

A case for the introduction of cooperative education in the Nigerian education system

MONISOYE 'SOLA AFOLABI

Crown-Hill University, Ilorin, Nigeria

MOYOSOLA 'KEMI MEDU¹

Carleton University, Ottawa, Canada

Youth unemployment remains a major political and socioeconomic challenge in sub-Saharan Africa, including Nigeria, particularly given the region's young population. Literature points to two key barriers facing youth employment in the region, skills deficiencies and weak fundamentals that inhibit job creation and growth. Labor supply challenges are not unique to the younger population, and employment interventions adopted by the Nigerian government to combat these challenges in the formal wage sector, are primarily focused on graduates and non-graduates. This paper makes a case for encouraging the education system, employers, and governments to better prepare post-secondary students for the labor market before graduation through cooperative education. Cooperative education, a strategic policy response geared towards increasing youth employability and smoothing school-to-work transition, can help address the gap in the current suite of government intervention strategies and allow for a more proactive, dynamic and progressive response.

Keywords: Cooperative education, Nigeria, youth unemployment, school-to-work transition, labor supply challenge

Young Nigerians continue to find it challenging to enter the labor market when they complete their education. A big concern is that the youth unemployment rate is higher with more advanced levels of educational attainment. In 2019, the unemployment rate among those with advanced education was 15% compared to 9% for their counterparts with primary education. This trend, also prevalent in other sub-Saharan African (SSA) countries, suggests that the education systems across the continent are not sufficiently preparing young people to transition to employment.

SSA's youth population represents an enormous opportunity, particularly now, when populations in much of the world are ageing rapidly. According to the International Labour Organization (ILO, 2020), the population of young people aged 15–24 is expected to reach 283 million by 2030 in SSA; compared to 1990, the absolute population size of this age group will likely triple by 2030. As one of the largest SSA economies, Nigeria's youth population growth is expected to account for a significant portion of the projected increase in SSA.

The growing number of educated youths constitutes an essential resource of growth and development for SSA. However, this growth can exacerbate existing civil conflict and social tensions if it is not adequately leveraged. As stated in Filmer and Fox (2014):

Realizing this brighter vision for Africa's future, however, will require a clearer understanding of how to benefit from this asset. Meeting the youth employment challenge in all its dimensions—demographic, economic, and social—and understanding the forces that created the challenge, can open potential pathways toward a better life for young people and better prospects for the countries where they live. (p. 2)

The international literature on youth unemployment suggests a multipronged intervention to address

¹ Corresponding author: Kemi Medu, kemimedu@cmail.carleton.ca

labor demand and supply constraints across multiple dimensions. For example, ILO (2012) notes two factors, the low growth rate of the economy and the limited relevance of the education and training system, that play a critical role in explaining youth unemployment and subsequent government responses across SSA countries. Similarly, Betcherman and Khan (2018) note that the main barriers for young people in SSA are skill deficiencies and weak fundamentals (for example, poor infrastructure, weak governance, and limited access to credit) that constrain job creation in the region.

Labor demand challenges facing young people in SSA are not unique to the younger population. Infrastructure deficiencies, weak governance, corruption, and limited access to finance are just a few of the pervasive issues across the region (African Development Bank [AfDB] et al., 2012). However, issues specific to young people mainly come to the fore on the labor supply side through concerns about human capital development.

An inadequately educated workforce has been highlighted in the literature as one of the most critical obstacles to doing business in Africa, regardless of firm size and sector (AfDB, 2019). Similarly, AfDB et al. (2012) note that lack of skills is one of the primary labor market challenges youths face and highlight mismatches between the needs of the labor market and skills offered by young people.

Independent Evaluation Group (2013) notes that programs that combine smoothing the transition from school to work with work-based skills development appear to be most effective for youth employment and earnings in countries with a formal sector. Supportive policy responses, including encouraging entrepreneurship, apprenticeship/internships and growing the technical and vocational education and training system, are promoted in the literature, and can be found in the current Nigerian national strategic and policy responses, including the National Youth Policy and the Medium-Term National Development Plan (MTNDP) 2021-2025, as interventions to address skill mismatches and promote youth employment (Federal Republic of Nigeria, 2021).

However, cooperative education (co-op), a strategic policy response geared towards smoothing school-to-work transition, adopted in various countries across the world, has yet to fully permeate Nigeria's policy discourse. Co-op is an educational strategy that combines academic learning in the classroom with real-world practice in a relevant workplace (Eames & Coll, 2010). This paper presents a case for co-op as a pathway for improving skill development and smoothing school-to-work transition among Nigerian youths. It centers on a single country case study in order to identify relevant lessons for policymakers, who operate within national systems. Though the paper focuses on the Nigerian experience, the policy response has broader implications for other countries in SSA and the rest of the world.

DEFINITION OF ADOPTED CONCEPTS

There is no universally accepted definition of youth. The Nigerian National Youth Policy released in 2019 defines youth as young people in Nigeria between the ages of 15 and 29 years (Federal Republic of Nigeria, 2019). The United Nations adopts a slightly narrower definition for statistical purposes and considers youth as persons falling between 15 and 24 years inclusive (United Nations General Assembly, 1985). The UN definition is adopted in this paper to allow for cross-country and regional comparisons.

AfDB (2015) generally groups skills needed in the workforce into two main categories: hard and soft skills. Hard skills (or technical skills) refer to performing specific tasks, such as operating a tool or

machine. Soft skills refer to a broader array of applied knowledge and more generic skills needed in the workplace. Accordingly, skills development in this paper refers to both hard and soft skills.

There is currently no standard definition of experiential learning, also known as learning by doing or work-integrated learning, (WIL). May (2018) includes the following definition: "The process through which students come to learn from experiences in educational and practice settings. It includes the kinds of curriculum and pedagogic practices that can assist, provide, and effectively integrate learning experiences in both settings" (p. 9).

According to (Wallin et al., 2019), experiential learning includes co-op internships, community service learning, applied research, work experiences, apprenticeships, and entrepreneurship. Co-op is a form of experiential learning that is fully integrated into the curriculum and transforms the learning process.

The main question of this paper can thus be reframed as: how can co-op help transform the supply of skills (hard and soft) produced by education systems to enable smoother transition from school to work and meet the complex and evolving skills demand of the Nigerian labor market?

OVERVIEW OF YOUTH UNEMPLOYMENT AND LABOR FORCE PARTICIPATION IN NIGERIA

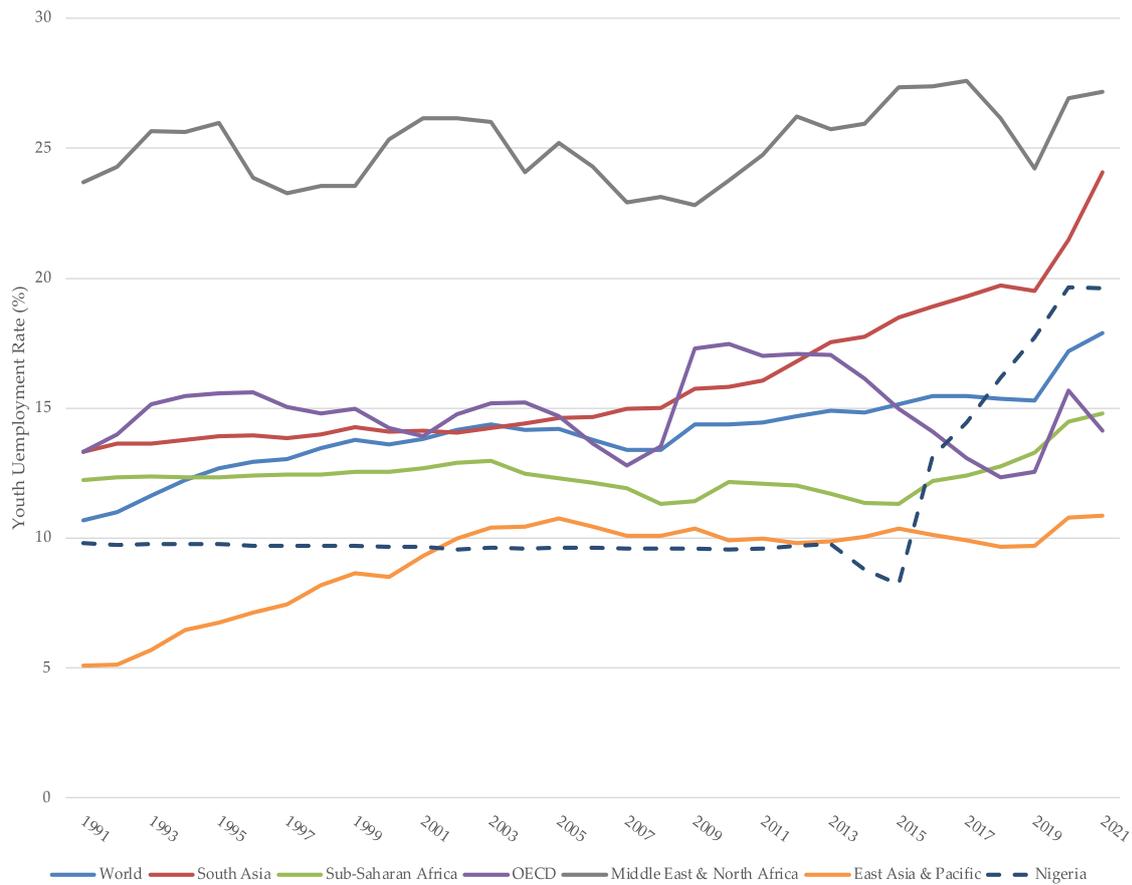
This section highlights trends in standard labor market indicators as the primary focus is the formal wage sector. However, it would be remiss not to mention that international literature point to several features of the labor markets in SSA economies that limit the thorough understanding and applicability of conventional labor market indicators, including: limited social protection (for example, minimum wage and unemployment benefits); small wage sector; predominance of the informal and agricultural sectors; the prevalence of personal networks to secure jobs; and limited labor market data availability.

Youth Unemployment

Figure 1 presents the youth unemployment rate in Nigeria and select regions from 1991 to 2021. The figure shows that the youth unemployment rate was historically lower in Nigeria than in most regions, including SSA. This trend has shifted in recent years, and by 2021, the Nigerian youth unemployment rate was higher than most regions included in the chart except South Asia and the Middle East and North Africa.

Baah-Boateng (2016) notes that SSA's low unemployment rates, as defined using ILO standards, understate the actual unemployment rate because they do not include discouraged workers, informal sector workers, and underemployed workers. Even with low unemployment, earnings are often poor and precarious with limited benefits and access to meaningful formal social protection (Betcherman & Khan, 2018).

FIGURE 1: Youth unemployment rate Nigeria and select regions: 1991 to 2021.



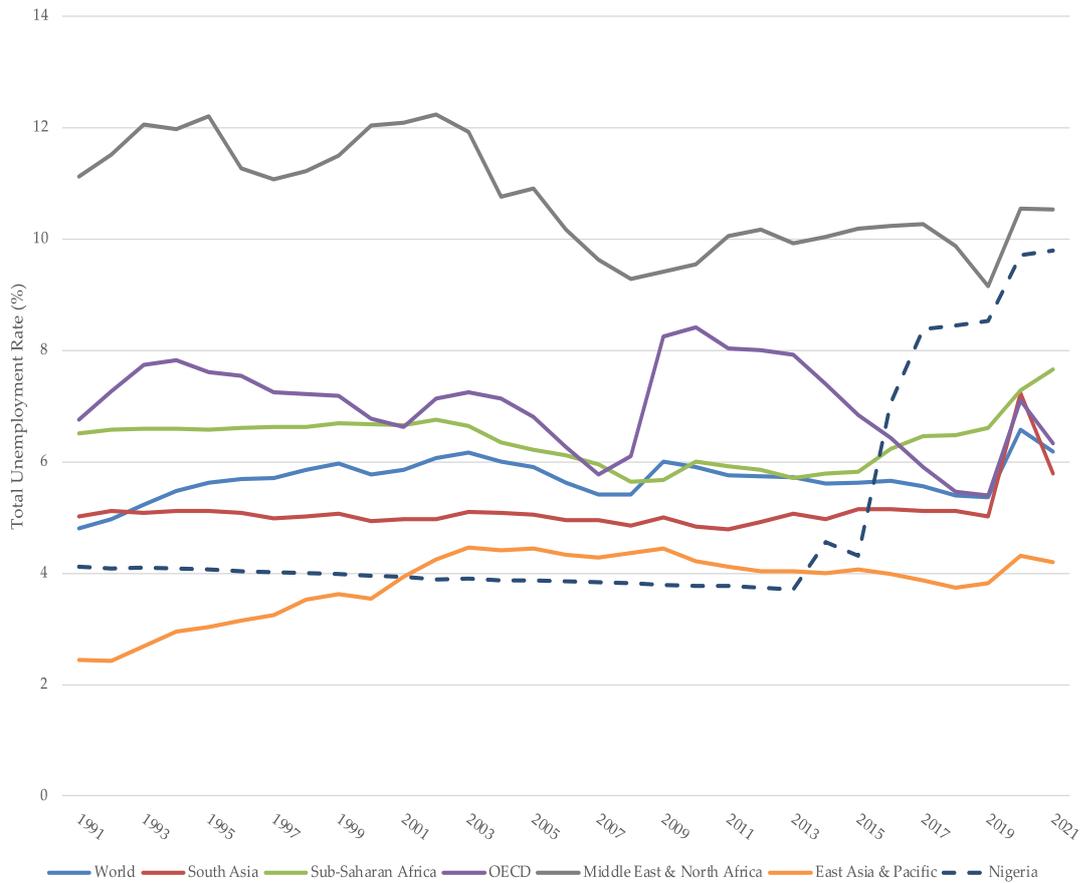
Note. Data sourced from: *World Development Indicators 1991-2021*, by the World Bank, 2022, (<https://databank.worldbank.org/source/world-development-indicators#>). CC BY 4.0.

Total Unemployment

Figure 2 presents the total unemployment rate for Nigeria and select regions. The Nigerian unemployment rate follows a similar pattern as youth unemployment, historically lower than most regions and increasing in recent years. More importantly, the youth unemployment rates in all regions represented are higher than the total unemployment rate. In Nigeria, the youth unemployment rate is at least double the total unemployment rate in majority of the time period included in the chart.

Blackaby et al. (1999) show how the difference in unemployment incidence is likely due to several factors, including job shopping by younger workers. Anyanwu (2013) highlights other factors from the literature to explain labor market bias against younger workers, including ease of dismissal compared to older and more established employees, and a disproportionate share of youth as new job seekers.

FIGURE 2: Total unemployment rate Nigeria and select regions: 1991 to 2021.



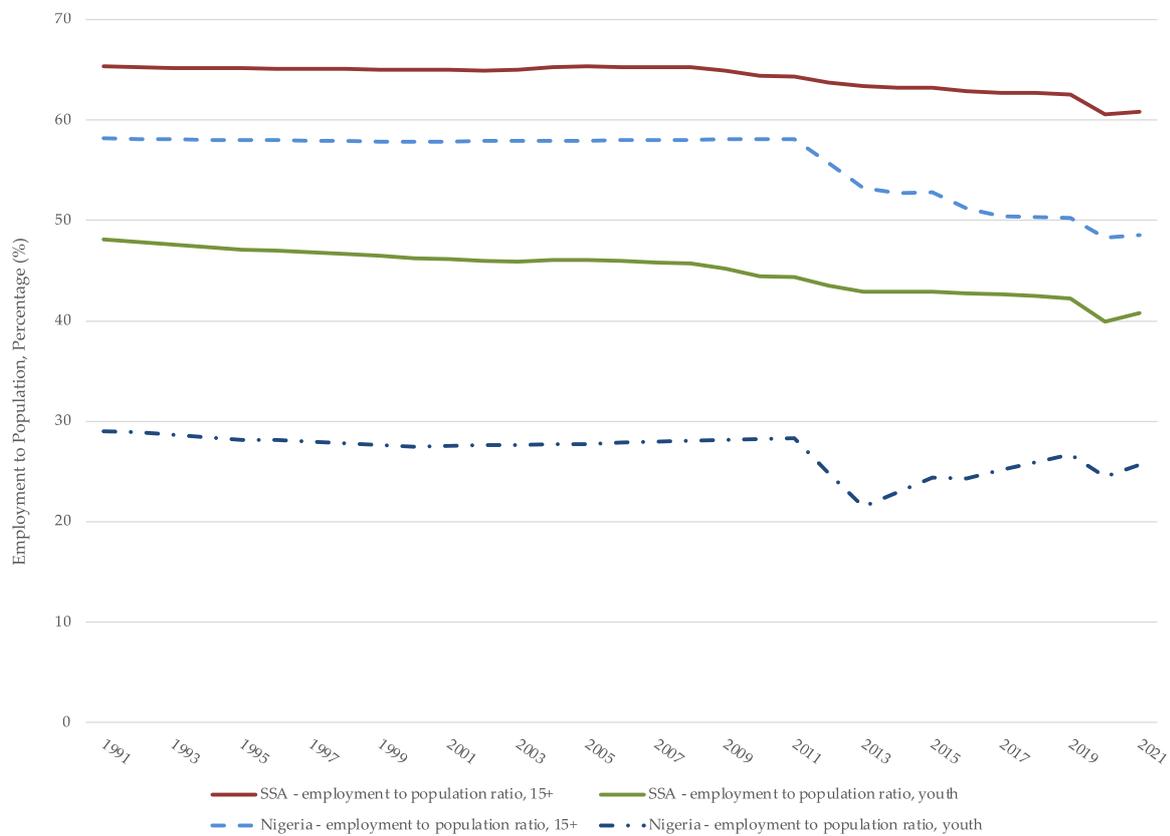
Note. Data sourced from: *World Development Indicators 1991-2021*, by the World Bank, 2022, (<https://databank.worldbank.org/source/world-development-indicators#>). CC BY 4.0.

Employment to Population Ratio

Figure 3 presents the employment-to-population for the working population (including youth) in Nigeria and SSA between 1991 and 2021. The employment-to-population ratio is an important indicator as it assesses the ability of an economy to accommodate those who are willing to work. In other words, the ratio measures the degree to which an economy is utilizing its labor resources. By placing employment in the context of the population, the employment-to-population ratio allows for more meaningful comparisons over time and across countries than the unemployment rate.

In 2021, the difference between the total and youth employment ratio in Nigeria and SSA was about 20 percentage points. The lower youth employment-to-population ratio suggests that a higher proportion of youth are without employment compared to the total working population. The low ratio is also indicative that the country still has a way to go in meeting the eighth Sustainable Development Goal adopted by all United Nation Member States to "promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all" (United Nations, n.d.).

FIGURE 3: Nigeria & SSA total & youth employment to population ratio in unemployment rate: 1991 to 2021.



Note. Data sourced from: *World Development Indicators 1991-2021*, by the World Bank, 2022, (<https://databank.worldbank.org/source/world-development-indicators#>). CC BY 4.0.

Other Characteristics of the Labor Market

Other youth labor market trends relevant to this discussion have been identified in the literature. They include the predominance of the informal sector as well as educational attainment, regional and gender disparities. ILO (2020) notes that informality is most pervasive in sub-regions such as SSA and a large number of young people in SSA are not in employment, education or training (NEET). In 2019, the proportion of young people with NEET status in Nigeria was 28% compared to 13% for OECD countries. A characteristic of the youth NEET is stark gender disparity with much higher NEET rates among young women.

Baah-Boateng (2016) also notes that youth unemployment rates are higher among the educated than the less educated or uneducated in Africa, and shows five countries (Ghana, Malawi, Mali, Nigeria & Uganda) with higher youth unemployment rates among university graduates than all other levels. He suggests that the development indicates educated graduates are better able to afford to be unemployed, because of the limited attractiveness of the informal sector to those with higher levels of education.

Finally, ILO (2012) notes that in Africa more generally:

- youth unemployment rates are higher in urban areas compared to rural areas,
- youth unemployment rates are higher among females compared to males and,

- youth with little (or no) education or with the most education have lower rates of unemployment compared to youth with intermediate levels of education.

HISTORY AND CHARACTERISTICS OF COOPERATIVE EDUCATION

The history of the co-op concept can be traced back to industrialized countries particularly the United Kingdom, United States, Canada and Australia. In the United States, the introduction of co-op programs was primarily motivated by the need for better-prepared engineers. In the early twentieth century, industrial expansion increased the demand for engineering and technological education (McCallum & Wilson, 1988). The Canadian experience was an extension of the United States' experience as founders of the University of Waterloo, the first Canadian co-op program, saw co-op as "the best way to serve the growing science and technology needs of the community and, indeed, the country" (McCallum & Wilson, 1988, p. 61).

Co-op programs are also offered in post-secondary institutions in SSA countries, including South Africa and Namibia. According to Reinhard et al. (2016), "technikons, otherwise known as universities of technology, implemented the cooperative education system in the 1970s and 1980s, with six months study time, and six months working time" (p. 250). In Namibia, the Namibia University of Science and Technology (NUST) established a Centre for Cooperative Education in 2010 and adopted its first co-op policy in 2011 (Reinhard et al., 2016).

According to Groenewald and Schurink (2003), the co-op construct can be categorized into three core dimensions: (a) the integrated curriculum, (b) learning derived from work experience and (c) the logistical organization and coordination of the learning experience. In essence, the success of co-op programs not only hinges on integrating all three dimensions but also on close collaboration between universities, industry, and government to ensure the economy is fueled by a workforce that fully meets the demands of a knowledge and technology-driven society.

Co-op is offered through two main models (Grubb & Villeneuve, 1995). In the first model, students alternate between semesters in school and the workplace. This cycle is repeated several times until graduation. The parallel method splits the day between school and work and is typically structured to accommodate student's class schedules. Other models, such as the sandwich model and the new American model, have students work a 40-hour workweek for a set amount of time, typically between 12 weeks and six months. Following the work-based experience, students return to school for an academic semester, after which they may have another work term. This cycle repeats multiple times, adding a year or more to the student's university career. In this model, students do not receive a summer break from school; instead, they work or are in school for 12 months.

Co-op proponents (e.g., Haddara & Skanes, 2007; Weisz & Chapman, 2004) identify benefits for students (including higher earnings, increased motivation, career clarity, enhanced employability, vocational maturity and potential professional certification waivers based on acquired work experience), employers (including labor force flexibility, recruitment/retention of trained workers and input into curricula), educational institutions (including enhanced relationships with industry, curriculum development, staff development and increased university prestige and reputation as a school of choice) and society (including improved labor market outcomes and labor productivity).

There is a financial cost associated with the co-op model. Weisz and Chapman (2004) estimate that the total cost to the institution for each co-op student is about AUD 3,144 (currently about USD\$2,000) per year. This estimated cost in Nigeria is anticipated to be lower given the marked differences in earnings

and living standards between countries. Also, associated costs are typically shared by employers, training institutions and governments in countries with co-op programs.

LITERATURE ON THE BENEFITS OF COOPERATIVE EDUCATION

Several studies have attempted to demonstrate the benefits of co-op programs and develop economic models to quantify financial gain (Weisz & Chapman, 2004). However, beyond informal and anecdotal evidence, a familiar refrain in the literature is the lack of high-quality research (Bartkus & Stull, 1997; Wilson, 1988). Recent literature reviews highlight the research's growth and maturity, including increased theoretical development and research complexity (Bartkus & Higgs, 2011; Zegwaard & Coll, 2011).

The importance of the nuance in program design and implementation is highlighted in Alam and de Diego (2019), where it is noted that the current evidence around the impact of programs to strengthen school-to-work transition presents a mixed record of increasing employment and earnings. Almost 70% of the programs evaluated are not effective in raising employment and income for beneficiaries. However, some specific design and implementation features are consistently associated with higher effectiveness amongst those evaluated. These include comprehensive programs that provide a diversified package of interventions corresponding to the multiple constraints of the beneficiaries (such as programs that combine classroom training, internship/work experience, job search assistance, counselling, life skills training, and entrepreneurship).

There is some survey evidence of the efficacy of the co-op model in promoting school-to-work transition and improving employment outcomes albeit mainly from developed regions. Harvey et al. (1997) document the findings of a major survey conducted in the United Kingdom, which included about 260 interviews with employers and employees in approximately 90 organizations. They found that "respondents overwhelmingly endorsed work-based placements as a means of helping students develop attributes that would help them to be successful at work" (Harvey et al., 1997, p. 293).

Ferguson and Wang (2014) documents the results of a survey of post-secondary students in Canada who graduated between 2009 and 2010. The survey was conducted three years after graduation and findings highlight a number of labor market benefits for graduates who completed co-op programs while in school. College and bachelor graduates who participated in co-op and did not pursue further studies, had higher employment rates than their counterparts and the difference was more pronounced for bachelor degree graduates. Co-op graduates at both levels also experienced lower unemployment rates and reported better occupation-to-field-of-study matches. Also, at the bachelor level, graduates with cooperative work experience had higher earnings than other graduates.

Similarly, Jiang et al. (2015) analyze three years of undergraduate cooperative job postings and work term evaluations from a large Canadian institution. The data set includes 36,615 evaluation pairs (evaluation of the student by the employer and an evaluation of the employer by the student) from 19,093 job placements of engineering students with 4,709 employers located in 76 countries around the world. The results suggest that students performed better at work and found placements with an increasing emphasis on leadership in their senior years. Also, senior students acquired non-engineering skills that increased their ability to qualify or seek out more diversified placements.

More recently, Galarneau et al. (2020) documents the results of another Canadian graduate survey, the 2018 National Graduates Survey, that examines the participation of 2015 postsecondary graduates in WIL, such as a co-op placement, internship, practicum or clinical placement. The results also suggest

that graduates who participated in WIL in school were more likely to be employed in their field of study and were less likely to be overqualified for the job they held three years after graduation. Among bachelor degree graduates, 32% of those who participated in WIL were overqualified for their job, compared to 49% of non-participants. Also, bachelor degree graduates who participated in WIL had higher employment earnings than those who did not participate in WIL. A difference in employment earnings of 7% was observed between these two groups among all employed bachelor's graduates, as well as bachelor's graduates who worked full time.

Finally, Chopra and Golab (2022) investigate prospective students' perceptions of co-op by analyzing over 33,000 applications to undergraduate engineering programs in a large North American university. Results suggest that prospective students were attracted to co-op programs to learn new skills, gain practical work experience leading to a desirable career, and leverage the reputation and size of the institution's co-op program.

In summary, the presented evidence generally highlights a host of tangible benefits of co-op for students, employers, educational institutions, and society. The findings from prospective students suggest minimal variation between perceived benefits of co-op and reality experienced by students. The importance of select program design and implementation features is also highlighted in the presented evidence. While the evidence is mainly from developed countries, it is arguably generalizable and provides valuable insights of the anticipated benefits of co-op education for Nigerian students, employers, educational institution and society.

PRACTICAL OVERVIEW OF COOPERATIVE EDUCATION

This section provides a high-level summary abstracted from current programs in SSA and North America to provide a practical overview of how co-op programs work. The examples provided in this section are primarily derived from the University of Waterloo, Canada, and Namibia University of Science and Technology (NUST).

Universities currently offer co-op across a broad range of academic undergraduate programs: sciences (for example, computing, engineering, mathematics and health), social sciences and arts (for example, economics, sociology accounting and history). Some universities also offer co-op as part of their graduate level programs. University of Waterloo, North America's largest co-op program, currently offers over 100 co-op programs.

To be eligible for co-op, students are expected to be in good academic standing according to university policies and standards and follow a sequence of courses assigned by the university program of study. Co-op students take the same number of courses as non-co-op students and are often required to complete at least the first year (or at a minimum the first two semesters) of their program before they are eligible for co-op. Table 1 presents an example of a possible sequence of progression based on the 'alternating' co-op model. In this example, a student will complete five co-op terms, equivalent to 20 months (close to two years) of work experience.

TABLE 1: Cooperative education/study sequence example.

Year	First Semester	Second Semester	Third Semester
First	School	School	Off
Second	School	Co-op	School
Third	Co-op	School	Co-op
Fourth	School	Co-op	School
Fifth	Co-op	School	Graduation

Note. Semester = four month academic or work term; Off = time off school

Co-op is often funded by a fee students pay each co-op term. Students pay tuition during their academic term and pay a co-op fee during their work term. The co-op fee allows students to maintain their full-time status during co-op while helping to cover some of the co-op program related costs accrued by the universities. The ability to recoup some of the costs associated with running a co-op program helps minimize funding impact on other areas of the university (including faculty salaries). Arguably, universities also have latitude over enrolment and can strike a balance between co-op and non-co-op student population to further mitigate the funding impact.

Universities typically require that students receive some form of compensation for their co-op work terms in order to receive credit. This compensation can vary depending on employer, program of study, work term level or general work experience. While the determination of compensation typically occurs between the employer and student, universities often provide resources to help support and guide the process.

Universities that offer co-op programs have a co-op unit or department with dedicated staff, expertise and funding. For example, the University of Waterloo, Canada, has a co-op department while Namibian University of Science and Technology has a Cooperative Education Unit. The need for logistical organization and co-ordination of co-op programs has been identified in the literature (for example, Groenewald & Schurink, 2003) as one of the crucial elements of ensuring success of co-op programs.

Other elements that are arguably crucial to the success of co-op program is quality assurance through registration or accreditation as well as establishment and alignment with relevant quality frameworks and employment standards legislation. Internationally, many universities that offer co-op are members of the World Association for Cooperative Education (WACE) previously known as the World Council and Assembly on Cooperative Education. Founded in 1983, WACE is the only international professional organization dedicated to developing, expanding, and advocating for co-op.

Canadian universities that offer co-op programs are also members of Co-operative Education and Work-Integrated Learning Canada (CEWIL). CEWIL was established in 1979 to regulate post-secondary co-op programs in Canada and ensure the quality of programs through accreditation. Canadian co-op programs are also guided by the quality principles including those articulated in the *Work-Integrated Learning Quality Framework* (McRae et al., 2018) and Canadian employment standards regulations.

In SSA, Namibia University of Science and Technology is a member of the Southern African Society for Co-operative Education (SASCE), a non-profit organization that promotes the integration of academic studies with WIL. Admittedly, SASCE is more of an advocacy than accreditation body but does highlight the importance of cross collaboration to promote the quality of co-op.

RECENT NIGERIAN GOVERNMENT RESPONSES TO YOUTH UNEMPLOYMENT CHALLENGE

Various administrations have introduced programs to address poverty and youth unemployment in Nigeria. Akande (2014) notes that the measures that have been implemented to date, can be classified into three main categories: labor demand, labor supply and labor market interventions. Labor demand strategies create jobs immediately through public works or create specific positions in the private sector to promote entrepreneurship and skills enhancement. Labor supply strategies are focused on training and educating prospective job seekers. The labor market intervention strategies are concentrated on improving the labor market and matching labor demand and supply.

Three examples of recent policy responses are the Students Industrial Work Experience Scheme (SIWES), Subsidy Reinvestment and Empowerment Programme (SURE-P) and the National Social Investment Programme (N-SIP). All three initiatives arguably include different labor policy interventions embedded in their design.

The Federal Government of Nigeria introduced SIWES in 1973-74 which is a skills training program designed for universities, polytechnics, and Colleges of Education. The scheme was created to bridge the gap between the theory taught in the classrooms and professional practice by familiarizing students with the work methods, techniques, equipment, and machinery used in the workplace. The scheme is funded by the Federal Government of Nigeria and jointly coordinated by the Federal Government of Nigeria, Industrial Training Fund (ITF), Nigeria Universities Commission (NUC), National Board for Technical Education (NBTE) and National Commission for Colleges of Education (NCCE). SIWES forms part of the approved minimum academic standards and compulsory graduation requirement in select degree programs in all Nigerian universities. (National Open University of Nigeria, n.d.). The scheme is often about six months in duration and typically occurs during vacation breaks between school semesters.

The SURE-P was introduced in February 2012 by former President Goodluck Jonathan's administration and was in place for about three years. The program focused on managing and investing federal government savings derived from the partial removal of the subsidy on petroleum products. SURE-P was an umbrella program and included the Graduate Internship Scheme (GIS), Community Services Scheme (CSS), Vocational Training Scheme (VTS), and Community Services, Women and Youth Empowerment (CSWYE). Of relevance to this paper is the GIS, which offered unemployed graduates the opportunity to undergo a one-year internship in areas related to their disciplines in both the private and public sectors.

Former President Buhari's administration introduced N-SIP in 2016. N-SIP is also an umbrella program and includes Home-Grown School Feeding Programme (HGSFP), Job Creation Programme (N-Power), and the Government Enterprise Empowerment Programme (GEEP), the Conditional Cash Transfer (CCT). Of particular relevance is the N-Power program, the job creation and youth empowerment initiative focused on improving young Nigerians' employability and income status ActionAid Nigeria (2019).

The N-Power program comprises two broad categories: N-Power Graduate and N-Power Non-Graduate. The N-Power Graduate, known as N-Power Volunteer Corps, is a post-tertiary engagement initiative, a two-year paid volunteer program, for Nigerians between 18 and 35. The N-Power Non-Graduate category is a training and empowerment initiative for non-graduates and offers training and certification programs for successful candidates.

Reviews and evaluations of the different programs have been conducted over time. For SIWES, studies such as Ukwueze (2011) highlight the positive impact of the scheme on students' early career success and employability. On the other hand, other studies highlight the challenges that inhibit the full realization of the scheme's objective, including poor placement matches, inadequate funding and supervision of students by some institutions (Alao et al., 2022; Ojokuku et al., 2015; Onihunwa et al., 2020). For SURE-P and N-SIP, several studies highlight the strengths and successes of the various schemes (for example, ActionAid Nigeria, 2019; Tochukwu, 2019). However, they also note challenges (including inadequate funding, complex governance and administration) and provide recommendations for improvement to ensure that N-SIP programs have the intended and sustained effects across the country.

THE CASE FOR COOPERATIVE EDUCATION AS A NATIONAL GOVERNMENT RESPONSE IN NIGERIA

The continued persistence and prevalence of youth unemployment suggests that more needs to be done to improve youth employability and smoothen work transitions, particularly among post-secondary students. The target groups for the SURE-P and N-SIP government intervention programs have primarily been graduates and non-graduates. Admittedly, the target group of the SIWES scheme is students in tertiary institutions. However, Mafe, (2009) as cited in Onihunwa et al. (2020) notes that students are the key actors in the SIWES scheme and are directly involved in its implementation. All other stakeholders, government, and institutions, play a lesser role in the actual training process. Also, as previously noted, SIWES typically takes place between academic semesters.

This characterization of SIWES is more aligned with other forms of experiential learning where workplace training is not integrated into the academic calendar and employers and institutions do not work closely together and are only connected through the student (for example, internships). Omonijo et al. (2019) considers SIWES to be similar to an apprenticeship and compares the scheme to apprenticeship schemes in the United States, Turkey and Germany.

There is very little attention devoted to addressing post-secondary students' labor supply challenges to ensure that their academic curricula and course content are well orientated towards employer needs. As such, there remains a role for co-op to play in improving employability and improving school-to-work transitions for students. One of the unique constructs is the increased alignment between university training and industry needs built on a reciprocal relationship and supported by an integrative and reflective pedagogical structure.

In addition, a number of strategies contained in Nigeria's Medium-Term National Development Plan: 2021-2025 are geared towards developing a partnership framework with industry by identifying skills gaps and designing skills development programmes aligned to meet the demands of the emerging labor market with a particular focus on the needs of the fourth industrial revolution (Federal Republic of Nigeria, 2021). The need to bridge the gap between theory and practice and better prepare for an industrial expansion led to the introduction of the SIWES scheme. It also led to the development of co-op in North America. The continued relevance of this need in the Nigerian economy speaks to the opportunity for a more refined and dynamic response.

The co-op construct aligns with the federal government's current policy response. A federally driven co-op initiative will be unique to Nigeria as co-op in other countries is typically spearheaded by training institutions. It is worth contemplating the proposal of the federal government championing the

development and growth of co-op in Nigeria, given the high level of synergy between co-op and the SIWES and N-Power programs.

Co-op could be envisioned as a contemporary of the SIWES program or a distinct target group of the training and empowerment Non-Graduate category of the N-Power program. Integrating the co-op initiative within existing government strategies will allow the federal and state governments to leverage existing program infrastructure and partnerships with industry. This integration also allows for pilot testing of the co-op construct before a full-scale rollout. As an employer, federal and state governments could also act as role models by providing practical experience opportunities in ministries and public institutions to encourage private sector participation and involvement.

The value-added proposition for private sector employers is strong. Through co-op, employers will have the opportunity to 'grow their own' employees by helping design curriculum and pedagogy that precisely provide the required mix of hard and soft skills. Increased collaboration between employers and post-secondary institutions will ensure that students and graduates (including those who participate in the N-Power Graduate program) are better prepared for the workplace.

The value-added proposition for post-secondary institutions is also quite strong, given that the requisite political will and industrial partnerships are already in place. Federal and state governments could mitigate the anticipated costs to institutions and employers through tax credits to employers, government grants to participating institutions or increased budget allocations to public institutions.

It is recommended that the 'alternating' co-op model, one of the predominant co-op models, be adopted for this initiative. Co-op programs are structured so that each study term (or semester) is alternated with a term (or semester) of work (practical learning). Work terms typically last four months, but work terms of eight months or longer are available at co-op programs in Canada and the United States. Since the co-op participation involves multiple work terms, a typical co-op student will work three or more work terms, gaining at least a year of career-related work experience before graduation. Theoretically, this model gives students a better opportunity to delve deeper into workplace projects, build stronger relationships with employers, and take on more responsibility over time (Kelly et al., 2015).

CONCLUSION LITERATURE CONTRIBUTION AND OPPORTUNITIES FOR FUTURE RESEARCH

As increased numbers of young workers enter the Nigerian labor market every year, the need to create employment opportunities becomes even more pressing. Youth employment issues are a significant concern for many countries, including Nigeria, due to their negative effect on the welfare of young people and adverse effect on economic performance and social stability.

This case study lays out an argument for encouraging the education system, employers, and governments to better prepare youths for the labor market through co-op. The world of work is changing, and with that comes the need to evolve from the prevailing 'one-size-fits-all' to a 'fit-for-future' integrative approach to higher education. Co-op can go a long way in helping foster the requisite collaboration partnerships between universities, employers, and governments to achieve that innovative vision. This case study contributes to the existing literature by presenting a theoretical argument of the importance of co-op education interspersed with practical examples to encourage its adoption in Nigeria.

While the proposed integration of the co-op program within the existing government programs is expected to go a long way to improve outcomes of students and graduates, the reality is that Nigerian

federal and state governments cannot solely 'train their way' to more and better jobs and outcomes for youths. International literature on youth unemployment suggests a multipronged intervention to address labor demand and supply constraints across multiple dimensions. Policies aimed at addressing the economic, political, business, social and cultural environments all play a critical role. In addition, the recent change in government provides the opportunity to re-imagine and develop more comprehensive and proactive responses to ensure that the Nigerian economy is best positioned to respond to the industrial revolution's needs both now and in the future.

Additional research is required on several fronts to further refine the co-op approach adopted in Nigeria, including determining the: proper management structure for the co-op system; appropriate models or templates for different programs and tertiary institutions; and the applicability of co-op or other forms of experiential learning to non-tertiary education systems.

REFERENCES

- ActionAid Nigeria. (2019, May 27). *2018 Third-party monitoring report on the National Social Investment Programmes (NSIP)*. <https://nigeria.actionaid.org/publications/2019/2018-third-party-monitoring-report-national-social-investment-programmes-nsip>
- African Development Bank. (2015). African development report: Chapter 5: *Africa's youth in the labour market*. <https://www.afdb.org/en/documents/document/african-development-report-2015-chapter-5-africas-youth-in-the-labour-market-89692>
- African Development Bank. (2019). *African economic outlook (AEO) 2019*. <https://www.afdb.org/en/documents/document/african-economic-outlook-aeo-2019-107319>
- African Development Bank, Organisation for Economic Co-operation and Development, United Nations Development Programme & United Nations Economic Commission for Africa. (2012). *African economic outlook 2012*. <https://doi.org/10.1787/aeo-2012-en>
- Akande, T. (2014, September 23). *Youth unemployment in Nigeria: A situation analysis*. <https://www.brookings.edu/blog/africa-in-focus/2014/09/23/youth-unemployment-in-nigeria-a-situation-analysis/>
- Alam, A., & de Diego, M. E. (2019). *Unpacking school-to-work transition: Data and evidence synthesis*. UNICEF. https://data.unicef.org/wp-content/uploads/2020/01/Unpacking-School-to-Work-Transition-Scoping-Paper_2019.pdf
- Alao, O., Osanyinro, J., & Alao, P. (2022). Achieving the effectiveness of the students industrial work experience scheme for sustainability of the Nigerian economy. *International Journal of Work-Integrated Learning*, 23(3), 393-404.
- Anyanwu, J. C. (2013). Characteristics and macroeconomic determinants of youth employment in Africa. *African Development Review*, 25(2), 107-29. <https://doi.org/10.1111/j.1467-8268.2013.12019.x>
- Baah-Boateng, W. (2016). The youth unemployment challenge in Africa: What are the drivers? *Economic and Labour Relations Review*, 27(4), 413-31. <https://doi.org/10.1177/1035304616645030>
- Bartkus, K. R., & Higgs, J. (2011). Research in cooperative and work-integrated education. In R. K. Coll & K. E. Zegwaard (Eds.), *International handbook for cooperative and work-integrated education: International perspectives of theory research and practice* (pp. 73-84). World Association for Cooperative Education.
- Bartkus, K. R., & Stull, W. A. (1997). Some thoughts about research in cooperative education. *Journal of Cooperative Education*, 32(2), 7-16.
- Betcherman, G., & Khan, T. (2018). Jobs for Africa's expanding youth cohort: A stocktaking of employment prospects and policy interventions. *IZA Journal of Development and Migration*, 8, Article 13. <https://doi.org/10.1186/s40176-018-0121-y>
- Blackaby, D., Leslie, D., Murphy, P., & O'Leary, N. (1999). Unemployment among Britain's ethnic minorities. *The Manchester School*, 67(1), 1-20. <https://doi.org/10.1111/1467-9957.00130>
- Chopra, S., & Golab, L. (2022). Undergraduate engineering applicants' perceptions of cooperative education: A text mining approach. *International Journal of Work-Integrated Learning*, 23(1), 95-112.
- Eames, C., & Coll, R. K. (2010). Cooperative education: Integrating classroom and workplace learning. In S. Billett (Ed.), *Learning through practice: Models, traditions, orientations and approaches* (pp. 180-196). Springer. https://doi.org/10.1007/978-90-481-3939-2_10
- Federal Republic of Nigeria. (2019). *National youth policy: Enhancing youth development and participation in the context of sustainable development*. <https://www.prb.org/wp-content/uploads/2020/06/Nigeria-National-Youth-Policy-2019-2023.pdf>
- Federal Republic of Nigeria. (2021). *Nigeria's medium term national development plan (MTNDP) - 2021-2025*. <https://nationalplanning.gov.ng/wp-content/uploads/2021/03/Nigeria-MTNP-2021-2025-Overview-of-Draft-Plan.1.pdf>

- Ferguson, S. J., & Wang, S. (2014). *Graduating in Canada: Profile, labour market outcomes and student debt of the class of 2009-2010*. Statistics Canada. <https://www150.statcan.gc.ca/n1/en/pub/81-595-m/81-595-m2014101-eng.pdf?st=sFSZeEmP>
- Filmer, D., & Fox, L. (2014). *Youth employment in Sub-Saharan Africa*. World Bank.
- Galarneau, D., Kinack, M., & Marshall, G. (2020). *Work-integrated learning during postsecondary studies, 2015 graduates*. Statistics Canada. <https://www150.statcan.gc.ca/n1/en/pub/75-006-x/2020001/article/00003-eng.pdf?>
- Groenewald, T., & Schurink, W. (2003). The contribution of co-operative education in the growing of talent in South Africa: A qualitative phenomenological exploration. *SA Journal of Human Resource Management*, 1(3), Article 26. <https://doi.org/10.4102/sajhrm.v1i3.26>
- Grubb, W. N., & Villeneuve, J. C. (1995). *Co-operative education in Cincinnati: Implications for school-to-work programs in the U. S. Technical assistance report* (ED388860). ERIC. <https://eric.ed.gov/?id=ED388860>
- Haddara, M., & Skanes, H. (2007). A reflection on cooperative education: From experience to experiential learning. *Asia-Pacific Journal of Cooperative Education*, 8(1), 67-76.
- Harvey, L., Geall, V., & Moon, S. (1997). Graduates' work: Implications of organizational change for the development of student attributes. *Industry and Higher Education*, 11(5), 287-96. <https://doi.org/10.1177/095042229701100504>
- Independent Evaluation Group. (2013). *Youth employment programs: An evaluation of World Bank and International Finance Corporation support*. World Bank. <https://doi.org/10.1596/978-0-8213-9794-7>
- International Labour Organization. (2012). *Youth employment interventions in Africa: A mapping report of the employment and labour sub-cluster of the Regional Coordination Mechanism (RCM) for Africa*. https://www.ilo.org/wcmsp5/groups/public/---africa/documents/publication/wcms_206325.pdf
- International Labour Organization. (2020). *Global employment trends for youth 2020: Technology and the future of jobs*. https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/---publ/documents/publication/wcms_737648.pdf
- Jiang, Y. H., Lee, S. W. Y., & Golab, L. (2015). Analyzing student and employer satisfaction with cooperative education through multiple data sources. *Asia-Pacific Journal of Cooperative Education*, 16(4), 225-240.
- Kelly, A. P., James, K. J., Lautzenheiser, D. K., Deane, D. C., & Columbus, R. (2015). *Building paths to the middle class: Innovations in career and technical education*. American Enterprise Institute for Public Policy Research. <https://www.aei.org/wp-content/uploads/2015/04/Building-Paths-to-the-Middle-Class.pdf?x91208>
- May, B. (2018). *Experiential learning and pathways to employment for Canadian youth: Report of the Standing Committee on Human Resources, Skills and Social Development and the Status of Persons with Disabilities*. House of Commons: Chambre des Communes Canada. <https://www.ourcommons.ca/Content/Committee/421/HUMA/Reports/RP10078738/humarp12/humarp12-e.pdf>
- McCallum, B. A., & Wilson, J. C. (1988). They said it wouldn't work (a history of cooperative education in Canada). *Journal of Cooperative Education*, 24(2-3), 61-67.
- McRae, N., Pretti, J., & Church, D. (2018). *Work-integrated learning quality framework, AAA*. University of Waterloo, Centre for the Advancement of Cooperative Education. https://cewilcanada.ca/common/Uploaded%20files/Public%20Resources/Resource%20Hub/wil_quality_framework_ -aaa_ - for_posting.pdf
- National Open University of Nigeria. (n.d.). *Students industrial work experience scheme (SIWES)*. <https://nou.edu.ng/students-industrial-work-experience-scheme-siwes/>
- Ojokuku, B. Y., Emeahara, E. N., Aboyade, M. A., & Chris-Israel, H. O. (2015). Influence of students industrial work experience scheme on professional development of library and information science students in south-west Nigeria. *Library Philosophy and Practice*, 11(2), 1-18.
- Onihunwa, J. O., Inyene, P. U., Archibong, E. U., Joshua, D. A., Irunokhai, E. A., & Omole, E. B. (2020). Students industrial work experience scheme (SIWES) online interactive platform for students and school supervisors. *International Journal of Innovative Information Systems*, 8(3), 1-13.
- Reinhard, K., Pogrzeba, A., Townsend, R., & Pop, C. A. (2016). A comparative study of cooperative education and work integrated learning in Germany, South Africa, and Namibia. *Asia-Pacific Journal of Cooperative Education*, 17(3), 249-63.
- Tochukwu, E. K. (2019). Government social intervention and job creation in Nigeria: A study of SURE-P and N-POWER programmes, 2012- 2018. *Global Journal of Human-Social Science*, 19(7), 41-50.
- Ukwueze, F. N. (2011). Impact of students industrial work experience scheme (SIWES) on development of graduate employability skills. *Nigerian Vocational Association Journal*, 16(1), 118-24.
- United Nations. (n.d.). *Sustainable Development Goals*. <https://sdgs.un.org/goals>
- United Nations General Assembly. (1985). *International youth year: Participation, development, peace. Report of the Secretary- General*. <https://digitallibrary.un.org/record/85263?ln=en>
- Wallin, A., Nokelainen, P., & Mikkonen, S. (2019). How experienced professionals develop their expertise in work-based higher education: A literature review. *Higher Education*, 77, 359-378. <https://doi.org/10.1007/s10734-018-0279-5>

- Weisz, M., & Chapman, R. (2004). Benefits of cooperative education for educational institutions. In R. K. Coll & C. Eames (Eds.), *International handbook for cooperative education: An international perspective of the theory, research, and practice of work-integrated learning* (pp. 247-258). World Association for Cooperative Education.
- Wilson, R. L. (1988). Research in cooperative education. *Journal of Cooperative Education*, 24(2-3), 77-89.
- World Bank. (2022). *World development indicators*. <https://databank.worldbank.org/source/world-development-indicators>
- Zegwaard, K. E., & Coll, R. K. (2011). Exploring some current issues for cooperative education. *Journal of Cooperative Education and Internships*, 45(2), 8-16.



About the Journal

The International Journal of Work-Integrated Learning (IJWIL) publishes double-blind peer-reviewed original research and topical issues related to Work-Integrated Learning (WIL). IJWIL first published in 2000 under the name of Asia-Pacific Journal of Cooperative Education (APJCE).

In this Journal, WIL is defined as " *An educational approach involving three parties – the student, educational institution, and an external stakeholder – consisting of authentic work-focused experiences as an intentional component of the curriculum. Students learn through active engagement in purposeful work tasks, which enable the integration of theory with meaningful practice that is relevant to the students' discipline of study and/or professional development*" (Zegwaard et al., 2023, p. 38^{*}). Examples of practice include off-campus workplace immersion activities such as work placements, internships, practicum, service learning, and cooperative education (co-op), and on-campus activities such as work-related projects/competitions, entrepreneurships, student-led enterprise, student consultancies, etc. WIL is related to, and overlaps with, the fields of experiential learning, work-based learning, and vocational education and training.

The Journal's aim is to enable specialists working in WIL to disseminate research findings and share knowledge to the benefit of institutions, students, WIL practitioners, curricular designers, and researchers. The Journal encourages quality research and explorative critical discussion that leads to the advancement of quality practices, development of further understanding of WIL, and promote further research.

The Journal is financially supported by the Work-Integrated Learning New Zealand (WILNZ; www.wilnz.nz), and the University of Waikato, New Zealand, and receives periodic sponsorship from the Australian Collaborative Education Network (ACEN), University of Waterloo, and the World Association of Cooperative Education (WACE).

Types of Manuscripts Sought by the Journal

Types of manuscripts sought by IJWIL is of two forms: 1) *research publications* describing research into aspects of work-integrated learning and, 2) *topical discussion* articles that review relevant literature and provide critical explorative discussion around a topical issue. The journal will, on occasions, consider good practice submissions.

Research publications should contain; an introduction that describes relevant literature and sets the context of the inquiry. A detailed description and justification for the methodology employed. A description of the research findings - tabulated as appropriate, a discussion of the importance of the findings including their significance to current established literature, implications for practitioners and researchers, whilst remaining mindful of the limitations of the data, and a conclusion preferably including suggestions for further research.

Topical discussion articles should contain a clear statement of the topic or issue under discussion, reference to relevant literature, critical and scholarly discussion on the importance of the issues, critical insights to how to advance the issue further, and implications for other researchers and practitioners.

Good practice and program description papers. On occasions, the Journal seeks manuscripts describing a practice of WIL as an example of good practice, however, only if it presents a particularly unique or innovative practice or was situated in an unusual context. There must be a clear contribution of new knowledge to the established literature. Manuscripts describing what is essentially 'typical', 'common' or 'known' practices will be encouraged to rewrite the focus of the manuscript to a significant educational issue or will be encouraged to publish their work via another avenue that seeks such content.

By negotiation with the Editor-in-Chief, the Journal also accepts a small number of *Book Reviews* of relevant and recently published books.

*Zegwaard, K. E., Pretti, T. J., Rowe, A. D., & Ferns, S. J. (2023). Defining work-integrated learning. In K. E. Zegwaard & T. J. Pretti (Eds.), *The Routledge international handbook of work-integrated learning* (3rd ed., pp. 29-48). Routledge.



EDITORIAL BOARD

Editor-in-Chief

Assoc. Prof. Karsten Zegwaard University of Waikato, New Zealand

Associate Editors

Dr. David Drewery University of Waterloo, Canada
Assoc. Prof. Sonia Ferns Curtin University, Australia
Dr. Judene Pretti University of Waterloo, Canada
Dr. Anna Rowe University of New South Wales, Australia

Senior Editorial Board Members

Dr. Bonnie Dean University of Wollongong, Australia
Dr. Phil Gardner Michigan State University, United States
Prof. Denise Jackson Edith Cowan University, Australia
Assoc. Prof. Jenny Fleming Auckland University of Technology, New Zealand
Assoc. Prof. Ashly Stirling University of Toronto, Canada
Emeritus Prof. Janice Orrell Flinders University, Australia
Emeritus Prof. Neil I. Ward University of Surrey, United Kingdom

Copy Editor

Diana Bushell International Journal of Work-Integrated Learning

REVIEW BOARD

Assoc. Prof. Erik Alanson University of Cincinnati, United States
Prof. Dawn Bennett Curtin University, Australia
Mr. Matthew Campbell University of Queensland, Australia
Dr. Craig Cameron University of the Sunshine Coast, Australia
Prof. Leigh Deves Charles Darwin University, Australia
Assoc. Prof. Michelle Eady University of Wollongong, Australia
Assoc. Prof. Chris Eames University of Waikato, New Zealand
Assoc. Prof. Wendy Fox-Turnbull University of Waikato, New Zealand
Dr. Nigel Gribble Curtin University, Australia
Dr. Thomas Groenewald University of South Africa, South Africa
Assoc. Prof. Kathryn Hay Massey University, New Zealand
Dr Lynette Hodges Massey University, New Zealand
Dr. Katharine Hoskyn Auckland University of Technology, New Zealand
Dr. Nancy Johnston Simon Fraser University, Canada
Dr. Patricia Lucas Auckland University of Technology, New Zealand
Dr. Jaqueline Mackaway Macquarie University, Australia
Dr. Kath McLachlan Macquarie University, Australia
Prof. Andy Martin Massey University, New Zealand
Dr. Norah McRae University of Waterloo, Canada
Dr. Katheryn Margaret Pascoe University of Otago, New Zealand
Dr. Laura Rook University of Wollongong, Australia
Assoc. Prof. Philip Rose Hannam University, South Korea
Dr. Leoni Russell RMIT, Australia
Dr. Jen Ruskin Macquarie University, Australia
Dr. Andrea Sator Simon Fraser University, Canada
Dr. David Skelton Eastern Institute of Technology, New Zealand
Assoc. Prof. Calvin Smith University of Queensland, Australia
Assoc. Prof. Judith Smith Queensland University of Technology, Australia
Dr. Raymond Smith Griffith University, Australia
Prof. Sally Smith Edinburgh Napier University, United Kingdom
Prof. Roger Strasser University of Waikato, New Zealand
Prof. Yasushi Tanaka Kyoto Sangyo University, Japan
Prof. Neil Taylor University of New England, Australia
Dr. Faith Valencia-Forrester Charles Sturt University, Australia
Ms. Genevieve Watson Elysium Associates Pty, Australia
Dr. Nick Wempe Primary Industry Training Organization, New Zealand
Dr. Theresa Winchester-Seeto University of New South Wales, Australia
Dr. Karen Young Deakin University, Australia

Publisher: Work-Integrated Learning New Zealand (WILNZ)

www.wilnz.nz

Copyright: CC BY 4.0