12

Preparing Students for Digital Commerce: Innovations in Learning and Skills Development

Dr. Samson Sitlhou
Assistant Professor in History,
Dhanamanjuri University, Imphal
Samdew9@gmail.com

Abstract
Digital commerce transcends traditional business transactions, extending beyond physical goods and services to incorporate an extensive range of digital, downloadable, and sharable products. Drones, video streams, and virtual goods through online games are a few examples. E-commerce continues to evolve rapidly, influenced by unprecedented connectivity through smart devices and the Internet of Things that influence consumers' decisions. Consequently, academic institutions are rushing to launch entrepreneurial programs aimed to foster digital commerce knowledge. Currently, those establishment and admission requirements remain elusive for prospective students. Faculty members, program builders, and academic departments often require external advice. Insights on digital commerce education and training, as well as the necessary materials are needed (Song Southworth, 2015) (Marzo-Navarro & Berné-Manero, 2022).

Keywords: *Digital commerce, competency-based curriculum, experiential learning, problem-based pedagogy, multichannel retailing, interdisciplinary collaboration, lifelong learning.*

1. Introduction

Digital commerce refers to the transactions between buyers and sellers that take place over the internet. The transformation is further accelerated by enhanced connectivity around the world and more mobile devices. Digital commerce can build relationships remotely. It also facilitates fast, inexpensive transaction anywhere and at any time. Also, it supports online promotions and advertisements. According to the World Trade Organization, the new platforms (such as social media, app stores, and platforms for digital goods and services) although quickly taking share of 'regular'

commerce, digital payment improvements continue to drive digital commerce. The rise of new types of online commerce increases competition. Persons entering the marketplace today require a wide range of competencies to be competitive.

Concerns over gaps between education and market needs are growing among business stakeholders in many established nations. Employers and government agencies have called for the integration of competencies needed to succeed in the digital economy across the tertiary education sector. The objectives of this chapter are to describe new competencies that individuals need to participate in the digital economy, recommend pedagogical frameworks to address these competencies, and identify environments and resources to support the transition from theory-based to practice-based pedagogy. (Marzo-Navarro & Berné-Manero, 2022)

2. Context and Rationale for Digital Commerce Competencies

The advent of digital technologies and platforms has reshaped commerce enormously (Vishnu et al., 2022). The education sector globally is realising the potential of digital commerce and devising strategies to equip students with required competencies to succeed in this expanded, competitive, and rapidly evolving marketplace. Stakeholders in higher education institutions are increasingly aware that digital commerce competencies are critical for learners wanting to build successful careers (Pérez & C. Murray, 2006). The skills and knowledge needed to succeed within this commerce space are very different from those traditionally disseminated in commerce curricula.

The expansion of digital channels has raised a range of social, ethical, and legal challenges for organisations. Data enables organisations to meet privacy and other compliance regulations and generate meaningful decisions from the great number and variety of data streams provided by digital commerce systems. Such complex environments require a technically and operationally skilled workforce that can understand not only business goals but also the digital framework—including the application of Artificial Intelligence (AI) and machine learning—that will enable these goals to be achieved efficiently and effectively.

Digital commerce has been characterised as a whole-of-business undertaking that must be directed and coordinated by executives, who need to exercise a whole-of-business vision and understanding. Aspects of commerce such as sales, marketing, customer service, product development, procurement, and distribution must all be interconnected if organisational goals are to be met. Achieving such a level of understanding is very difficult even for learners who have worked extensively in a broad

range of functional areas. Hence, a shorter period within which the objectives outlined previously can be achieved is necessary.

A significant increase in student support for digital commerce has occurred, dramatically outpacing the growth of students studying other disciplines such as computer science and electronic engineering. These trends align with greater equity in access to or ownership of the necessary digital devices and connections—a phenomenon that has been progressively recognised in many countries worldwide. Attracting increasing numbers into digital commerce thus represents a strategic opportunity for many educational institutions.

3. Theoretical Frameworks for Digital Commerce Education

Educational theories provide useful guidance for identifying learning objectives and shaping pedagogy for digital commerce courses. Education theory can delineate two main approaches to education. The traditional approach views knowledge as composed of discrete facts, principles, and methods corresponding to separate disciplines. The aim is to convey the knowledge in well-structured courses and to develop higher order thinking through assignments (Parker & Swatman, 2001). Alternative visions maintain that knowledge is embedded in problems, situations, or activities. The goal is to learn through undertaking, simulating, or dealing with community projects—small projects drawn from life, industry, or other disciplines (Nistor & Nyer, 2018).

The approach to digital commerce taken here adopts a problem-based vision of education (Miliou & Angeli, 2022). The learning objective is to develop the competency to engage in commercial activity through digital means. A viable link can be made between this objective and the skills and competencies identified in the Context and Rationale section. A general framework of pedagogy emerges from the understanding that the objective is to develop competency through the engagement in digital commerce.

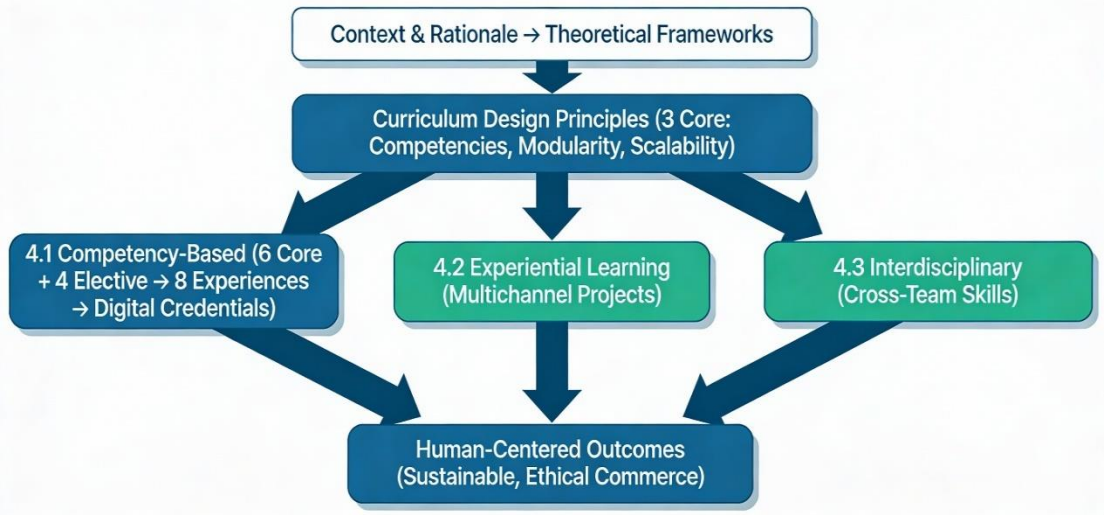
In early steps, the emphasis is placed on the role of digital technology in commerce, followed by the emergence of the digital economy and digital markets and commerce. Considerable attention focuses on understanding the digital market, its dimensions and attributes. Aspects of the digital commerce problem—community (market), transaction types, digital supply chains, digital negotiation, and exchange of limited intangibles—are explored. Digital commerce opportunities and attributes of digital commercial activity are introduced. Working within the digital framework, an additional layer of specifics colour the activity further—

offering relevant commercial goods and services, attracting the target market, customer acquisition approaches and processes, provisioning the goods and services and order fulfilment methods, pricing, and secondary customer interaction and retention. Particular emphasis is placed on an understanding of the business opportunity and a convincing articulation of the transaction cycle.

4. Curriculum Design and Pedagogical Strategies

A curriculum design, content and pedagogical strategies for digital commerce education emerge from the context and rationale as well as from the theoretical frameworks. The specification of student outcomes, expected learning experiences, activities, and assessment approaches are guided by three design principles. They first deal with core, elective and supplementary competencies that can be mapped to the institutional learning outcomes. In addition, they promote a competency-based modularity regimen where any subset can be chosen for licensure, credentialing, recognition (Marzo-Navarro & Berné-Manero, 2022). Furthermore, they assist with incremental scalability which can be introduced in low-resource setups. Similarly, the assessment activities and associated digital and physical resources will adopt a modular and incremental approach.

The focal competencies highlight the need for teaching and practice aimed at sustainable, human-centred digital commerce, which encompasses delivering real value and enhancing people's quality of life through more responsible, impactful and ethical uses of digital technology. The context and rationale, the theoretical frameworks, and the curriculum design point to four recurrent pedagogical characteristics for the specification of learning experiences. The aforementioned properties make the curriculum more relevant and up to date, broaden its appeal to attract a larger, more diverse audience, and encourage the inclusion of cross-disciplinary contributions from other studies, research or practices.



4.1. Competency-Based Curricula

A competency-based curriculum defines both core and elective competencies required at the completion of a digital commerce credential, in a fully mapped manner. Competencies are framed as targeted knowledge, skills, or attitudes that students acquire through specific learning experiences and assessments (Pérez & C. Murray, 2006). The core competencies reflect the pivotal learning objectives of the curriculum in relation to digital commerce and its interconnected domains; the elective competencies address additional learning objectives that enhance student preparation for the marketplace. All six core and four elective competencies align with the overall curricular framework and its eight digital commerce learning experiences.

Clear articulation of competencies increases visibility and facilitates communication with stakeholders. In addition, modular competency-based curricula support the issuance of digital credentials for modular completion of a broader curriculum, thus promoting lifelong learning and skills upgrading. Competencies are recorded in the credentials themselves; issuers provide evidence and verification, either linked to the credential or as separate trusted attestations. The mapping of competencies to otherwise structured curricula further exemplifies competency-based design, broadening awareness of its potential relevance.

4.2. Experiential and Problem-Based Learning in Digital Markets

The rise of digital commerce has completely changed how customers buy and obtain goods. In today's world, all brick-and-mortar stores are in competition with online channels like e-commerce websites, mobile apps, social media and marketplaces. The multichannel retailing is one such shift

which is now leading to skills requirement which is opening up another academic discourse, the digital-commerce curriculum. A variety of institutions have acknowledged the necessity of new types of competence for many job categories along the supply chain. Retailing has become a profession due to training and collaboration with the industry and, for example, training. The same developments are being proposed in multichannel retailing. Events and existing programs can explore how specific digital commerce capabilities can be aligned with the changing landscape for education; explore certificate and degree program options for different market segments and entry points; and share with the community. The leading ten technology firms in the world recognized a severe deficiency in competencies for digital commerce (Song Southworth, 2015). They assigned their digital task forces to formulate early-stage guidelines for digital skills competencies.

Problem-based learning has long been endorsed in higher education by organizations such as the Association for Experiential Education and the Organisation for Economic Co-operation and Development, which promotes the development of competencies within authentic environments through applied, experiential, or project-based learning (Marzo-Navarro & Berné-Manero, 2022). A project undertaken during a multi-channel retailing course engaged students in creating an online multi-channel presence for real brick-and-mortar, independent businesses in the community. The initiative sought to fill students' knowledge gaps about Web-based selling while enabling them to apply theoretical concepts in a practical learning setting directly related to the digital marketplace, thereby developing competencies related to the digitization of retailing and enhancing employability. According to the United Nations Educational, Scientific and Cultural Organization, project-based and experiential learning rank among the most flexible and effective methodologies for establishing competence frameworks.

4.3. Interdisciplinary Approaches and Collaboration

Forty-five percent of individuals pursue dual competencies in entrepreneurship and digital commerce. Students from marketing, management, international business, import/export and other programs form cross-disciplinary teams. This model represents the collaboration of professionals with different skills and educational backgrounds such as found in practice (Marzo-Navarro & Berné-Manero, 2022). According to Forrester et al. (2019), essential cross-cutting skills include self-management, project management, cultural awareness, effective communication, digital collaboration, and data literacy.

Combined, they enable you to participate in in-class and extra-curricular international digital commerce teams, echoing the growing importance of transnational networks for business and society. Consequently, linking it to other subjects enhances the attraction of Digital Commerce education and is crucial to fulfilling the wider demand for inclusion and accessibility.

5. Technological Tools and Resources for Learning

The educational sector is witnessing a fundamental change in teaching and learning values, which introduces considerable new pedagogical challenges and productives fresh approaches to curriculum development. These innovations are made feasible by modern networking technologies and by adaptive learning program, which offer great freedom to learners in their selection of study materials and by learners' contributions to the learning experience of others, which are essential, urgent, and pervasive. Learning resources can therefore be refocused from static production to dynamic situations; and measuring the extent and quality of adaptation becomes a pivotal issue for quality assurance.

A large number of computerized instruments are available for the development of a broad variety of learning activities. Electronic tools allow learners to formulate ideas, and to analyze and debate issues in a group or community setting; to collect, organize, analyze, visualize, and communicate information digitally, and to actively estimate the quality of an information source; to create analogies, synthesize disparate ideas, reflect and direct thoughts; to structure, log, and prioritize work. Social, collaborative, and creative web services enable learners from distant locations to cooperate within and between communities. More complex learning events can thus occur and evolve under appropriate pedagogical guidance. Learning objectives must be clearly formulated in order to select suitable facilities from among the remarkable range of instruments available; feedback assessment by learners may then determine the optimal evolution of an instruction set (Quinton, 2006).

5.1. Simulation Environments and E-Commerce Labs

Interactive simulations and e-commerce laboratories allow learners to engage in digital commerce practices that closely resemble the actual working environment, thereby providing experiential learning opportunities unavailable through traditional pedagogies (Parker & Swatman, 2001). The design and application of such environments vary widely, encompassing everything from simple spreadsheets used for the management of stocks and cash-flow activities to

sophisticated computer simulations involving multiple firms and individual advisors (Parker & Swatman, 2001). The use of simulation-oriented software facilitates the provision of easily measurable and comparable results related to the work accomplished by different groups. Additionally, independent laboratories enable focus on the processes of attaching computers to networks, establishing an Internet presence, and participating in established online electronic markets without incurring legal obligations.

The initiation of a web-based business simulation in the 1990s prompted further research into the complexity and adequacy of the anticipated work involved. The total-work anticipation predicted at that time significantly exceeded the actual workload required, confirming that substantial additional assistance could be provided to students undertaking real-world Internet-based commerce (Parker & Swatman, 2001). The scenario pursued effectively mirrored existing real-world operations and enabled the attachment of parameters to a great variety of equipment, customers, competitors, and other related entities. Handbook materials written by students were subsequently applied to facilitate learning-oriented activities.

5.2. Data Literacy, Analytics, and Digital Ethics

Data competence encompasses data skills, analytic methods, and their responsible implementation for efficient, regulated information usage. Being aware of data source transparency, data collection implications, and privacy concerns is vital. Familiarity with data categorizations, legal frameworks, and access criteria—including stewardship, governance, and ownership rules—improves understanding of pertinent responsibilities. These fundamental concepts and considerations, discussed in various university reports (Coffin Murray & Perez, 2014) , remain vital within a society increasingly dependent on digital commerce.

5.3. Online Platforms and Flexible Delivery

The use of flexible online modes is emerging as a key additional consideration in the design of new curricula across all disciplines and competency profiles. The pervasive presence of digital technologies both in everyday life and at work puts pressure on education systems to meet learners where they are accustomed to interacting: “Delivering university courses online through well-known digital platforms improves student satisfaction” (Muvingi et al., 2018). In a recent study, limitations in a fully on-site course delivery format prompted an institution to flesh out the implementation details of a blended course, which maintains on-campus

components while allowing asynchronous online engagement through the learning management system and the information, application, and support system desired for every course. Online courses are now increasingly designed to provide more effective and flexible methods for today's diverse learners.

In the case of the blended course, students can access all course materials, participate in online discussions, and submit assignments via the learning management system, providing 24-hour availability of learning content and space for previously lacking interaction among remote students. Social media, the open web, and other virtual environments can also be harnessed to create collaborative online spaces. In parallel, institutional priorities around technology-enhanced learning have further focused attention on flexible delivery and on exceeding the previous standard of accommodating only students with non-standard work hours. The extent to which courses are made otherwise available online has been recognized as an important requirement, given the central role of digital commerce and associated competencies and activities in the modern economy, society, and everyday life. Well-established opportunities for packaging learning content as massive open online courses (MOOCs) in multiple areas—allowing learners to pursue much of the material in self-directed fashion—have also reinforced the case for flexible, online, and blended delivery solutions.

6. Assessment, Feedback, and Quality Assurance

The principles behind assessment tell us when, what and how to assess. Effective assessment is most engaging encouraging engaged students learning. The provision of help to teachers and the early indication of the level of knowledge and skills of the students, and assistance in adapting the teaching methods and resources. Constructive feedback creates opportunities for students to learn within their own practice (Jara & Mellar, 2010). Initially restricted to annual evaluations of the digital commerce content, the assessment processes for this initiative were broadened to include ongoing feedback loops and institutional quality controls. Quality mechanisms external and internal (feedback from peers, degree-level standards, and institutional requirements) as well as scope for development – continuous improvement of the digital commerce programme.

Activities undertaken in formal and informal settings, in combination with structured curricula, reflect different aspects of digital commerce. Through the process of initial descriptive mapping, we connected activity descriptions, participant characteristics and simulated trade platforms. Afterwards formal alignment connected digital commerce

capacities to a consolidated digital commerce case and to internal, institutional-level external evaluations.

Digital commerce is a comprehensive term that refers to a host of activities taking place through a variety of platforms and modes of delivery. The modular, core and elective components facilitate progressive credentialing, upskilling and lifelong learning by offering flexible pathways to meet diverse needs in education, employment and entrepreneurship. The support foundation components are designed to assist students in some preparation for the selected activities, while the additional enrichment slots provide additional opportunity to build on the nominated external experiences (Bentley & Selassie, 2012).

6.1. Formative and Summative Assessments in Digital Commerce

Digital commerce competences may be assessed through formative or summative assessment. This differs regarding their purpose, their timings and the type of feedback they offer students (J. Wing, 2018). Formative assessments take place before summative assessments. They help both instructors and learners identify strengths and weaknesses in knowledge, skill, and ability. As a result, along with helping in further, formative assessments help us improve our summative assessment. The use of rubrics outlining the expected behaviour, skill or degree of competency associated with tasks help students assess their own work or consult others before submitting their work for grading. Self-evaluations, peer review, and assignment drafts are all ways of formative assessments.

Summative assessments are usually given after there has been enough instruction and practice, which evaluate broader outcomes, like an entire module. Opportunities for reflection and improvement may still be provided after a summative assessment is marked and returned. Grading rubrics also show students how complete or of what quality something must be to get a particular mark in the course. Individual assignments allow the student to comprehend the nature of the assignment that is related to the competencies in the course. They are used to address the type, scope, and quality of expected competencies (Boitshwarelo et al., 2017).

6.2. Authentic Assessment and Performance Metrics

Tasks that simulate actual practices in the digital commerce sector are typically performed by a team of individuals and envisaged in collaboration with an active partner organization. The tasks are aligned with individual competencies—core and elective competencies established at the outset of the program, then mapped onto the learning

experiences and assessments of courses offering formative and summative evaluations (Dwika Herdiawan, 2019). This enables learners to demonstrate a selection of competencies and the associated learning achievements and yet maintain a coherent integrated identity for the program. Each course incorporates more detailed specifications of the competencies being developed and assessed, qualifications that are further formalized in the individual learning contracts.

The authenticity of these activities covers both social practices and outcomes (L Eddy & Lawrence, 2013). Tasks are therefore designed to match real-world digital commerce challenges, addressing problems drawn from the current marketplace that resonate with contemporary day-to-day priorities in practice. The situation, problem, and desired outcome are defined clearly, with information on the client organization also provided. As a result, the specifications of the task, together with the learning objectives, position the activity firmly in the domain of digital commerce. Matching the task to an outside partner furthermore allows further criteria to be introduced, since organizations frequently require various deliverables to remain accountable to stakeholders. Such criteria may include, for example, customer success metrics, cost-benefit analysis, feasibility for implementation, and detailing of options available.

6.3. Quality Assurance and Institutional Readiness

Online education has witnessed significant growth, fueled by the recent COVID-19 pandemic, that has accelerated the need for institutions to offer teaching and training through digital platforms, especially considering the socio-economic context in Brazil and globally (Rossi & Notargiacomo Mustaro, 2022). These technological transformations have favoured the emergence and popularisation of online education, thus requiring educational institutions to be qualified to foster such changes. Furthermore, continual monitoring of a particular education development helps to ascertain changes in educational quality and proposes continuous improvement actions. An evaluation and quality assurance model in online education, called eQETIC, has been developed to fill this gap by allowing these circumstances to be reviewed continuously. The framework promotes a systematic vision of the digital educational process and the transition between onsite and online. The pedagogical, psychological, design, and technology dimensions have all been identified as essential for offering an educational process that ensures quality, follows a structure, and satisfies learners' needs according to Rodrigues . The model provides several key dimensions

of institutional parameters that underpin supervision, thereby justifying the articulations required by education systems and allowing continuous improvement actions to be indicated for enhancing education quality.

Accreditation of programs in higher education institutions in Canada is a voluntary self-regulatory process whereby universities evaluate their programs against established criteria and standards. Acknowledging this broad framework, institutions and disciplines often develop program objectives and associated graduate attributes clarifying the breadth and depth of competency development within the associated programs. Program review occurring within predetermined cycles provides an opportunity for institutions to review educational objectives, program changes since the last accreditation, and to update the course syllabus, the digital catalogue recording the courses associated with each program allowing full transparency and accessibility to any stakeholder interested or involved with the curriculum development. Within the context of program review, the collection of data at the intersection of multiple institutional and discipline-specific strategies promotes a culture of inclusive continuous improvement towards achieving a good level of educational quality.

7. Industry Partnerships and Work-Integrated Learning

The digital commerce landscape is changing rapidly due to changing consumer behaviour, competition and technology. Today, organizations prioritize investing in digital channels and digital markets more than ever. Stakeholders such as students, industry players, professional organisations and society expect effective education, training, and skills development regarding digital commerce (Holt et al., 2004).

Two complementary frameworks guide the implementation of digital commerce education at the university level. A competency-based learning framework establishes the desired knowledge, skills, and attitudes and directs the formation of learning objectives, assessment strategies, and appropriate pedagogies. A problem-based learning framework shapes learning objectives, content selection, and the specification of learning outcomes. These approaches align with professional practices and demonstrate relevance to contemporary digital commerce challenges faced by the jobs market (Chopra & M. Deranek, 2017).

7.1. Internships, Apprenticeships, and Industry Projects

Internships, apprenticeships, and industry projects are useful for learners, as they are exposed to the real world relating to their studies. By taking up field placements, students can help

identify and strengthen their own career paths, especially their passion. When working on projects for real companies that mimic a workplace experience the same effect can occur. According to Song Southworth (2015), project work motivates students to apply knowledge to challenging, authentic problems through a pedagogy of knowledge acquisition.

Supervision from the industry can enhance learning through guest lectures by professionals. Moreover, relevant projects can fill a gap when firms do not have the capacitate or resources to devote to WIL experience. Collaboratively, these functions endow project initiatives with tangible advantages, while establishing authenticity, education and engagement attributes (Marzo-Navarro & Berné-Manero, 2022).

Choice and agency enable the high-level project types. A learning contract formalizes the arrangement between students and projects or companies. Sharing the results with the public provides more motivation. Depending on institutional policy, these levels of productivity and involvement may also satisfy requirements for recognized co-curricular activities. Ensuring institutional requirements might also promote and enable collaboration with outsiders.

7.2. Co-Creation of Curricula with Employers

Developing and providing students with commerce and e-commerce models is essential to a curriculum that prepares future managers and professionals for tackling digital commerce challenges. However, sitting alongside the importance of relevant content is the need for active and learner-centered pedagogy; otherwise, students might not effectively assimilate and internalize key principles, concepts, and practices (Marzo-Navarro & Berné-Manero, 2022). Digital commerce competencies can be positioned as a powerful vehicle for addressing higher education's canonical learning goal of equipping students with lifelong learning capabilities.

A lot of universities co-opt the industry for responsibility regarding curricular debates. When the appropriate employers are willing to be involved, this involvement can take place not only in terms of consultations about the curriculum content from time to time, but also in terms of various other arrangements. These arrangements have the capacity to strengthen this involvement and improve the relevance of the curriculum to labour-market needs. Participation in various activities to scale the curriculum also provides useful entry points for collaboration. The partnering institutions may vary in their approaches to the co-development of a digital commerce curriculum and the concept itself. Some may narrow the idea of co-creation to the collaborative design

and ongoing adjustment of an entire curriculum specification; others may be more liberal and allow participation in merely some components or individual courses in a more varied pedagogic scenario. The policies of each institution will different nomenclatures (curricular design, reflexion on curricular evolution) but there are equally varieties of forms of co-operation that can be subsumed constructively under the term co-creation. Industry contribution to the co-creation of curriculum is useful too.

8. Equity, Inclusion, and Access in Digital Commerce Education

Many students have started their careers in new designations like E-Commerce Coordinator and Digital Marketing Administrator as digital commerce is taking over the Globe. In Canada, the role of Manager of E-commerce and Digital Marketing is seeing speedy growth. As digital businesses are gaining importance, the new generation of students should be imparted knowledge and skills from these new domains. In light of distance education's intent and philosophy, it is essential to look into how digital commerce is impacting the learners, tools, teaching methods, curriculum and their delivery of learning.

Many students have started their careers in new designations like E-Commerce Coordinator and Digital Marketing Administrator as digital commerce is taking over the Globe. In Canada, the role of Manager of E-commerce and Digital Marketing is seeing speedy growth. As digital businesses are gaining importance, the new generation of students should be imparted knowledge and skills from these new domains. In light of distance education's intent and philosophy, it is essential to look into how digital commerce is impacting the learners, tools, teaching methods, curriculum and their delivery of learning.

The curriculum also needs to incorporate newer subjects since Courses on Financial Technology can draw students' attention. Digital Marketing Skills remain highly sought after yet the standard curriculum related to accounting has not been updated. Students have expressed great interest in either taking an online job to learn skills or involving in the National or International level hackathons. Schools are encouraged to find industry partners for competition sponsorship to avoid conflicts with the curriculum.

Broadening student prospects would allow them to explore many interesting areas. Digital and Virtual Reality Facilities are candidates for consideration, yet assurance has not been completed on finding rights. Design and subjects such as the engineering of airplane are also on the consideration list.

8.1. Inclusive Pedagogy and Accessible Design

Digital content designed to be inclusive benefits everyone. Access is crucial for the equal participation of learners. The marginalized might need specialized help as well as skills. Inclusion of accommodations like extended deadlines addresses systemic disadvantage. Tools and design strategies, such as screen readers, video content captioning, plain language and minimalism, promote equitable consumption. Institutions are pressured to integrate accessibility and inclusivity in programs. Barriers such as high demand curriculum content, low awareness on campus impede action. Effective practice should align with frameworks providing ways for implementation. The objective and the result of the process including the tools used for the objectives will be inclusive in nature with the help of UDL principles. In order to dismantle this theory practice gap moments of intentional transition are necessary; it may also be worth exploring measures to enhance embodiment (Copeland & Thompson, 2019)

Digital infrastructure provides a foundation for wellbeing. In resource-poor or disaster-hit contexts, students face more barriers. One way to improve access is to offer modular and hybridized courses and learning pathways. Interdisciplinary collaborations support equity and inclusion in other ways. The initiatives of cybersecurity training, technology literacy and software support ensure access is fairer.

8.2. Bridging Skills Gaps and Lifelong Learning

In order to enhance intrinsic motivation to pursue education throughout life, pathways for upgrading and reskilling in digital commerce ranging from basic to advanced skills must be created. The solutions should offer modular choices and flexibility allowing learners to progress at their own pace thus increasing affordability. Outreach to disadvantaged communities and adult learners desirous of re-entering the workforce or retraining for employment, as well as recognition of prior learning are other approaches worth consideration (El Mawas & Muntean, 2018) (Miliou & Angeli, 2022).

9. Policy Implications and Accreditation

Digital commerce curricula should align with relevant standards in digital commerce education, such as those established by the Association to Advance Collegiate Schools of Business for the Digital Business concentration (Marzo-Navarro & Berné-Manero, 2022) or the Institute of Business & Finance, Education and Training for its Foundation Certificate in E-Commerce (Parker & Swatman, 2001). Further policy incentives may include the establishment of dedicated digital commerce skill development opportunities through funding models aligned with national or

institutional educational policies and program priority status (Quinton, 2006).

9.1. Standards for Digital Commerce Education

Digital commerce is now a mainstay of modern economic activity and commerce education. Addressing this reality requires developing appropriate digital commerce pedagogies, curricula, and assessment approaches. This is more than a problem of merely modifying existing courses or programs; new approaches must be built on a solid theoretical foundation in order to achieve meaningful competency development and ensure market relevance. Four theory-based frameworks are presented here—graduate profile, competency-based education, experiential learning, and interdisciplinary learning.

The framework of the graduate profile identifies the core competencies as well as the alignment. The competencies are organized into core and elective domains that are related to specific educational paths, learning outcomes, teaching methods, and assessment methods. The other frameworks help educators in designing curricula, learning experiences and evaluation strategies pertaining to those competencies.

The framework of competency-based education places competencies at the centre of education and training. Through this, it designs learner-centered curricula and assessments that explicitly target specified outcomes so that recent graduates have the capability sought by employers. It is the framework that stresses the importance of learning by doing, along with the reflection that helps us absorb much faster.

By learning through experience, learners not only gain the acqusition of relevant knowledge and skills but also the ability to combine knowledge gained in previous studies. This is part of many graduate profiles. The interdisciplinary learning framework promotes the organization of classes around one or two themes that cut across areas of expertise. In a business and digital commerce context, the ability to work in teams is increasingly important. Teams of specialists from different fields, whether engineering, programming, design, marketing or management, come together to solve open-ended problems. A song by Southworth (2015).

9.2. Educational Policy Alignment and Funding Models

The study of telecommunications and the teaching of digital commerce are among the recent priorities of different Governments and Institutions from different countries. Many Countries are working on a national framework for the digital curriculum like guidelines, and policies with the implementation. Education-to-work transition policy frameworks that are student-centric, lifelong learning and skills development-

oriented will strengthen the knowledge economy. Education systems and the workforce are continuously changing which reflects the needs of a social, economic, and industrial scenario. Yet, due to the expansion of digital commerce, educational systems fail to keep pace with labor market requirements. Consequently, a framework that is compatible with national and international standards can ease the implementation and adoption of the curriculum in diverse colleges and universities (Quinton, 2006).

Achieving policy alignment makes funding opportunities possible between stakeholder groups increasing sustainability of implementation and facilitating governance and monitoring of the system. As budgets at the local, regional or institutional levels constrain the program and learning-path funding, a wider funding architecture will ensure that funding capabilities evolve for long-term viability. A wide-ranging strategy fund framework can assist in identifying funding priority areas for support and foster the development of complementary program "mini-grants".

10. Future Trends and Implications for Practice

The rapid evolution of technology and rapid market changes require institutions to develop serious learning offers about digital commerce. Technologies like AI, blockchain, contract automation, and fintech are changing the digital economy and calling the curriculum content and teaching methods into question. Recognising the existence of high turnover in the skills space should drive home the need for a continuous refresh, preferably through a formal process that involves a range of stakeholders assessing future directions.

Secondly, foundations which are linked into higher and continuing education manifest as a competence map of technical skills. Difficulties originating higher in a digital commerce programme require continuous monitoring for that reason. Determining the audience of a course helps in aligning curricular goals, learning targets and lesson designs. The industry's development thus indicates the strategic direction and future relevance of the offering (Quinton, 2006).

Frequent engagement with stakeholders facilitates observing both directions. The ambition to bring a national focus on improving productivity through skills in education, foresight into future requirements, and potentially broader enrolments helps illuminate the 2020–2025 horizon for curricula and associated delivery questions. Furthermore, engaging strategically with the problem assists in providing a structured basis for framing outreach towards commercialisation, recognition of prior learning credits, and alternative pathways for capitalising on existing skills (Orosz et al., 2019).

10.1. Emerging Technologies and Market Dynamics

AI tools and platforms like ChatGPT and Microsoft 365 Copilot have drastically changed the Commerce and Business landscape, whether Digital or otherwise. Artificial intelligence plays a significant role in spontaneous digital transformation. Top-level companies are investing in AI with an eye on gaining competitive advantage and creating value from newer AI technologies and capabilities. Shoppers are adjusting to the product development timelines imposed by new levels of capability. They quickly adopted ChatGPT for understanding, mid-journey for imagery and Dall-E for media. The global industry is witnessing a rapid transformation by digital platforms, business models, and analytics. The emerging Generative AI, decentralized finance (DeFi), blockchain, and web 3.0 are reshaping the basic understanding, working, and handling of data, digital assets, and financial resources disrupting industries in both digital and traditional commerce. Websites and chatbots, like Chat Gpt, are becoming companions to learn concepts, business writing, project management, Data analytics, financial modelling, and many more changing the pace of educational systems and processes. Digital Commerce is on the rise as a second area of specialization after Data Science. To get high priority and ready Universities for Digital Commerce Symposium institutions are working on establishing and implementing programs and departments.

10.2. Resilience, Adaptability, and Continuous Improvement

In view of the current VUCA environment (Vincent, 1993), it is paramount for individuals and organizations to become resilient and adaptable (Marzo-Navarro & Berné-Manero, 2022). The people and processes in academia and industry should be more anticipatory than reactive. Educational institutions, thus, are encouraged to keep abreast of the ever-evolving requirements of the digital commerce marketplace and assess periodically their conformity with the same.

Continuous improvement takes approach that is built on resilience and adaptability and comes with a commitment to always identifying learning needs; developing, delivering, and evaluating responsive curricula in an agile way; and always updating based on stakeholder feedback. Monitoring these days is essential because everything is fast changing including events, technologies, and big consumer preferences. And the external environment too has to be monitored. In addition, Organizations must engage with the stakeholders on a regular basis.

Conclusion

The emergence of digital media, mobile devices and internet technology created the market of digital commerce. It comprises a range of activities, including e-commerce, electronic banking etc. To be able to participate in it, the students should develop competencies and skills to deal with substantial challenges. Government bodies and other stakeholders look for directions to help them establish and implement educational programs as groups of institutions take action to respond to this need.

The Common Framework of Digital Competence's provisions and recommendations and the standards defined by the International Association for the Development of the Information Society (IADIS) not only serve to define what digital commerce is, but also which competences must be developed, with whom the establishment of programmes must be coordinated and how the impact of the implementation of these programmes can be measured.

Governments, policymakers, and industry are declaring their involvement in digital commerce education in response to the increasing demand from citizens and organizations for individuals with the relevant skills and competencies. The framework and recommendations proposed help individuals and institutions involved in the development of education on digital commerce to better respond to the ongoing demand (Marzo-Navarro & Berné-Manero, 2022).

References:

1. Bentley, Y., & Selassie, H. (2012). Evaluation of a global MBA programme. Journal of Pedagogic Development, 2(1). https://www.beds.ac.uk/jpd/volume-2-issue-1/evaluation-of-a-global-mba-programme/

2. Boitshwarelo, B., Reedy, A. K., & Billany, T. (2017). Envisioning the use of online tests in assessing twenty-first century learning: A literature review. Research and Practice in Technology Enhanced Learning, 12(1), Article 17. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6294208/

3. Chopra, S., & Deranek, K. M. (2017). Efficiently teaching engineering and technology students through effective college–industry partnerships. Journal of STEM Teacher Institutes. (No specific pages or DOI found; Google search link provided in source.)

4. Coffin Murray, M., & Perez, J. (2014). Unraveling the digital literacy paradox: How higher education fails at the fourth literacy. Issues in Informing Science and Information Technology, 11, 1-11. https://selid.efos-europa.eu/wp-

content/uploads/2021/06/Problematizing_the_digital_literacy_para-1.pdf

5. Copeland, C., & Thompson, K. (2019). Diversity, accessing ability, and LIS education practices. Journal of Education for Library and Information Science. (No specific pages located; conference paper referenced.) https://www.tandfonline.com/doi/full/10.1080/24750158.2025.2540085

6. Dwika Herdiawan, R. (2019). Authentic assessment in EFL teaching and learning. English Education Journal, 9(1), 1-10. http://repository.upi.edu/36926/1/D_BING_1602788_Title.pdf

7. El Mawas, N., & Muntean, C. (2018). Supporting lifelong learning through development of 21st century skills. EDULEARN18 Proceedings. https://nour-elmawas.com/publis/EDULEARNElMawas2018.pdf

8. Forrester, P., Honal, A., & Bleicher, J. (2019). New approaches for learning analytics and business projects as learning enhancers for students. In Proceedings of the 79th Annual Meeting of the Academy of Management. https://eprints.keele.ac.uk/view/subjects/LB2300.html

9. Holt, D., Mackay, D., & Smith, R. (2004). Developing professional expertise in the knowledge economy: Integrating industry-based learning with the academic curriculum in the field of information technology. Asia-Pacific Journal of Cooperative Education, 5(2), 1-11. http://hdl.handle.net/10536/DRO/DU:30002681**

10. Jara, M., & Mellar, H. (2010). Quality enhancement for e-learning courses: The role of student feedback. Computers & Education, 54(3), 709-720. https://doi.org/10.1016/j.compedu.2009.10.012**

11. Marzo-Navarro, M., & Berné-Manero, C. (2022). Analysing cross-cutting competencies learning in an online entrepreneurship context. Heliyon, 8(10), Article e11058. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9638349/**

12. Miliou, O., & Angeli, C. (2022). Design principles for internet skills education: Results from a design-based research study in higher education. Educational Technology Research and Development, 70(5), 1623-1650. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9395925/**

13. Muvingi, I. J., McKay, J., & Katz, N. H. (2018). Course delivery: Examination of online/distance and hybrid course delivery possibilities: Service learning and experiential

education possibilities. CAHSS Faculty Books and Book Chapters. https://scholars.nova.edu/cahss_books/2/**

14. Nistor, C., & Nyer, P. (2018). A new framework for online business teaching. Theoretical and Applied Economics, 25(2), 41-54. https://digitalcommons.chapman.edu/business_articles/66/**

15. Orosz, B., Kovács, C., Karuović, D., Molnár, G., Major, L., Vass, V., Szűts, Z., & Námesztovszki, Z. (2019). Digital education in digital cooperative environments. Journal of Applied Technical and Educational Sciences, 9(4), 55-69.

16. Parker, C., & Swatman, P. (2001). Web-TRECS: Teaching electronic commerce. Australasian Journal of Educational Technology, 17(1), 86-99. http://hdl.handle.net/10536/DRO/DU:30001089**

17. Pérez, J., & Murray, M. C. (2006). Journey to the center of the core: Computers and the Internet in the core curriculum. Journal of Research on Technology in Education, 38(3), 293-308.

18. Quinton, S. (2006). A brief critique on the future of learning (Assessing the potential for research). [No verifiable source with pages found; Google search provided.]

19. Rossi, R., & Notargiacomo Mustaro, P. (2022). eQETIC: A maturity model for online education. arXiv. https://arxiv.org/abs/2201.11621**

20. Song Southworth, S. (2015). Preparing students for careers in multichannel retailing using an authentic experiential learning project. Journal of Higher Education Theory and Practice, 15(3), 85-92. https://digitalcommons.georgefox.edu/cgi/viewcontent.cgi?article=1109&context=gfsb**

21. Vishnu, S., Raghavan Sathyan, A., Susan Sam, A., Radhakrishnan, A., Olaparambil Ragavan, S., Vattam Kandathil, J., & Funk, C. (2022). Digital competence of higher education learners in the context of COVID-19 triggered online learning. Frontiers in Education, 7, Article 935225. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9364721/**

22. Wing, T. J. (2018). The effects of formative and summative assessment on student's connectedness, satisfaction, learning and academic performance within an online healthcare course (Publication No. 10820551) [Doctoral dissertation, Boise State University]. ProQuest Dissertations and Theses Global.

23. Eddy, P. L., & Lawrence, A. (2013). Wikis as platforms for authentic

assessment. Innovative Higher Education, 38(4), 253-265. https://doi.org/10.1007/s10755-012-9239-3**