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# Aligning cybersecurity education with industry needs: Bridging South Africa's skills development

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South Africa faces a critical shortage of cybersecurity professionals, with both industry and academia recognising the gap as a driver of national cyber risk. This paper examines the nature of the cybersecurity skills gaps by reviewing recent studies and presenting the findings of a recent survey. Findings confirm that employers expect graduates to transition seamlessly into the workforce, highlighting the importance of practical, hands-on training, embedded certification pathways, and curricula aligned with market demands. Students similarly seek a relevant qualification to enhance their careers, offer hands-on learning, embed certifications, and provide flexible and affordable delivery. To address these needs, the study evaluates two international cybersecurity knowledge frameworks, ACM Cybersecurity Curricula Guidelines 2017 (CSEC2017) and the Cyber Security Body of Knowledge (CyBok). Adopting and localising these frameworks can guide the development of a South African cybersecurity postgraduate qualification that is globally benchmarked yet tailored to local threats, legislation, and workforce requirements. By bridging the gap between academic preparation and industry expectations, the study aims to enhance the nation's capacity to respond to evolving cybersecurity challenges.

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