi -Project (graduated, September, 2010) 7. Njue Esther Kagendo (graduated, September, 2010) -Project 8. Kangara Hannah Wanjiku -Project (graduated, September 2010) 9. Rutere Josephine Kathure (graduated, December, 2011) -Project 10. Muguna Gacheri Florence -Project (graduated, September, 2011)
- 11. Mutiso Fredrick Nzangi
- -Project 12. Nyamwaya Daudi Obare -Project
- (graduated, September 2011) 13. Andriano Gitile Ikunya (graduated, August, 2012)
  - -project

(graduated, September, 2011)

- 14. Henry Mureithi -project (graduated, December, 2012)
- 15. Joshua Nyakoni Nyandwaki Project (graduated, December, 2012) 16. Kavoi Musembi Mutuku (graduated, December, 2012)
- -project 17. David Okemwa -project
- (graduated, December, 2013) õInfluence of social environment on visually impaired children development of science skils in a special school in Kenyaö
- 18. Mary Maina Waigwe (graduated, December, 2013) -project õPlay materials and pre-school childrenøs performance in science activity in Gaturi division, Murangøa Countyö
- 19. Zilpia Kemunto Moturi (graduated, December, 2014) -project õEffect of reflective teaching on childrenøs performance in pre-school science activities in Nyamaiya Division, Nyamira Countyö
- (graduated, December, 2014) 20. Mutiso Francis Kitavi -project õImpact of reflective teaching on pre-schoool childrenøs performance in science activities in Iveti Division, Kathiani Sub County, Machakos Countyö
- 21. Leah Mikwa (graduated, September, 2015) -project õInfluence of parental involvement on childrenøs performance in number work activities in Kanjai Zone, Tigania West, Meru Countyö
- 22. Wilberforce Kipngetich Mutai -project (graduated, September, 2018) õImpact of use of farming technology on livelihood of small-scale farmers in Longisa, Bomet Countyö

#### Doctor of Philosophy Degree

- 23. Irene Gacheri Mageto -PhD(**graduated in December, 2015**) õEvidence-based master of science in forensic nursing curriculum: a model for Kenya.ö School of Nursing Sciences, University of Nairobi
- 24. Timothy Walela Maonga PhD(**graduated in December, 2015**) õInfluence of reflective-inquiry-based teaching on public secondary school studentsø performance in geography map work in Kenya.ö School of Education, University of Nairobi
- 25. Simon P. Munayi -PhD(**graduated in September, 2015**) õEvaluation of primary school physical education teaching and learning process for learners with intellectual disability in Kenyaö School of Education, University of Nairobi
- 26. Eunice Wanjie -School of Education (**in progress**) õEffect of Self directed learning on academic achievement in secondary school biology in Kenyaö

### Referees

Prof. Julius A. Ogengøo	Deputy Vice Chancellor (Academic Affairs), University of Nairobi P.O. Box 30197-00100, Nairobi Tel. (+254) (0) 720837592
Prof. Isaac O. Jumba	Principal, College of Education and External Studies, University of Nairobi, P.O. Box 30197-00100, Nairobi Tel. (+254) (0) 728999744 or 722336886
Prof. Mohamud A. Jama	Deputy Principal, College of Humanities and Social Sciences, University of Nairobi, P. O. Box 30197-0100, Nairobi Tel. (+254) (0) 722820773