

IMPORTANCE OF MICRO CREDENTIALS FOR TEACHER EDUCATORS

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ABSTRACT

In the changing landscape of education, the teaching profession is increasingly challenging, and teachers need to invest their effort and ability in updating their teaching skills and inspiring their students by reflecting on experiences gained from different institutions or organizations. In this context, micro-credentials are helpful, as they give teachers greater scope to refine their knowledge and acquire modern skills. The present study examines the knowledge and awareness of micro-credentials among teacher educators. The main objective of this study is to examine the influence of micro-credentials on the teaching and learning processes in teacher education institutions. The sample comprised 182 teacher educators working in various teacher education institutions in the North coastal region of Andhra Pradesh. The survey method was used, and the data were collected through a questionnaire and semi-structured interviews. The result revealed that there is a significant change that has been seen with the teachers who have micro credentials, and teacher educators need to be encouraged to get more micro credentials, which the Government of India offers, like SWAYAM, DIKSHA, NPTEL etc.

KEYWORDS: Employability, Micro Credentials, Teacher Educators, Teaching Skills, Technological Knowledge, Modern Skills,

INTRODUCTION

Micro-credentials are short, focused certifications that validate specific skills and knowledge, often earned through online courses. These certificate courses were designed for professional growth and to boost employability by getting proficiency in different fields of Education.

Micro-credentials are being developed across different courses to customize learning paths for students and teachers with diverse backgrounds, enhancing their knowledge and skills. These micro-credentials aim to break down educational barriers and support teachers and students in uniting in a multidisciplinary approach, which is the main motto of the National Education Policy 2020.

Micro-credentials help improve the teaching performance of teacher educators by accounting for the various teaching and technological skills to be demonstrated in the classroom.

Objectives of the Study:

- To understand the importance of micro credentials in the teacher education program.
- To familiarize with online platforms that provide micro credentials for teachers and teacher educators
- To enhance the teaching skills and credibility of teacher educators.

Importance of micro credentials in teacher education:

The teachers are the builders of society; they can make the nation's foundation deep and lift its pillars to the sky. But this towering aspiration can be realized by enhancing Teacher Educators' scientific and technological knowledge. The main purpose of introducing micro-credentials is to enhance the technological knowledge and skills required in the teaching profession, paving the way for new ways of communicating with students, new means of imparting education, and an innovative way of organizing and delivering information. Some of the following are the importance of micro-credentials.

a. Career Development

Micro-credentials open concrete pathways for teacher educators to advance beyond routine classroom roles. By certifying niche skills like digital pedagogy, assessment design, or inclusive education, they signal specialized expertise to institutions and recruiters. This targeted upskilling helps educators qualify for senior posts, curriculum design roles, and training positions. In a competitive academic ecosystem, such stackable achievements distinguish a CV and enable lateral moves into ed-tech, policy, or consultancy. Thus, micro-credentials transform professional stagnation into structured, visible career progression.

b. Enhanced Leadership Qualities

Earning micro-credentials builds the confidence and competence that teacher educators need to lead change. Courses in mentoring, instructional coaching, and educational leadership equip them with frameworks for guiding peers, managing departments, and implementing NEP-aligned reforms. These short certifications translate theory into actionable skills—such as facilitating workshops, resolving classroom conflicts, or driving school improvement plans. As recognized proof of initiative, they position educators as resource persons. Consequently, micro-credentialed teachers evolve from implementers to influencers who mentor colleagues and shape institutional culture.

c. Mastery of New Technology and Teaching Methods

Micro-credentials keep teacher educators aligned with rapidly evolving pedagogical and digital tools. Modules on LMS platforms, gamified learning, AI in education, or blended teaching help replace outdated lecture-heavy methods with active, learner-centered strategies. Because each credential targets a single skill, educators can address specific gaps without committing to lengthy degrees. This agility ensures classroom practice reflects current research and student needs. Ultimately, tech-savvy, method-rich teaching improves engagement and learning outcomes, fulfilling NEP 2020's call for 21st-century classrooms.

d. Return on Investment (ROI)

Compared to full degrees, micro-credentials demand modest time and financial input while delivering tangible professional returns. Certified skills often lead to promotions, additional responsibilities, or salary increases under the CAS and API frameworks. Institutions increasingly value documented continuous professional development during appraisals and recruitment. For the individual, the payoff includes consulting opportunities, invited sessions, and project leadership roles. Hence, the cost-benefit ratio favors micro-credentials: small investment, verifiable output, and measurable career gains that compound over time.

e. Cost-Effective

Micro-credentials remove the financial barrier that often restricts professional growth. Most courses are free to audit or priced significantly lower than diplomas and degrees, with optional paid certification. Platforms like NPTEL, SWAYAM, and DIKSHA even provide government-backed content at zero cost.

This affordability enables educators at rural or budget-constrained institutions to access world-class training. Because they are modular, teachers can invest gradually rather than pay large lump sums. The result is equitable, scalable upskilling without economic strain.

f. Personalized and Self-Paced

Unlike rigid semester schedules, micro-credentials respect a teacher educator's workload and context. Learners choose what, when, and how fast to study—pausing during exams, accelerating in holidays, or revisiting content as needed. This flexibility accommodates diverse career stages, subjects, and skill levels, allowing a language teacher to study ICT tools while a science teacher explores inquiry-based learning. Personalized pathways prevent redundancy and burnout. Self-pacing thus sustains motivation, ensures deeper mastery, and integrates...

Online platforms for teachers and teacher educators: Certain online platforms offer micro-credentials for teacher educators and teachers from different fields

a) **NPTEL:** The Ministry of Human Resource Development initiated a project called the National Program on Technology-Enhanced Learning. It provides high-quality courses for teachers and students in engineering, science, humanities, and education. Teachers interested in developing their professional and technical skills have access to these courses at no cost. The content and course materials were developed by top institutions such as the IITs and IISEs to enhance the quality of certification.

b) **Coursera:** It is a massive online learning platform that offers courses, specializations, and professional certificates from top universities, which have a tie-up with different companies like GOOGLE, IBM, etc. It provides flexible, world-class education through video lectures, readings, projects, and assignments, and certificates allow individuals from different backgrounds to learn at their own pace.

c) **edX:** It is also a learning platform that Harvard and MIT designed. It offers university-level courses, professional certifications, and degree programs from top global universities. It provides high-quality education across all subjects, including humanities, science, engineering, and education.

d) **The Teachers Academy:** The main purpose and passion of the Teachers Academy is to provide affordable and convenient professional development for teachers for the 21st century. They equip the teachers with modern teaching practices and the latest information, which helps to boost student development.

e) **SWAYAM:** The Government of India initiated a program for students and teachers named SWAYAM to achieve three important principles of the National Educational policy, which are access, equity, and quality. The main motto is to give the best teaching and learning experiences to all people, including disadvantaged groups. The courses offered on SWAYAM are organized into four quadrants: video lectures, printed materials, self-assessment quizzes, and online discussion forums.

f) **MMTTC**: Malaviya Mission Teacher Training Program offers short-term courses, refresher courses, and induction programs for teachers who are working in higher education institutions through online and in-person modes.

g) **DIKSHA**: It is a digital platform initiated by the Government of India. It offers continuous professional development courses for teachers and teacher educators. It includes NISHTHA, CPD, and nano courses.

Design of the Study:

Upon reviewing the literature on the use of micro-credentials in various teacher education institutions, the researcher prepares a study plan and an action plan, as the present study is unique and not a repetition of any previous studies or projects.

Population: The Researcher selected a population of teacher educators working in various teacher education institutes in the North Coastal districts of Andhra Pradesh. i.e., Visakhapatnam, Vizianagaram, and Srikakulam Districts

Sample:

The researcher collected data from 182 teacher educators working in the North Coast Districts of Andhra Pradesh, i.e., Visakhapatnam, Vizianagaram, and Srikakulam. The researcher used a stratified random sampling method and divided the population into different strata.

Variables		Frequency	Percentage
Gender	Male	97	53.29
	Female	85	46.70
Educational Qualifications	With Ph.D	99	54.39
	Without Ph.D	83	45.60
Experience	Above 10 years	96	52.74
	Below 10 years	86	47.25

Hypothesis:

- 1) There is no gender difference occurring between the teacher educators about the knowledge of micro credentials and familiarized online platforms.
- 2) There is no experiential difference between the teacher educators about the knowledge of micro credentials and familiarized online platforms.
- 3) There is no significant difference between the teacher educators about the knowledge of micro credentials and familiarized online platforms with respect to educational qualifications.

Selection of Tool:

On suggestions taken by the experts in the field of education, the researcher developed a semi-structured interview schedule and a questionnaire about the knowledge and importance of micro credentials

Statistical Analysis:

The data collected through the questionnaire and interview were analyzed using statistical measures such as the mean, standard deviation, and the t-test. The interpretations were given below.

Table 1 shows differences in demographic variables among teacher educators regarding awareness of microcredentials.

Variable	Male	Female	Without Ph.D	With Ph.D	Above 10yrs Experience	Below 10yrs Experience
Number	97	85	99	83	96	86
Mean value	20.35	19.64	19.12	20.14	19.81	18.85
Standard deviation	4.95	4.70	4.57	4.74	4.92	4.67
t value	1.014		1.478		1.371	
Significant level	Significant difference at the 0.01 and 0.05 levels		Significant difference at the 0.01 and 0.05 levels		Significant difference at the 0.01 and 0.05 levels	

Table 1 revealed that the mean perceptual scores of Teacher Educators regarding awareness of micro-credentials were 20.35 for Male teachers and 19.64 for Female teachers, with SD values of 4.95 and 4.70, respectively. The 't'-value was 1.01, and the p-value was 0.00, which was significant at the 0.01 level. This shows that there is a significant difference between the perceptions of Male and Female Teachers, and Male teachers had good awareness about microcredentials.

According to educational qualifications, the mean perceptual scores of Teacher Educators regarding awareness of micro credentials were 19.12 for teacher educators without a Ph.D. and 20.14 for those with a Ph.D., with SD values of 4.57 and 4.74, respectively. The 't'-value was 1.47, which was significant at a 0.01 level and 0.05 level. This shows that there is a significant difference between the perceptions of Teacher Educators with Ph. D.S, who had good awareness of micro credentials, and those without Ph. D.S.

Regarding experience, the mean perceptual scores of Teacher Educators with respect to awareness of micro credentials were 19.81 for those with more than 10 years' experience and 18.85 for those with fewer than 10 years' experience, with SD values of 4.92 and 4.67, respectively. The 't'-value was 1.37, which was significant at the 0.01 and 0.05 levels. This shows that there is a significant difference between the perceptions of Teacher Educators with more than 10 years of experience and those with fewer than 10 years of experience, and that Teacher Educators with more than 10 years of experience had good awareness of micro-credentials.

Graph 1: Mean comparison between perceptions of Teacher Educators according to their demographic variables, i.e., Gender, educational qualifications, and experience, towards awareness of micro credentials.

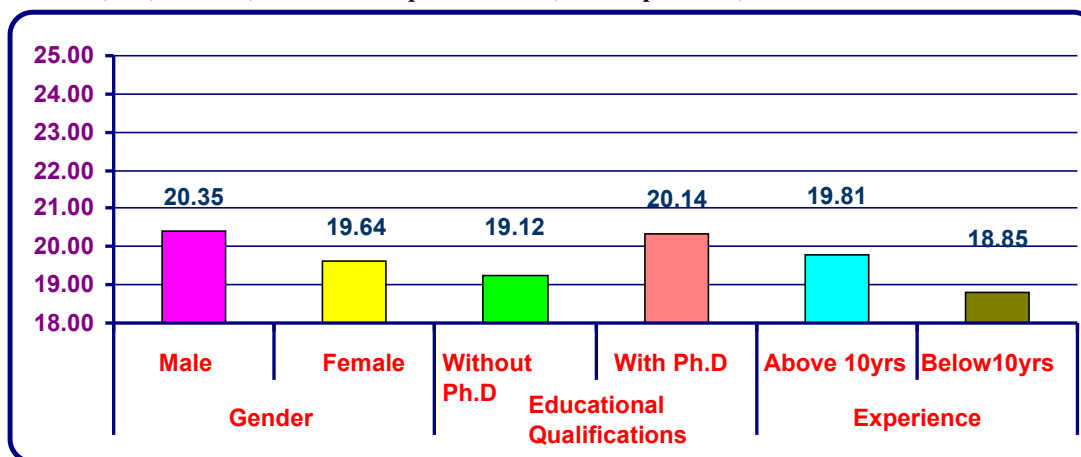


Table 2: Mean comparison between perceptions of Teacher Educators according to their demographic variables, i.e., Gender, Locality, and Experience, about knowledge about institutions that offer micro credentials

Variable	Male	Female	Without Ph.D	With Ph.D	Above 10yrs Experience	Below 10yrs Experience
Number	97	85	99	83	96	86
Mean value	33.69	39.93	39.12	33.72	40.22	38.34
Standard deviation	14.55	8.92	8.82	8.50	8.72	9.08
t value	3.54		4.21		1.43	
Significant level	No significant difference		No significant difference		Significant at the 0.01 and 0.05 levels	

Table 2: About gender, the mean perceptual scores of Teacher Educators with respect to knowledge about institutions offering micro-credentials were 33.69 for males and 39.93 for females, with SD values of 14.55 and 8.92, respectively. The 't'-value was 3.54. This shows that there is no significant difference between Male and Female Teacher Educators on knowledge about institutions that offer micro credentials

Regarding educational qualifications, the mean perceptual scores of Teacher Educators on knowledge about institutions offering micro-credentials, with a Ph.D. and without a Ph.D., were 33.72 and 39.12, with SD values of 8.50 and 8.82, respectively. The 't'-value was 4.21, which is not significant at any two levels. This shows that there is no significant difference in Teacher Educators' perceptions of the knowledge of institutions that offer micro-credentials.

Regarding Experience, the mean perceptual scores of students with respect to knowledge about institutions offering micro-credentials, and the mean perceptual scores of Teacher Education with less than 10 years of experience, were 38.34. In contrast, Teacher Education with more than 10 years of experience was 40.22, with SD values of 9.08 and 8.72, respectively. The 't'-value was 1.43, which was significant at the 0.01 and 0.05 levels. This shows that there is a significant difference between the perceptions of Teacher Educators and Teacher Education above 10 years of experience, and institutions that offer micro credentials

Graph 2: Mean comparison between perceptions of Teacher Educators according to their demographic variables, i.e., Gender, Locality, and Experience in knowledge about institutions that offer micro credentials

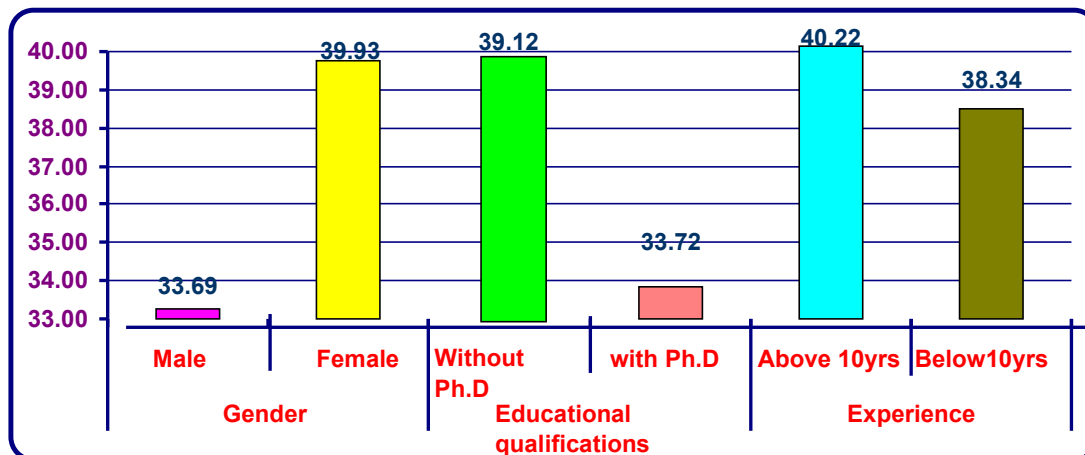


Table 3: Mean comparison between perceptions of Teacher Educators according to their demographic variables, i.e., Gender, educational qualifications, and Experience about the importance of micro credentials

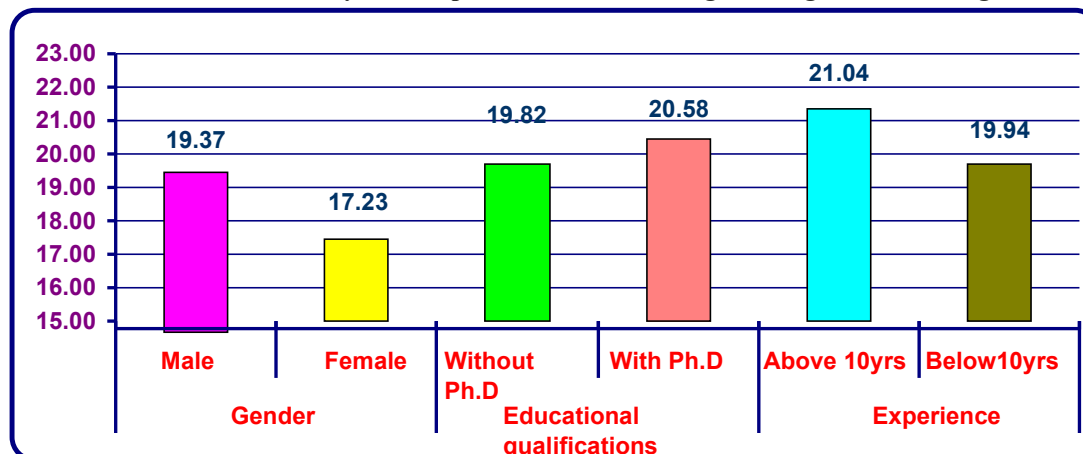
Variable	Male	Female	Without Ph.D	With Ph.D	Above 10yrs Experience	Below 10yrs Experience
Number	97	85	99	83	96	86
Mean value	19.37	17.23	19.82	20.58	21.04	19.94
Standard deviation	4.60	5.35	5.14	5.52	5.12	5.05
t value	2.93		the 0.96		1.48	
Significant level	No significant difference		Significant at the 0.01 and 0.05 levels		Significant at the 0.01 and 0.05 levels	

Table 3 revealed that the mean perceptual scores of Teacher Educators on Gender regarding the importance of micro credentials were 19.37 and 17.23 for male and female teacher educators, respectively, with SD values of 4.60 and 5.35, respectively. The 't'-value was 2.93 and shows that there is no significant difference between the perceptions of Male and Female teachers about the importance of micro credentials.

Regarding educational qualifications, the mean perceptual scores of Teacher Educators with respect to the importance of micro credentials were 19.82 and 20.58 for Teacher Educators without a Ph.D. and with a Ph.D., respectively, with SD values of 5.14 and 5.52, respectively. The 't'-value was 0.96, which was significant at the 0.01 and 0.05 levels. This shows that there is a significant difference between the perceptions of teacher educators and highly qualified teachers, who place greater importance on microcredentials than other Teachers.

About Experience, the mean perceptual scores of Teacher Educators with respect to the importance of micro credentials, the mean perceptual scores of those below 10 years were 21.04, and the SD value is 5.12. In contrast, for those aged 10 and above, the mean perceptual score was 19.94, and the SD was 5.05. The 't'-value was 1.48, which was significant at the 0.01 and 0.05 levels. This shows that there is a significant difference between the perceptions of Teacher Educators with fewer than 10 years of experience and those with more than 10 years of experience, and that those with fewer than 10 years place greater importance on micro-credentials than those with more than 10 years.

Graph 3: Mean comparison between perceptions of Teacher Educators according to their demographic variables, i.e., Gender, Locality, and Experience, towards design strategies for teaching and learning



Major findings:

- 1) The variable-wise differences in gender, locality, and experience were significant.
- 2) The male teachers who have above ten years of experience with Ph.D qualifications had good awareness about micro credentials.
- 3) Regarding the knowledge about the institutions offering micro credentials, the above ten years of experience showed very good knowledge.
- 4) The teachers who have high qualifications and less than ten years of experience felt the need and importance of micro credentials.

The overall perception shows that there is a good initiation of micro credentials in teacher education, which customizes teaching experience and enables the teacher educators to adopt modern technologies and novel experiences for transforming teachers into modern classroom designers.

CONCLUSION

In an era of rapid information flow, teachers must not only keep pace with advances but also raise student standards. To adapt to this dynamic environment, teacher educators must acquire knowledge and skills that support future generations. Micro-credentials reinforce the principle that teachers are continuous learners.

The Indian Government's initiatives, such as DIKSHA, SWAYAM, and MMTTP (Malaviya Mission Teacher Training Program), create opportunities for teacher educators to develop innovative ideas and connect with diverse students and professionals, thereby supporting their educational journey.

Based on the above discussion, it is recommended that teacher educators be encouraged to earn micro-credentials across various teaching fields. These will improve their teaching competency and help achieve the ultimate objective of quality standards in Teacher Education.

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