

Generic Skills, Inclusive Pedagogy, Assessment Reform, and Action Research Orientation as Predictors of Reform Readiness in Teacher Education: A Quantitative Study

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Abstract

Educational reform in India increasingly emphasizes holistic development, competency-based learning, inclusive pedagogy, authentic assessment, and reflective professionalism. Yet these reform priorities are often discussed as policy or conceptual concerns rather than examined through measurable teacher-education variables. The present study investigates the extent to which generic skills integration, pedagogical rejuvenation, inclusive and differentiated pedagogy orientation, assessment reform orientation, and action research orientation predict reform readiness among pre-service teachers. Using a quantitative survey framework, data from 600 pre-service teachers were analyzed through descriptive statistics, correlation, group comparison, and multiple regression. The findings indicated that all five predictor variables were positively and significantly associated with reform readiness. Inclusive and differentiated pedagogy, pedagogical rejuvenation, and action research orientation emerged as the strongest predictors, while generic skills integration and assessment reform orientation also contributed significantly. No significant differences were observed in reform readiness with respect to gender, institution type, or programme type; however, internship exposure showed a significant effect. The findings suggest that reform readiness in teacher education is multidimensional and depends on the interaction of pedagogical, inclusive, evaluative, and inquiry-based orientations. The study contributes an empirical framework for examining teacher preparation in relation to broader educational reform in India.

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1. Introduction

Educational reform in contemporary India is increasingly framed in terms of quality, equity, flexibility, inclusion, competency-based learning, and holistic development. This shift reflects a broader rethinking of what educational systems are expected to accomplish. Education is no longer viewed only as the transmission of disciplinary knowledge or the preparation of learners for conventional examinations; rather, it is expected to foster communication, critical thinking, collaboration, adaptability, ethical awareness, and social responsibility (Government of India, 2020; UNESCO, 2020). Such expectations place renewed emphasis on teacher education, since the teacher remains the central agent through whom pedagogical reform becomes operational.

Early work on skill-based education and the relationship between education systems and social demands highlights the need for educational institutions to respond to changing realities of work, citizenship, and social participation (Singh, 2013, 2014g). Subsequent writings expand this argument by treating generic skills, life skills, global competencies, pedagogical rejuvenation, inclusive education, differentiated instruction, examination reform, and action research as interrelated rather than separate concerns (Singh, 2014a, 2014b, 2014c, 2014i, 2015; Singh & Gera, 2015a, 2015b, 2015c, 2015d).

A major strength of this body of work is that it links educational purpose to classroom practice. Generic skills are presented not as incidental by-products of education, but as outcomes requiring deliberate pedagogical integration. Inclusion is framed not merely as access or placement, but as actual responsiveness to learner diversity. Assessment reform is viewed as necessary because traditional examinations often fail to capture learners' broader capabilities. Action research, meanwhile, is positioned as a practical professional mechanism through which teachers can reflect upon and improve their own practice (Singh, 2014a, 2015). Together, these strands suggest that educational reform is best understood as a coordinated transformation across teacher preparation, pedagogy, inclusion, assessment, and professional inquiry.

These themes resonate with wider teacher-education literature. Darling-Hammond (2006) emphasizes that strong teacher education depends on coherence between coursework and practice, deep understanding of learning, and meaningful clinical experience. Avalos (2011) similarly argues that professional development becomes effective when grounded in reflection, collaboration, and actual teaching contexts. Research on generic skills in higher education has likewise shown that such competencies require intentional curricular and pedagogical support rather than being left to indirect development (Tuononen et al., 2022). From this perspective, teacher education reform demands not isolated interventions but an integrated pedagogical architecture.

Despite the richness of this conceptual literature, there remains a need to translate reform discourse into measurable educational variables. Many discussions of educational change remain normative, policy-driven, or thematic, leaving an insufficient empirical basis for understanding how future teachers perceive, internalize, and prepare for reform-oriented pedagogy. The present study addresses this gap by operationalizing five core constructs—generic skills integration, pedagogical rejuvenation, inclusive and differentiated pedagogy orientation, assessment reform orientation, and action research orientation—and examining their contribution to reform readiness among pre-service teachers.

The study proceeds from the assumption that reform readiness is not a vague attitude but a measurable professional orientation reflecting preparedness for learner-centered, inclusive, competency-based, and reflective teaching. In doing so, the paper offers an empirical model through which broad reform principles may be studied quantitatively in teacher education.

2. Objectives of the Study

The study was designed to achieve the following objectives:

To assess the level of generic skills integration, pedagogical rejuvenation, inclusive and differentiated pedagogy orientation, assessment reform orientation, action research orientation, and reform readiness among pre-service teachers.

To examine the relationship between generic skills integration and reform readiness.

To examine the relationship between pedagogical rejuvenation and reform readiness.

To examine the relationship between inclusive and differentiated pedagogy orientation and reform readiness.

To examine the relationship between assessment reform orientation and reform readiness.

To examine the relationship between action research orientation and reform readiness.

To study differences in reform readiness with respect to gender, institution type, programme type, and internship exposure.

To determine the combined predictive contribution of generic skills integration, pedagogical rejuvenation, inclusive and differentiated pedagogy orientation, assessment reform orientation, and action research orientation toward reform readiness.

3. Hypotheses

The study tested the following null hypotheses:

H01: There is no significant relationship between generic skills integration and reform readiness.

H02: There is no significant relationship between pedagogical rejuvenation and reform readiness.

H03: There is no significant relationship between inclusive and differentiated pedagogy orientation and reform readiness.

H04: There is no significant relationship between assessment reform orientation and reform readiness.

H05: There is no significant relationship between action research orientation and reform readiness.

H06: There is no significant difference in reform readiness with respect to gender.

H07: There is no significant difference in reform readiness with respect to institution type.

H08: There is no significant difference in reform readiness with respect to programme type.

H09: There is no significant difference in reform readiness with respect to internship exposure.

H010: Generic skills integration, pedagogical rejuvenation, inclusive and differentiated pedagogy orientation, assessment reform orientation, and action research orientation do not significantly predict reform readiness.

4. Method

4.1 Research Design

The study employed a quantitative survey design with descriptive, correlational, comparative, and predictive components. This design was considered appropriate because the study aimed to examine levels, relationships, group differences, and predictive influence among multiple teacher-education variables related to reform readiness.

4.2 Participants

The sample comprised 600 pre-service teachers enrolled in teacher education programmes. The sample included participants across gender, institution type, programme type, and internship exposure categories in order to permit relevant group comparisons.

4.3 Variables

The independent variables were generic skills integration, pedagogical rejuvenation, inclusive and differentiated pedagogy orientation, assessment reform orientation, and action research orientation. The dependent variable was reform readiness.

4.4 Instrumentation

A structured Likert-type instrument was used to measure the six constructs included in the study. The tool was conceptually grounded in the educational themes advanced in scholarship on skills, pedagogy, inclusion, reflective practice, and examination reform (Singh, 2014a, 2014b, 2014c, 2015; Singh & Gera, 2015a, 2015c, 2015d). The instrument consisted of six subscales corresponding to the study variables. Responses were recorded on a five-point scale ranging from strongly disagree to strongly agree.

4.5 Statistical Analysis

The data were analyzed using mean, standard deviation, Cronbach's alpha, Pearson's product-moment correlation, independent-samples t test, one-way ANOVA, and multiple regression analysis.

5. Results

5.1 Reliability and Descriptive Statistics

Table 1 presents the internal consistency and descriptive statistics for the study variables.

Table 1
Reliability and Descriptive Statistics of the Study Variables

Variable	Cronbach's alpha	Mean	SD
Generic Skills Integration	.918	3.511	0.571
Pedagogical Rejuvenation	.920	3.541	0.559
Inclusive and Differentiated Pedagogy Orientation	.926	3.568	0.615
Assessment Reform Orientation	.912	3.580	0.563
Action Research Orientation	.913	3.548	0.555
Reform Readiness	.930	3.577	0.587

Note. SD = standard deviation. Cronbach's alpha values indicate high internal consistency across all subscales.

The reliability coefficients indicated high internal consistency for all scales. Mean values showed moderately high levels across all reform-related dimensions, suggesting that the participants generally reported positive pedagogical and professional orientations.

5.2 Correlation among Study Variables

Table 2 presents the Pearson correlation coefficients among the variables.

Table 2
Correlation Matrix of the Study Variables

Variable	1	2	3	4	5	6
1. Generic Skills Integration	1.000					
2. Pedagogical Rejuvenation	.528	1.000				
3. Inclusive and Differentiated Pedagogy Orientation	.519	.587	1.000			
4. Assessment Reform Orientation	.435	.476	.431	1.000		
5. Action Research Orientation	.413	.489	.473	.394	1.000	
6. Reform Readiness	.522	.645	.660	.492	.586	1.000

Note. All correlations with reform readiness were positive and statistically significant as reported in the source manuscript.

All correlations with reform readiness were positive and statistically significant. Reform readiness showed the strongest correlation with inclusive and differentiated pedagogy orientation ($r = .660$), followed by pedagogical rejuvenation ($r = .645$), action research orientation ($r = .586$), generic skills integration ($r = .522$), and assessment reform orientation ($r = .492$). Accordingly, H01, H02, H03, H04, and H05 were rejected.

5.3 Group Differences in Reform Readiness

No statistically significant difference was found in reform readiness with respect to gender, $t = 0.147$, $p = .883$. Thus, H06 was retained.

No statistically significant difference was observed in reform readiness with respect to institution type, $t = 0.395$, $p = .693$. Thus, H07 was retained.

No statistically significant difference was found in reform readiness with respect to programme type, $t = -1.508$, $p = .132$. Thus, H08 was retained.

A statistically significant difference was found in reform readiness with respect to internship exposure, $F(2, 597) = 19.37$, $p < .001$. Participants with higher internship exposure reported the highest reform readiness, followed by those with moderate exposure, while those with low exposure reported the lowest mean score. Hence, H09 was rejected.

5.4 Multiple Regression Analysis

A multiple regression analysis was conducted to examine the extent to which the five predictor variables explained variance in reform readiness.

Table 3
Multiple Regression Analysis Predicting Reform Readiness

Predictor	B	Beta	t	p
Generic Skills Integration	0.085	.083	2.523	.012
Pedagogical Rejuvenation	0.264	.251	7.084	< .001
Inclusive and Differentiated Pedagogy Orientation	0.295	.309	8.948	< .001
Assessment Reform Orientation	0.114	.109	3.512	< .001
Action Research Orientation	0.253	.239	7.637	< .001

Note. Model summary: $R^2 = .603$, Adjusted $R^2 = .600$, $F(5, 594) = 180.60$, $p < .001$.

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The regression model explained 60.3% of the variance in reform readiness. Inclusive and differentiated pedagogy orientation emerged as the strongest predictor, followed by pedagogical rejuvenation and action research orientation. Assessment reform orientation and generic skills integration also made significant contributions. H010 was therefore rejected.

6. Discussion

The findings support the proposition that reform readiness in teacher education is multidimensional and shaped by the interaction of pedagogical, inclusive, evaluative, and reflective orientations. The strongest predictor of reform readiness was inclusive and differentiated pedagogy orientation. This is consistent with the view that educational reform becomes meaningful only when teachers are prepared to respond to learner diversity through adaptive, equitable, and context-sensitive pedagogical practice (Singh, 2014c, 2014d, 2014e, 2014i). Inclusion, therefore, is not merely a moral or policy commitment; it is a practical indicator of pedagogical reform.

Pedagogical rejuvenation also emerged as a strong predictor. This result reinforces the argument that educational reform cannot be sustained without renewal of teacher preparation itself. Singh's work on pedagogical foundations and the Singh–Gera formulation of pedagogical rejuvenation emphasize that strong teacher education depends on reflective engagement, field relevance, and meaningful integration of theory and practice (Singh, 2014b; Singh & Gera, 2015c). The present findings are aligned with the broader teacher-education literature, which similarly underscores coherence and clinically grounded preparation as central to teacher effectiveness (Avalos, 2011; Darling-Hammond, 2006).

Action research orientation was another substantial predictor of reform readiness. This finding is important because it suggests that pre-service teachers who view inquiry, reflection, and problem-solving as part of professional practice are more likely to be prepared for educational reform. Action research, in this sense, functions not merely as a research method but as a professional disposition toward improvement and contextual responsiveness (Singh, 2014a).

Generic skills integration and assessment reform orientation, though somewhat weaker predictors than inclusive pedagogy and pedagogical rejuvenation, were nevertheless significant. This suggests that broader educational capabilities such as communication, adaptability, critical thinking, and collaborative competence remain important to reform-oriented teaching, but they achieve fuller significance when embedded within responsive pedagogy and reflective practice (Singh & Gera, 2015a, 2015d; Tuononen et al., 2022). Likewise, support for assessment reform matters because competency-based and inclusive education cannot be fully realized through recall-dominated evaluation systems (Singh, 2015).

The absence of significant differences by gender, institution type, and programme type indicates that reform readiness is not substantially shaped by these categorical distinctions within the present sample. In contrast, internship exposure showed a significant effect, suggesting that practice-based experience plays an important role in fostering reform-oriented dispositions. This result strengthens the argument that field engagement and classroom-linked preparation are indispensable to teacher education quality.

7. Conclusion

The present study examined reform readiness in teacher education through a quantitative framework grounded in generic skills integration, pedagogical rejuvenation, inclusive and differentiated pedagogy orientation, assessment reform orientation, and action research orientation. The findings demonstrated that all five variables were positively related to reform readiness and that, taken together, they explained a substantial proportion of variance in the dependent variable.

Among the predictors, inclusive and differentiated pedagogy orientation, pedagogical rejuvenation, and action research orientation emerged as the most influential. These findings underscore the need to conceptualize teacher education reform not as a set of disconnected priorities, but as an integrated pedagogical architecture. Reform-oriented teacher preparation must therefore strengthen inclusive classroom responsiveness, renew pedagogical practice, promote inquiry-based professionalism, integrate generic skills, and support authentic assessment.

The study contributes to the empirical literature on teacher education by offering a structured model through which broad reform discourse may be quantitatively examined. It also provides a useful basis for curriculum planning, institutional review, and future research in teacher education.

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