CHAPTER V
CONCLUSIONS AND RECOMENDATIONS

5.1 Conclusions

This study concludes that employability skills play a significant role in shaping career success among geology graduates. The conclusions are drawn from the lived experiences of the participants and address the three research questions of the study.

1. Employability skills among geology graduates function as an integrated and interdependent system rather than isolated competencies. Communication, technical and practical competence, teamwork, problem-solving, and adaptability collectively shape graduates' ability to perform effectively in both geological and non-geological sectors. Employability skills operate as an integrated system of interdependent competencies that collectively determine graduates' workplace performance and career development.

    1.1 Communication skills enable graduates to translate academic knowledge into workplace performance, support professional interaction, and facilitate adaptation across different occupational environments. Communication skills function as a foundational employability resource that enables effective knowledge expression, workplace interaction, and cross-sector career adaptability.

    1.2 Technical and practical competence allows graduates to apply theoretical knowledge in real workplace contexts, operate industry-

relevant technologies, and continuously adapt to technological and organizational demands. Technical and practical competence functions as a dynamic employability resource that enables graduates to transform academic knowledge into operational workplace capability through continuous learning.

1.3 Teamwork and collaboration support coordination, task distribution, and collective problem-solving in both structured and non-structured work environments. Teamwork and collaboration function as social employability resources that enhance workplace coordination, efficiency, and collective problem-solving across diverse occupational contexts.

1.4 Problem-solving skills enable graduates to analyze workplace challenges, make informed decisions, and implement effective solutions under varying levels of uncertainty and pressure. Problem-solving skills function as cognitive employability resources that support effective decision-making and adaptive responses to workplace challenges.

1.5 Adaptability enables graduates to adjust to new occupational environments, learn new technologies, and manage career transitions across different sectors. Adaptability functions as a meta-employability resource that enables continuous learning, career transition, and professional adjustment in dynamic labour markets.

2. Career success is constructed through the interaction between employability skills, career adaptability, and occupational context, resulting in both objective achievements and subjective career fulfilment.
3. The study concludes that graduate employability development requires shared responsibility between students, universities, and industry stakeholders. While students' proactive engagement in professional development activities contributes to employability enhancement, universities play an important role in providing structured learning opportunities, career support, and industry exposure. Stronger university–industry collaboration is essential to reduce the gap between academic preparation and workplace expectations and to support sustainable career development among geology graduates.
4. This study demonstrates that geology graduates' career success is not determined solely by disciplinary knowledge but by their ability to construct adaptable career identities, develop transferable competencies, and utilize available educational and professional resources within changing labour market environments.

5.2 Recommendations

1. Recommendations for Abbottabad University of Science and Technology (AUST)

Based on the findings of this study, Abbottabad University of Science and Technology (AUST) should strengthen employability development within the geology curriculum by integrating structured

competency-based learning approaches. Although technical knowledge remains a fundamental component of geology education, the findings demonstrate that transferable skills such as communication, teamwork, adaptability, problem-solving, and professional responsibility are essential for graduates' career success.

Therefore, the Department of Geology should introduce professional development courses and practical learning activities, including scientific communication, technical report writing, GIS and remote sensing applications, project management, career planning, and professional ethics. These courses should be supported by competency-based assessments through presentations, field projects, group assignments, portfolios, and industry-based case studies.

Furthermore, AUST should strengthen university–industry collaboration by establishing formal partnerships with geological employers, including mining companies, petroleum organizations, environmental consulting firms, geological survey institutions, and geotechnical organizations. Such partnerships should support curriculum improvement, internship opportunities, industry mentoring, guest lectures, and collaborative research activities to ensure alignment between academic preparation and workplace expectations.

2. Recommendations for Students

Geology students should be encouraged to take greater responsibility for their own employability development by actively participating in

activities beyond formal academic requirements. Students should engage in internships, professional workshops, industry seminars, research activities, student organizations, and networking opportunities to develop practical experience and professional confidence.

Students should also adopt proactive career management behaviors by continuously improving their technical and transferable skills, seeking feedback, developing professional networks, and exploring diverse career pathways. Such active engagement will enable graduates to better adapt to changing labour market conditions and improve their career readiness.

3. Recommendations for Employers and Industry Organizations

Employers and industry organizations should increase their involvement in graduate development by collaborating with universities through internship programs, industry-based training, mentoring activities, and curriculum discussions. Greater employer engagement can help students understand workplace expectations and enable graduates to develop competencies that are directly relevant to professional practice.

4. **Recommendations for Policymakers**

Policymakers should support stronger university–industry collaboration and promote work-integrated learning initiatives within specialized STEM disciplines. Policies should encourage institutions to develop employability frameworks that recognize both technical competencies and transferable skills as important indicators of graduate career development

5. Implications

This study provides both theoretical and practical implications regarding the contribution of employability skills to career success among geology graduates.

From a theoretical perspective, the findings extend the application of Career Construction Theory by demonstrating that employability skills function as adaptive resources that enable geology graduates to construct successful careers across both geology-related and non-geology occupations. The findings further show that communication, technical and practical competence, teamwork, problem-solving, and adaptability operate as interconnected competencies that collectively contribute to both objective and subjective career success.

From a practical perspective, the findings provide useful insights for geology graduates regarding the employability skills required for career success in different occupational contexts. The findings may also inform curriculum enhancement, career development initiatives, and future research related to graduate employability. These implications should be interpreted within the scope of this study and should not be considered universally applicable beyond the study context.

6. Research Limitations

This study has several limitations that should be considered when interpreting its findings. These limitations do not diminish the value of the

study; rather, they define the scope within which the findings should be understood and provide directions for future research.

First, this study adopted a qualitative phenomenological approach involving seven geology graduates from Abbottabad University of Science and Technology who graduated in 2021. This design was appropriate for exploring participants' lived experiences and obtaining rich, in-depth insights into the contribution of employability skills to career success. However, because the study focused on a relatively small and context-specific sample, the findings are not intended for statistical generalization but rather for providing an in-depth understanding of the phenomenon within the specific research context.

Second, the study explored the perspectives of geology graduates only. Although participants provided valuable first-hand accounts of how employability skills influenced their career success, the views of employers, university faculty, and industry professionals were not included. Incorporating these stakeholders in future studies could provide a more comprehensive understanding of graduate employability by allowing comparisons between graduates' experiences and employers' expectations.

Third, the study was conducted within the Pakistani context, where labour market conditions, educational practices, and employment opportunities may differ from those in other countries. Consequently, the findings should be interpreted within this context, as the experiences of geology graduates may vary across different cultural, institutional, and economic environments.

Despite these limitations, the study offers meaningful insights into the contribution of employability skills to career success among geology graduates. By capturing participants' lived experiences through a phenomenological approach, the study contributes to the growing body of knowledge on graduate employability and provides a valuable foundation for future research in similar contexts.

7. Suggestions for Further Research

a. Future studies may expand the scope by including graduates from multiple universities or different regions to provide a more comprehensive understanding of employability skills across diverse academic contexts.
b. Further research may also incorporate additional variables such as industry readiness, work experience, emotional intelligence, or academic performance to develop a more comprehensive model of career success.
c. Longitudinal studies are recommended to examine how employability skills influence career progression over time, rather than only at the point of graduation, in order to understand long-term professional development patterns.