AJEMATES
African Journal of Educational Management, Teaching and Entrepreneurship Studies
VOL.15 (2), May-August, 2025 https://ajemates.org

GAMES AND SIMULATIONS AS METHOD FOR ADULT EDUCATION CLASSROOM MANAGEMENT: SOCIAL WORK EDUCATORS PERSPECTIVE

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ABSTRACT

Games and simulations are valuable tools in adult education classroom management as they engage adult learners in interactive and experiential learning experiences. This paper outlined the benefits of incorporating games and simulations in the classroom to enhance adult learners' understanding and retention of the material. By using games and simulations, educators can create a dynamic and collaborative learning environment that encourages active participation and critical thinking. Additionally, games and simulations provide a hands-on approach to learning that allows adult learners to apply theoretical concepts to real-world scenarios, fostering a deeper understanding of the material. Overall, games and simulations offer a fun and interactive way to promote learning in adult education classrooms and a valuable asset in enhancing classroom management strategies.

Keywords: Games, Simulations, Adult education, Classroom management

Introduction

Effective adult education classroom management is considered as the unique needs and characteristics of adult learners, such as diverse backgrounds, experiences, and motivations. It aims to create a learning environment that is respectful, inclusive, and supportive of adult learners' development. Adult education classroom management is the techniques and strategies used by educators to create a conducive learning environment, manage learner behavior, and maximize learning outcomes in adult education settings. Classroom management is crucial in adult education, as it enables learners to focus on the learning process and achieve their goals. Lichtbach, (2019) opined adult education classroom management as creating a conducive learning environment, physical and psychological environment that is comfortable, supportive, and inclusive. Managing learner behavior and setting clear

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VOL.15 (2), May-August, 2025 https://ajemates.org

expectations, encouraging active participation, and addressing disruptive behavior (Kulinna et al., 2019). Maximizing learning outcomes as well as using varied instructional strategies, providing feedback, and encouraging learner engagement; building relationships while establishing positive relationships with learners to enhance motivation and engagement; and continuously evaluating and improving, assessing and refining classroom management strategies to ensure effectiveness (Hattie & Timperley, 2017). Adult learners have diverse needs, experiences, and backgrounds, which can pose challenges (Merriam & Bierema, 2018). Cecilia, Ubana & Jerry (2025) assert that achieving community development is a significant tool for adult education. Ubana, Glory, Undie, Elizabeth (2024) opined that artificial intelligence promote skills for adult learners and educators. Limited resources, such as time and funding, can constrain classroom management efforts (Kumar et al., 2020).

Conceptual clarifications

Games and simulations

Games and simulations have been used as learning tools for centuries, from early board games to modern computer-based simulations. In recent years, they have gained popularity as a method of classroom management in adult education. This is largely due to the advent of digital technologies, which have made it easier to create and distribute interactive learning experiences. Games and simulations offer several advantages as a method of classroom management. They can provide a more engaging and interactive learning environment than traditional lectures or readings (Apperley, T. H. (2016). Games and simulations improve learning outcomes by providing a more engaging and interactive learning environment that promotes active learning, helps learners develop important skills, such as problem-solving, decision-making, and communication, which can be transferred to real-world situations, increase motivation and engagement among learners, which can lead to greater success in the classroom. Benefits of games and simulations as a method for classroom management (Belli & Ravenscroft 2017). Compton & Mateas, (2015). identified additional benefits of games and simulations as a method for classroom management; Beautification of human skills (Okoi, Kpee and Jack 2021). Helen Ubana and Grace (2025) asserts that literacy education is a key component for economic development. Helen, Catherine and Ubana (2025) opined that digital learning platforms in enhancing adult literacy skills acquisition play a pivotal role to cushioning economic empowerment and promoting economic understanding of adults. Itam & Okoi (2024) asserts that technological innovation is also important to game and simulation. Michael, Solomon and Anashie (2024) opined that digitalization in education also promote games and simulation in adult learning process. Games and simulations increases retention by providing learners with a hands-on learning experience that helps them better understand and

remember information, greater collaboration; games and simulations fosters collaboration among learners by encouraging teamwork and communication in order to achieve a common goal and fun and enjoyment: Games and simulations makes learning more fun and enjoyable for learners, which helps increase motivation and engagement (Compton 2015). Asor, Ubana, & Abuokwen (2022) stressed that supervision is the way of guiding, stimulating, improving and overseeing activities and skills of adults for effective goal attainment. Community education/skill is a vital approach to promoting game and simulation management for adult education programme. (Augustine, Ubana, Rose, and George 2025). Solomon, Felicia, Odok, Stephen, and Offem (2023) asserts that teacher utilization of learning resources and attitude to work on learners' performance promote simulation.

Simulation games have emerged as a prominent tool in the field of education and training, offering a unique approach to learning and skill development. These immersive and interactive environments allow learners to engage with realistic scenarios, make decisions, and experience the consequences of their actions in a safe and controlled setting (Perla, 2021; Compton, 2015). The growing popularity of simulation games can be attributed to their ability to enhance learners' motivation, active participation, and the transfer of knowledge and skills to real-world situations (Reas, C., & Fry, B. 2022). Though, family background and students' attitude towards drug abuse affect smooth performance of games and simulations among adult learners and facilitators (Ogar, Peter and Saawua 2020). Ubana, Awah, Emmanuel, Igboke, Abuokwen, Patrick and & Arikpo, (2025) asserts that participation of activities in game and simulation improve adult education and community development. Okoi, Unamba, Edeh, and Echip (2024) asserts that principals' administrative effectiveness and teachers' task accomplishment promote the functionality of games and simulations. Game and simulations have emerged as a powerful tool for adult education classroom management, offering a dynamic and engaging approach to learning that can effectively address the unique challenges faced in teaching mature learners. The theoretical foundations, practical applications, and empirical evidence supporting the use of game simulations in adult education settings. The integration of games and simulations into adult education classroom management has gained significant attention in recent years. As a dynamic and engaging approach to learning, these tools offer a compelling alternative to traditional instructional methods, catering to the unique needs and characteristics of adult learners (Compton & Mateas 2015).

Perron & Schröter (2016) sees games and simulations as interactive learning experiences that allow learners to practice skills, test hypotheses, and explore complex scenarios in a safe environment, they provide an immersive and engaging way for adults to apply knowledge and develop competencies. Games typically have defined rules, goals, and competitive elements, while simulations

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aim to replicate real-world systems and processes. Andong, Ubana, Eloma & Musa (2025) asserts that activities of game and simulation are important tools educational development. Fabulich, (2016) highlights key characteristics of games and simulation; Active participation: Games and simulations require adult learners to actively engage with the content, make decisions, and experience the consequences. Experiential Learning: The hands-on nature of games and simulations allows adults to learn through experimentation, reflection, and adaptation. Contextual Relevance: Effective games and simulations are designed to mirror realistic workplace or life scenarios, making the learning directly applicable to adult learners. Feedback and Debriefing: Games and simulations provide immediate feedback, enabling learners to understand the impact of their actions and decisions. Structured debriefing sessions further enhance the learning experience. Safe Environment: Games and simulations offer a low-risk environment where adults can try new approaches, make mistakes, and learn from them without fear of real-world consequences. Increased Motivation: The interactive, goal-oriented nature of games and simulations can enhance adult learners' engagement, motivation, and retention of the material. Collaborative Learning: Many games and simulations involve teamwork, promoting communication, problem-solving, and the sharing of knowledge among adult learners. Adaptability: Well-designed games and simulations can be tailored to the specific learning needs, preferences, and skill levels of the adult audience.

Rationale for using games and simulations as a classroom management strategy

Enhancing Learner Engagement and Motivation, Games and simulations can increase learner engagement and motivation by creating a more interactive and immersive learning environment (Squire, K. 2023; Fabulich, 2016). Adult learners are often self-directed and intrinsically motivated, and games can tap into these characteristics by providing a sense of autonomy, relatedness, and competence (Goyette, P., et al. 2017). Promoting Active Learning and Participation; Games and simulations encourage active participation, collaboration, and experiential learning, which aligns well with the principles of adult learning (Koch, D., et al. 2019). By actively engaging in the learning process, adult learners are more likely to retain information and apply it to real-world contexts (Guraya, & Guraya 2014). Fostering a Positive Learning Environment. Well-designed games and simulations can create a low-stakes, playful learning environment that helps to reduce anxiety and establish a positive classroom climate (Brookfield, 2021; Guo, P. J., et al. 2014). This can be especially beneficial for adult learners who may have negative past experiences with traditional classroom settings (Smith, Wood, Adams, Wieman, Knight, Guild, & Su, 2011). Managing Diverse Learner Needs and Backgrounds; Games and simulations can accommodate diverse learning styles, backgrounds, and

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prior experiences by offering multiple pathways to engagement and success (Merriam & Bierema, 2013; Wlodkowski, 2008). This can help to create a more inclusive learning environment and mitigate potential classroom management challenges. Facilitating Effective Communication and Group Dynamics Many games and simulations rely on effective communication, collaboration, and the negotiation of group dynamics, which are essential skills for adult learners to develop (Weidman, 2018; Neumann, Riemann, Gräsel, Jucks, & Vogel, 2008). By incorporating these elements, instructors can enhance the overall classroom management and learning experience. Addressing Disruptive Behaviors and Conflicts Games and simulations can provide a structured and engaging alternative to traditional lecture-based instruction, which can help to minimize disruptive behaviors and conflicts in the classroom (Brookfield, 2021; Weidman, 2018). The inherent rules and objectives of games can also serve as a framework for addressing and resolving any disruptions that may arise.

Principles of games and simulations in adult education classroom management

Games and simulations can be powerful tools for engaging learners and enhancing their understanding of complex topics in adult education. When incorporating games and simulations into the classroom, it is important to follow comprehensive and holistic principles to ensure they are effective and meaningful learning experiences has stated categorically by Koch, D., et al. (2019).

1. Set clear learning objectives: Before implementing games and simulations, educators should establish clear learning objectives to ensure that the activity aligns with the desired outcomes of the lesson. These objectives should be specific, measurable, achievable, relevant, and time-bound.
2. Design learning experiences: Games and simulations should be carefully designed to create engaging and interactive learning experiences. Educators should consider the learning styles and preferences of adult learners, as well as incorporate elements of challenge, competition, and collaboration to encourage active participation.
3. Provide opportunities for reflection: After completing a game or simulation, learners should be given time to reflect on their experiences and identify the key takeaways. Reflection can help deepen understanding and facilitate transfer of knowledge to real-world contexts.
4. Foster collaboration and communication: Games and simulations can promote teamwork and communication skills among adult learners. Educators should create opportunities for collaboration and shared decision-making, as well as provide feedback on interpersonal interactions.
5. Ensure alignment with curriculum: Games and simulations should be integrated seamlessly into the overall curriculum to reinforce key concepts and support learning objectives. Educators should carefully assess

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the relevance of each activity and its contribution to the learning outcomes.
6. Assess learning outcomes: It is essential to assess the effectiveness of games and simulations in achieving learning objectives. Educators should use appropriate assessment methods, such as quizzes, surveys, or performance evaluations, to measure the impact of the activity on learner comprehension and retention.
7. Encourage experimentation and risk-taking: Games and simulations provide a safe environment for adult learners to experiment with new ideas and strategies. Educators should encourage learners to take risks, make mistakes, and learn from failure as part of the learning process.

The roles of games and simulations for adult learning

Overview of the role of games and simulations in adult education: Engagement and Motivation: Games and simulations can make learning more engaging, interactive, and enjoyable for adult learners. They can help increase motivation and participation by providing a fun and immersive learning environment. Active Learning: Games and simulations encourage active learning, where learners are involved in the learning process rather than just passively receiving information. They allow learners to apply knowledge, make decisions, and experience the consequences, promoting deeper understanding (Martin, Chow, & Martinez 2017). Akinwumi Et al (2024) asserts that perception and acceptability of regular education significantly promote games and simulation in adult education. Impact of Genetic Counselling also affect games and simulations (Effiom, Ogar, Philip, David, Ikum, Godwin, Ukpogu, Oluchukwu, Eme, Dada, Godwin, Ubi, Ignatius and Bassey 2025).

Experiential Learning: Games and simulations provide a safe environment for adult learners to experiment, make mistakes, and learn from their experiences. This experiential learning approach aligns well with the needs and preferences of adult learners. Problem-Solving and Critical Thinking: Games and simulations often present complex, real-world scenarios that require problem-solving and critical thinking skills. Learners must analyze information, weigh options, and make decisions, developing these essential skills. Helen, Ubana & Grace (2025) asserts that building digital literacy is a significant approach for simulation. Helen, Ubana, Eki, and Nkanga (202) opined that vocational training programmes and digital skills acquisition improves game and simulation for adult learners. Andong, Ubana, Igboke & Arikpo (2025) asserts that incorporating digital technology to adult literacy education programmes. Feedback and Reflection: Games and simulations can provide immediate feedback, allowing learners to understand the consequences of their actions and learn from them. This feedback, coupled with opportunities for reflection, supports the learning process and helps adult learners identify areas for improvement (Pattison, Carter & Morgan 2016).

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Contextual Learning: Games and simulations can be designed to reflect the specific contexts and challenges that, adult learners face in their professional or personal lives. This contextual relevance makes the learning more meaningful and applicable to the learners' needs. Collaboration and Communication: Many games and simulations involve group-based activities, fostering collaboration, communication, and teamwork skills among adult learners. Adaptability and Personalization: Games and simulations can be tailored to meet the diverse needs, preferences, and skill levels of adult learners, making the learning experience more personalized and effective (Kebritchi, Hirumi & Bai 2010) and individual variables and crime vulnerability among learners can as well affect games and simulations (Philip and Ambor 2022)

Classroom management strategies using games and simulations

Classroom management strategies using games and simulations can help create a positive and engaging learning environment for adults. Freund (2019) postulated some key considerable strategies as:

1. Establish clear expectations: Clearly communicate the purpose of using games and simulations in the classroom, along with the learning objectives and expected outcomes. This can help set a clear understanding of how these tools will be integrated into the learning experience (Solomon, Anashie, Offem, and Grace 2022).
2. Set rules and guidelines: Establish rules and guidelines for using games and simulations, such as appropriate behavior, participation expectations, and time limits. Consistency in enforcing these rules can help maintain a structured and respectful learning environment (Anak, Anyin, Digang, and Anake 2023).
3. Provide orientation and instructions: Before introducing a new game or simulation, provide a brief orientation and instructions to ensure that all adults understand how to use the tool effectively. This can help minimize confusion and frustration during the learning process.
4. Offer feedback and support: Provide timely and constructive feedback to adults as they engage with games and simulations. Encourage them to reflect on their performance, ask questions, and seek assistance when needed. This can help promote continuous learning and improvement. (Okpechi, and Ogar 2022)
5. Encourage collaboration and teamwork: Incorporate cooperative activities and group tasks using games and simulations to foster collaboration and teamwork among adults. Encourage them to work together, share ideas, and support each other throughout the learning process.
6. Monitor progress and participation: Keep track of adults' progress and participation in games and simulations to assess their engagement and comprehension. Be observant of any challenges or issues that may arise and provide timely support to address them.
7. Reflect and adjust: Regularly reflect on the effectiveness of using games and simulations

in the classroom and be willing to adapt and adjust strategies based on feedback and observations. Continuously seek ways to enhance the learning experience for adults.

Steps to aid setup game-based learning environment

Here are some steps to help set up a game-based learning environment according to Freeman (2014):

1. Set clear learning objectives: Define the specific learning goals and outcomes you want to achieve through game-based learning. Align the games and simulations with the curriculum and educational objectives to ensure relevance and effectiveness.
2. Choose appropriate games and simulations: Select games and simulations that are suitable for the learning context and address the desired learning outcomes. Consider factors such as complexity, subject matter, age appropriateness, and the level of interactivity.
3. Provide necessary resources and technology: Ensure that you have the necessary resources, including technology tools, devices, and software, to support the implementation of games and simulations in the learning environment. Make sure that learners have access to these resources and are familiar with how to use them.
4. Introduce the concept of game-based learning: Educate learners about the benefits and principles of game-based learning, including how it can enhance engagement, motivation, and learning outcomes. Encourage them to embrace a positive mindset towards the use of games in the educational setting.
5. Create a supportive and collaborative atmosphere: Foster a supportive and collaborative classroom environment where learners feel safe to explore, experiment, and take risks. Encourage teamwork, communication, and problem-solving skills through game-based activities.
6. Provide guidance and instructions: Offer clear instructions and guidance on how to use the games and simulations effectively. Ensure that learners understand the rules, goals, and mechanics of the games to maximize their learning experience.
7. Incorporate feedback and assessment mechanisms: Implement feedback mechanisms within the games or provide opportunities for learners to reflect on their performance and receive feedback from peers or instructors. Use assessment tools to evaluate learners' progress and understanding.
8. Encourage exploration and creativity: Encourage learners to explore, experiment, and think creatively when engaging with games and simulations. Allow for open-ended challenges and opportunities for learners to apply their knowledge and skills in different ways.
9. Reflect and refine: Continuously evaluate the effectiveness of game-based learning in the classroom and gather feedback from learners to make improvements. Reflect on what is working well and what can be enhanced to optimize the learning experience.

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Challenges and limitation of games and simulations in adult education:

Challenges and limitation of games and simulations in adult learning environment as pointed out by Fabulich (2016):

1. Resistance to change: Some adult learners may be resistant to the idea of using games and simulations in their education, viewing them as childish or not applicable to their learning needs.
2. Technical issues: Games and simulations require technology and Internet access, which may be limited for some adult learners, especially those in underserved communities or with limited resources.
3. Time constraints: Adult learners may have limited time to dedicate to playing games or simulations, as they may have work, family, and other responsibilities.
4. Accessibility: Games and simulations may not be accessible to all adult learners, including those with disabilities or those who speak languages other than English.
5. Lack of engagement: Not all adult learners may find games and simulations engaging or effective for their learning style, leading to decreased motivation and participation.

Limitations

1. Limited transferability: While games and simulations can be effective for teaching specific skills or concepts, their transferability to real-world situations may be limited. Adult learners may struggle to apply what they have learned in a game or simulation to their everyday lives.
2. Lack of personalization: Games and simulations are often designed for a broad audience and may not be tailored to the individual needs and learning styles of adult learners.
3. Cost: Developing and implementing games and simulations can be expensive, making it difficult for some adult education programs to adopt these tools.
4. Overemphasis on technology: Relying too heavily on games and simulations can take away from other important aspects of adult education, such as face-to-face interaction, discussion, and critical thinking.
5. Limited assessment tools: It can be challenging to assess the effectiveness of games and simulations in adult education, as traditional assessment methods may not always apply.

Recommendations/Way forward

1. Choose games and simulations that align with the learning objectives: When selecting games and simulations for adult education classroom management, it is essential to ensure that they are relevant to the material being taught and support the learning objectives of the lesson.
2. Provide clear instructions and guidelines: Make sure to explain the rules and objectives of the game or simulation clearly to the adult learners. This will help them understand what is expected of them and how the activity ties into the overall lesson.
3. Incorporate debriefing sessions: After completing a game or simulation, schedule time for a debriefing session where students can reflect on their experiences, share insights, and discuss what they learned. This reflective process is essential for solidifying

learning outcomes.
4. Encourage collaboration and teamwork: Many games and simulations require teamwork and collaboration among participants. Encourage adult learners to work together, communicate effectively, and leverage each other's strengths to achieve common goals.
5. Emphasize the application of knowledge: Games and simulations provide a hands-on approach to learning, allowing adult learners to apply theoretical concepts in practical scenarios. Encourage participants to draw connections between the game or simulation and real-world situations.
6. Use a variety of games and simulations: To keep adult learners engaged and cater to different learning styles, incorporate a variety of games and simulations in the classroom. This could include role-playing exercises, case studies, virtual simulations, or interactive online games.
7. Evaluate the effectiveness of games and simulations: After using games and simulations in the classroom, gather feedback from adult learners to assess their effectiveness. Use this feedback to make adjustments and improvements for future activities.

Summary

Games and simulations are valuable tools in adult education classroom management that offer a dynamic and interactive approach to learning. By incorporating games and simulations that align with the learning objectives, providing clear instructions, fostering collaboration and teamwork, emphasizing the application of knowledge, using a variety of activities, and evaluating effectiveness, educators can enhance the learning experience for adult learners. These engaging activities not only promote active participation and critical thinking but also encourage practical application of theoretical concepts in real-world scenarios. By leveraging the power of games and simulations, educators can create a stimulating and effective learning environment that supports adult learners in their educational journey.

REFERENCES

Akinwumi, A. S. ., Philip, A. O. ., Ayorinde, A. O. ., Ajah, M. O. ., Emmanuel, A. ., Sade, O. J. ., Osa, I. P. ., Etukudo, O. B. ., Ayibeya, A. M. ., Ongbonya, N. M. ., Inyang, O. I. ., Okorn, O. O. ., Okoi, O. C. ., Daniel, J. D. ., Edet, I. B. ., & Orim, O. S. . (2024). Perception and Acceptability of Regular Education Teachers Towards Inclusion of Children with Intellectual Disability in Calabar, Cross River State, Nigeria. *Journal of Intellectual Disability - Diagnosis and Treatment*, *12*(2), 47–55. https://doi.org/10.6000/2292-2598.2024.12.02.1

Andong, H. A., Ubana M. U., Igboke, S.B. & Arikpo, S. O. (2025). Incorporating

digital technology to adult literacy education programmes in Cross River State. Unizik Journal of Educational Research, Science and Vocational Studies (UJERSVOCS) Vol. 2 (1); Pp. 321-338.

Andong, H. A., Ubana, U. M., Eloma, E. S. & Musa , Z. (2025) Activities of agricultural cooperative societies and economic development of co-operators in Southern Cross River State, Nigeria. Unizik Journal of Educational Research and Policy Studies VOL.19 (3) Pp. 572-586

Asor L. J., Ubana, U. M., & Abuokwen A. A. (2022). Community Engagement in Internal Security. Journal of Environmental and Tourism Education (JETE) Vol. 5 No. 2, 30-47.

Augustine, A. A., Ubana, M. U., Rose, O. B., George, O. A. (2025). Community environmental education: A significant instrument for environmental protection. Scientific Journal of Educational Management, Research and law. Vol. 3 (1). Pp. 293-301.

Apperley, T. H. (2016). Genre and game studies: Toward a critical approach to video game genres. Simulation & Gaming, 37(1), 6-23.

Anake P. M., Anyin, N. N., Digang, S. T. & Anake G. A. (2023) An overview of trauma-informed education and counselling in Nigeria. Zamfara International Journal of Education. Vol. 3. 6. Pp. 232-238

Belli, V., & Ravenscroft, A. (2017). Connecting game-based and experiential learning: The portal to learning framework. Simulation & Gaming, 48(3), 300-327.

Boellstorff, T. (2008). Coming of age in Second Life: An anthropologist explores the virtually human. Princeton University Press.

Brookfield, S. D. (2021). The power of critical theory for adult learning and teaching. McGraw-Hill Education.

Compton, K., & Mateas, M. (2015). Casual creators. Proceedings of the Sixth International Conference on Computational Creativity, 228-235.

Effiom, B. E., Ogar A. A., Philip A. O., David A., Ikum, M. I., Godwin O. A., Ukpogu, J., Oluchukwu, E. E., Eme J. A., Dada, I. O., Godwin M., Ubi, F. O., Ignatius A. & Bassey J. E. (2025). Impact of Genetic Counselling: An Imperative for Child Development in Cross River State, Nigeria. IOASD Journal of Business and Management Studies. ISSN: 3048-7595 (Online). Vol. 2. 1. Pp 1-3

Fabulich, D. (2016). The history of simulation games. In J. P. Zagal & S. Deterding (Eds.), Role-playing game studies: Transmedia foundations (pp. 31-44). Routledge.

Freeman, S., et al. (2014). Active learning increases student performance in science, engineering, and mathematics. Proceedings of the National Academy of Sciences, 111(23), 8410-8415.

Freund, K. (2019). City-building games and the global South: Challenging colonial urban imaginaries. Games and Culture, 14(7-8), 867-886.

Goyette, P., et al. (2017). Engaging the Disengaged: How to Teach Across the Learning Styles. Retrieved from https://www.fisher.osu.edu/academic-departments/business-communication-lab/resources/engaging-the-disengaged-how-to-teach-across-the-learning-styles

Guraya, S. Y., & Guraya, S. S. (2014). The confounding factors leading to poor academic performance in undergraduate medical students. British Journal of Educational Psychology, 84(2), 301-328

Guo, P. J., et al. (2014). How video production affects student engagement: An empirical study of MOOC videos. In Proceedings of the First ACM Conference on Learning @ Scale Conference (pp. 41-50).

Hattie, J., & Timperley, H. (2017). The power of feedback. Review of Educational Research, 77(1), 81-112.

Helen A. A., Catherine N. T & Ubana, M. U. (2025). Evaluating the effectiveness of digital learning platforms in enhancing adult literacy skills acquisition in rural communities in Cross River State, Nigeria. Scientific Journal of Educational Management, Research and law. Vol. 3 (1). Pp. 185-196.

Helen A. A., Ubana, M. U., Eki, R. A. & Nkanga, I. I. (202). Vocational training programmes and economic empowerment of street children in Calabar Metropolis, Cross River State, Nigeria. African Journal of Educational Management, Teaching and Entrepreneurship Studies VOL.15 (2), 242-259.

Helen A. A., Ubana M. U. & Grace B. B. A. (2025). Building digital literacy through social work education for sustainable development. Scientific Journal of Educational Management, Research and law. Vol. 3 (1). Pp. 420-425.

Helen A. A. Ubana M. U., Glory E. E. & Emmanuel A. A. (2024) Administrative competence of principals and secondary school teachers' job performance in Calabar South Local Government Area of Cross River State. Prestige Journal of Education, Vol. 7, No. 1 Pp. 36-45

Itam B. E. & Okoi O. O. (2024). Technological Innovation and the Teaching of Health Education at the Basic Education Level in Calabar Municipal: Prospects and Challenges. Federal Polytechnic Ugep Journal of Innovation and Research (FPUJIR). 1 (1) 61-67

Kebritchi, M., Hirumi, A., & Bai, H. (2010). The effects of modern mathematics computer games on low-achieving students' mathematics achievement and performance.

Koch, D., et al. (2019). Differentiated Instruction in the Classroom: Strategies for Success. Retrieved from https://www.learningsuccessblog.com/blog/teachers/differentiated-

instruction-classroom-strategies-success

Kumar, R., et al. (2020). Effective classroom management strategies for adult learners. Journal of Adult Education, 49(1), 33-44.

Kulinna, P. H., et al. (2019). Classroom management and student engagement in physical education. Journal of Teaching in Physical Education, 38(2), 143-152.

Lichtbach, S. (2019). The impact of physical environment on learning. Journal of Educational psychology, 111(2), 351-362.

Martin, S. J., Chow, A., & Martinez, M. (2017). Using games to engage students in the classroom. Faculty Focus. Retrieved from https://www.facultyfocus.com/articles/teaching-and-learning/using-games-engage-students-classroom

Merriam, S. B., & Bierema, L. L. (2018). Adult learning: Linking theory and practice. Jossey-Bass.

Metropolis, N., & Ulam, S. (1949). The Monte Carlo method. Journal of the American Statistical Association, 44(247), 335-341.

Michael, E. A. Solomon, A. A., Anashie A. I. (2024). Digitalization in educational management information system (EMIS): Perspective of academic staff in public Universities in Cross River State, Nigeria. Journal of Association of Educational Management and Policy Practitioners. 6 (2) 295-301

Neumann, B., Riemann, R., Gräsel, C., Jucks, R., & Vogel, M. (2008). Establishing connections between individual work and group activities in a lecture based learning environment. Learning and Instruction, 18(2), 101-114.

Okoi. O. O., Unamba, C. P., Edeh, S. O., Echip, G. A. (2024). Principals' administrative effectiveness and teachers' task accomplishment in secondary schools in Ikom Local Government Area of Cross River State. Journal of Association of Educational Management and Policy Practitioners. Vol. 4. Issue 1. Pp. 96-102

Okoi, O. O. & Ategwu P. O. (2024). Perceptions of Secondary School Principals and Teachers on the Influence of Conflict Resolution Strategies on School Effectiveness in Ikom Education Zone, Cross River State. Trends in Educational Studies Journal (TRESJ) Vol. 16. 1 Pp. 58-74.

Okoi O. O., G. G. Kpee, I. F. Jack (2021). Roles of human beautification skills on the economic sustainability of secondary school graduates in Cross River State, Nigeria. Al-Hikmah Journal of Education (AJE). Vol. 8. 1. Pp. 325 – 330. ISSN 2384-7662 E-ISSN 2705-2508

Okpechi, P. A. & Ogar, A. A. (2022). Tone of school discipline and level of morality among secondary school students in Calabar Education Zone Of Cross River State, Nigeria and need for guidance and counselling

interventions. British Journal of Education. Vol.10, Issue 1, pp. 64-72. Online ISSN: 2054-636X (Online).

Ogar, A. A., Peter T. O. & Saawua A. T. (2020). Family background and students' attitude towards drug abuse in tertiary institutions in Cross River State, Nigeria. Keffi Journal of Counseling and Psychotherapy. Vol. 1. 1. Pp. 223-236.

Pattison, H., Carter, J., & Morgan, M. (2016). Digital games for STEM education: A review of learning games based on effective teaching strategies. Computers & Education, 94, 1-10.

Perron, B., & Schröter, F. (2016). Video games and the mind: Essays on cognition, affect and emotion. McFarland.

Perla, P. P. (2021). The art of wargaming: A guide for professionals and hobbyists. Naval Institute Press.

Philip A. O. & Ambor A. O. (2022) Individual Variables and Crime Vulnerability Among Teenagers in Secondary Schools in Ikom Education Zone of Cross River State – Nigeria and Counseling Needs, British Journal of Education, Vol.10, Issue 2, pp. 13-21

Reas, C., & Fry, B. (2022). Processing: A programming handbook for visual designers and artists. MIT Press.

Solomon A. Aniah, A. I. Anashie, O. O. Offem, G. I. Ushie (2022). Teachers' attitudes to work and effective teaching of english language in primary schools in Akpabuyo Local Government Area of Cross River State, Nigeria. Global Journal of Educational Research 21 (2), 143-148

Solomon, A. A., Felicia, U. U., Odok, L. O. Stephen, O. E. & Offem, O. O. (2023). Teacher utilization of learning resources and attitude to work on learners performance in English Language in selected primary schools in Calabar South Local Government, Cross River State, Nigeria. Global Journal of Education Research. Vol. 22. 2. Pp 205-212

Squire, K. (2023). From content to context: Videogames as designed experience. Educational Researcher, 35(8), 19-29.

Smith, M.K., Wood, W.B., Adams, W.K., Wieman, C., Knight, J.K., Guild, N., & Su, T.T. (2011). Why peer discussion improves student performance on in-class concept questions. Science, 323(5910), 122-124.

Ubana M. U., Glory E. E., Arikpo, S. O. & Oku B. U. (2024). Administrators supervisory role on quality service secondary school delivery in Ikom Education Zone of Cross River State, Nigeria. Journal of Association of Educational Management and Policy Practitioners (JAEMPP) Vol. 4. Issue 1. Pp. 219 - 225

Ubana, M. U., Glory E. E., Undie, R. A. & Elizabeth O. P. (2024). Artificial Intelligence (AI) A tool for combating unethical practices in Social Works Education. Journal of

Environmental and Tourism Education, Vol. 7.

Ubana M. U., Awah, G. O., Emmanuel, A. A., Igboke, S. B., Abuokwen, A. A., Patrick, E. O. & Arikpo, S. O. (2025). Youth Participation in Socio-Economic Activities and Community Development in Central Senatorial District in Cross River State, Nigeria. Unizik Journal of Educational Research and Policy Studies VOL.20 (3) Pp.

Ubana M. U., Awah, G. O., Emmanuel A. A., Igboke, S. B., Abuokwen, A. A., Patrick, E. O. & Arikpo, S. O. (2025). Youth participation in socio-economic activities and community development in Central Cross River State, Nigeria. Unizik Journal of Educational Research and Policy Studies VOL.19 (4); Pp. 135 – 153.

Weidman, J., et al. (2018). Active Learning in Higher Education: A Case Study. Retrieved from https://link.springer.com/chapter/10.1007/978-3-319-39514-5_12

Wlodkowski, R. J. (2018). Enhancing adult motivation to learn. Jossey-Bass.

Weidman, J., et al. (2018). Active Learning in Higher Education: A Case Study. Retrieved from https://link.springer.com/chapter/10.1007/978-3-319-39514-5_12