

The Axiology of Teacher Education: Examining Curriculum Effectiveness, Teaching Competence, and Institutional Resources in Shaping Student Development

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Abstract:

This study assessed the effectiveness of the curriculum, teaching competence, and institutional resources at a technological state university in the Philippines. Specifically, it sought to answer questions about human resources, including students' and teachers' profiles, and material resources, including facilities, tools and equipment, and instructional materials. The study further assessed teaching competence and curriculum effectiveness in terms of the goal and objectives, courses of study such as foundation, professional, and major subjects, as well as the problems encountered by teachers and students. The study used the descriptive correlational method. A total of 95 respondents were involved, with 75 teacher education students and 20 teachers teaching at the tertiary level. The study found that 87.67 percent of the student population were female and 12.33 percent were male. In terms of age, 40.30 percent of the students were of normal age, 31.34 percent were above normal age, and 26.36 percent were below normal age. Based on the parents' income, the majority of students are in the low-income group, earning Php 9,990 or less. Students' academic performance was satisfactory. On the level of attitudes towards teacher education, the overall mean of 3.28 is moderately favorable. On the teachers' profile, 55 percent of teachers teaching the major and professional subjects were females and 45 percent were males. Fifty percent of the teachers were middle-aged, with an average age of 42.21 years. Almost three-fourths, or 72.22 percent, of the teachers were married. The educational qualifications of teachers showed that 35 percent held doctoral degrees, as well as bachelor's degrees. In terms of academic rank, 31.58 percent were associate professors, 26.31 percent were instructors, 21.05 percent were Assistant Professors, 10.53 percent were professors, and 10.53 percent were Part-time instructors. The facilities, as perceived by students and teachers, were moderately available. In tools and equipment, all areas of specialization were found moderately adequate. On the other hand, the instructional materials in the teacher education program were less adequate. The teachers were found to be competent in all areas: relationships with students, instructional skills, evaluation skills, research skills, and classroom management. The curriculum effectiveness of the teacher education program in terms of its goals and objectives was very satisfactorily attained as perceived by the students, and satisfactorily attained as perceived by the teachers; foundation subjects were very satisfactorily attained, as well as professional subjects and its major subjects. The problems encountered by teachers and students were moderate, such as a lack of instructional materials, tools and equipment, and facilities, as well as their attitudes towards the subjects. The findings revealed a significant difference in the perceptions of teachers and students regarding facilities and foundation subjects, while no significant differences were observed in their perceptions of the program's goals and objectives, professional subjects, and major subjects. In view of these findings, the teacher education

program may be revisited and strengthened to ensure its continued relevance and effectiveness, particularly in addressing differences in the perceptions of key stakeholders. Teachers may encourage students to develop a more favorable attitude toward the program and motivate them to improve their academic performance in foundation, professional, and major subjects while fostering positive attitudes toward their studies. The school administration may likewise prioritize the department's current needs through the procurement of modern tools, equipment, and facilities, as well as the adequate provision of instructional materials aligned with contemporary educational technologies. To supplement institutional resources, administrators and teachers may initiate fundraising activities, solicitations, and resource mobilization efforts and seek donations from successful graduates, government and non-government organizations, benefactors, and sponsors, with the proceeds allocated for the acquisition and improvement of tools, equipment, facilities, and instructional materials. Furthermore, regular consultations between teachers and students should be conducted to identify, discuss, and appropriately address the problems and concerns encountered in the implementation of the program.

Keywords: axiology of teacher education, curriculum, teaching competence, institutional resources, teachers, students

1. INTRODUCTION

The effectiveness of teacher education programs is foundational to ensuring student achievement and educational quality in schools. Recent research underscores the pivotal role of well-structured curricula, sufficient resources, and highly competent teacher educators in preparing future teachers to meet complex educational demands (García & Weiss, 2020; Tran et al., 2023). An effective curriculum not only equips teacher candidates with subject knowledge and pedagogical skills but also fosters adaptability and reflective practice necessary for diverse classroom settings (Kelchtermans et al., 2022). Additionally, access to adequate resources—such as teaching technologies, instructional materials, and supportive institutional frameworks—is associated with improved teacher preparation and student learning outcomes (Li et al., 2021).

A robust, standards-aligned curriculum is widely recognized as a prerequisite for effective teacher preparation and professional practice. Curricular coherence—linking pre-service coursework, field experiences, assessment literacy, and reflective practice—has been associated with improved teacher performance and more reliable implementation of evidence-based instructional strategies DeLuca & Bellara (2013), Okiri & Hercz (2024). In contexts ranging from general educator preparation to subject-specific programs, researchers repeatedly emphasize that well-articulated curricula are necessary to translate policy expectations into classroom practice and to support preservice teachers as they develop core pedagogical competencies DeLuca & Bellara (2013), Jie (2023), Leko et al. (2015). Moreover, standards-based assessment and curriculum alignment emerge as critical components to ensure that teachers can translate curricular goals into effective instruction and equitable student outcomes DeLuca & Bellara (2013), Adesuyi-Fasuyi (n.d.).

Resource availability, including instructional materials, laboratory facilities, technology, and financial backing, is repeatedly linked to teacher efficacy and instructional quality. Empirical work across agricultural education, science education, and general teacher preparation demonstrates that the perceived adequacy of tools and resources correlates with teachers' confidence and competence in delivering curricula McCubbins et al., 2017; Greer & Meyen, (2009). In addition, studies of program implementation consistently find that resource provision interacts with curriculum design to influence the extent to which preservice and beginning teachers can enact high-quality instruction in real

classrooms Denny & Tulivuori (2022), (Absolor, 2021). The present study thus foregrounds resources not as ancillary supports but as a core component that enables the curricular and instructional dimensions of teacher education to be effectively enacted, particularly in resource-constrained settings.

Competent teachers—those who possess deep content knowledge, pedagogical content knowledge, and professional dispositions—are central to translating curriculum and resources into student learning gains. A substantial body of work argues that teacher preparation should emphasize disciplinary expertise, pedagogical skills, and assessment literacy, along with opportunities for deliberate practice, guided reflection, and feedback within authentic classroom experiences (Adesuyi-Fasuyi, n.d.; Leko et al., 2015). Research from diverse domains indicates that preservice teachers' perceived competence is shaped by the quality of their coursework, the rigor of field experiences, and the alignment of supervision practices with professional standards (Jie, 2023; DeLuca & Bellara, 2013). The study adopts a holistic view of competence, recognizing that ongoing professional development and distributed leadership within teacher education systems contribute to sustained instructional quality and improved student outcomes (Okiri & Hercz (2024), Diego (2013).

Moreover, recent studies emphasize that competent teacher educators serve as critical models and mentors, shaping the professional identity and instructional capabilities of pre-service teachers (Yuan et al., 2022). The interplay between these elements—curriculum, resources, and educator competence—has become a central focus in contemporary teacher education research, highlighting the need for systemic approaches to reform and enhancement (Tran et al., 2023).

2. Methodology

This descriptive survey research study assessed the effectiveness of the curriculum, teaching competence, and institutional resources at a technological state university in the Philippines. This was deemed appropriate to determine the human and material resources, which include students and teachers as respondents, teaching competence, curriculum effectiveness, and the problems encountered by teachers and students. Human resources include students' profiles such as sex, age, family income, and attitude toward the teacher education program. Teachers' profile includes sex, age, civil status, educational qualifications, academic rank, teaching experience, and seminars/trainings attended. It also determines the adequacy of the material resources of the program in terms of facilities, tools and equipment, and instructional materials; teaching competencies; and curriculum effectiveness on the extent of attainment of the teacher education program, which involves its Goal and Objectives, courses of study such as Foundation Subjects, Professional Subjects, and Major Subjects. It also included students' academic performance levels and the problems encountered by teachers and students.

Researcher-made questionnaires were used to gather the necessary data. The collected data were tabulated and analyzed using a t-test.

This study involved two (2) groups of respondents: teachers and students. The students involved were third- and fourth-year students enrolled in the teacher education program at a state university in the Philippines.

The study used a researcher-developed questionnaire and secondary data as sources of information relevant to achieving the study objectives. The researcher developed two sets of survey instruments: one for teachers to gather information about their professional and personal backgrounds, as well as their perceptions of the adequacy of material resources, problems encountered, and the curriculum's effectiveness/extent of attainment of the program. The second set of instruments was used to gather personal information on students' attitudes towards the subject, the adequacy of material resources, teaching competence, problems encountered, and the curriculum's effectiveness/extent of attainment of the program.

The questionnaire for teacher respondents had four parts, namely; Part I dealt on the personal

information of teachers; Part II dealt on the adequacy of material resources such as facilities, tools and equipment's and instructional materials; Part III focused on the curriculum effectiveness such as the extent of attainment of its goal and objectives and course of study under foundation subjects, professional subjects, and major subjects; Part IV – Problems encountered by teachers. The questionnaires for the students were composed of five parts; Part I dealt on their human resource/ personal background, Part II focused on the teaching competence of their respective teachers, Part III dealt on the adequacy of facilities; Part IV focused on curriculum effectiveness/ the extent of attainment of its goal and objectives and course of study, lastly, Part V dealt on the problems encountered of students.

The students' academic performance was based on documents obtained from the registrar and subsequently analyzed using a specified criterion. The data gathered in this study were scored, analyzed, and interpreted using appropriate statistical treatment.

3. Results and Discussion

Human Resources. Sixty-six or 87.67% of the population of teacher education students were females, and only 9 or 12.33% were males. In terms of age, 30 or 40.30% of students were of normal age (19 to 20), 24 or 31.34% were above normal age (21-above), and 21 or 26.36 were below normal age (18-below). Based on the parents' income, the majority of students were in the low-income group, earning Php 9,990 or less. The level of attitudes towards courses was moderately favorable, with an overall mean of 3.28.

Table 1. Attitude of students towards courses

Statement	Mean	Rank	Interpretation
I am satisfied with my lessons.	3.91	7	Favorable
I don't like participating in class recitation.	2.52	15	Moderately Favorable
I completed my projects and other class activities on or before the due dates.	4.07	4	Favorable
I do not enjoy making projects and other laboratory activities.	2.24	18.5	Slightly Favorable
I like my course because I want to become a teacher someday.	3.72	9	Favorable
I do not like my course because it's not my choice.	2.60	14	Moderately Favorable
I feel I gain sufficient knowledge in dealing with other people through this course.	3.70	10	Favorable
I don't like to participate in our class activities.	2.07	20	Slightly Favorable
I feel I am developing good character traits through my course.	3.93	5	Favorable
I feel this course is dull and boring.	2.24	18.5	Slightly Favorable
I believe this course will help me acquire desirable traits in dealing with other people.	4.20	3	Favorable
I find this course overcrowded.	2.28	17	Slightly Favorable
I am challenged to learn the different theories and principles observed in the teaching-learning process.	4.25	2	Favorable
I feel exhausted in doing a lot of course requirements.	2.69	13	Moderately Favorable
I do not find this course very interesting and stimulating.	2.40	16	Slightly Favorable
I want to gain sufficient knowledge and skills in teaching	4.27	1	Favorable

I find this course complex and very tiring.	3.08	12	Moderately Favorable
I find this course globally competitive.	3.92	6	Favorable
I like to do assignments of my course.	3.68	11	Favorable
I find the course fulfilling.	3.83	8	Favorable
Overall Mean	3.28		Moderately Favorable

Eleven (11), or 55%, of teachers teaching the major and professional subjects were female, and 9, or 45%, were male. The teachers had an average age of 42.21 years. Almost three-fourths (72.22%) of the teachers were married. The educational qualifications of teachers showed that 2/3 had either finished their master's or doctorate degrees. In terms of academic rank, almost 1/3 were Associate Professors.

Material Resources. The facilities were moderately adequate according to teachers' and students' perceptions, with mean ratings of 2.93 and 2.75, respectively.

Table 2. Adequacy of facilities

Items	Students			Teachers		
	Mean	Rank	Interpretation	Mean	Rank	Interpretation
Shop laboratory facilities	2.87	8	MA	3.00	2	MA
Toilets/Comfort Rooms	2.12	10	SA	2.53	9	MA
Ventilation	2.89	7	MA	3.11	1	MA
Electrical facilities	3.13	3	MA	2.84	4	MA
Medical facilities	2.85	9	MA	2.84	4	MA
Sanitary water facilities	3.00	4	MA	2.58	8	MA
Library facilities	3.33	1	MA	2.84	4	MA
Student lounge	2.96	5.5	MA	2.37	10	SA
Classroom facilities	3.23	2	MA	2.68	6	MA
Sports facilities	2.96	5.5	MA	2.67	7	MA
Overall Mean	2.93		MA	2.75		MA

In tools and equipment, all areas of specialization were found to be moderately adequate: graphic arts ($x=3.29$); ceramics ($x=3.25$); foods ($x=2.92$); agriculture ($x=2.74$); fisheries ($x=2.67$), except for clothing ($x=4.01$), which was interpreted as adequate.

Table 3. Adequacy of tools and equipment

Areas	Mean	Rank	Interpretation
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Foods	2.92	4	Moderately Adequate
Clothing	4.01	1	Adequate
Handicrafts	2.58	7	Moderately Adequate
Ceramics	3.25	3	Moderately Adequate
Graphic Arts	3.29	2	Moderately Adequate
Agriculture	2.74	5	Moderately Adequate
Fishery Arts	2.67	6	Moderately Adequate
Overall Mean	3.07		Moderately Adequate

On the other hand, the instructional materials are less than adequate, with the lowest mean of 2.46.

Table 4. Adequacy of instructional materials

Items	Mean	Rank	Interpretation
Visual aid	3.28	2	Moderately Adequate
Books/references	3.0	3.5	Moderately Adequate
Magazines	2.61	10	Moderately Adequate
Journals	2.33	15	Less Adequate
Leaflets	2.11	18	Less Adequate
Models	2.28	16	Less Adequate
Pictures	2.72	7.5	Moderately Adequate
Flip charts	2.94	5.5	Moderately Adequate
Teachers manual	2.61	10	Moderately Adequate
Modules	2.39	14	Less Adequate
Teaching aids and devices	3.0	3.5	Moderately Adequate
Actual projects	3.39	1	Moderately Adequate
Exhibits	2.94	5.5	Moderately Adequate
Field trips	2.41	13	Less Adequate
Bulletin boards	2.72	7.5	Moderately Adequate
Display boards	2.61	10	Moderately Adequate
Mock-ups	2.59	12	Moderately Adequate
Cassette recorders and tapes	1.88	22	Less Adequate
Television	2.0	20	Less Adequate
LCD Projector	1.82	24.5	Less Adequate
Computer	1.88	22	Less Adequate
DVD and VCD	1.82	24.5	Less Adequate
Digital camera	1.88	22	Less Adequate
Overhead Projector	2.12	17	Less Adequate
Workbook/work texts	2.06	19	Less Adequate
Overall Mean	2.46		Less Adequate

Teaching Competence. The teachers were found competent in all areas: “Relationship with students” ($x=4.19$), instructional skills ($x=3.90$), evaluation skills ($x=3.87$), research skills ($x=3.85$), and classroom management ($x=3.74$).

Table 5. Teaching competencies

Teaching Competencies	Mean	Rank	Interpretation
Instructional Skills	3.90	2	Competent
Management Skills	3.74	5	Competent
Evaluation Skills	3.87	3	Competent

Research Skills	3.85	4	Competent
Relationship with Students	4.19	1	Competent
Overall Mean	3.91		Competent

Curriculum Effectiveness. The extent of attainment of the BT-HELE Program goals and objectives is very satisfactory ($x=3.77$) as perceived by the students, and satisfactory ($x=3.25$) as perceived by the teachers.

Table 6. Curriculum effectiveness

Extent of Attainment	Students			Teachers		
	Mean	Rank	Interpretation	Mean	Rank	Interpretation
Goal and Objectives	3.77	3.5	VSA	3.25	4	SA
Course of Study (Foundation Subjects)	3.77	3.5	VSA	3.58	3	VSA
Course of Study (Professional Subjects)	3.86	2	VSA	3.85	2	VSA
Course of Study (Major Subjects)	4.01	1	VSA	3.87	1	VSA
Overall Mean	3.85		VSA	3.64		VSA

Legend: VSA – Very Satisfactory Attained SA – Satisfactory Attained

As perceived by students, the majority of the foundation subjects ($x=3.77$), professional subjects ($x=3.86$), and major subjects ($x=4.01$) were attained to a very satisfactory level. Similarly, the 3 aspects of the programs were found very satisfactory by the teachers. The mean for the professional subjects was 3.86, interpreted as very satisfactory. Only the item on students' teaching was rated as satisfactorily attained by the students, while the rest were rated as very satisfactorily attained. The mean for Professional Subjects, as perceived by teachers, was 3.85, interpreted as very satisfactory. All items were rated very satisfactory by the teachers. The mean of major subjects, as perceived by students, was 4.01, interpreted as very satisfactory, with all major subjects rated very satisfactory. As perceived by teachers, the extent of attainment of major subjects was 3.87, interpreted as very satisfactorily attained, with all subjects very satisfactorily attained.

Table 7. Students' academic performance

Rating	Foundation Subjects		Professional Subjects		Major Subjects	
	f	%	f	%	f	%
Excellent (1.0)	0	0	0	0	0	0
Outstanding (1.5 - 1.1)	0	0	0	0	0	0
Very Satisfactory (2.0 - 1.6)	10	13.33	25	33.33	49	65.33
Satisfactory (2.5 - 2.1)	62	82.67	48	64.00	26	34.67
Fair (3.0 - 2.6)	3	4	2	2.67	0	0
Poor (below - 3.1)	0	0	0	0	0	0
Overall Mean	2.23		2.12		1.98	

The general average for students in their “Foundation Subjects” is 2.23, which is interpreted as satisfactory. In their “Professional Subjects,” they got an average of 2.12, which is also interpreted as satisfactory. And with a higher general average in their “Major Subjects,” which is 1.98 and interpreted as very satisfactory.

Difference in Respondents’ Perceptions of Material Resources, Goal and Objectives, and Course of Study. Significant differences in perceptions between teachers and students were observed for facilities and foundation subjects, with *p*-values of .002 and .017, respectively.

Table 8. Difference in Respondents’ Perceptions of Material Resources, Goal and Objectives, and Course of Study

Variables	<i>t</i> value	<i>p</i> -value	Interpretation
Facilities	3.237	.002	Significant
Goals and Objectives	0.939	.350	Not significant
Course of Study			
Foundation subjects	2.436	0.017	Significant
Professional subjects	0.040	0.968	Not significant
Major subjects	0.885	.0378	Not significant

On the other hand, perceptions on goals and objectives, professional subjects, and major subjects did not differ significantly.

Problems Encountered by Teachers and Students. The overall computed mean for the problems faced by teachers in the program is 3.33, interpreted as a moderately problematic issue.

Table 9. Problems Encountered by Teachers

Items	Mean	Rank	Interpretation
Inadequate facilities and equipment	4.11	2	Urgent Problem
Inadequate supplies and materials	4.05	3.5	Urgent Problem
Lack of books and other reference materials	4.05	3.5	Urgent Problem

Large class size	2.74	11	Moderate Problem
Supervisors do not recognize the good work done by the teachers	2.89	9	Moderate Problem
Irrelevant information exchange resulting factionalism and less action	3.06	7	Moderate Problem
Students absenteeism	2.95	8	Moderate Problem
Supervisor does not give constructive suggestion to improve competencies	2.83	10	Moderate Problem
Students show no interest in their values	3.21	6	Moderate Problem
Poor performance of students	3.41	5	Moderate Problem
Negative attitude towards manual work	5	1	Very Urgent Problem
Overall Mean	3.33		Moderate Problem

The average computed mean for students' problems in their shop laboratory facilities is 2.98, which is described as moderately problematic.

Table 10. Problems encountered by students

Items	Mean	Rank	Interpretation
Teacher Related Problems			
Teachers lack of mastery of the subject matter.	3.20	1	Moderate
Teacher shows favoritism among his/her students.	3.03	3	Problem
Teachers' non-recognition of students, needs, abilities and interest.	3.15	2	Moderate
Teachers do not encourage students to participate in class activities.	2.87	4	Problem
Teachers do not find time to follow-up studies and projects.	2.76	5	Moderate
			Problem
			Moderate
			Problem
Sub-Mean	3.0	2	Moderate Problem
B. Attendance			
I am often absent because I dislike my course and classmates.	2.33	3	Urgent Problem
I am often absent because of home chores.	2.25	5	Urgent Problem
I am often absent because of my "barkada".	2.26	4	Urgent Problem
I am often absent because I dislike some of my teachers.	2.60	2	Urgent Problem
I am absent because of financial problem.	2.93	1	Moderate
			Problem
Sub-Mean	2.48	4	Less of a Problem
C. Project Making			
I find myself too tired, sleepy, and listless to work efficiently.	2.75	4	Moderate
			Problem

I do not find time at home so I often finish my project in school.	2.89	1	Moderate Problem
I cannot submit my project on or before the deadline.	2.81	3	
I find it hard to keep my mind on what I am working.	2.85	2	Moderate Problem
Project introduced is not actually needed.	2.69	5	Moderate Problem
Sub-Mean	2.80	3	Moderate Problem
D. Shop Laboratory Facilities			
Inadequate modern tool and equipment in shop laboratory.	3.69	2.5	Urgent Problem
Inadequate classroom/shop laboratory.	3.72	1	Urgent Problem
Non-provision of safety gadgets for security measures.	3.52	5	Urgent Problem
Minimum utilization of laboratory equipments in the shop.	3.61	4	Urgent Problem
Less emphasis of budget allocation for supplies and materials are provided.	3.69	2.5	Urgent Problem
Sub-Mean	3.65	1	Urgent Problem
Overall Mean	2.98		Moderate Problem

4. Conclusions

The study found that the students were predominantly female, within the normal age range, mostly from low-income families, and had a moderately favorable attitude toward the program. The teachers handling subjects were also predominantly female, middle-aged, married, highly qualified, experienced in the teaching profession, and competent in teaching their respective subjects. In terms of program resources, the facilities, tools, and equipment were found to be moderately adequate, while instructional materials were considered less adequate. The program's curriculum effectiveness was generally rated as very satisfactory across its goals and objectives, foundation subjects, professional subjects, and major subjects. Similarly, students demonstrated very satisfactory academic performance in major subjects and satisfactory performance in professional and foundation subjects. Significant differences were found between teachers' and students' perceptions of the adequacy of facilities and the foundation subjects; however, no significant differences were observed in their perceptions of the program's goals and objectives, professional subjects, and major subjects. Moreover, both teachers and students encountered moderate problems in implementing the program, particularly regarding the lack of instructional materials, tools, equipment, and facilities, as well as challenges related to their attitudes toward the subjects.

5. Recommendations

Based on the study's findings and conclusions, it is recommended that the teacher education program be revisited, strengthened, and continuously improved to ensure its responsiveness to students' changing needs and the demands of the teaching profession. Teachers should provide appropriate motivation and guidance to help students develop a more favorable attitude toward the program and improve their academic performance in foundation, professional, and major subjects. The school administration should prioritize procuring and providing adequate, modern tools, equipment, facilities, and instructional materials that align with current educational technologies and the program's needs. To augment institutional resources, administrators and teachers may initiate fundraising activities, solicit donations,

and establish partnerships with successful graduates, government and non-government organizations, benefactors, and other potential sponsors, with proceeds allocated for the acquisition and improvement of instructional resources and facilities. Furthermore, regular monitoring and evaluation of the courses and program implementation should be undertaken to ensure the quality, relevance, and effectiveness of the program and other programs offered by the school. Consultative mechanisms involving teachers and students should likewise be strengthened to identify, discuss, and address problems encountered in the implementation of the program.

References

1. García, E., & Weiss, E. (2020). COVID-19 and student performance, equity, and U.S. education policy: Lessons from pre-pandemic research to inform relief, recovery, and rebuilding. *Education Policy Analysis Archives*, 28(133), 1–21. <https://doi.org/10.14507/epaa.28.5477>
2. Kelchtermans, G., Smith, K., & Vanderlinde, R. (2022). Understanding teacher educators' professional development: A review of recent research. *European Journal of Teacher Education*, 45(1), 1-18. <https://doi.org/10.1080/02619768.2021.2003731>
3. Li, Y., Garza, V., Keicher, A., & Popov, V. (2021). Predicting high-quality teaching and learning: The role of resources and supportive school environment. *Educational Researcher*, 50(2), 81-91. <https://doi.org/10.3102/0013189X20985677>
4. Tran, T. T., Nguyen, H. T. M., & Le, T. T. H. (2023). Curriculum innovation in teacher education: A systematic review. *Teaching and Teacher Education*, 121, 103945. <https://doi.org/10.1016/j.tate.2023.103945>
5. Yuan, R., Wang, S., & Zhang, L. J. (2022). Navigating the complexities of teacher educator identity: Insights from a longitudinal study. *Journal of Education for Teaching*, 48(4), 473-487. <https://doi.org/10.1080/02607476.2022.2082137>
6. Lin & Li (2024) Lin, Y., & Li, H. (2024). Cultivating STEAM teachers: A regional resource-based model for normal university students in Chongqing. *Future in Educational Research*, 2024. (Note: journal and article details provided in candidate; citation styled for consistency with APA 7th edition; authors and title included as provided by candidate.)
7. Hudson & Hudson (2019) Hudson, S., & Hudson, J. (2019). "Please Help Me Find Teachers for My Rural and Remote School": A Model for Teaching Readiness. *Australian and International Journal of Rural Education*, 29(3). DOI: 10.47381/aijre.v29i3.233
8. Charania (n.d.) Charania, R. (2009). Preparing future teachers for virtual schooling: Assessing their preconceptions and competence. etd-180810-2009. (Note: thesis/dissertation repository entry; relevant to curriculum CPD for virtual contexts.)
9. Greer & Meyen (2009) Greer, T., & Meyen, M. (2009). Special Education Teacher Education: A Perspective on Content Knowledge. *Learning Disabilities Research & Practice*, 24(2), 99-108. DOI: 10.1111/j.1540-5826.2009.00293.x
10. Byrd et al. (2015) Byrd, E., et al. (2015). Does Agricultural Mechanics Laboratory Size Affect Agricultural Education Teachers' Job Satisfaction? *Journal of Agricultural Education*, 56(2), 1-12. DOI: 10.5032/jae.2015.01006
11. Diego (2013) Diego, L. (2013). Teacher Preparation, Professional Development, and Long-Term English Learners. *International Journal of Education*, 2013, 1-16. DOI: 10.5032/ije.v5i4.4140
12. Stripling & Barrick (2013) Stripling, B., & Barrick, R. (2013). Examining the Professional, Technical, and General Knowledge Competencies Needed by Beginning School-Based Agricultural Education Teachers. *Journal of Agricultural Education*, 54(4), 1-18. DOI: 10.5032/jae.2013.03067
13. DeLuca & Bellara (2013) Deluca, C., & Bellara, D. (2013). The Current State of Assessment Education. *Journal of Teacher Education*, 64(1), 32-45. DOI: 10.1177/0022487113488144
14. Anthony-Stevens et al. (2020) Anthony-Stevens, A., et al. (2020). Regenerating Teacher Education Programs with Indigenous Knowledge in Idaho. *Northwest Journal of Teacher Education*, 2020(3), 15-40. DOI: 10.15760/nwjte.2020.15.3.3
15. Crim et al. (2017) Crim, R., et al. (2017). Strategies Toward the Inclusion of Environmental Education in Educator Preparation Programs: Results from a National Survey. *School Science and Mathematics*,

- 117(6), 345-360. DOI: 10.1111/ssm.12211
16. Langeveldt et al. (2023) Langeveldt, K., et al. (2023). South African Legal Framework to Prepare Pre-Service Teacher Education Programmes: A Freirean Approach. *Research in Educational Policy and Management*, 2023(25). DOI: 10.46303/repam.2023.25
17. Okiri & Hercz (2024) Okiri, C., & Hercz, R. (2024). Preservice teacher education stakeholders' perceptions of distributed pedagogical leadership in nurturing teacher leadership. *European Journal of Education*, 2024(4). DOI: 10.1111/ejed.12713
18. Adu-Yeboah & Kwaah (2018) Adu-Yeboah, D., & Kwaah, A. (2018). Preparing Teacher Trainees for Field Experience: Lessons From the On-Campus Practical Experience in Colleges of Education in Ghana. *Sage Open*, 8(3). DOI: 10.1177/2158244018807619
19. Adesuyi-Fasuyi (n.d.) Çer, S. (2026). Evaluating the Turkish Classroom-Teaching Undergraduate Program: A CIPP Model Approach. *Sage Open*. DOI: 10.1177/21582440261416973
20. Çer (2026) Humphrey-Darkeh, J., et al. (2022). Investigating the Challenges Facing the Teaching and Learning of Science and Technology in Selected Schools in the Ashanti Region of Ghana. *Journal of Science Learning*, 16(2), 120-142. DOI: 10.19999/jsl.2022.43869
21. Jie (2023) Jie, L. (2023). Preparing Preservice Teachers for Inclusive Education Through Standards-based Curriculum. *Revista Inclusión & Sociedad (Revincluso)*, 2023(2). DOI: 10.46569/xd07h153j
22. Wildner (2000) Wildner, K. (2000). Technology Integration into Preservice Foreign Language Teacher Education Programs. *Calico Journal*, 17(2), 58-80. DOI: 10.1177/0022487113488144
23. Leko et al. (2015) Leko, M. M., et al. (2015). Envisioning the Future of Special Education Personnel Preparation in a Standards-Based Era. *Exceptional Children*, 81(3), 316-336. DOI: 10.1177/0014402915598782
24. Humphrey-Darkeh et al. (2022) Absolor, M. (2021). Academic Adequacy of the English Pre-Service Teachers of Ilocos Sur Polytechnic State College. *Psychology and Education Journal*, 58(1). DOI: 10.17762/pae.v58i1.2075
25. Thornton et al. (2023) Thornton, T., et al. (2023). Towards a Model for Monitoring and Evaluating Curricula Reforms. In B. Smith (Ed.), *Curriculum Reforms* (pp. 1-28). Springer. DOI: 10.1007/978-3-031-13548-4_17
26. Denny & Tulivuori (2022) Denny, S., & Tulivuori, S. (2022). STEM and Education Technology in Bangladesh, Cambodia, the Kyrgyz Republic, and Uzbekistan: A Synthesis Report. *Asian Development Bank*. DOI: 10.22617/spr220247
27. Hsiao (2015) Hsiao, H. (2015). The Culturally Responsive Teacher Preparedness Scale: An Exploratory Study. *Contemporary Issues in Education Research*, 8(4), 1-14. DOI: 10.1111/jede.123
28. (Absolor, 2021). Mccubbins, M., et al. (2017). Examining the Relationship Between the Perceived Adequacy of Tools and Equipment and Perceived Competency to Teach Agricultural Mechanics. *Journal of Agricultural Education*, 58(3), 1-15. DOI: 10.5032/jae.2017.02268 McCubbins et al. (2017) 10.473