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RELEVANCE OF THE NIGERIAN CORE CURRICULUM AND MINIMUM ACADEMIC STANDARDS (CCMAS) IN EQUIPPING STUDENTS FOR EMPLOYABILITY IN THE FOURTH INDUSTRIAL REVOLUTION ERA

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ABSTRACT

The Fourth Industrial Revolution (4IR) is reshaping the global employment landscape, emphasizing the need for a dynamic, technology-driven skill set across all disciplines, including art and design. This study critically examined the relevance of the current Nigerian Core Curriculum and Minimum Academic Standards (CCMAS) in preparing art and design students for employability in the 4IR era. This study appraised the employability relevance of selected general courses in the Nigerian art and design CCMAS, drawing on the five core components of the CareerEDGE model of graduate employability. The analysis revealed that while the curriculum offers significant potential for enhancing students' employability, the effectiveness of these courses can be substantially improved through intentional integration of reflective practices, industry engagement, soft skills development, and emotional intelligence training. The study concluded that aligning art and design education with the CareerEDGE model provides a practical framework for producing graduates who are not only technically proficient but also adaptable, entrepreneurial, and career-ready. This research offers vital implications for curriculum reform, policy development, and strategic educational planning to enhance graduate outcomes in Nigeria's creative sector.

Keywords: Art and Design, Employment Potentials, Nigerian Universities Curriculum, Graduate Employability Model, 4IR era

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INTRODUCTION

Employability refers to the capacity to obtain and maintain employment or to engage in self-employment, underpinned by the continuous development of lifelong skills, attributes, and personal qualities essential for career success (Maina *et al*., 2021). Graduate employability has become a primary concern for policymakers, educational institutions, employers, and graduates (Misni *et al*., 2020), particularly in the context of rapidly changing labour market demands and technological advancements. The mismatch between young people's skills and employability needs has led to a situation where millions of people worldwide remain unemployed or underemployed even though there are job vacancies yet unfilled. Morsy and

Mukasa (2019) addressed the pressing issue of jobs, skills, and educational mismatches among African youths. According to Muo (2016), the growing prevalence of skill mismatches and the resulting decline in employability are causes for serious concern. While graduates struggle to find job opportunities that align with their skill sets, employers on the other hand face challenges in finding candidates who align with their business vision (Salahuddin *et al.*, 2023). The persistently high unemployment rate among graduates of Nigerian educational institutions is primarily attributed to the misalignment between the demands of the labour market and the graduates' acquisition of relevant employability skills (Oladipo *et al.*, 2013). If this issue is not tackled, it is expected to worsen alongside the transformative effects of the Fourth Industrial Revolution (4IR) on society, economies, jobs, and individuals' personal lives, marked by the convergence of physical assets and digital technologies (Armstrong, 2022).

While employability is a concern across many sectors of the economy, this study focused specifically on students and graduates of the art and design field in Nigerian higher education institutions. Vocational and entrepreneurial-focused programmes like art and design hold significant promise in ensuring post-graduation job prospects since the discipline shares various characteristics with entrepreneurship (Odewole *et al.*, 2022). This implies that graduates in art and design careers should ideally have ample employment opportunities available to them. However, according to Anderson (2014), art and design students often require additional intelligence or experience to transform their original ideas into lucrative business ventures and become more employable. While art and design undergraduates may possess vocational motivation, the complex realities of professional practice often remain unclear to students, particularly those who feel compelled to compete for recognition or attain prominence within the field (Clark, 2012). Therefore, the employability of the art and design graduates goes beyond mastering artistic or creative skills alone but also necessitates cultivating entrepreneurial and technological competencies to ensure a flourishing professional trajectory.

The global economic recession has transformed work environments and intensified youth unemployment, prompting many developing countries to review higher education curricula to better align with the evolving demands of employers, industries, and the 21st-century workforce (Misni *et al.*, 2020). A strong alignment between education and employment signals an effective labour market, which requires a dynamic and relevant higher education curriculum that adapts to the evolving demands of the modern workforce and industry needs (Anikweze & Ugodulunwa, 2020). A relevant curriculum for 4IR employability must emphasize integrating essential 21st-century skills for success in today's professional and workplace environments. Study explored the potentials of the newly implemented Core Curriculum and Minimum Academic Standards (CCMAS) in Nigeria towards enhancing employability for art and design students, drawing on the CareerEDGE Model of Graduate Employability to examine the interplay between curriculum content, potential for skills development, and labour market relevance.

Curriculum Design in Higher Education and Graduate Employability in the 4IR

The ability of the higher education institutions to meet labour market needs and ex-

pectations amid the 4IR realities is a growing concern for the education sector (Adekanmbi & Ukpere, 2023). Graduate employability has gained increasing significance for higher education institutions due to shifts in the graduate labour market, expanded access to higher education, financial pressures on students, heightened competition for student recruitment, and growing expectations from students, employers, parents, and the government (Maher & Graves, 2007). Higher education institutions are being re-positioned to reflect on students' skill development and to consider the role each institution can or should play in enhancing graduate employability (Koseda *et al.,* 2025).

In higher education, there is a persistent expectation among stakeholders that university students should engage with a comprehensive curriculum that imparts the essential knowledge, skills, and values needed to thrive in an increasingly competitive labour market (Sophia & Onen, 2024). Within higher education research, scholars have criticized the role of curricula in contributing to youth unemployment, highlighting the need for an in-depth examination of the connection between higher education curricula and graduate employability (Sophia & Onen, 2024). Misni *et al.* (2020) found that curriculum design positively and significantly influences employability competency, offering valuable insights for implementing balanced, practice and theory-based curricula in private and public higher education institutions. The interconnectedness of curriculum, certification, and the world of work assumes that individuals must undergo a structured educational programme to emerge as qualified graduates with a defined knowledge base and skills that ensure competence and employability (Anikweze & Ugodulunwa, 2020).

Graduate employability is a global challenge, especially amid rapidly evolving and increasingly sophisticated technologies across various economic and employment sectors (Anikweze & Ugodulunwa, 2020). Graduate unemployment and underemployment, both in developed and developing economies, are primarily driven by a mismatch between the skills graduates acquire, often outdated or misaligned with 4IR demands, and those required by industry, highlighting the failure of universities to provide industry-relevant curricula (Aziz *et al.,* 2023). Curriculum design has become central in higher education as a crucial strategy for addressing the challenges of global competitiveness and graduate unemployment (Anikweze & Ugodulunwa, 2020). Characterized by the fusion of technologies, blurring the lines between physical, digital, and biological spheres (Smith, 2023), 4IR demands a new breed of professionals, especially in creative fields like art and design, who are both creatively adept, technologically proficient, and entrepreneurially minded. With these, the need for curricula redesign in higher education institutions to reflect the realities of the 4IR and enhance graduates' employability cannot be overemphasized. According to Smith (2023), the evolving landscape of the 4IR demands a shift in curriculum design, requiring institutions to align their programmes with the dynamic needs of the modern workforce. A well-structured curriculum is vital in enhancing student employability by embedding employability skills within existing modules or introducing new ones, thereby preparing graduates with the competencies and knowledge required for the workforce. According to Cook (2022), graduate employability agendas typically relate to the curriculum in three ways: intra-curricular (embedded and assessed within formal learn-

ing, such as work-integrated learning), co-curricular (university-led activities outside the formal curriculum, like mentoring programmes), and extra-curricular (external opportunities like paid work or volunteering, often promoted by career services).

From BMAS to CCMAS in Nigerian Tertiary Education

The global economic recession has transformed work environments and intensified youth unemployment, prompting many developing countries to review higher education curricula to better align with the evolving demands of employers, industries, and the 21st-century workforce (Anikweze & Ugodulunwa, 2020). Recent scrutiny of higher education curriculum content reveals growing attention to its design, driven by widespread criticism that it often falls short of fulfilling institutional missions and objectives (Fokong *et al*., 2024). To address rising graduate unemployment and enhance employability in Nigeria, the National Universities Commission (NUC) has officially implemented the replacement of the Benchmark Minimum Academic Standards (BMAS) with the Core Curriculum and Minimum Academic Standards (CCMAS), aiming to align university curricula with global standards and future workforce demands (Ohiare-Udebu *et al*., 2023). The recently revised CCMAS aims to bridge educational outcomes with market realities, particularly for disciplines like art and design.

The NUC around 2007, in an effort to guide curriculum development and accreditation in Nigerian universities, introduced the BMAS, emerging as a blend of earlier content-based "Minimum Academic Standards" and more outcome-oriented "Benchmark Statements", and aiming to clearly define the learning outcomes and competencies expected of graduates in about thirteen major academic disciplines (Ogunode *et al*., 2024). While the BMAS sought to provide a degree of flexibility and relevance in ensuring quality assurance across universities, it was not without shortcomings. One of its most widely cited weaknesses was that it remained overly traditional and prescriptive, leaning heavily toward theoretical knowledge and lacked sufficient emphasis on contemporary trends such as information and communication technology (ICT) integration, entrepreneurial skills, and hands-on practical experience (Nwankwo & Mkpa, 2023). Practical and infrastructural limitations further compounded these issues. In many universities, there were inadequate laboratories, workshops, and teaching aids to support the kind of experiential learning the labour market increasingly required and large class sizes, a shortage of audio-visual tools, and insufficient teaching resources made it difficult to deliver even the theoretical content effectively (Wordu & Nwanguma, 2023). In response to the shortcomings of the BMAS, the NUC began implementing a new curriculum framework in 2022 known as the CCMAS, which was designed to align Nigerian university education more closely with twenty-first-century realities (Wordu & Nwanguma, 2023). The NUC, aligning with national educational objectives and global 21st-century demands, replaced the BMAS with the CCMAS to unbundle university programmes, enhance practical skill acquisition, update academic relevance, and integrate entrepreneurial studies. The new structure placed stronger emphasis on employability skills, integration of theory with practice, entrepreneurship education, ICT competency, and global competitiveness, thereby equipping graduates with globally competitive skills, competencies, and dispositions for meaningful socio-economic contribution (Nwankwo & Mkpa, 2023). The CCMAS

adopted a distinctive implementation model, expanding coverage from thirteen to seventeen disciplines and sought to be more learner-centred, and mandating that 70% of the curriculum of a programme would be uniform across all universities, while the remaining 30% would be designed by individual university senates to reflect local contexts and specializations (Ogunode *et al*., 2024). This was intended to balance national coherence with institutional autonomy.

Specific Focus of the CCMAS for Art and Design Programmes

The new CCMAS recognizes the significance of employability and 21st-century skills in all the courses offered in Nigerian Universities. The following summarizes the core objectives of the CCMAS Environmental Sciences regarding art and design discipline. According to Rasheed (2022),"The CCMAS highlights digital and media art alongside theoretical and studio-based courses that nurture self-expression, client engagement, and adaptability while equipping students with critical 21st-century skills such as creativity, communication, leadership, research, and ICT literacy. It equips graduates to pursue diverse careers as studio masters, product designers, consultants, educators, technologists, cultural officers, entrepreneurs, curators, and media professionals in local and international organizations, including the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the United Nations Industrial Development Organization (UNIDO)"

Structure of Art and Design Programmes in Nigeria

In line with the structure of art and design education in Nigerian universities, all students must undertake general foundational courses at the 100 and 200 levels. General art and design courses are taught at the foundational levels, providing students with a broad base before progressing to higher levels of specialization in art education, art history, ceramic design, graphic design, sculpture, or textile design (Odewole *et al*., 2024). From the 300 level onward, students begin to specialize in one of the available disciplines, depending on the offerings of each tertiary institution. Between the 300 and 400 or 500 levels (depending on the duration of the programme in a particular university), students primarily engage in courses within their chosen specialization, supplemented by a limited number of general courses.

General Courses in Art and Design CCMAS considered Relevant to Foster Students' Employability

According to Anikweze and Ugodulunwa (2020), a curriculum is deemed relevant when it equips 21st-century students with the skills to compete globally. Curriculum relevance entails being applicable and appropriate in addressing learners' and society's needs, interests, aspirations, and expectations (Anikweze & Ugodulunwa, 2020). According to Koseda *et al.* (2025), there are nine essential elements considered critical for effectively embedding employability into the curriculum of a modern higher education institution, including the provision of clear pathways and accessible employability services, the strategic use of technology, and the promotion of employability awareness within course groups. Others include the alignment between academic programmes and employability support services, the diversification of resources that support career readiness, the integration of employability skills directly into the course curriculum, and a strong focus on diversity and social inclusion (Koseda *et al*., 2025). It also includes the inclusion of

structured placement or internship programmes, the availability of comprehensive student support services, and Education 4.0, which involves integrating emerging technologies into teaching and learning, which has significant implications for enhancing employability in higher education (Koseda *et al*., 2025).

Based on the foregoing, this study examined the inclusion of employability-related topics, skills, and competencies within the course content of the art and design programme in the CCMAS. Examining the CCMAS for the art and design discipline reveals several general courses across all levels (100–500) with considerable potential for enhancing students' employability. These courses were considered relevant to foster 4IR employability due to their potential to transfer entrepreneurial and technological skills to the students as required in today's dynamic and technology-driven job market in the 4IR era. These courses include Entrepreneurship and Innovation (ENT 211), Introduction to Digital Art and Design (FAA 241), Computer-Aided Industrial Design (IDD 202), Venture Creation (ENT 312), Student Industrial Work Experience Scheme (FAA 311/IDD 402), Art and Design Management (FAA 422), and Management, Marketing, and Exhibition (IDD 502). The following provides the descriptions of each course, as available in the CCMAS.

Entrepreneurship and Innovation (ENT 211) provides a foundational understanding of entrepreneurial concepts, including entrepreneurship, intrapreneurship, and the relevance of entrepreneurial theories, such as the Schumpeterian perspective and the notion of creative destruction. It introduces students to critical entrepreneurial traits such as opportunity-seeking, innovation, and risk-taking—qualities central to self-employment and job creation. Moreover, the course addresses entrepreneurial thinking through critical, reflective, and creative lenses while also touching on innovation dimensions and the influence of knowledge and technology on enterprise formation. It includes content on business planning, partnerships, contemporary digital entrepreneurship issues, such as virtual offices and e-commerce, and Nigerian-specific entrepreneurial contexts. These components equip students with practical business acumen and digital adaptability, enhancing their readiness for both traditional employment and entrepreneurial ventures.

Introduction to Digital Art and Design (FAA 241) focuses on equipping students with essential digital imaging and design skills. The course provides both theoretical background and practical training in digital art, facilitating creative expression and visual communication across various specializations within the visual arts. Students are introduced to professional software tools such as Adobe Photoshop and Illustrator, which are standard in the creative industry, enabling them to develop high-quality digital works. The course also emphasizes two-dimensional and three-dimensional artistic rendering, promoting the technical and aesthetic skills in high demand in sectors like digital marketing, animation, gaming, and web design. This practical, technology-oriented approach prepares students for various digital roles and entrepreneurial, creative projects.

Computer-Aided Industrial Design (IDD 202) introduces students to digital design and 3D modeling principles. It emphasizes using relevant software for 2D and 3D design and animation, encouraging conservative and

experimental concept development. Through this, students acquire technical competencies in CAD (computer-aided design) and digital prototyping, skills that are essential for careers in industrial design, product development, and 3D visualization. The course also ensures students stay abreast of digital modelling and animation trends, aligning their skills with industry demands.

Venture Creation (ENT 312) builds on the entrepreneurial foundation laid in earlier coursework and focuses on practical aspects of launching and managing new ventures. The course covers opportunity identification, business planning, entrepreneurial finance, and market research. It delves deeply into digital entrepreneurship through content on e-commerce models (B2B, B2C, etc.), customer acquisition, and digital marketing strategies. Students are also introduced to emerging technologies such as artificial intelligence (AI), virtual and mixed reality (VR/MR), the Internet of Things (IoT), blockchain, and renewable energy as they relate to business development. These contemporary technological themes position students to leverage innovation in solving market problems, thereby increasing their potential to thrive as entrepreneurs or innovators within established organizations. Including opportunity discovery exercises, business pitching, and communication strategies further develops their soft skills and professional confidence.

SIWES / Industrial Training (FAA 311/ IDD 402) is a crucial employability component of the curriculum, as it exposes students to real-world industry practices and environments. Through a six-month placement in relevant art and design industries, students gain hands-on experience with tools, processes, and professional standards not typically available in academic settings. They are expected to maintain logbooks, use appropriate industry terminology, and produce technical reports, enhancing their communication and documentation skills. This experience improves their practical competencies and helps them build professional networks and understand workplace dynamics, increasing their chances of post-graduation employment or internship conversions.

Art and Design Management (FAA 422) focuses on preparing students for the business side of creative practice. The course introduces management principles tailored to artists and designers, including pricing strategies for commissioned works, legal aspects such as copyright and contract law, and protections against plagiarism. It also explores how art institutions operate within the larger economy, particularly concerning the commodification of artworks. This course is crucial for students who intend to pursue freelance careers or establish their creative businesses, as it empowers them with the knowledge to navigate both legal and commercial landscapes effectively.

Management, Marketing, and Exhibition (IDD 502) builds on students' SIWES experience, guiding them from learners to aspiring entrepreneurs ready for Nigeria's competitive creative market. The course covers essential management and marketing skills tailored to the art and design industry, focusing on business planning, brand promotion, and sales strategies. It aims to equip students with entrepreneurial know-how, especially in leveraging online and offline media for marketing and brand building, which are key skills in the 4IR era. Students will also gain practical experience in exhibition and event

management, including organizing trade shows, sales outlets, and workshops. These opportunities enhance industry engagement and client networking. The course aims to develop transferable skills in space planning, lighting, audiovisual presentation, and portfolio creation that are relevant across creative and cultural sectors. It also encourages the creation of a professional portfolio and career diary, helping students reflect on their progress and present themselves effectively for employment or freelance opportunities.

The CareerEDGE Model of Graduate Employability

One influential framework that offers a structured understanding of graduate employability is the CareerEDGE model, developed by Dacre-Pool and Sewell in 2007. The model provides a holistic view of the elements necessary to enhance a graduate's employability. The core principle of the model is that it leads to effective employability-enhancing interventions (Wujema *et al.*, 2022). The CareerEDGE model outlines five core components of graduate employability: career development learning, experience (work and life), degree subject knowledge, generic skills, and emotional intelligence, providing a robust framework for evaluating how well academic programmes prepare students for the labour market (Pool, 2020). These components form the acronym "EDGE," while "Career development learning" is central to creating the "CareerEDGE."

Pool (2020) also observed that the CareerEDGE model emphasizes five key domains: human capital (skills, knowledge, and abilities), social capital (networks and relationships), career development learning (knowledge of the labour market and self-directed career planning), generic skills (transferable soft and hard skills), and emotional intelligence (self-awareness, adaptability, and interpersonal competence). With this, the CareerEDGE model places degree subject knowledge, skills, and understanding at its core, emphasizing that the academic discipline is central to the student experience and a vital component of employability development (Pool, 2020). This provides a comprehensive framework to assess the impact of curricular content on employment capabilities.

Appraising the Suitability of the Identified CCMAS Art and Design Courses for Fostering Students' Employability based on the CareerEDGE Model

The CareerEDGE model of graduate employability provides a comprehensive and structured framework for assessing how effectively higher education programmes equip students with the competencies needed for the contemporary labour market. Its five key components—career development learning, experience (work and life), degree subject knowledge, generic skills, and emotional intelligence—offer a multidimensional approach to evaluating and enhancing employability. According to the model, career development learning is a vital process that empowers students to take control of their career trajectories and involves equipping students with knowledge about career planning, labour market trends, and personal development strategies. Regarding experience (work and life), practical experience gained through internships, part-time jobs, volunteering, and extracurricular activities is a key enhancer of employability, as it develops skills, builds networks, and deepens understanding of workplace dynamics. Concerning degree-subject knowledge, understanding, and skills, while academic knowledge is essential, it

must be complemented by additional skills and experiences to enhance employability, as subject-specific understanding alone does not guarantee success in the job market. Generic skills (sometimes referred to as "transferable" or "soft" skills), such as communication, teamwork, problem-solving, and time management, are consistently highlighted by employers as critical to workplace success. Emotional intelligence comprises qualities that enhance interpersonal relations and adaptability in diverse work environments, including self-awareness, empathy, motivation, self-regulation, and social skills.

The CareerEDGE model has been widely adopted by universities seeking to design or evaluate employability initiatives, serving as a diagnostic tool and a guide for embedding employability into curricula (Pool, 2020). This study pivots emphatically on the degree subject knowledge, understanding, and skills aspect, with other components of the CareerEDGE model, focusing on the art and design courses in the new CCMAS. These courses include ENT 211, FAA 241, IDD 202, ENT 312, FAA 311/IDD 402, FAA 422, and IDD 502 as discussed earlier. When applied to the general courses highlighted in the art and design CCMAS, the model helps identify areas of strength and opportunities for further improvement, especially within the context of the 4IR to foster students' and graduates' employability.

Career development learning, the first component of the model, refers to students' understanding of career pathways, labour market dynamics, and strategies for self-managed career planning. Courses such as Entrepreneurship and Innovation (ENT 211) and Venture Creation (ENT 312) contribute meaningfully to this domain by introducing students to entrepreneurial thinking, opportunity identification, and the dynamics of innovation-driven enterprises. These courses provide foundational knowledge and digital entrepreneurship frameworks relevant to Nigeria's socio-economic context. However, to fully harness the potential of career development learning, these courses could be enhanced by incorporating structured career planning activities, such as career mapping tools, goal-setting exercises, and digital portfolios. Reflective components like career journals or learning diaries could be integrated into assessments to encourage students' self-awareness and long-term employability planning. Engagement with industry mentors and guest professionals could further deepen students' insights into career trajectories and workplace expectations.

The second element of the CareerEDGE model, experience (work and life), is directly addressed through the Student Industrial Work Experience Scheme (SIWES), offered in FAA 311/IDD 402. This six-month placement in relevant art and design industries provides a vital opportunity for students to interact with real-world tools, processes, and standards, enhancing their technical competencies, building professional networks, and fostering adaptability. However, the curriculum could include pre-placement workshops on workplace etiquette, communication, and problem-solving to improve the experiential learning outcomes. Post-placement sessions where students present reflective reports and peer-evaluate their experiences would help reinforce learning and foster a culture of shared insights. Requiring logbooks and technical documentation during SIWES can also strengthen students' written communication and analytical skills.

The third pillar of the CareerEDGE model, degree subject knowledge, understanding, and skills, is robustly supported by courses such as Introduction to Digital Art and Design (FAA 241) and Computer-Aided Industrial Design (IDD 202). These courses equip students with industry-relevant digital imaging, 3D modeling, and animation competencies, using professional software tools like Adobe Photoshop and AutoCAD. They align well with current demands in the creative industries, including digital marketing, gaming, and virtual production. However, these offerings can be improved by incorporating interdisciplinary project briefs that simulate real-world scenarios, such as sustainable product design or user-centered experiences in digital interfaces. Including certification pathways, such as Adobe Certified Professional or Autodesk credentials, would further enhance students' competitiveness in the job market. Assessments in these courses should mirror industry expectations by focusing on portfolio development, client-based projects, and the production of marketable digital assets.

The fourth component, generic skills, encompasses transferable skills such as communication, teamwork, time management, and problem-solving, which are consistently emphasized by employers across sectors. While these skills are embedded informally across several CCMAS courses, they require more intentional and explicit development. For instance, Venture Creation (ENT 312) and Management, Marketing, and Exhibition (IDD 502) could emphasize collaborative group projects, simulated business pitches, and client engagement scenarios to help students build professional communication and teamwork competencies. These courses can also integrate case-based learning, using real-life challenges from Nigeria's creative economy to develop students' critical thinking and decision-making skills. Peer assessments, group critiques, and reflective evaluations can serve as mechanisms to foster accountability, leadership, and interpersonal growth among students.

The final component of the CareerEDGE model is emotional intelligence, which includes self-awareness, empathy, resilience, and the ability to manage interpersonal relationships effectively. Although CCMAS courses emphasize creativity and entrepreneurial resilience, emotional intelligence is not explicitly targeted within the current curriculum structure. To address this, relevant courses, particularly Art and Design Management (FAA 422) and Management, Marketing, and Exhibition (IDD 502), could include modules or workshops focused on emotional literacy, leadership, and conflict resolution. Reflective practices like journaling and self-assessment tools can help students build emotional insight and regulation. Team-based interdisciplinary projects involving students from different art and design specializations could also help cultivate empathy, patience, and adaptability in collaborative environments, mirroring the relational demands of the workplace.

Practical Implication

The study reveals, through the lens of the CareerEDGE model, that while several general courses in the art and design CCMAS already contribute significantly to developing employability, their impact can be amplified through more deliberate alignment with the model's five domains. Applying the CareerEDGE model highlights the importance of intentionally embedding employability-enhancing strategies into the curriculum rather than assuming students will acquire such competencies indirectly. Courses such as En-

trepreneurship and Innovation, Venture Creation, and Digital Art and Design already provide foundational and technical knowledge; however, they must be augmented with structured career development learning activities, including reflective tasks, digital portfolios, and industry mentoring schemes. Institutions should consider integrating dedicated career modules, workshops, or online career development platforms into these courses to ensure students are supported in their transition to the workforce.

There is a clear need to reinforce experiential learning beyond traditional industrial placements. While the SIWES programme provides valuable exposure to industry, preplacement training in soft skills, ongoing mentorship, and post-placement reflective assessments should complement it. Departments should develop formal guidelines to maximize the learning outcomes of industry experience and ensure all students are assessed on participation and growth in professionalism, communication, and problem-solving. Generic and transferable skills such as teamwork, communication, critical thinking, and adaptability must be taught and assessed explicitly. Group projects, client-based simulations, peer reviews, and cross-disciplinary collaborations should be built into course delivery. Practical exercises like business pitching, brand development, and portfolio exhibitions can provide students with real-world challenges that mirror industry expectations and build their confidence. The study underscores the often-overlooked role of emotional intelligence in employability.
Higher education institutions should incorporate activities that foster self-awareness, empathy, and resilience, such as reflective journaling, peer feedback sessions, and emotional literacy workshops. This would help students develop the interpersonal and psychological competencies to navigate complex professional environments. Universities and academic programme planners should align assessment methods more closely with real-world performance indicators. For example, allowing students to submit professional design portfolios, organize mock exhibitions, or develop and pitch business plans for their projects would offer more authentic learning experiences and evidence of career readiness.

CONCLUSION

There is the critical need for curriculum reform grounded in employability-focused models offering a practical roadmap for embedding graduate attributes essential for sustainable career success in the evolving creative economy.

Although many courses already incorporate aspects that support 21st-century skills and entrepreneurial readiness, aligning these courses with the CareerEDGE model can transform them into powerful tools for preparing students for employment, self-employment, and innovation-driven careers within the context of the 4IR.

To ensure graduates of art and design programmes are truly employable, higher educational institutions must go beyond the inclusion of entrepreneurship and digital literacy.
Higher education institutions must also incorporate career guidance, reflective learning, industry exposure, soft skills training, and emotional intelligence development into course content.

A more holistic and interdisciplinary redesign supported by faculty training, industry collaboration, and innovation ecosystem is

needed to truly prepare graduates for entrepreneurial success and employability in the evolving creative economy.

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