

THE MODERATING EFFECT OF DEMOGRAPHICS ON THE RELATIONSHIP BETWEEN SUPERVISORS' MENTORING SKILLS AND PRE-SERVICE TEACHERS' TEACHING SKILLS

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ABSTRACT: *This study examined whether age, sex, and field of specialization moderate the relationship between supervisors' mentoring skills and pre-service teachers' self-assessed teaching skills. A cross-sectional descriptive-correlational design was employed among 204 teaching interns selected through proportionate stratified random sampling from five local colleges in Misamis Oriental, Philippines. Data were obtained using a modified and content-validated questionnaire and analyzed through descriptive statistics, Spearman's rank-order correlation, and multiple regression models containing mentoring-by-demographic interaction terms. Respondents rated supervisors' mentoring skills as very good ($M = 3.83$, $SD = 0.25$) and their own teaching skills as highly competent ($M = 3.73$, $SD = 0.24$). Mentoring dimensions showed statistically significant but weak positive correlations with several teaching-skill dimensions ($r_s = .138$ to $.289$). Age did not moderate the association ($B = -0.235$, $p = .204$), and sex likewise showed no moderating effect ($B = 0.091$, $p = .581$). Field of specialization produced significant interaction terms for Filipino ($B = -0.379$, $p = .031$) and Technology and Livelihood Education ($B = -0.473$, $p = .004$), relative to English, although the specialization model explained only 9.2% of adjusted variance. The findings indicate that mentoring is beneficial across demographic groups, but its association with reported teaching competence may vary by disciplinary context. Teacher-education institutions should therefore maintain a common mentoring framework while adding specialization-aligned coaching, calibrated observation rubrics, digital learning resources, and evidence-based mentor development. Because the outcome was self-reported and the design was cross-sectional, the interaction effects should be validated using mentor ratings, observed teaching performance, and longitudinal or multilevel designs.*

Keywords: mentoring; pre-service teachers; teaching skills; moderation analysis; field of specialization

INTRODUCTION

Teaching internship is the point at which pedagogical knowledge is tested against the practical demands of planning, instruction, assessment, classroom management, and professional conduct. Pre-service teachers do not develop these competencies through coursework alone; they also need guided practice, timely feedback, and opportunities to examine the consequences of their instructional decisions. The supervisor therefore functions not merely as an evaluator but as a professional mentor who helps the novice connect theory, context, and classroom action [1,2].

Evidence from teacher education nevertheless shows persistent difficulties in lesson planning, classroom management, questioning, assessment, and adaptation to diverse learners [3,4]. These difficulties are important because early teaching experiences shape efficacy, professional identity, and readiness for employment. Contemporary teaching also requires digital, collaborative, and problem-solving competencies. Finnish pre-service teachers, for example, reported differentiated perceptions of twenty-first-century skills, reinforcing the need for teacher preparation to treat such competence as multidimensional rather than as a single generic ability [5].

Philippine evidence similarly shows that teaching competence develops within an instructional ecosystem. Interactive Learning Objects can support trainee teachers when face-to-face learning is constrained, but their educational value depends on purposeful integration and learner support [6]. Among Philippine public-university educators, performance expectancy and effort expectancy predicted behavioral intention to use Web 2.0 tools, while

behavioral intention and facilitating conditions predicted use behavior [7]. These results imply that access to tools alone is insufficient: mentors must model their pedagogical use, reduce perceived difficulty, and connect technology with authentic teaching tasks.

Pedagogical beliefs also shape how educators interpret and use technology in teaching. Namoco and Zaharudin found that technology integration among Philippine higher-education educators was mediated by beliefs about teaching and learning, suggesting that mentoring must address the reasoning behind instructional choices rather than prescribe techniques mechanically [8]. Related regression evidence from flexible Computer-Aided Designing courses showed that learner factors and parental guidance, rather than teacher factors and facilities alone, significantly predicted performance [9]. Collectively, these studies caution against attributing pre-service competence to one source; mentoring operates alongside learner, contextual, technological, and disciplinary conditions.

Within Philippine local colleges, this issue has policy relevance. DILG Memorandum Circular No. 2009-67 expanded access through guidelines for establishing local colleges and universities [10], while DepEd Order No. 007, s. 2023 emphasizes merit, competence, and fitness in teacher recruitment and appointment [11]. Teacher-education institutions must therefore generate evidence on how internship supervision can strengthen the competencies expected of beginning teachers.

Existing research supports the value of mentoring relationships, but three gaps remain. First, many studies describe mentoring quality or teaching competence

separately and do not test whether the relationship between them changes across demographic groups. Second, demographic variables are frequently treated as direct predictors, even though their more plausible role may be conditional: the benefit associated with mentoring may differ according to age-related experience, sex-linked social experiences, or specialization-specific pedagogical demands. Third, Philippine studies on learning technologies and academic performance identify contextual determinants [6-9], but they do not explain whether supervisor mentoring is equally associated with teaching competence across subject specializations in local-college internship settings.

This distinction is consequential. A significant main effect of specialization indicates differences in average teaching-skill scores, whereas a significant mentoring-by-specialization interaction indicates differences in the slope linking mentoring with teaching skills. Conflating these effects can lead institutions to design generic interventions when the evidence instead calls for discipline-responsive mentoring. Moderation analysis is therefore appropriate because it directly tests whether the magnitude or direction of the mentoring-skill association depends on a third variable [12]. The study consequently examined the levels of supervisors' mentoring skills and pre-service teachers' teaching skills, tested their bivariate relationships, and determined whether age, sex, and field of specialization moderated the relationship between the two constructs. It was hypothesized that each mentoring-by-demographic interaction term would significantly predict teaching skills after accounting for the corresponding main effects.

By locating moderation within a Philippine local-college context, the study extends prior work from descriptions of competence and technology adoption toward a conditional explanation of when mentoring is more or less strongly associated with teaching skills. Its practical contribution is an empirical basis for deciding which mentor-development components should be common across programs and which should be aligned with disciplinary practice.

MATERIALS AND METHODS

Research design and setting. The study used a quantitative, cross-sectional descriptive-correlational design with moderation analysis. The design was appropriate because it estimated naturally occurring associations without manipulating mentoring conditions and tested whether the mentoring-skill relationship varied by demographic characteristics. The study was conducted in five local colleges in Misamis Oriental, Philippines, among pre-service teachers who had completed or were undertaking a teaching internship. Participants and sampling. The target population comprised 430 pre-service teachers. A sample of 204 (47.4% of the population) was selected through proportionate stratified random sampling so that participating colleges and fields of specialization were represented. Eligibility required enrollment in a teacher-education program and actual teaching-internship experience during the data-collection period. The final sample included respondents aged 20-30 and 31-60 years, male and female respondents, and majors in

English, Filipino, Social Studies, MAPEH, and Technology and Livelihood Education (TLE).

Instrument. Data were collected using an adopted and modified questionnaire covering five mentoring dimensions (professional presence, guiding mentees, assessing mentees' teaching, developing mentees' teaching skills, and giving feedback) and five teaching-skill dimensions (classroom management, communication, lesson planning, teaching methodologies, and questioning). Responses used a four-point scale. The modified instrument underwent expert content validation before administration. The manuscript reports composite means and standard deviations; future replications should also disclose the source items, number of items per scale, content-validity indices, pilot-test procedures, and reliability coefficients to permit fuller evaluation and replication.

Data analysis. Frequencies and percentages described the sample. Means and standard deviations summarized mentoring and teaching-skill ratings. Spearman's rank-order correlation (r_s) was used for bivariate associations because the measures were derived from ordinal rating scales. Separate multiple-regression models tested moderation by age, sex, and specialization. Each model included the mentoring score, the moderator, and the mentoring-by-moderator interaction. Sex and specialization were dummy coded; male and English served as the reported reference categories. A statistically significant interaction term at $\alpha = .05$ was interpreted as evidence of moderation. Regression coefficients were interpreted together with p values and adjusted R-squared; non-significant interactions were not inferred from visual convergence or divergence of plotted lines alone [12].

Ethical considerations. Participation was voluntary and based on informed consent. Respondents received information about the study's purpose, procedures, confidentiality safeguards, and right to withdraw without penalty. Data were reported in aggregate form. The author should insert the approving ethics body, protocol number, and approval date in the final submission if institutional ethics review was required or obtained.

RESULTS AND DISCUSSION

Results are presented from sample characteristics and descriptive estimates to bivariate associations and moderation models. Interpretations emphasize effect magnitude, uncertainty, and the distinction between main and interaction effects.

Pre-service Teachers' Profile

Table 1. Frequency and percentage distribution of pre-service teachers by age

Age (Years)	F	%
20-30 yrs old	192	94.12
31-60 yrs old	12	5.88

Most respondents were 20-30 years old ($n = 192$, 94.12%), while 12 (5.88%) were 31-60 years old. This pronounced imbalance is descriptively important and statistically consequential: the very small older subgroup limits power to detect an age interaction and makes the age model sensitive to a few observations. Accordingly, the non-significant age

interaction reported later should be interpreted as absence of evidence in this sample, not proof that age can never condition mentoring effects.

The distribution is consistent with the usual age of students completing an undergraduate teacher-education program. It should not be used to infer that younger adults prefer teaching or that local-college access caused the pattern, because neither preference nor causal exposure was measured.

Table 2. Frequency and percentage distribution of pre-service teachers by sex (n=204)

Sex	F	%
Male	59	28.92
Female	145	71.08

Female respondents constituted 71.08% (n = 145) of the sample, compared with 28.92% male respondents (n = 59). The imbalance describes the participating cohort but does not itself establish sex differences in competence. Its relevance to the research question lies in whether the slope between mentoring and teaching skills differs by sex, which is tested through the interaction model rather than by comparing raw group ranges.

Table 3. Frequency and percentage distribution of pre-service teachers by field of specialization

The representation of	F	%
English	74	36.27
Filipino	37	18.14
Social Studies	18	8.82
MAPEH	32	15.69

English was the largest specialization (n = 74, 36.27%), followed by TLE (n = 43, 21.07%), Filipino (n = 37, 18.14%), MAPEH (n = 32, 15.69%), and Social Studies (n = 18, 8.82%). Unequal cell sizes reduce the precision of specialization-specific slopes, particularly for the smallest group, and should be considered when interpreting interaction estimates.

Pre-service Teachers' Teaching Skills

Table 5. Consolidated findings for pre-service teachers' teaching skills

Pre-service teachers' skills	Mean	SD	Interpretation
1. Classroom Management	3.81	0.25	Highly Competent
2. Communication	3.67	0.33	Highly Competent
3. Lesson Planning	3.75	0.28	Highly Competent
4. Teaching Methodologies	3.71	0.40	Highly Competent
5. Ability in asking questions	3.71	0.30	Highly Competent
Total Measure	3.73	0.24	Highly Competent

Note: 1.01 – 1.75 Non-Competent 1.76-2.50 Poorly Competent 3.26-4.00 Highly Competent 2.51-3.25 Moderately Competent

Pre-service teachers rated themselves highly competent overall (M = 3.73, SD = 0.24). Classroom management received the highest mean (M = 3.81, SD = 0.25), followed by lesson planning (M = 3.75, SD = 0.28), teaching methodologies and questioning (both M = 3.71), and communication (M = 3.67, SD = 0.33). Although all dimensions fell within the highest interpretive band, the

The distribution should be treated as a feature of the sampled colleges rather than evidence that one specialization offers superior employment or overseas opportunities. Such motivations were not measured. The substantive question is whether disciplinary differences in content, pedagogy, assessment, and practicum tasks alter how mentoring relates to reported teaching competence.

Supervisors' Mentoring Skills

Table 4. Consolidated findings for supervisors' mentoring skills

Supervisor's	Mean	SD	Interpretation
1. Professional	3.84	0.37	Very good
2. Guiding	3.82	0.35	Very good
3. Assessing	3.81	0.29	Very good
4. Developing	3.83	0.27	Very good
5. Giving	3.83	0.38	Very good

Note: 1.01-1.75 Unsatisfactory 1.76-2.50 Poor 2.51-3.25 Satisfactorily 3.26-4.00 Very Good

Supervisors' mentoring skills were rated very good overall (M = 3.83, SD = 0.25). Dimension means were tightly clustered from 3.81 to 3.84, indicating consistently favorable perceptions of professional presence, guidance, assessment, development, and feedback. The small standard deviations (.27-.38) suggest limited dispersion and possible ceiling effects on the four-point scale.

These favorable ratings support the institutional value of supervision but should not be read as direct evidence that supervisors caused high competence. The same respondents rated both constructs, creating potential common-method and social-desirability inflation. Strong mentoring nevertheless remains theoretically credible because supervisors translate coursework into situated practice, model instructional judgment, and provide feedback [1,2]. In digitally mediated or resource-constrained contexts, mentors can also demonstrate how interactive learning objects and Web 2.0 tools serve specific learning goals [6,7], while addressing the pedagogical beliefs that govern whether technology is meaningfully integrated [8].

relatively lower communication score identifies a useful developmental target. These scores represent perceived competence, not independently observed performance; triangulation with mentor ratings, teaching demonstrations, lesson artifacts, and learner outcomes would strengthen validity

Relationship between supervisors' mentoring skills and pre-service teachers' teaching skills.**Table 6. Relationship between supervisors' mentoring skills and pre-service teachers' teaching skills**

Pre-service student teachers' skills	Supervisors' mentoring skills											
	Professional Presence		Guiding Mentees		Assessing Mentees Skills		Developing Mentees Skills		Giving feedback		Total Measure	
	R-value (P-value)	Remarks	R-value (P-value)	Remarks	R-value (P-value)	Remarks	R-value (P-value)	Remarks	R-value (P-value)	Remarks	R-value (P-value)	Remarks
Classroom Management Skills	.088 (.211)	NS	.176* (.012)	S	.199** (.004)	S	.228*** (.001)	S	.127 (.070)	NS	.225** (.001)	S
Communication Skills	.144* (.040)	S	.226** (.001)	S	.230** (.001)	S	.260** (.000)	S	.082 (.246)	NS	.253** (.000)	S
Lesson Planning	.088 (.209)	NS	.092 (.192)	NS	.178* (.001)	S	.138* (.049)	S	-.012 (.866)	NS	.142* (.043)	S
Teaching Methodology	.073 (.298)	NS	.166* (.017)	S	.226** (.001)	S	.195** (.005)	S	.073 (.299)	NS	.200** (.004)	S
Ability in asking questions	.214** (0.002)	S	.252** (0.000)	S	.289** (0.000)	S	.204** (0.003)	S	.085 (.228)	NS	.267** (.000)	S
Total Measure	.161* (.021)	S	.261** (.000)	S	.294** (.000)	S	.250** (.000)	S	.079 (.261)	NS	.281** (.000)	S

Note: Analysis is based on Spearman's Rank Correlation S-Significant (*** $p < .001$, ** $p < .01$, * $p < .05$), NS – Not Significant ($p > .05$)

The statistically significant coefficients were uniformly positive but weak ($r_s = .138$ to $.289$). For classroom management, significant associations occurred with guidance ($r_s = .176$, $p = .012$), assessment ($r_s = .199$, $p = .004$), development ($r_s = .228$, $p = .001$), and total mentoring ($r_s = .225$, $p = .001$). These magnitudes indicate that mentoring covaried with classroom-management perceptions, but accounted for only a small share of their rank-order variation. Communication was associated with professional presence ($r_s = .144$, $p = .040$), guidance ($r_s = .226$, $p = .001$), assessment ($r_s = .230$, $p = .001$), development ($r_s = .260$, $p < .001$), and total mentoring ($r_s = .253$, $p < .001$). This pattern is educationally plausible because mentoring conversations, modeling, and feedback provide repeated opportunities to clarify explanations and adapt messages to learners. However, the weak effects imply that communication competence also depends on prior knowledge, practice opportunities, confidence, and the instructional context.

Lesson planning correlated with assessment ($r_s = .178$, $p = .011$), development ($r_s = .138$, $p = .049$), and total mentoring ($r_s = .142$, $p = .043$). The smaller coefficients suggest that supervisors may refine planning, but interns' coursework, curriculum familiarity, and access to exemplars also contribute substantially.

Teaching methodology correlated with guidance ($r_s = .166$, $p = .017$), assessment ($r_s = .226$, $p = .001$), development ($r_s = .195$, $p = .005$), and total mentoring ($r_s = .200$, $p = .004$). The finding is consistent with Philippine evidence that pedagogical beliefs influence technology integration [8]:

feedback is more likely to change practice when it engages the mentee's underlying rationale, not merely the visible technique.

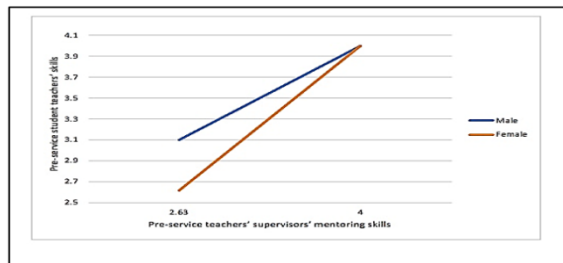
Questioning showed the largest observed coefficient, with significant associations for professional presence ($r_s = .214$, $p = .002$), guidance ($r_s = .252$, $p < .001$), assessment ($r_s = .289$, $p < .001$), development ($r_s = .204$, $p = .003$), and total mentoring ($r_s = .267$, $p < .001$). Mentors can make questioning strategies visible through modeling, observation, and focused feedback; effective questions, in turn, promote classroom interaction and higher-order responses [13].

Taken together, the results support a modest rather than strong mentoring-competence relationship. Statistical significance was aided by the sample size, whereas practical significance remained limited. This is compatible with broader Philippine evidence that educational performance is multicausal: in flexible CAD learning, learner and parental factors were significant while teacher and facility factors were not [9]. Mentoring should therefore be treated as one component of a wider system that includes learner readiness, disciplinary tasks, resources, and institutional support.

The correlations do not establish direction or causality. More competent interns may seek and use feedback more effectively; positive respondents may rate both themselves and their supervisors favorably; or a third factor, such as practicum quality, may influence both. These alternatives justify the moderation analyses and the recommendation for longitudinal, multi-source evaluation.

Moderating Effect of Age**Table 7. Regression model with the interaction effect of age**

Model	Coefficients			t-value	p-value	Remarks
	Unstandardized Coefficients		Standardized Coefficients			
	B	S.E.	β			
(Constant)	4.252	0.690		6.164		Significant
Age	0.901	0.709	1.326	1.271	0.205	Not Significant
Pre-service Teachers' Supervisors' Mentoring Skills (IV)	0.415	0.221	0.436	1.878	0.062	Not Significant
Interaction	-0.235	0.185	-1.347	-1.275	0.204	Not Significant
Note: Dependent Variable: Pre-service Student Teachers' Skills				Adjusted $R^2=0.017$		
ANOVA for Regression=0.093, $p<.05$						
Interaction: Age* Pre-service Teachers' Supervisors' Mentoring Skills						
Significance at $p\leq 0.05$						

**Figure 2. Moderation model for sex**

The overall age model was not statistically significant ($p = .093$) and had very limited explanatory power (adjusted $R^2 = .017$, or 1.7% of variance after adjustment). Neither mentoring ($B = 0.415$, $p = .062$), age ($B = 0.901$, $p = .205$), nor the mentoring-by-age interaction ($B = -0.235$, $p = .204$)

Moderating Effect of Sex**Table 8. Regression model with the interaction effect of sex**

Model	Coefficients			t-value	p-value	Remarks
	Unstandardized Coefficients		Standardized Coefficients			
	B	S.E.	β			
(Constant)	3.428	0.560		6.119	0.000	Significant
Female	-0.316	0.629	-0.606	-0.503	0.615	Not Significant
Male (Ref)	--	--	--	--	--	--
Pre-service Teachers' Supervisors' Mentoring Skills	0.073	0.147	0.077	0.498	0.619	Not Significant
Interaction	0.091	0.164	0.672	0.553	0.581	Not Significant

With male as the reference group, mentoring was not a significant predictor in this model ($B = 0.073$, $p = .619$), the female main effect was not significant ($B = -0.316$, $p = .615$), and the mentoring-by-sex interaction was not significant ($B = 0.091$, $p = .581$). The overall model was not significant ($p = .120$), and the adjusted R^2 was .014, indicating minimal explanatory power. Accordingly, sex did not moderate the mentoring-skill relationship. The specialization model was statistically significant ($p = .001$) but modest in explanatory power (adjusted $R^2 = .092$). For English majors, the estimated mentoring slope was positive ($B = 0.374$, $p = .001$). Relative to English, the interaction

reached the .05 level. Thus, age did not moderate the relationship in this sample. The result should be interpreted cautiously because 94.12% of respondents belonged to the 20-30 group; restricted variation can attenuate an interaction and reduce statistical power. Figure 1 displays the fitted pattern, but the interaction decision is based on the regression coefficient, not the apparent line direction.

The evidence supports a common baseline mentoring program across age groups, while allowing individual adaptation based on prior experience. It does not support age-based assignment or assumptions about who will benefit from mentoring. A replication with balanced age groups and age measured continuously would provide a more sensitive test

coefficients were negative and significant for Filipino ($B = -0.379$, $p = .031$) and TLE ($B = -0.473$, $p = .004$), but not significant for Social Studies ($B = 0.613$, $p = .055$) or MAPEH ($B = -0.304$, $p = .159$). The implied mentoring slopes were approximately -0.005 for Filipino and -0.099 for TLE after adding each interaction to the English slope. Thus, the result does not mean that Filipino and TLE respondents had lower competence; rather, their teaching-skill ratings changed less positively across mentoring scores than did those of English majors within the fitted model.

Moderating Effect of Field of Specialization

able 9. Regression model with interaction effects of field of specialization

Model	Coefficients			t-value	p-value	Remarks
	Unstandardized Coefficients		Standardized Coefficients			
	B	S.E.	β			
Pre-service Teachers' Supervisors' Mentoring Skills (IV)	0.374	0.109	0.393	3.411	0.001	Significant
Social Studies	-2.481	1.232	-2.975	-2.014	0.045	Significant
Filipino	1.520	0.668	2.477	2.278	0.024	Significant
MAPEH	3.673	1.360	5.647	2.701	0.008	Significant
TLE	1.814	0.626	3.128	2.898	0.151	Not significant
English (Ref)	--	--	--	--	--	--
Interaction						
English *IV	-0.613	0.318	-4.775	-1.931	0.055	Not Significant
Filipino *IV	-0.379	0.174	-2.370	-2.175	0.031	Significant
MAPEH *IV	-0.304	0.215	-1.799	-4.414	0.159	Not Significant
TLE *IV	-0.473	0.164	-3.108	-2.882	0.004	Significant
Constant	2.289	0.419		5.466	0.00	Significant

Note: Dependent Variable: Pre-service Student Teachers' Skills ANOVA for Regression=0.001, $p < .05$

Interaction: Field* Pre-service Teachers' Supervisors' Mentoring Skills (IV), Adjusted $R^2 = 0.092$

Significance at $p \leq 0.05$

Several mechanisms may explain this conditional pattern. Subject disciplines differ in the observability of teaching performance, the balance of content and pedagogy, and the extent to which practicum tasks require laboratories, demonstrations, materials, language performance, or technology. Evidence on subject specialization is mixed: specialization can support subject-specific expertise, but it can also alter relational and instructional arrangements [14,15]. In the Philippine context, ILOs can extend practice and feedback beyond face-to-face sessions [6], Web 2.0 use

Because English is the reference category, all main and interaction coefficients are conditional. The comparatively flat Social Studies line and converging lines at the scale maximum should not be overread, especially given small and unequal subgroup sizes and potential ceiling effects. The principal empirical implication is that a uniform mentoring package may not operate identically across disciplines. Institutions should retain common quality standards while co-designing specialization-specific observation criteria and feedback cycles with mentor teachers and subject coordinators.

CONCLUSION

Supervisors' mentoring skills were rated very good and pre-service teachers' teaching skills highly competent. Mentoring dimensions were positively associated with teaching-skill dimensions, but the correlations were weak. Therefore, the results support mentoring as a relevant developmental resource without establishing it as the dominant cause of competence.

Age and sex did not moderate the relationship between mentoring and teaching skills in the analyzed sample. Field of specialization did: compared with English, the mentoring slopes for Filipino and TLE differed significantly. This finding supports disciplinary responsiveness, but the model explained only a modest proportion of variance and should not be used to rank programs, mentors, or students.

The conclusions are bounded by a cross-sectional design, self-report measures, common-source data, imbalanced demographic groups, and a restricted four-point scale. Causal claims and broad demographic generalizations are therefore unwarranted. The contribution of the study lies in identifying a testable conditional pattern that can guide better-designed mentoring and future validation.

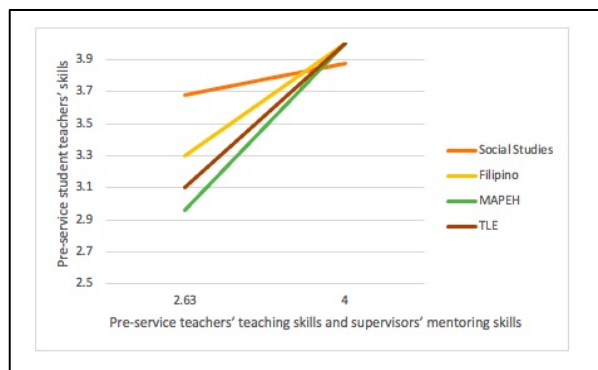


Figure 3. Moderation model for field of specialization

depends on expectancy and facilitating conditions [7], and pedagogical beliefs shape actual technology integration [8]. For TLE in particular, mentoring may need to be combined with access to tools, modeled demonstrations, performance rubrics, and iterative practice rather than delivered mainly through verbal guidance. Figure 3 illustrates the fitted specialization-specific patterns.

RECOMMENDATIONS AND USE OF THE EMPIRICAL EVIDENCE

Teacher-education institutions should use the evidence to develop a two-tier mentoring system. The first tier should establish common standards for professional presence, observation, formative assessment, feedback, communication, and ethical practice across all programs. The second tier should provide specialization-aligned mentoring: subject coordinators and cooperating teachers should map the distinctive teaching performances required in English, Filipino, Social Studies, MAPEH, and TLE; use discipline-specific observation rubrics; and conduct short feedback-practice-reobservation cycles. For TLE and other performance-based fields, the package should include access to equipment, demonstration videos or ILOs, authentic production tasks, safety criteria, and assessment of procedural competence [6].

The evidence should be used for program improvement rather than demographic screening. Age and sex should not determine mentor assignment, admission, or opportunity. Instead, institutions should monitor outcomes by specialization and test whether revised mentoring improves observed teaching performance. A practical evaluation design would collect baseline and post-internship scores from interns, mentors, and independent observers; record exposure to mentoring; and compare improvement across programs. Future studies should use longitudinal or multilevel models, balanced subgroup samples, validated multi-source measures, centered continuous predictors, confidence intervals, simple-slope tests, and incremental R^2 for interaction blocks. These steps would determine whether the observed specialization effects are reproducible and sufficiently large to justify institutional scaling.

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