

THE INFLUENCE OF TEACHING COMPETENCY AND WORK MOTIVATION ON THE EFFECTIVENESS OF INSTRUCTIONAL MANAGEMENT: A CASE STUDY OF TEACHERS AT HAINAN VOCATIONAL AND TECHNICAL COLLEGE

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ABSTRACT

This study aimed to examine the influence of teaching competency, motivation factors, and hygiene factors on the effectiveness of instructional management among teachers in vocational and technical colleges in Hainan. A quantitative research approach using a survey method was employed, with a sample of 223 teachers selected from a population of 500 using Yamane's formula at a 95% confidence level. Data were collected through a structured questionnaire and analyzed using descriptive statistics and multiple regression analysis. The results revealed that all three independent variables significantly influenced instructional management effectiveness. Teaching competency showed a positive effect, with content integration being the most influential component, followed by content knowledge and instructional methods. Motivation factors also had a significant impact, particularly advancement, achievement, and recognition, while work itself and responsibility were not significant predictors. Hygiene factors demonstrated the strongest overall influence, with administrative policies and compensation as the most significant factors, followed by working conditions, job security, and interpersonal relationships. These findings indicate that instructional management effectiveness is influenced by the combined effects of teacher competencies, motivational factors, and organizational support. The study suggests that educational administrators should focus on enhancing teacher competencies, promoting motivation through recognition and career development, and improving working conditions to achieve higher instructional effectiveness.

Keywords: Teaching Competency, Motivation Factors, Hygiene Factors, Effectiveness of Instructional Management

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INTRODUCTION

Teaching and learning management in vocational and technical education institutions constitutes a crucial mechanism for human resource development aligned with labor market demands and economic development at both local and national levels. This is because vocational education emphasizes integrating theoretical knowledge with practical skills. Learners are therefore expected not only to acquire knowledge but also to apply it effectively in real-world work contexts. Such development encompasses professional expertise, understanding of work processes, occupational safety, problem-solving in specific situations, and responsibility for work quality. These competencies cannot be developed through theoretical instruction alone; rather, they require a high-quality instructional process that is appropriate to the characteristics of vocational education.

In this regard, teachers play a pivotal role as designers of learning experiences, facilitators of practical training, and evaluators of students' actual competencies. When teachers lack teaching competence or motivation, the learning process often devolves into content-based instruction, routine exercises, or score-oriented assessment. Such practices fail to accurately reflect students' practical abilities and ultimately diminish the effectiveness of teaching and learning, both in terms of instructional processes and learning outcomes.

A review of the literature and previous studies indicates that teacher performance efficiency and effectiveness are key indicators of overall educational quality, particularly within public educational institutions that face high expectations alongside limited supporting resources. Numerous international studies have demonstrated that teachers' teaching competence and work motivation are internal factors that directly influence instructional quality. Teachers with high teaching competence are generally able to systematically design learning activities, select instructional methods appropriate to learning objectives and student characteristics, clearly explain content, organize activities that promote active participation, and conduct ongoing assessments to support learner development. Meanwhile, work motivation functions as an internal driving force that enables teachers to fully utilize their competencies, fostering dedication, perseverance, and commitment to continuous instructional improvement—especially in vocational education contexts, which require substantial time and energy for supervising practical work and providing individualized student support (Halimahturrafiah et al., 2023).

Empirical research in vocational education further reinforces the significance of these factors. Habibi (2015) found that school administrators' managerial competence and teachers' work motivation had positive and significant effects on vocational teachers' professionalism. Subsequently, Habibi et al. (2018) expanded this explanatory framework by demonstrating that compensation, academic supervision, and teaching competence significantly influenced teachers' work motivation, which in turn mediated these effects on teacher performance. Similarly, Aji et al. (2019) confirmed that work motivation plays a crucial mediating role in the relationship between organizational commitment and professional competence and vocational teachers' job performance. These findings suggest that even when teachers possess adequate knowledge and competence, a lack of work motivation prevents them from fully realizing their potential. Conversely, motivation without appropriate competence cannot lead to high-quality instructional practices.

In Hainan Province, these issues become even more critical. Education in this region is expected not only to produce graduates who complete formal curricula but also to serve as a key mechanism for enhancing the province's overall economic and social capacity. Liu and Gao (2022) noted that educational decision-making in Hainan is deeply intertwined with local economic structures and cultural contexts, while Ding (2022) highlighted constraints related to resources, personnel, and the quality of educational management, particularly in developing areas. Under such conditions, vocational and technical teachers must possess both teaching

competence capable of fostering high-quality practical learning and work motivation that supports sustained dedication and professional development. Accordingly, this study is significant in elucidating the internal factors of teachers that influence the effectiveness of teaching and learning management. Its findings can serve as empirical evidence to inform teacher development strategies, enhance the quality of vocational education, and support the sustainable development of Hainan Province.

This study aims to: (1) examine the teaching competencies of teachers that influence the effectiveness of instructional management among teachers in vocational and technical colleges in Hainan; (2) examine the work motivation factors of teachers that influence the effectiveness of instructional management among teachers in vocational and technical colleges in Hainan; and (3) examine the hygiene factors of teachers that influence the effectiveness of instructional management among teachers in vocational and technical colleges in Hainan.

LITERATURE REVIEWS

Concepts and Theories of Teaching Competency

Teaching competency is grounded in psychological and human resource management theories that emphasize individual attributes contributing to effective performance, particularly the concept of competency as a predictor of real-world success rather than merely intellectual ability (McClelland, 1973). Subsequent frameworks conceptualized competency as an integration of motivation, knowledge, skills, and self-concept that are causally related to superior performance (Boyatzis, 1982; Spencer & Spencer, 1993). In the educational context, these ideas have been operationalized into structured models such as Danielson's Framework for Teaching, which categorizes teaching practice into planning, classroom environment, instruction, and professional responsibilities (Danielson, 2013). Moreover, Shulman's (1987) concept of pedagogical content knowledge (PCK) highlights the importance of integrating subject matter knowledge with appropriate pedagogical strategies. Accordingly, teaching competency encompasses content knowledge, pedagogical knowledge, and PCK, all of which enable teachers to design, implement, and adapt instruction effectively, thereby forming a critical foundation for high-quality instructional management.

Concepts and Theories of Motivation Factors

Work motivation theories explain the forces that influence individuals' effort and persistence in achieving organizational goals and are commonly classified into content and process theories, with the former focusing on internal needs and the latter on cognitive decision-making processes (Vroom, 1964; Locke, 1968). Among these, Herzberg's two-factor theory identifies motivation factors as intrinsic aspects of work, such as achievement, recognition, the nature of the work itself, responsibility, and advancement, which directly contribute to job satisfaction and performance (Herzberg et al., 1959). In the teaching profession, motivation has been further explained through self-determination theory, which distinguishes between autonomous and controlled motivation, with autonomous motivation being positively associated with job satisfaction and performance (Ryan & Deci, 2000; Xu, 2022). Empirical studies have consistently demonstrated that both intrinsic and extrinsic motivation significantly influence teachers' performance, commitment, and instructional quality (Amini et al., 2022; Layek & Koodamara, 2024). Therefore, motivation factors serve as essential drivers that enhance teachers' engagement, professional commitment, and effectiveness in instructional management.

Concepts and Theories of Hygiene Factors

Hygiene factors, as proposed in Herzberg's two-factor theory, refer to extrinsic conditions surrounding the job that prevent dissatisfaction but do not inherently motivate individuals, including salary, organizational policies, interpersonal relationships, working conditions, and job security (Herzberg et al., 1959). In educational settings, these factors play a crucial role in shaping teachers' work environments and psychological well-being, as inadequate hygiene

conditions can lead to stress, dissatisfaction, and burnout (Maslach et al., 2001). Empirical research indicates that workload, working conditions, and institutional support significantly influence teachers' stress levels and retention decisions (Carroll et al., 2022; Mohzana et al., 2023). Furthermore, studies such as OECD (2019) and Ingersoll and Smith (2003) highlight that fair compensation, supportive administrative policies, and positive interpersonal relationships contribute to job stability and organizational commitment. Thus, hygiene factors function as foundational elements that stabilize teachers' working conditions, reduce negative work experiences, and support sustained instructional performance.

Concepts and Theories of Effectiveness of Instructional Management

The effectiveness of instructional management is derived from organizational effectiveness theory, which defines effectiveness as the extent to which an organization achieves its goals while maintaining quality processes and efficient resource utilization (Mott, 1972). In the educational context, school effectiveness encompasses both administrative and instructional dimensions, emphasizing leadership, teacher performance, and the quality of teaching and learning processes (Hoy & Miskel, 1991). Instructional management effectiveness is typically conceptualized through two key dimensions: the quality of instructional processes and student learning outcomes, both of which are interrelated and influenced by teacher competency and work conditions. Research has shown that instructional quality depends not only on teachers' professional competencies but also on continuous professional development, job satisfaction, and supportive learning environments (Gore et al., 2024; Harrison et al., 2023). Additionally, student learning outcomes—such as knowledge acquisition, critical thinking, and skill development—serve as direct indicators of instructional effectiveness and are shaped by instructional design, student engagement, and teacher-student interactions (Yang & Kaiser, 2022; Qureshi et al., 2021). Therefore, instructional management effectiveness represents a comprehensive construct reflecting both the processes and outcomes of teaching and learning within educational systems.

Research Hypotheses

H1: Teaching competency has a positive influence on instructional management effectiveness among teachers at Hainan Vocational and Technical College.

H2: Motivation factors positively influence instructional management effectiveness among teachers at Hainan Vocational and Technical College.

H3: Hygiene factors positively influence instructional management effectiveness among teachers at Hainan Vocational and Technical College.

From the literature review, the conceptual framework can be drawn as shown in Figure 1.

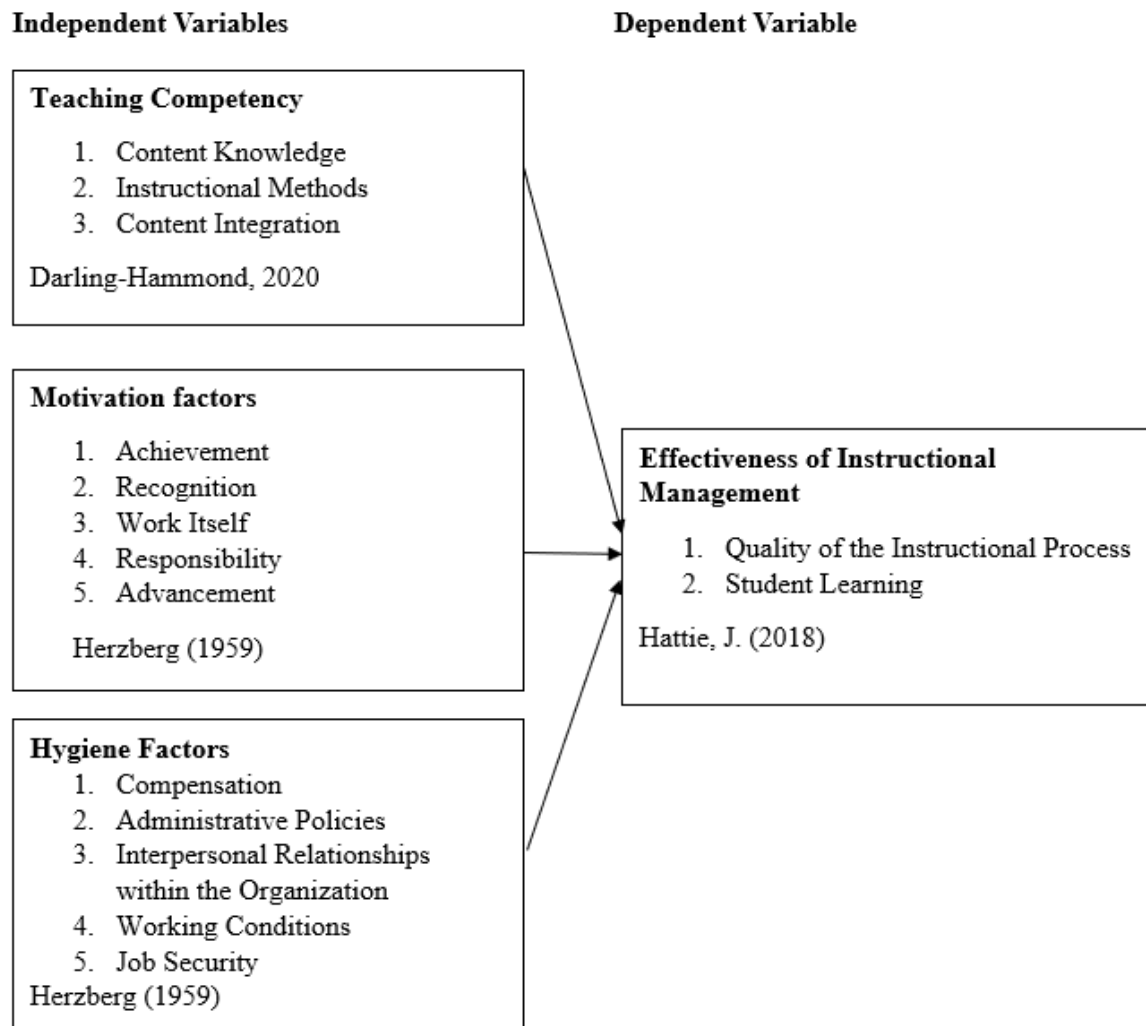


Figure 1 Conceptual Framework

RESEARCH METHODOLOGY

To examine the influence of teaching competency, motivation factors, and hygiene factors on the effectiveness of instructional management among vocational and technical teachers, this study adopted a quantitative research approach using survey methodology. The population consisted of 500 teachers at Hainan Vocational and Technical College who were responsible for instructional management across various academic disciplines. The sample size was determined using Yamane's (1973) formula at a 95% confidence level with a 5% margin of error, resulting in 223 respondents. Proportional stratified random sampling was employed to ensure representation across academic programs. The research instrument was a structured questionnaire developed based on relevant theories and prior studies, comprising five sections: demographic information, teaching competency, motivation factors, hygiene factors, and instructional management effectiveness. The teaching competency section included dimensions of content knowledge, pedagogical knowledge, and pedagogical content knowledge, while motivation factors covered achievement, recognition, work itself, responsibility, and advancement, and hygiene factors included compensation, administrative policies, interpersonal relationships, working conditions, and job security. Instructional management effectiveness was measured through the quality of instructional processes and student learning outcomes. A five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree) was used to measure respondents' perceptions. Prior to data collection, the questionnaire's content validity was assessed using the item-objective congruence (IOC)

method, and reliability was examined using Cronbach's alpha to ensure internal consistency (Polit & Beck, 2006; Hair et al., 2012). Data were collected through the distribution of questionnaires to the selected sample, and all returned responses were screened for completeness and accuracy. In addition, secondary data were obtained from academic literature, research studies, and related documents to support the analysis. For data analysis, both descriptive and inferential statistics were employed using statistical software. Descriptive statistics, including frequency, percentage, mean, and standard deviation, were used to describe respondents' characteristics and the levels of each variable. Inferential statistics involved multiple regression analysis to investigate the predictive effects of teaching competency, motivation factors, and hygiene factors on instructional management effectiveness. All statistical tests were conducted at a significance level of .05 to ensure the validity and reliability of the findings

RESEARCH RESULTS

Demographic Characteristics of Respondents

The majority of respondents were female, accounting for 120 individuals (53.8%), while 103 respondents (46.2%) were male. Most respondents were aged between 31-40 years, representing 118 individuals (52.9%). Regarding educational attainment, the majority held a master's degree, totaling 140 respondents (62.8%). In terms of work experience, most respondents had 1-5 years of experience, accounting for 125 individuals. Overall, the respondents' perceptions were at a high level. Among the studied variables, teaching competency received the highest mean score ($\bar{X} = 3.85$, $SD = .30$), followed by hygiene factors ($\bar{X} = 3.78$, $SD = .26$), effectiveness of instructional management ($\bar{X} = 3.78$, $SD = .28$), and motivation factors, which had the lowest mean score ($\bar{X} = 3.77$, $SD = .24$).

Results of Hypothesis Testing

Table 1 Results of the Regression Analysis of Teaching Competency, Motivation Factors, and Hygiene Factors on the Effectiveness of Instructional Management

Factors	b	Std. Error	β	t	Sig.	Tolerance	VIF
(Constant)	.895	.249		3.592***	.000		
- Content Knowledge	.051	.039	.079	1.305	.193	.746	1.341
- Instructional Methods	.030	.045	.043	.670	.504	.654	1.528
- Content Integration	.035	.045	.050	.779	.437	.677	1.477
- Achievement	.046	.049	.057	.949	.344	.755	1.324
- Recognition	.051	.046	.068	1.125	.262	.756	1.323
- Work Itself	-.056	.050	-.072	-1.109	.269	.645	1.551
- Responsibility	.009	.046	.012	.196	.845	.730	1.371
- Advancement	.097	.046	.134	2.088*	.038	.668	1.498
- Compensation	.139	.046	.186	3.002**	.003	.714	1.401
- Administrative Policies	.126	.050	.166	2.518**	.013	.628	1.593
- Interpersonal Relationships within the Organization	.025	.049	.035	.524	.601	.619	1.615
- Working Conditions	.120	.046	.165	2.606**	.010	.680	1.470
- Job Security	.090	.043	.129	2.088*	.038	.718	1.393
R = .624, R ² = .390, Adj. R ² = .376, SEE _{EST} = .224, F = 27.745, Sig. = .000***							

*** < 0.001, ** < .01, * < .05

From Table 1, it was found that teaching competency, motivation factors, and hygiene factors jointly have a statistically significant positive influence on the effectiveness of instructional management. The overall regression model was statistically significant ($F = 27.745$, $p < .001$), with a relatively strong correlation coefficient ($R = .624$). The coefficient of determination ($R^2 = .390$) indicates that approximately 39.0% of the variance in instructional management effectiveness can be explained by the combined independent variables, with an adjusted R^2 of .376, reflecting a relatively high level of explanatory power.

Among the predictors, several variables were found to be statistically significant. Compensation had the strongest positive influence ($\beta = .186$, $p < .01$), followed by administrative policies ($\beta = .166$, $p < .01$), working conditions ($\beta = .165$, $p < .01$), advancement ($\beta = .134$, $p < .05$), and job security ($\beta = .129$, $p < .05$). These findings indicate that hygiene factors play a dominant role in influencing instructional management effectiveness, particularly in terms of organizational policies, financial rewards, and working environment conditions.

In contrast, teaching competency variables, including content knowledge ($\beta = .079$, $p = .193$), instructional methods ($\beta = .043$, $p = .504$), and content integration ($\beta = .050$, $p = .437$), were not statistically significant. Similarly, most motivation factors, such as achievement ($\beta = .057$, $p = .344$), recognition ($\beta = .068$, $p = .262$), work itself ($\beta = -.072$, $p = .269$), and responsibility ($\beta = .012$, $p = .845$), did not show significant effects within the combined model.

Furthermore, the tolerance values ranged from .619 to .756, and the variance inflation factor (VIF) values ranged from 1.323 to 1.615, indicating no multicollinearity issues among the independent variables. This confirms that the regression model is appropriate, stable, and reliable for explaining the effectiveness of instructional management.

DISCUSSION AND CONCLUSION

After addressing the research objectives, this study provides empirical evidence that teaching competency, motivation factors, and hygiene factors jointly and significantly influence the effectiveness of instructional management among teachers in vocational and technical colleges in Hainan. By integrating all independent variables into a single analytical model, the findings offer a more accurate understanding of the relative and combined contributions of these factors, addressing limitations found in prior studies that examined them separately.

In terms of teaching competency, the results indicate that content integration is the strongest predictor, followed by content knowledge and instructional methods. This finding reinforces the theoretical perspective of competency-based performance, which emphasizes the integration of subject knowledge and pedagogical skills as a key determinant of effective teaching (Shulman, 1987; Spencer & Spencer, 1993). It suggests that teachers who are able to effectively integrate content with appropriate instructional strategies are better equipped to design meaningful learning experiences and enhance instructional quality.

Regarding motivation factors, the findings reveal that advancement, achievement, and recognition significantly contribute to instructional management effectiveness, while work itself and responsibility do not show significant effects when analyzed within the combined model. This supports Herzberg's two-factor theory, which identifies intrinsic factors as critical drivers of job satisfaction and performance (Herzberg et al., 1959), and is consistent with self-determination theory, which highlights the role of intrinsic motivation in sustaining engagement and performance (Ryan & Deci, 2000).

Importantly, hygiene factors demonstrate the strongest overall influence among the three constructs, with administrative policies and compensation emerging as the most significant predictors. This indicates that organizational conditions play a crucial enabling role in supporting instructional effectiveness. Consistent with prior research, fair policies, adequate

compensation, and supportive working conditions reduce dissatisfaction and enhance teacher performance (Herzberg et al., 1959).

These findings highlight that instructional management effectiveness is not determined by a single factor but results from the interaction between teacher competencies, motivational drivers, and organizational support. This integrated perspective is aligned with organizational effectiveness theory, which posits that both internal capabilities and environmental conditions are necessary for achieving desired outcomes (Mott, 1972; Hoy & Miskel, 1991).

From a practical perspective, the findings suggest that educational administrators should implement targeted interventions based on the strongest predictors identified in this study. Specifically, institutions should develop training programs that enhance teachers' ability to integrate content and instructional strategies, establish clear and supportive administrative policies, and design compensation and reward systems that reinforce achievement and recognition. Additionally, structured career advancement pathways and performance-based recognition systems should be implemented to strengthen teacher motivation. These context-specific strategies are particularly relevant for vocational and technical colleges in Hainan, where both instructional quality and organizational support systems play critical roles.

Despite its contributions, this study has several limitations. First, the quantitative design may limit the depth of understanding of teachers' experiences; future research should incorporate qualitative approaches to explore underlying mechanisms. Second, the focus on a single institution may limit generalizability; future studies should include multiple institutions or regions. Finally, additional variables such as leadership style, organizational culture, and professional development opportunities should be examined to provide a more comprehensive understanding of instructional management effectiveness.

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