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Impact of Teacher Experience on Vocational Education for UNSDG at Nanchang Institute of Technology, Jiangxi

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Abstract: Within the framework of the United Nations Sustainable Development Goals (UNSDG), this study examines the influence of instructor experience on vocational education at the Nanchang Institute of Technology in Jiangxi. Two hundred students and fifty instructors participated in the study by filling out prepared questionnaires as part of a quantitative research strategy. Academic achievement, skill acquisition, and employment rates are just a few of the student outcomes shown to be substantially improved by teachers with more experience. There were positive connections between teachers' levels of experience and these student results, according to multiple regression analysis, and there were significant differences, according to analysis of variance, depending on the teachers' degrees of experience. The results support policies that promote the hiring, retention, and ongoing professional development of experienced educators, highlighting their critical role in vocational education. If vocational education programs want to help students become more employable and have a positive impact on sustainable development, they need to take these observations into account. In line with the United Nations Sustainable Development Goals (UNSDG), the study found that investing in skilled vocational instructors is crucial for attaining quality education and decent employment.

Keywords: teacher experience, vocational education, UNSDG, student outcomes, Nanchang Institute of Technology

1. Introduction

The United Nations Sustainable Development Goals (UNSDG) highlight the importance of vocational education in today's educational scene. Vocational education plays an essential role in the pursuit of social and economic development objectives and in the cultivation of students' practical skills and employability at Jiangxi's Nanchang Institute of Technology. A lot of people have started to pay attention to how teachers' backgrounds affect vocational education recently. In order to better prepare their pupils for the workforce, experienced educators impart a plethora of information, practical abilities, and insights into the sector (Fisher & Gonzalez, 2020). This study seeks to explore the intricacies of how the experience of teachers affects the effectiveness and results of vocational education at the Nanchang Institute of Technology, with a focus on the implications for the United Nations Sustainable Development Goals (UNSDG).

There are several moving parts to the UNSDG framework as it pertains to vocational education. Effective vocational training programs have a direct bearing on the United Nations Sustainable Development Goals of excellent education (Goal 4) and decent employment and economic growth (Goal 8). Acquiring practical skills that are crucial in a dynamic job market is an integral part of a quality education, just as much as academic knowledge (Brown & Souto-Otero, 2020). The gap between school and work can be filled through vocational training, which emphasizes practical experience and skills valued by employers. But the quality of teaching, which is affected by the knowledge and competence of the educators, is a major factor in how well these programs work.

The neglected effect of instructors' prior work experience on students' performance in vocational programs is the focus of this research. Although everyone agrees that veteran educators are invaluable, few have dug into the specifics of how this expertise improves vocational education programs and the results they provide for their students (Pambudi & Harjanto, 2020). Institutions like the Nanchang Institute of Technology, which emphasizes vocational education, are

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especially affected by this information vacuum. The purpose of this research is to determine the effect of teachers' levels of experience on vocational education in terms of students' grades, job prospects, and happiness, and to quantify those effects.

This study has three main goals. To begin with, it intends to look into how the quality of vocational education offered by instructors at Nanchang Institute of Technology relates to their level of experience in the field. Years of service, professional experience, and CPD are just a few of the aspects of a teacher's past that will be examined. Second, we hope to find out how much of an effect teachers' years of experience have on students' final grades, skill sets, and chances of finding gainful employment (Quinlan & Renninger, 2022). The study will shed light on the many ways in which veteran educators boost vocational education programs by analyzing these indicators. Finally, the study hopes to contribute to the UNSDG by suggesting policies and practices that would make veteran educators more valuable in vocational education.

This research is important because it has the ability to change educational practices and policies on a local and national scale. The results can help the Nanchang Institute of Technology create strategies for attracting and retaining instructors with specialized knowledge and experience. To better prepare students for the workforce, the institution can boost the quality of its vocational education programs by highlighting the special benefits of experienced teachers in the study. Research findings can provide evidence-based insights applicable in varied educational situations, and can thus contribute to the global discourse on vocational education and the UNSDG.

The results of the study may also have important consequences for how educators continue to grow throughout their careers. Being aware of the ways in which past events impact the efficacy of teaching can guide the creation of professional development programs that enhance teachers' current expertise. These programs can help teachers stay current with vocational education techniques by emphasizing ongoing learning and industry interaction. This will benefit both students and the community at large.

Educational equity is another important topic that the study touches on. When it comes to accommodating students with a wide range of learning styles and backgrounds, veteran educators usually have the upper hand. The research can help illuminate ways to better assist all students, especially those from disadvantaged backgrounds, by analyzing the effects of teachers' experiences on vocational education. In light of the United Nations Sustainable Development Goals (UNSDG), which state that "quality education should be accessible to all at all times," this is of paramount importance.

2. Literature Review

The level of expertise of the instructors has a major impact on the success of vocational education programs. Within the framework of the United Nations Sustainable Development Goals (UNSDG), the value of experienced educators is especially highlighted at Jiangxi's Nanchang Institute of Technology (Song et al., 2023). Strong vocational education systems immediately contribute to the UNSDG framework's emphasis on quality education (Goal 4) and decent employment and economic growth (Goal 8). To ensure that students are well-prepared for the profession and can make meaningful contributions to sustainable development, these systems rely heavily on the expertise of professors with years of experience in the field.

There are a number of interconnected aspects that shed light on how teacher experience affects vocational education. To start, seasoned educators are better able to convey intricate technical material because of their extensive pedagogical skills (Asad et al., 2021). With their extensive experience in the field, they have honed their teaching methods to accommodate a variety of student learning styles, guaranteeing that every student will be able to master the material. In addition, many veteran educators have extensive knowledge of curriculum development, which they put to use by creating and executing training programs that are thorough and in line with best practices in the field. When it comes to vocational education, where teaching students the skills they'll need to be successful in a particular trade or career path is the main objective, this congruence is crucial.

Many vocational instructors also have extensive expertise in the field, which is an important asset in the classroom. Students can greatly benefit from the real-world viewpoints offered by teachers who have practical experience in the subjects they teach (Dare et al., 2021). To make academic subjects more relatable and interesting for pupils, these educators can use examples from their own lives. Furthermore, through their relationships in the sector, they may help students find internships, apprenticeships, and collaborative projects with local businesses where they can obtain practical experience. Students benefit from a higher quality education and increased employability as a result of this direct connection to industry, which provides them with hands-on experience and professional networks.

One other important part of a teacher's experience that has an effect on vocational education is continuing professional development. Educators that put in the time and effort to learn new things and enhance their careers are the ones who ultimately benefit their students the most. Their dedication to continuous learning allows them to incorporate the latest techniques, tools, and industry news into their lessons. Workshops, industry certifications, and joint research initiatives are some examples of the professional development possibilities offered by the Nanchang Institute of Technology (Liu & Liu, 2021). Skilled educators can keep up with the ever-changing job market by regularly updating their own knowledge and skills. This allows them to offer pupils education that is state-of-the-art.

Classroom dynamics and learning outcomes are not the only areas where instructors' backgrounds matter in vocational education. Teachers with experience have a knack for making their classrooms welcoming and safe places where all children can thrive (Azano et al., 2020). They create an ideal learning environment by efficiently managing classrooms, building strong relationships with students, and attending to their particular needs. In vocational education, where students may have varied degrees of experience and expertise, this setting is very crucial. All children can reach their maximum potential when teachers with expertise provide an inclusive and supportive classroom atmosphere.

Student outcomes reflect the value of instructors with expertise. Academic performance, skill acquisition, and post-graduation employment rates are all positively correlated with instructors' levels of experience, according to the research. In vocational education, where graduates' employment and achievement in their chosen fields constitute the ultimate measure of success, these outcomes take on added significance (Karcher et al., 2021). Graduation rates, student happiness, and employer feedback are just a few of the ways that experienced faculty at Nanchang Institute of Technology impact their students' academic performance. Renowned educators play a crucial role in achieving economic growth and sustainable development by equipping pupils with the necessary knowledge and skills for success.

It is clear by looking at the UNSDG as a whole how important it is to have instructors with experience in vocational education. The provision of high-quality education is essential to long-term sustainability, and qualified educators play a pivotal role in this endeavor. Veterans in the classroom can play a key role in fostering innovation and economic growth by vetting vocational education programs for efficacy, relevance, and alignment with industry demands. In addition, they aid in the social component of sustainable development by encouraging integrated and fair education, which in turn helps to lessen disparities and strengthen social bonds.

This research aims to fill a significant need in the existing literature by investigating the seldom-discussed effect of instructors' prior work experience on students' performance in vocational education. Although it is well recognized that experienced teachers are valuable, further study is needed to determine exactly how this expertise improves instructional methods and student results. This is of utmost importance for schools that prioritize vocational education, such as the Nanchang Institute of Technology (Zheng et al., 2024). Educational policy and practice can be greatly improved by the findings of this study, which seek to illuminate the unique ways in which the experience of teachers improves vocational education.

Teachers' continuing education can also benefit from the study's conclusions. In order to create professional development programs that enhance instructors' current knowledge and abilities, it is important to understand how experience impacts teaching effectiveness. These programs can keep teachers up-to-date on the latest vocational education practices by emphasizing industry interaction and ongoing learning (Arinaitwe, 2021). This will help both students and the community at large. The study also tackles the issue of educational equity by looking at ways that veteran educators can accommodate students with varying learning styles and backgrounds through the use of inclusive pedagogy.

3. Related theory

Studying how teacher experience affects UNSDG vocational education at the Nanchang Institute of Technology is a topic that is well-suited to the Social Cognitive Theory (SCT). Learners can benefit greatly from SCT, which was developed by Albert Bandura, since it places an emphasis on modeling, imitation, and observational learning. This theory states that people learn from both their personal experiences and the actions and results of those around them. Students in vocational programs look up to their more seasoned instructors as important role models. Students can learn industry-relevant abilities by observing, imitating, and internalizing their experience and practical skills. Teachers with experience set a good example for their pupils by addressing problems creatively, using their knowledge of the subject matter effectively, and acting professionally in the classroom and on the job. When instructors are able to cultivate a welcoming and interesting classroom setting, students are more likely to feel comfortable taking risks and developing their abilities via modeling (Boldureanu et al., 2020). As a result, SCT highlights the significant impact that veteran educators have on career training programs by serving as role models who inspire students to learn via direct observation, discussion, and critique, which in turn improves student achievement and brings about progress toward sustainable development objectives.

4. Methodology

This study conducted at the Nanchang Institute of Technology utilized a quantitative research approach to gather objective and measurable data regarding the impact of teacher experience on vocational education for UNSDG. A total of 250 participants, including 200 students and 50 faculty members, will be drawn at random from the institution's vocational programs using a stratified random sampling method. This sample strategy guarantees that the study sufficiently represents a range of occupational specializations and educator experiences. Students and teachers will each fill out their own organized questionnaire to help gather data. Academic achievement, skill development, employment rates, and general contentment with the vocational education program are some of the aspects that the student survey will center on. The years of experience, professional history, CPD pursuits, and self-assessed effectiveness as a teacher will

all be evaluated by the teacher questionnaire. To measure thoughts and feelings, both surveys will have Likert-scale questions.

The questionnaires will be pilot tested with a small group of participants (20 kids and 10 teachers) to see how they respond and make any necessary adjustments. The selected sample will receive the final surveys, which will guarantee the anonymity and confidentiality of responses in order to promote truthful and accurate reporting. In order to get the most out of the students and make sure everything is done consistently, the surveys will be handed out in classrooms by qualified research assistants over the course of a month.

We will use statistical software like SPSS to analyze the data that we acquire. To summarize the sample and key variables, descriptive statistics will be generated, including means, standard deviations, and frequency distributions. To test the study's hypotheses, inferential statistics will be used. The association between teacher experience and student outcomes (academic achievement, skill acquisition, job placement rates, and satisfaction) will be examined using multiple regression analysis. We can learn more about the relationship between teacher experience and student performance in vocational education by conducting this analysis.

Furthermore, we will compare the mean scores of student outcomes across various levels of teacher experience (e.g., novice, moderate, and highly experienced teachers) using Analysis of Variance (ANOVA). The results will shed light on the question of whether and how different levels of teacher experience affect the results of vocational education. The significance level for all statistical tests will be set at $p < 0.05$.

The regression models will incorporate student socio-economic background and prior academic achievement as covariates in order to compensate for potential confounding variables. This will be useful for determining whether or not the dependent variables are affected by teachers' levels of experience.

Tables and charts will be used to display the data in a way that is easy to understand and to emphasize the most important points. Results will be founded on evidence and can influence policy and practice at Nanchang Institute of Technology and beyond, thanks to the methodology's emphasis on rigor and systematic investigation of the effect of teachers' experiences on vocational education results. Supporting the attainment of the UNSDG, the study is anticipated to provide a substantial contribution to our knowledge of how the experience of teachers impacts the efficacy and quality of vocational education.

5. Results

The Nanchang Institute of Technology conducted a study on the effects of teacher experience on UNSDG vocational education, and the results show several important things. Important insights into the ways in which teacher experience affects student results emerged from the examination of data acquired from two hundred students and fifty instructors. With mean satisfaction scores of 4.2 and skill acquisition scores of 4.0 out of 5, respectively, descriptive statistics revealed that students typically assessed their vocational education experience positively. On average, teachers had 12 years of experience, although their tenure might be anywhere from 1 to 30.

Table 1. presents the descriptive statistics for key variables

Variable	**Mean**	**Standard Deviation**
Student Satisfaction	4.2	0.6
Skill Acquisition	4.0	0.7
Job Placement Rate	75%	-
Teacher Experience (years)	12	8

According to multiple regression analysis, student academic achievement ($\beta = 0.45$, $p < 0.01$), skill acquisition ($\beta = 0.38$, $p < 0.01$), and overall satisfaction ($\beta = 0.42$, $p < 0.01$) were all profoundly influenced by instructor experience. This suggests that students in vocational education benefit from instructors with more expertise. To further confirm that the impacts were mostly attributable to teachers' experience, the research accounted for potential confounding factors such students' socioeconomic status and their previous academic performance.

Table 2. shows the regression coefficients for the impact of teacher experience on student outcomes

Dependent Variable	β	p-value
Academic Performance	0.45	<0.01
Skill Acquisition	0.38	<0.01
Overall Satisfaction	0.42	<0.01

The findings of the analysis of variance also showed that there were substantial variations in student outcomes according to the amount of experience of the teachers. Academic performance (mean = 4.5), skill acquisition (mean = 4.3), and job placement rates (85%) were all considerably higher for students taught by instructors with more than 20 years of experience compared to those taught by instructors with less than 5 years of experience (mean scores of 3.8, 3.6, and 65%, respectively). For every comparison, the p-value was less than 0.05, indicating that these differences were statistically significant.

Table 3. summarizes the ANOVA results for student outcomes by teacher experience level

Teacher Experience Level	Academic Performance (Mean)	Skill Acquisition (Mean)	Job Placement Rate (%)
Novice (0-5 years)	3.8	3.6	65
Intermediate (6-20 years)	4.2	4.0	75
Highly Experienced (>20 years)	4.5	4.3	85

Students' qualitative comments revealed that more seasoned educators excelled in improving their students' learning experiences through the provision of relevant examples, efficient problem-solving techniques, and individualised support. Students also found that instructors with more experience were better able to make the classroom a welcoming and interesting place for everyone, which encouraged more active engagement.

In summary, this study's findings highlight how important it is for teachers to have relevant work experience in order to improve the vocational programs at Nanchang Institute of Technology. Students benefit greatly from having instructors with experience in the field since it leads to higher rates of skill acquisition, better academic success, and better job placement. To attain the UNSDG linked to quality education and decent work, these findings lend credence to the idea that policies should be put in place to make sure that experienced vocational instructors are recruited, kept, and supported in their pursuit of continuing professional development. Insights from this study can help educational institutions and lawmakers improve vocational education programs, which in turn can help students become more employable and have a positive impact on sustainable development.

6. Conclusion

According to the study, which is in line with the UNSDG, the vocational education at the Nanchang Institute of Technology is greatly affected by the experience of the teachers. The importance of experienced teachers in providing good vocational training is highlighted by the fact that they significantly improve students' academic achievement, skill development, and job placement rates. According to the statistics, students gain a lot from having teachers with a lot of experience in the field because of the wealth of information, wisdom, and insight they bring to the table. In addition to raising academic achievement, these educators create a classroom climate that is more welcoming and interesting for all students. The results support educational strategies that aim to keep vocational educators at the top of their game by making it a priority to hire and keep them, and by stressing the need of ongoing professional development. Economic growth and sustainable development can be achieved through vocational education programs that better prepare students for the workforce. In order to promote the sustainable development strategy and attain the larger objectives of excellent education and decent work, this study emphasizes the necessity of continuous investment in human capital within the education sector.

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Conflict of Interest

The authors declare no conflicts of interest.

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