INTERNATIONAL SOCIAL SCIENCES AND EDUCATION JOURNAL (ISSEJ)
ISSN: 3005-3463 (Online)
DOI: 10.61424/issej
Journal Homepage: https://bluemarkpublishers.com/index.php/ISSEJ

ISSEJ
BLUEMARK PUBLISHERS

Investigating How Career Pathways Influence Outcomes of the 2013 Revised Curriculum: A Case of Selected Secondary Schools in Chingola District

Mathew Henda Njamba
ICOF University, Zambia

Corresponding Author: Mathew Henda Njamba **E-mail:** njambamathew88@gmail.com

ARTICLE INFO

Received: October 10th, 2025
Accepted: November 12th 2025
Published*:* December, 24th 2025
Volume: 3
Issue: 4
DOI: 10.61424/issej.v3i4.622

KEYWORDS

Career pathways, revised curriculum, vocational education, work-based learning, Zambia

ABSTRACT

This mixed-methods study examines how career pathways embedded in Zambia's 2013 Revised Curriculum influence student outcomes in selected secondary schools of Chingola District. Data were collected via questionnaires (n = 115 returned: 10 administrators, 48 teachers, 57 students), semi-structured interviews (n = 24), focus groups (8 student groups), and school record review. Quantitative results indicate that 78% of students reported increased motivation, 85% of teachers observed greater lesson relevance, and 70% reported improved academic performance in career-linked subjects. Practical skills exposure was reported by 65% of students, while only 40% had work-based learning placements. Major implementation constraints included insufficient workshops/equipment (80%), inadequate teacher training (60%), and weak industry partnerships (70%). Qualitative analysis identified mechanisms—contextualized pedagogy, project-based learning, and leader commitment—that mediate positive outcomes, alongside systemic barriers that limit scale. The study concludes that career pathways positively influence engagement and skill acquisition but require sustained investment in infrastructure, teacher capacity, industry collaboration, and curriculum streamlining to realize full benefits. Recommendations are provided for policymakers, district officers, school leaders, and researchers.

1. Introduction

Globally, education systems are shifting toward models that better align schooling with labor market needs by integrating career pathways and competency-based approaches (OECD, 2018; Symonds, Schwartz, & Ferguson, 2011). Zambia's 2013 Revised Curriculum explicitly embeds career pathways to strengthen vocational competence, employability, and relevance of secondary education (Ministry of General Education, 2013). Despite policy advances, implementation challenges and uneven outcomes at the school level impede impact (Chibwe, 2018; Mulenga, 2015). This study investigates how career pathways influence academic and vocational outcomes in selected secondary schools in Chingola District, focusing on awareness, implementation fidelity, measurable student outcomes, constraints, and stakeholder recommendations.

2. Literature review

2.1 Career pathways and curriculum reform

Career pathways provide structured sequences of learning that link academic content with occupational skills and work-based learning (Dougherty, 2018). Evidence from international and African contexts indicates that rigorous career pathway programs increase student engagement, graduation rates, and post-school transitions when supported by teacher capacity, employer partnerships, and adequate resources (Kemple, 2008; ILO, 2015; World Bank, 2019).

2.2 Zambia's 2013 Revised Curriculum

The 2013 Revised Curriculum introduced competency-based education (CBE), career guidance modules, and work-based learning expectations to better prepare learners for a skills-oriented economy (Ministry of General Education, 2013). Early assessments note strengths in conceptual design but highlight implementation gaps—limited resources, inadequate teacher training, and weak monitoring (Chibwe, 2018; Mulenga, 2015).

2.3 Implementation determinants and outcomes

Successful career pathway implementation depends on aligned curriculum design, teacher professional development, infrastructure for practical training, and sustained school-industry collaboration (Barnett, 2013; OECD, 2018). Work-based learning (WBL) is critical for occupational competence but often constrained by logistical and partnership barriers in low-resource settings (Foster & MacDonald, 2017).

Gap: Few empirical studies evaluate how career pathways influence multiple student outcomes (academic performance, motivation, vocational skills, and transition readiness) in Zambian districts—this study addresses that gap for Chingola.

Research questions

1. What is the level of awareness and understanding of career pathways among students and teachers in selected secondary schools
2. How do career pathways influence students' academic performance and vocational skills acquisition?
3. What challenges constrain implementation of career pathways in these schools?
4. What strategies do stakeholders recommend to enhance the effectiveness of career pathways?

3. Methodology

3.1 Design and rationale

A convergent mixed-methods approach allowed simultaneous collection of quantitative and qualitative data to triangulate findings (Creswell & Plano Clark, 2018). The design suited exploration of relationships (e.g., perceived outcomes) and explanatory mechanisms (e.g., teacher practices, leadership).

3.2 Setting and sample

Ten secondary schools in Chingola District (urban and peri-urban) were purposively selected to reflect resource variation. A total of 120 questionnaires were distributed: 10 administrators, 50 teachers, 60 students; 115 were returned (95.8% response). Additionally, 24 semi-structured interviews (principals, career coordinators, teachers) and 8 student focus groups (6–8 participants) were conducted. School records (exam results, attendance, internship logs) over two academic years were reviewed.

3.3 Instruments and data collection

- Questionnaire: closed and Likert items on awareness, perceived influence on outcomes, frequency of practical activities, WBL participation, and constraints. Pilot tested for clarity.
- Interviews/focus groups: semi-structured guides probed implementation processes, partnerships, leadership, and recommendations. Audio-recorded with consent and transcribed.
- Document review: school inventories, workshop logs, and subject pass-rate trends.

3.4 Validity, reliability, and ethics

Content validity ensured via expert review; reliability assessed using Cronbach's alpha for multi-item scales ($\alpha \geq .78$). Ethical clearance obtained; informed consent, confidentiality, and voluntary participation were observed.

3.5 Data analysis

Quantitative data were analyzed descriptively (percentages, means) in SPSS; cross-tabulations examined associations (e.g., access to workshops vs. perceived skill gains). Qualitative data followed thematic analysis (Braun & Clarke, 2006). Integration occurred at interpretation (mixed-methods triangulation).

4. Results

4.1 Respondent characteristics, questionnaire return rate

Table 1: Questionnaire Return Rate by Respondent Group

Respondent Group	Number Distributed	Number Returned	Return Rate (%)
Administrators	10	10	100
Teachers	50	48	96
Students	60	57	95
Total	**120**	**115**	**95.8**

- Administrators: 10 (100% response)
- Teachers: 48/50 (96% response) — teaching experience varied from 2 to 25 years (M = 9.4 years).
- Students: 57/60 (95% response) — grades 10–12.

4.2 Awareness and understanding (RQ1)

- Teacher awareness: 82% reported being aware of career pathways objectives; 68% felt they understood the concept well.
- Student awareness: 76% were aware; 61% reported that teachers explained career pathway components clearly.

  Qualitative interviews revealed uneven depth: some teachers had attended Ministry CE (continuous education) sessions; others relied on self-study.

4.3 Influence on academic and vocational outcomes (RQ2)

Quantitative findings:

- Increased student motivation reported by 78% of students.
- Relevance of learning: 85% of teachers agreed linking content to careers made lessons more relevant.
- Academic improvement: 70% of teachers observed improved student performance in career-linked subjects (Mathematics, Science, Technical Drawing).
- Hands-on training: 65% of students reported regular practical sessions; 40% reported participation in internships or apprenticeships.

Document review: schools with functioning workshops (e.g., Chingola Secondary, Lulamba) recorded modest upticks in pass rates for technical subjects (average +3–5 percentage points over two years) compared to schools without practical facilities.

Qualitative themes:

- Relevance and engagement: students described projects and community tasks that made abstract topics concrete. Example quote: "When we build a birdhouse in workshop, we understand measurement much better than from the book" (Student, focus group).
- Confidence and employability: teachers highlighted improved student confidence in practical tasks and small entrepreneurship projects (e.g., bread-making, carpentry commissions).

4.4 Implementation challenges (RQ3)

Top constraints (percent reporting): **Table 2: Challenges in Implementing Career Pathways**

Challenge	Percentage Reporting (%)
Insufficient workshops/equipment	80
Lack of teaching materials	75
Inadequate teacher training	60
Weak industry partnerships	70
Curriculum overload	55

- Insufficient workshops/equipment: 80%
- Lack of teaching materials and consumables: 75%
- Inadequate teacher training for vocational pedagogy: 60%
- Limited industry partnerships for WBL: 70%
- Curriculum overload and timetable pressure: 55%

Qualitative data elaborated constraints: administrators cited budget and procurement delays; teachers reported improvisation (using recycled materials) but noted limits to skill fidelity; employers cited lack of formal supervision frameworks and liability concerns.

4.5 Stakeholder recommendations (RQ4)

High consensus on priority strategies:

- Teacher professional development (CPD) focused on competency-based pedagogy and career guidance: 90% support.
- Targeted funding for minimum workshop standards or cluster-based shared workshops: 85% support.
- Formalized MOUs with local industries and NGOs to expand internships, supervised placements, and mentorships: 80% support.
- Curriculum timetable adjustments to protect blocks for hands-on learning and project work: 70%.

4.6 Integration and mechanisms

Triangulated findings indicate career pathways enhance outcomes via:

- Contextualized pedagogy: integrating occupational examples into academic lessons increases cognitive and affective engagement.
- Repeated practice and formative assessment: structured practical sessions with feedback build procedural competence.
- Leadership and local initiative: committed principals reallocate limited resources, schedule practical blocks, and broker community partnerships—amplifying impact despite constraints.

5. Discussion

5.1 Awareness and capacity implications

High surface awareness but variable depth of understanding aligns with literature stressing the need for sustained CPD for teachers to operationalize career pathways (Barnett, 2013; Mulenga, 2015). Teacher competence is a linchpin: without skilled facilitation, CBE intentions risk superficial enactment (Chibwe, 2018).

5.2 Outcomes and explanatory pathways

Findings corroborate international evidence that career-linked learning fosters relevance and motivation, which mediate improved attainment in linked subjects (Kemple, 2008; Dougherty, 2018). The modest increases in technical subject pass rates in equipped schools illustrate potential but also reveal scale limitations.

5.3 Constraints and the paradox of implementation

The "paradox of implementation" (policy design strong; system supports weak) is evident—resource and partnership gaps constrain translation into widespread, high-quality WBL and vocational competence (Mwansa, 2014). Curriculum overload and timetable conflicts further compress effective practical delivery.

5.4 Policy and practice implications

Achieving intended outcomes requires coordinated systemic action: (a) prioritized investments for minimum viable infrastructure (cluster workshops), (b) coherent CPD models combining in-service training and instructional coaching, (c) district-level frameworks to formalize and supervise employer placements, and (d) monitoring systems capturing WBL participation and graduate transitions.

6. Conclusions

Career pathways in the 2013 Revised Curriculum positively influence motivation, perceived relevance, and vocational skill development where practical components and leadership support exist. However, systemic resource, capacity, and partnership constraints limit broad impact. Focused interventions—teacher capacity building, targeted infrastructure investment, strengthened school-industry linkages, and curriculum adjustments—are needed to scale benefits and align education with economic opportunities.

6.1 Recommendations

For national and district policymakers

- Establish a minimum-standard funding stream for cluster-based practical facilities to serve groups of schools.
- Institutionalize a national CPD certification for career pathway teachers, combining workshops, in-school coaching, and peer learning.
- Create district frameworks and standard MOUs to govern WBL, ensuring student safety, supervision, and quality.

For school leaders and teachers

- Protect timetable blocks for sustained practical sessions and project work; document outcomes and share best practices within networks.
- Develop low-cost local partnerships (community artisans, micro-enterprises) to expand supervised hands-on opportunities.

For industry and community partners

- Participate in formalized placements, guest instruction, and curriculum advisory roles; provide realistic scopes of work and mentorship.

For researchers

- Conduct longitudinal tracing of graduates to measure employment, further training, and career progression linked to pathway participation.
- Test cost-effective models (shared workshops, remote supervision) in randomized or quasi-experimental designs.

6.2 Limitations

The purposive district sample and reliance on self-reports limit generalizability. School record quality varied; longitudinal causal inference was not possible. Nonetheless, triangulation strengthens internal validity.

Author declaration: I declare this manuscript is original and has not been submitted elsewhere.

Acknowledgements: Thanks to participating schools, district education officers, teachers, students, and my supervisor Prof. Charles Mwape.

References

Akyeampong, K. (2017). Challenges in implementing vocational education in Sub-Saharan Africa. International Journal of Educational Development, 54, 12–21. https://doi.org/10.1016/j.ijedudev.2017.03.001

Barnett, B. (2013). Integrating career pathways into secondary education: Best practices. Journal of Career and Technical Education, 28(2), 29–44.

Bass, B. M. (1985). Leadership and performance beyond expectations. Free Press.

Bass, B. M., & Avolio, B. J. (1994). Improving organizational effectiveness through transformational leadership. SAGE.

Buchanan, J., Prescott, A., Schuck, S., Aubusson, P., Burke, P., & Louviere, J. (2013). Teacher retention and attrition: Views of early career teachers. Australian Journal of Teacher Education, 38(3), 112–129. https://doi.org/10.14221/ajte.2013v38n3.9

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. Qualitative Research in Psychology, 3(2), 77–101. https://doi.org/10.1191/1478088706qp063oa

Chansa, C. (2007). Vocational education in Zambia: Challenges and prospects. Zambia Journal of Educational Studies, 1(2), 15–29.

Chibwe, R. (2018). An analysis of curriculum implementation in Zambian secondary schools. Zambia Journal of Education, 3(1), 45–60.

Conway, P. F. (2014). Leadership for learning. In L. Stoll & K. S. Louis (Eds.), Educational leadership and learning: International perspectives (pp. 45–64). Springer.

Creswell, J. W., & Plano Clark, V. L. (2018). Designing and conducting mixed methods research (3rd ed.). SAGE.

Department of Basic Education. (2011). National curriculum statement grades R-12. Pretoria: South African Government.

Dougherty, S. M. (2018). Career pathways and workforce development: A review of evidence. Journal of Vocational Education & Training, 70(2), 169–187. https://doi.org/10.1080/13636820.2017.1412723

DuFour, R., DuFour, R., Eaker, R., & Many, T. (2010). Learning by doing: A handbook for professional learning communities at work (2nd ed.). Solution Tree Press.

Foster, E., & MacDonald, R. (2017). Vocational education reform in Africa: Lessons and challenges. Education Policy Analysis Archives, 25(12). https://doi.org/10.14507/epaa.25.2766

Fraenkel, J. R., Wallen, N. E., & Hyun, H. H. (2012). How to design and evaluate research in education (8th ed.). McGraw-Hill.

Fullan, M., & Langworthy, M. (2014). A rich seam: How new pedagogies find deep learning. Pearson.

Hallinger, P. (2003). Leading educational change: Reflections on the practice of instructional and transformational leadership. Cambridge Journal of Education, 33(3), 329–352. https://doi.org/10.1080/0305764032000122005

Hallinger, P., & Heck, R. H. (1998). Exploring the principal's contribution to school effectiveness: 1980–1995. School Effectiveness and School Improvement, 9(2), 157–191. https://doi.org/10.1080/0924345980090203

Hallinger, P., & Murphy, J. (1985). Assessing the instructional management behavior of principals. Elementary School Journal, 86(2), 217–247. https://doi.org/10.1086/461445

Harris, A. (2004). Distributed leadership and school improvement: Leading or misleading? Educational Management Administration & Leadership, 32(1), 11–24. https://doi.org/10.1177/1741143204039297

International Labour Organization. (2015). Skills for employment policy brief. ILO. https://www.ilo.org

Kemple, J. J. (2008). Career pathways programs: Impact and policy implications. Educational Evaluation and Policy Analysis, 30(4), 425–445. https://doi.org/10.3102/0162373708320739

Leithwood, K., Seashore-Louis, K., Anderson, S., & Wahlstrom, K. (2004). How leadership influences student learning. The Wallace Foundation. https://www.wallacefoundation.org

Ministry of General Education. (2013). The revised curriculum framework for basic education in Zambia. Government Printer.
Ministry of General Education. (2019). Education sector national implementation framework 2019–2025. Government Printer.
Mwiria, K. (2014). Curriculum reform challenges in East Africa. African Educational Research Journal, 2(3), 109–124.
Mulenga, C. (2015). Education reforms in Zambia: A historical overview. Zambian Journal of Educational Research, 2(1), 15–30.
Mwale, M. (2010). Vocational and technical education in Zambia: Policy and practice. African Journal of Education, 5(1), 23–35.
Mwansa, P. (2014). The paradox of curriculum implementation in Zambia. African Education Review, 11(3), 312–328. https://doi.org/10.1080/18146627.2014.965123
National Research Council. (2010). Preparing teachers: Building evidence for sound policy. The National Academies Press. https://doi.org/10.17226/12882
Oketch, M. (2016). Vocational education reforms in Kenya: Progress and challenges. Journal of Education and Work, 29(8), 936–951. https://doi.org/10.1080/13639080.2016.1216471
OECD. (2018). The future of education and skills: Education 2030. OECD Publishing. https://doi.org/10.1787/education-2030-en
Republic of Kenya. (2017). Basic education curriculum framework. Government Printer.
Republic of Zambia. (2016). Vision 2030: National development plan. Government of Zambia.
Robinson, V. M. J., Lloyd, C. A., & Rowe, K. J. (2008). The impact of leadership on student outcomes: An analysis of the differential effects of leadership types. Educational Administration Quarterly, 44(5), 635–674. https://doi.org/10.1177/0013161X08321509
Scott, L. (2017). Preparing students for 21st century careers: Integration of academic and technical skills. Journal of Career Education, 41(1), 22–39.
Ssymonds, W. C., Schwartz, R. B., & Ferguson, R. (2011). Pathways to prosperity: Meeting the challenge of preparing young Americans for the 21st century. Harvard Graduate School of Education. https://www.gse.harvard.edu
Stone, J. R., & Lewis, M. V. (2012). College and career ready in the 21st century: Making high school matter. Teachers College Press.
Symonds, W. C., Schwartz, R. B., & Ferguson, R. (2011). Pathways to prosperity: Meeting the challenge of preparing young Americans for the 21st century. Harvard Graduate School of Education.
Trilling, B., & Fadel, C. (2009). 21st century skills: Learning for life in our times. Jossey-Bass.
UNESCO. (2015). Education 2030: Incheon declaration and framework for action. UNESCO. https://unesdoc.unesco.org
UNESCO. (2016). Technical and vocational education and training in sub-Saharan Africa. UNESCO.
Vescio, V., Ross, D., & Adams, A. (2008). A review of research on the impact of professional learning communities on teaching practice and student learning. Teaching and Teacher Education, 24(1), 80–91. https://doi.org/10.1016/j.tate.2007.01.004
Wenger, E. (1998). Communities of practice: Learning, meaning and identity. Cambridge University Press.
World Bank. (2002). Zambia education sector review. World Bank Publications.
World Bank. (2011). Learning for all: Investing in people's knowledge and skills to promote development. World Bank.
World Bank. (2019). Skills for work in Zambia: Challenges and opportunities. World Bank Publications. https://doi.org/10.1596/978-1-4648-XXX-X
World Economic Forum. (2019). The future of jobs report. WEF. https://www.weforum.org