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PROFESSIONAL COMPETENCE DEVELOPMENT: PRE-SERVICE TEACHERS' PERCEPTIONS OF THEIR TEACHER EDUCATION CURRICULUM'S ADEQUACY

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Abstract:
Quality education depends on professionally competent teachers. The purpose of this study is to investigate pre-service teachers (**PSTs**) perceptions on the Initial Primary Teacher Education (**IPTE**) curriculum's adequacy in developing their professional competence. **203 PSTs** from seven teacher training colleges (**TTCs**) in Malawi were included in the sample. The study utilized a descriptive survey design using a **Teacher Education Evaluation Questionnaire** that focused on major curriculum components and teaching competence. Both parametric and non-parametric statistical methods were employed to analyze and to interpret **PSTs'** perceptions. The findings showed that most **PSTs** perceived the **IPTE** curriculum adequate. Perceptions varied significantly with respect to gender and type of institution but not with locale. **PSTs** from private-owned reported slightly favorable perceptions than those from government-owned **TTCs**, while female **PSTs** reported higher mean perception rating than male **PSTs**. Furthermore, **PSTs** from rural-based **TTCs** perceived the reviewed **IPTE** curriculum as being more adequate than their counterparts from urban-based **TTCs**. The study further revealed a statistically significant impact of gender and type of institution on respondents' perceptions of the reviewed **IPTE** curriculum's adequacy. Implications of these findings are discussed.

Key terms: initial primary teacher education, curriculum, pre-service teachers, professional competence

1: INTRODUCTION

Background to the problem

The significance of teachers' professional competence, their capacity to adapt to evolving student learning and development requirements for academic performance has long been recognized, leading to extensive research on teacher education **(Eret-Orhan et al 2018**). Teachers' professional competence is essential for delivering quality education globally. This is particularly true in developing countries like Malawi, where a strong foundation in education is a crucial tool for development **(National Planning Commission, 2020**). An Initial Teacher Education (**ITE**) curriculum plays a vital role in equipping **PSTs** with the necessary competencies to deliver engaging and effective instruction. The **IPTE** curriculum was reviewed in **2017** to make it more relevant and responsive to Malawi's changing educational needs, ensure efficiency and enhance basic quality of education by aligning it to the reviewed primary school curriculum of **2012** (**Chirwa, et al 2023**). This study investigates **PSTs'** perceptions of the reviewed **IPTE** curriculum's adequacy in the development of professional competence, aiming to support ongoing efforts to improve Malawi's primary teacher education system.

Statement of the problem

The quality of teachers produced from **TTCs** is reflected by the performance of the learners they teach when in service. There is a general belief among stakeholders that Malawi's **IPTE** curriculum does not adequately prepare pre-service teachers for the realities of classroom (**MoE, 2020**). A study conducted by Chirwa et al, (**2014**) revealed that Malawi faces challenges in achieving quality primary education due to superficial understanding of the reviewed **IPTE** curriculum by lecturers and the low minimum qualification for primary school teachers at a certificate level compared to other countries in the Southern African Development Community (**SADC)** region (**ibid**). Several studies stipulate that a bachelor's degree in education is the most current certification for primary school teachers worldwide **(Tjabolo, 2020: Yasin, 2021: Li, & Xue, 2023**). However, in most Sub-Saharan Africa countries, primary school teachers are awarded a diploma, although low-income countries such as Malawi still provide a certificate (**UNESCO, 2023**). This situation raises concerns regarding the **IPTE** curriculum's adequacy and alignment with contemporary educational needs, hence the current study. According to Harjantoa et al., (**2017**), a relevant teacher certification enhances teacher quality by measuring professionalism based on pedagogical, technological, social, and personal competences that influence teachers' performance. Conversely, low professionalism in the learning process leads to decreased education quality (**Arifin, 2013**).

Significance of the study

By identifying the reviewed **IPTE** curriculum's perceived adequacy, the study findings can guide future revisions, bridge the gap between theory and practice, and better equip future generations of Malawian primary school teachers with the competences they need to create successful

learning environments and ensure student success. Understanding **PSTs' perceptions** on the adequacy of the reviewed **IPTE** curriculum, particularly its components and the teaching competencies it develops in graduating teachers, is vital in providing valuable insights for educators, policymakers, and curriculum developers to improve the **IPTE** curriculum in Malawi.

Objectives of the study

This study was conducted to determine perceptions of **PSTs** on the adequacy of Malawi's reviewed **IPTE** curriculum in terms of professional competence development under the following objectives:

1. Explore the adequacy of the reviewed **IPTE** curriculum components in developing pre-service teachers' professional competence.
2. Find out whether the reviewed **IPTE** curriculum equips pre-service teachers with the necessary teaching competencies for effective primary education in Malawi's context.
3. Explore the influence of gender, institution type, and location on **PSTs'** perceptions of the reviewed **IPTE** curriculum's adequacy.

The study investigates the following null hypotheses:

1. There is no significant difference in **PSTs'** perceptions of the reviewed **IPTE** curriculum's adequacy based on gender, institution type, or location.
2. There is no significant difference in the levels of professional competence gained by pre-service teachers due to the reviewed **IPTE** curriculum.
3. Gender, institution type, or location has no predictive effect on **PSTs'** perceptions of the reviewed **IPTE** curriculum's adequacy.

Initial teacher education curriculum

Campbell et al. (**2019**) define Initial Teacher Education (**ITE**) as a blend of academic coursework and practical experiences that prepares aspiring teachers with the information, skills, and attitudes required for effective teaching. **ITE** programs vary in structure and content across the globe, but they consistently contain a mix of academic study and hands-on teaching experiences. A well-designed **ITE** curriculum guides teachers and students, closes the learning gap, and has an impact on the entire educational system as it influences the preparation of professionally competent, motivated, and ethical teachers **(Dunst et al., 2020**). Currently, there is a great deal of discussion about the adequacy of teacher education curricula worldwide with scholars looking at how well prospective teachers are trained (**Eret-Orhan et al 2018**). This is consistent with Malawi's reviewed **IPTE** curriculum, which stresses practice-based and reflective methods through learning opportunities and the implementation of effective teaching strategies **(MIE, 2017**). The **IPTE** programme in Malawi began in **2005**, covering six terms in two academic years. It was reviewed in **2017** and uses a **2 IN-2 OUT-2 IN** training structure, with students learning college content and methodologies, then practicing in primary schools, and reflecting on their teaching practices **(MoEST 2013)**. According to Croft (**2012**), **PSTs** are already familiar with academic practices and teachers but need competencies for teaching. In the **TTCs** they are introduced to principles of

education, curriculum, child development, teaching methods, and learning resources. Therefore, **ITE** programs are important in equipping **PSTs** with knowledge, skills, and attitudes relevant for the teaching profession.

Professional competence

Teachers' professional competence includes a wide range of skills, including theoretical knowledge, practical experience, ethical behavior, lifelong learning, student-centeredness, cooperation, and leadership (**Campbell et al., 2019**). These characteristics enable teachers to create pleasant learning environments and support student success. Competence is inextricably connected to teacher effectiveness and superior classroom performance. Kulshrestha and Pandey (**2013**) distinguish between theoretical and practical competence, defining the latter as a complicated talent for navigating difficult situations and a cognitive framework for specific tasks. Developing **PSTs'** professional competence combines knowledge, attitudes, abilities, and values **(Moreno-Murcia et al., 2015**). This encourages critical thinking, decision-making, problem solving, and project planning, resulting in more effective learning. Professional competence provides teachers with qualities such as personal traits, dispositions, and acquired knowledge to succeed in the classroom(**ibid**). The quality of a nation's **ITE** program has a direct impact on the qualifications and dispositions of graduating teachers. To ensure **PSTs'** success in the teaching profession, **ITE** programs must stress the delivery of high-quality, practical, and relevant material in a timely, efficient, and engaging way that reflects modern pedagogical expectations.

Teacher Education and Professional Competence: The foundation of Student Success

The teacher education curriculum serves as the foundation for student achievement by equipping aspiring teachers with the knowledge and skills necessary to be effective educators. A well-designed curriculum, as highlighted by the work of Darling-Hammond et al. **(2020)**, emphasizes both subject matter expertise and pedagogical skills that cater to the modern digital age. This includes methods for clear and engaging instruction, classroom management techniques that consider diverse learners as advocated in Mangin **(2017)**, and assessment strategies that go beyond rote memorization **(Popham, 2017)**. By translating this knowledge into practice, teachers develop professional competence, the ability to create a positive learning environment and cater to individual and diverse needs of learners. Professional competence, as highlighted in a study by Hanushek & Rivkin **(2014**), is linked to student performance. Competent teachers motivate students, make learning relevant, and provide effective instruction that incorporates technology and fosters critical thinking – all of which contribute to students' academic success.

Theoretical framework

This study is guided by the Professional Competence Theory (**PCT**), introduced by Grant et al. (**1979**) which focuses on real-world performance and defines competence as more than just technical knowledge. It emphasizes a multifaceted combination of knowledge, skills, and attitudes.

Knowledge encompasses factual and theoretical understanding, while skills involve practical abilities specific to the job and attitudes include work ethic, communication, and collaboration **(Mulder 2017**). The theory acknowledges that competence is **contextual** (varies by profession) and **dynamic** (improves through experience, training, and reflection). This framework, as discussed by Carr and Skinner **(2019),** offers a comprehensive understanding of success in any profession. The **PCT** is relevant for the current study which examines how **PSTs** perceive the reviewed **IPTE** curriculum's adequacy in developing their professional competence. As Lum **(2019)** and Braeken (**2015**) suggest, professional competence requires a curriculum aligned with practitioners' knowledge and interactional skills, which develop through continuous learning.

2: METHODOLOGY

The study used a descriptive survey design. As is typical in survey studies (**Fraenkel, Wallen, & Hyun, 2012**), the researchers gathered data from a representative sample using a questionnaire to get respondents' perceptions. The study included **203** newly graduated pre-service teachers still waiting for government posting to primary schools who were chosen by cluster, purposeful and convenient sampling strategies, as described by Hashimov (**2015**). Cluster sampling focused on the selection of seven **TTCs** based on type of institution (government or private) and location (rural or urban). Purposive sampling and convenience sampling gave researchers easy access to **TTC** Principals for respondents' contact information. Additionally, respondents were selected based on gender, institution type, and location, as these characteristics influence respondents' opinions of any phenomenon under study. Table 1 shows the respondents' profiles.

Table 1: Profile of the respondents (N = 203)

		Total number	%
Gender	Female	112	55
	Male	91	45
Type of institution	Government	137	67
	Private	66	33
Locale	Rural	143	70
	Urban	60	30

Data was collected though a **Teacher Education Evaluation Questionnaire** developed by Eret-Orhan et al. (**2018**). The tool has three sections: demographic data, curriculum components, and teaching competence. The first section collected demographic data, the second examined the adequacy of curriculum components, and the third evaluated the program's adequacy in terms of competence achieved by pre-service teachers by the end of the course. All items were scored on a 5-point Likert scale, ranging from "very inadequate **(VI = 1)"** to "very adequate **(VA = 5),"** (see Table 2). Cronbach Alpha coefficients for the items were estimated and found to be .928, showing high internal consistency. The questionnaire was modified and adapted to fit the Malawian context.

Table 2: Likert scale values

Level	Scale	Interval	Levels
Very inadequate	1	1.00-1.80	
Inadequate	2	1.80-2.60	Inadequate
Neither inadequate nor adequate	3	2.60-3.40	Neutral
Adequate	4	3.40-4.20	
Very adequate	5	4.20-5.00	Adequate

The researchers acquired consent from the Head of Department of the School of Education at Lovely Professional University, permission from the Principals of the sampled **TTCs**, and distributed a Google Form questionnaire to selected respondents. A WhatsApp message was issued to respondents confirming their desire to participate. The raw ordinal data was coded and scaled using Microsoft Excel and **SPSS** Version 23 for effective analysis. The researchers used both descriptive and inferential statistics to interpret the data meaningfully. Shape measurements such as skewness and kurtosis were employed to confirm data normalcy. Pre-conditions such as outlier removal, normalization, multicollinearity, and homogeneous variance-covariance matrices were investigated.

3: RESULTS AND DISCUSSION

Descriptive Statistics of the Scale.

The scale used to measure professional competence has **28** items related to respondents' perceptions on the adequacy of the reviewed **IPTE** curriculum components and **46** items related to teaching competence. The scale was divided into five factors, namely: learning environment (**LE = 6 items**), curriculum and courses (**CC = 9 items**), teaching practice (**TP = 8 items**), teaching staff (**TS = 5 items**) and teaching competence (**TC = 46 items)** as outlined in Table 3.

Table 3: Descriptive statistics of the professional competence scale

FACTOR	N	TOTAL SCORE	MEAN
Learning Environment (LE) 6 Items	203	19.08	3.18
Curriculum and Courses (CC) 9 items	203	31.51	3.50
Teaching Practice (TP) 8 items	203	32.08	4.01
Teaching Staff (TS) 5 items	203	19.89	3.98
Teaching Competence (TC) 46 items	203	170.67	3.71
TOTALS	203	18.38	3.676
Weighted mean (WM)			**3.676**

The analysis of **203** valid responses revealed that mean scores for **LE** and **CC** factors at **3.18** and **3.50** were below the **WM** of **3.676.** Conversely **TC, TS,** and **TP** factors scored significantly above the weighted mean at **3.71, 3.98 and 4.01,** respectively. These results imply that most respondents found the reviewed **IPTE** curriculum adequate in terms of teaching practice, teaching staff and teaching competence, but lacking in learning environment and curriculum courses provided.

Adequacy levels of perceptions on the reviewed IPTE curriculum

The respondents rated the **74** items of the scale ranging between **2.27** (inadequate) and **4.34** (adequate)**.** According to the Likert scale values of the scale (**see Table 1**), responses with a mean score of less than **2.6** indicate inadequacy, **2.6-3.4** neutrality, and more than **3.4-5** adequacy. The results reveal that 4 items (**5%)** were evaluated inadequate, 22 items (**30%**) neutral, and 48 items **(65%**) adequate (**see figure 1**). These findings are also consistent with the overall **WM** score of **(3.676**), which falls within the "adequate" range, indicating that most **PSTs** deemed the reviewed **IPTE** curriculum adequate in developing their professional competence. However, respondents evaluated the reviewed **IPTE** curriculum as inadequate in terms of inclusive education, research aptitude, availability of **ICT** facilities in colleges and teaching practice schools, reluctance of colleges/teaching practice schools to engage **PSTs** in Continuous Professional Development (**CPD)** activities while still in college/teaching practice schools, integration of **ICT** across the curriculum, and use of **ICT** tools/software/applications/ platforms for teaching and learning.

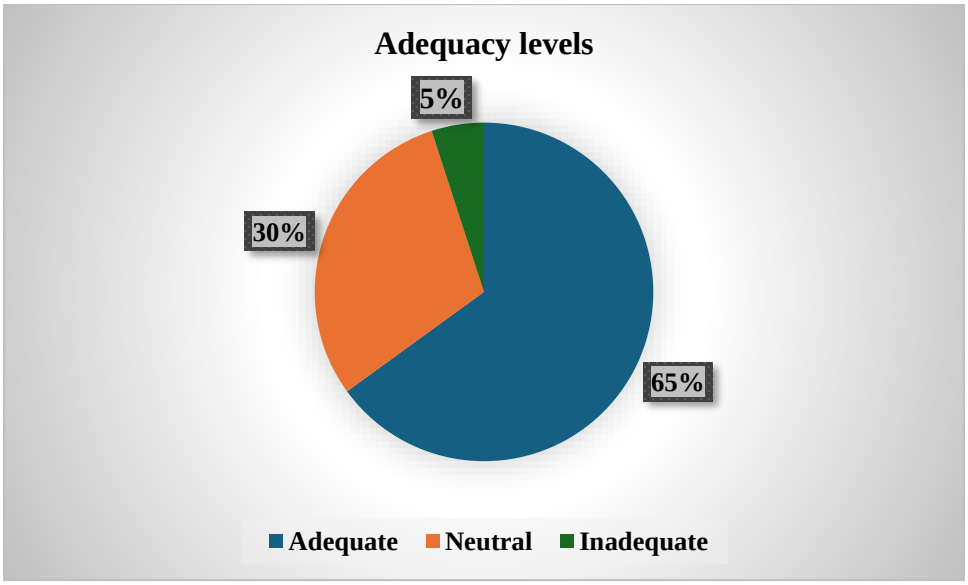

Figure 1: Summary of adequacy levels

Descriptive statistics results of the PSTs.

Female **PSTs** had a higher mean score than male **PSTs**, while **PSTs** from government-owned **TTCs** had a lower mean score than those from private-owned **TTCs**, and **PSTs** from rural-based **TTCs** had a higher mean score than **PSTs** from urban-based **TTCs**. These findings indicate that female **PSTs**, **PSTs** from private-owned **TTCs**, and **PSTs** from urban-based **TTCs** perceive the reviewed **IPTE** curriculum adequate in developing their professional competence. A summary of these findings is highlighted in Table 3.

Table 3: Summary of descriptive statistics

Variable	Category of respondents	N	Mean	SD
Gender	Female	112	279.96	43.163
	Male	91	257.48	37.384
Type of institution	Government	137	265.34	43.650
	Private	66	279.33	44.736

Locale	Rural	143	273.10	45.384
	Urban	60	262.23	41.289

Perceptions of PSTs on Adequacy of the reviewed IPTE Curriculum

H_0: There are no significant differences in **PSTs'** perceptions on the adequacy of the reviewed **IPTE** curriculum based on gender, type of institution, or location. The hypothesis was investigated using independent sample T-tests. Before verifying testing this hypothesis, Levene's test and normality assumptions were validated and confirmed (see Table 4).

Table 4: Summary of Independent Sample T-test results for PSTs' perceptions

Variable	**Levene's Test for Equality of Variances**		**T-test of equality of means**						
	F	**Sig.**	**t**	**df**	**Sig(2-tailed)**	**MD**	**SED**	**95% CI Difference**	
								Lower	**Upper**
Gender	5.947	.016	3.788	200.889	.000	22.481	5.934	10.779	34.183
Type of institution	.024	.877	−2.123	201	.035	−13.988	6.594	−27.001	−.995
Locale	.455	.501	1.597	201	.112	10.865	6.802	−2.090	23.819

MD = Mean difference, SED = Standard Error Deviation, CI= Confidence Interval

The findings indicate that there are significant differences in PSTs' perceptions of the reviewed **IPTE** curriculum's adequacy based on gender and type of institution, as evidenced by t-values greater than the +/- 1.96 critical range, p-value < 0.05, and a **CI** difference that does not include a zero (**Khatun, 2021**). As a result, we reject the null hypothesis. Similarly, there is no significant difference in **PSTs'** perceptions with respect to locale since the test statistics show a t-values within than the +/- 1.96 critical range, p-value > 0.05, and a **CI** difference that includes a zero. Hence, we fail to reject the null hypothesis.

Effect of Independent Variable on Pre-service Teachers' Perceptions of adequacy

H_0 1: Gender has no significant effect on **PSTs'** perceptions of the **IPTE** curriculum's adequacy.

H_0 2: Type of institution has no significant effect on **PSTs'** perceptions of the **IPTE** curriculum's adequacy.

H_0 3: Locale has no significant effect on **PSTs'** perceptions of the IPTE curriculum's adequacy.

Multiple regression analysis was used to test these possibilities. The dependent variable, professional competence, was regressed on the independent variables, gender, kind of institution, and location. The independent variables significantly predict professional competence **[F (3,199) = 7.889, p <.001]**, indicating that the three elements under research collectively have a positive significant effect on professional competence perceptions. Furthermore, the $\mathbf{R^2_{adj.}}$ **= .093** demonstrates that the model explains **9.3%** of the variance in professional competence perceptions. Furthermore, the coefficients were examined to determine the effect of each predictor variable on the criterion variable (professional competence). The study found that gender **(B = -27.358, t = -4.259, p <.001)** and institution type **(B = 21.653, t = 2.929, p =.004)** have a substantial favorable impact on professional competence perceptions. As a result, hypotheses one and two are rejected.

In contrast, the predictor variable locality **(B = 4.510, t =.594, p =.553)** did not have a significant impact on professional competence perceptions. As a result, we fail to reject Hypothesis 3. These findings are shown in Table 5.

Table 5: Summary of regression analysis results for pre-service teachers

Hypothesis	Regression Weights	B	T-value	P-value	Decision on null Hypothesis
H_0 1	G → PC	− 27.358	− 4.259	P = .000	Reject
H_0 2	TOI → PC	21.653	2.929	P = .004	Reject
H_0 3	L → PC	4.510	.594	P = .553	Fail to reject

Note: $R^2_{adj.}$ = .093, F (3,199) = 7.889 G = Gender, PC = Professional competence. TOI = Type of institution, L = Locale

These results clearly indicate that **PSTs** perceptions on the reviewed **IPTE** curriculum's adequacy are influenced by whether gender and type if institution, but not locale.

4: DISCUSSION AND IMPLICATIONS

The reviewed **IPTE** curriculum was deemed adequate by **PSTs** in three out of five major components namely: teaching practice, teaching staff and teaching competence. The teaching practice phase where **PSTs** apply classroom theory and build professional skills, was rated highest even though some respondents felt the duration was not adequate. This suggests the quality of support given to PST during teaching practice, not just practice hours, is crucial **(Stenberg et al., 2016)**. Studies by Reynolds et al. (**2016**), Aydın (**2016**), and Van Ooyik et al. (**2021**) support this, highlighting the vital role of the teaching practice phase in providing validation, feedback, and competence development opportunities to **PSTs**.

Respondents also rated the teaching staff as adequate, potentially reflecting that college lecturers and teaching practice schoolteachers work tirelessly to help **PSTs** acquire the necessary competencies for the teaching profession. These competent **PSTs** are crucial for translating the curriculum into engaging learning experiences. The teaching staff's expertise, coupled with excellent teacher-student interactions, contributes to the production of professionally competent teachers. The adequacy rating for the teaching competence factor is evidence that the reviewed **IPTE** curriculum places much emphasis on the development of essential competences. These include providing regular feedback, differentiated instruction, consistent use of English, and utilizing diverse teaching methods and resources. Overall, the findings emphasize the importance of a well-designed curriculum that equips future teachers with the necessary competences to work with students, plan and deliver lessons, assess learning, and help students reach their full potential.

The learning environment factor was rated the least adequate, contrasting with studies that highlight its impact on academic achievement **(Suleman & Hussain, 2014)**. Respondents desired better facilities and comfortable learning spaces. The curriculum and courses factor was also seen as inadequate, lacking content on research, **ICT** integration, and inclusive education. Research skills are essential for problem-solving and professional growth, while **ICT** is a crucial tool in modern education (**MoEST, 2018**).

One-third of respondents felt that they did not fully acquire certain teaching competencies. These included areas like working with diverse learners, intercultural communication, and knowledge of educational legislation. Understanding relevant **UN** conventions and African charters on education is crucial for aligning teaching with global best practices and ensuring the development of responsible, empathetic learners **(MoEST, 2016)**.

4: CONCLUSION

This study examined **PSTs** perceptions on the adequacy of Malawi's reviewed **IPTE** curriculum in developing their professional competence. While the overall curriculum received an adequacy rating, several limitations and areas for improvement were identified. The study's limitations include lack of generalizability to other educational contexts. The adequacy of the reviewed **IPTE** curriculum revealed in this study could have been influenced by other factors such as cultural differences, educational levels, or policies, which may differ significantly in other settings. Furthermore, the study may not reflect current trends due to the dynamic nature of teacher education.

The study recommends integrating research skills, **ICT**, and inclusive education into the curriculum. It emphasizes investing in **ICT** facilities, internet access, and exposure to best national and international practices. Additionally, it suggests a robust assessment system, professional learning communities, and ongoing research on curriculum effectiveness and influencing factors. Finally, it calls for future research with wider participation and mixed methods. This highlights the need for improvement despite perceived adequacy. Addressing limitations and implementing recommendations can strengthen the curriculum, better equipping future teachers for the dynamic educational landscape. A well-designed curriculum remains crucial for overall educational quality.

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