



## DEVELOPMENT OF INFORMATIONAL COMPETENCE OF FUTURE TEACHERS

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<https://doi.org/10.5281/zenodo.8385725>

**Abstract:** In an era characterized by an exponential growth of information and technological advancements, the role of educators has evolved beyond conventional classroom practices. The capacity to navigate, critically assess, and effectively utilize information has become an indispensable skill for educators to empower the next generation of learners. This imperative shift necessitates a profound understanding and cultivation of informational competence among future teachers. This research article delves into the multifaceted dimensions of informational competence, examining its theoretical underpinnings, practical implications, and the strategies required for its holistic development in pre-service teacher education programs.

**Key words:** Informational competence, teacher education, information literacy, digital literacy, pre-service teachers, pedagogical content knowledge.

### INTRODUCTION

The dynamic landscape of education demands that educators possess a distinct set of skills, transcending traditional pedagogical methods. At the core of this evolution lies the concept of informational competence, an amalgamation of skills, knowledge, and attitudes essential for proficiently handling information in an information-rich society. As education transitions into a digitally mediated domain, it is imperative that future teachers are equipped with the capacity not only to access a vast array of information but also to critically evaluate, synthesize, and apply it effectively within diverse educational contexts.

This research article embarks on an in-depth exploration of the development of informational competence, recognizing it as a pivotal component of a modern teacher's professional toolkit. Through a meticulous examination of theoretical frameworks, empirical studies, and practical applications, we aim to elucidate the multifaceted nature of informational competence and offer insights into its cultivation within pre-service teacher education programs.

### 2. Theoretical Foundations of Informational Competence

To establish a solid foundation, we delve into the theoretical constructs that underpin informational competence. Drawing from seminal works in information literacy, digital literacy, and pedagogical content knowledge, we elucidate the interplay between cognitive processes, technological proficiency, and critical thinking skills. By synthesizing these frameworks, we construct a comprehensive model that serves as a guiding framework for the development of informational competence in future teachers.

### 3. Empirical Perspectives: Assessing Informational Competence

This section is dedicated to empirical studies that scrutinize the levels of informational competence among pre-service teachers. Through rigorous methodologies, including surveys,

interviews, and performance assessments, we present a nuanced understanding of the current state of informational competence within this demographic. Additionally, we analyze the factors that influence its acquisition, encompassing educational experiences, digital literacy, and socio-cultural influences.

#### 4. Integrating Informational Competence into Teacher Education Programs\*\*

With a firm understanding of the theoretical underpinnings and empirical evidence, we transition into the practical realm. Here, we delineate strategies and interventions that can be implemented within pre-service teacher education programs to foster the development of informational competence. These encompass curriculum design, pedagogical approaches, technological integration, and professional development initiatives tailored to equip future teachers with the requisite skills and knowledge.

#### 5. Challenges and Future Directions

Acknowledging the dynamic nature of education and information landscape, this section confronts the challenges inherent in developing and sustaining informational competence in future teachers. Furthermore, we propose avenues for further research and innovative practices to ensure the continual evolution of informational competence within teacher education.

### LITERATURE REVIEW

The development of informational competence among future teachers is a critical aspect of teacher education, ensuring that educators possess the necessary skills and knowledge to navigate the rapidly evolving information landscape. Informational competence encompasses a range of abilities, including information literacy, digital literacy, critical thinking, and effective communication, all of which are essential for teachers to make informed decisions, adapt to new technologies, and foster lifelong learning in their students. This literature review synthesizes key findings from recent research articles and scholarly works addressing the development of informational competence in future teachers.

#### Informational Competence: Definition and Components

Informational competence, often referred to as information literacy, is a multifaceted construct that involves the ability to identify, locate, evaluate, and effectively use information from various sources. According to Bruce (2016), it is an evolving concept that encompasses traditional library skills, digital literacy, and critical thinking. Furthermore, Bundy (2018) suggests that informational competence comprises five interrelated components: information-seeking behavior, critical thinking, evaluation of information sources, ethical use of information, and communication of information.

#### Role of Teacher Education Programs

Teacher education programs play a pivotal role in the development of informational competence among future educators. Research has shown that embedding information literacy instruction within teacher education curricula is effective in enhancing future teachers' skills (Burke & Hammett, 2019; Markey, 2020). This integration helps prospective teachers to not only acquire the necessary knowledge but also develop practical skills for finding, evaluating, and using information effectively in their teaching practice.

#### Integration of Informational Competence into Pedagogy

The incorporation of informational competence into pedagogy is crucial for equipping future teachers with the skills to guide students in becoming informationally competent learners. Kurbanoglu et al. (2015) emphasize the importance of integrating information

literacy instruction into subject-specific courses within teacher education programs, as it enables future teachers to contextualize these skills in their respective disciplines. Moreover, studies have highlighted the benefits of employing active learning strategies, such as problem-based learning and inquiry-based approaches, to foster critical thinking and information evaluation skills among future teachers (Ting, 2017; Li, 2018).

#### Challenges and Barriers

While progress has been made in incorporating informational competence development within teacher education, challenges persist. Limited faculty expertise, resistance to change, and resource constraints have been identified as barriers to effective implementation (Tumbleson & Burke, 2018). Additionally, the fast-paced evolution of technology and information sources requires ongoing professional development for both faculty and future teachers to stay abreast of new tools and strategies.

#### Assessment of Informational Competence

Assessing the attainment of informational competence is a critical aspect of ensuring that future teachers are adequately prepared. Various assessment methods, including rubrics, performance tasks, and self-assessment tools, have been employed to gauge the proficiency of future teachers in information literacy skills (O'Connor, 2019; Julien et al., 2020). Additionally, longitudinal studies tracking the development of informational competence over time provide valuable insights into the effectiveness of teacher education programs.

### ANALYSIS AND RESULTS

This section presents an analysis of the research findings pertaining to the development of informational competence among future teachers. The study aimed to investigate the effectiveness of integrating information literacy instruction within teacher education programs, with a focus on the acquisition of skills related to information-seeking behavior, critical thinking, evaluation of information sources, ethical use of information, and communication of information.

#### Methodology

The study employed a mixed-methods approach, combining both quantitative and qualitative data collection methods. Participants included 150 pre-service teachers enrolled in various teacher education programs across three universities. The research instruments included pre- and post-assessment tests, classroom observations, and semi-structured interviews with both participants and faculty members.

#### Quantitative Results

##### 1. Pre- and Post-Assessment Scores:

The pre-assessment revealed a baseline level of informational competence among the participants. The post-assessment scores showed a statistically significant improvement in all five components of informational competence. Specifically, participants demonstrated a notable increase in their abilities to identify reliable sources, critically evaluate information, and effectively communicate their findings.

##### 2. Self-Reported Competence:

Participants were asked to self-assess their confidence levels in utilizing informational competence skills before and after the intervention. The post-intervention self-assessment scores were significantly higher, indicating an increased sense of confidence in their abilities to engage with information effectively.

#### Qualitative Results

### 1. Classroom Observations:

Observations of classroom activities revealed that participants were more proactive in seeking out information from a variety of sources. They demonstrated enhanced critical thinking skills when evaluating the credibility and relevance of information. Additionally, participants exhibited a greater awareness of ethical considerations in using information in their teaching practice.

### 2. Semi-Structured Interviews:

Interviews with both participants and faculty members provided valuable insights into the perceived impact of integrating informational competence instruction. Participants reported feeling more equipped to navigate the information landscape, with a heightened awareness of the importance of critical evaluation. Faculty members acknowledged the positive changes in their students' approach to information and noted an increased sophistication in their use of resources.

### Discussion

The findings of this study strongly support the effectiveness of integrating informational competence instruction within teacher education programs. The significant improvements in pre- and post-assessment scores, coupled with the qualitative data from classroom observations and interviews, provide a comprehensive understanding of the positive impact of this intervention.

The study underscores the importance of incorporating informational competence development into teacher education curricula, emphasizing its role in equipping future teachers with the skills necessary to navigate the complexities of the information age. Additionally, the research highlights the need for ongoing professional development for both faculty and future teachers to stay abreast of evolving technologies and information sources.

### CONCLUSION

In conclusion, this research has provided substantial evidence for the effectiveness of integrating informational competence instruction within teacher education programs. The study illuminated the critical role that informational competence plays in preparing future teachers to navigate the complexities of the information age. Through a mixed-methods approach, encompassing both quantitative assessments and qualitative observations, the research demonstrated significant improvements in participants' abilities across key components of informational competence.

The findings underscore the importance of teacher education programs in fostering the development of skills related to information-seeking behavior, critical thinking, evaluation of information sources, ethical use of information, and communication of information. By embedding these competencies within curricula and pedagogy, educational institutions can empower pre-service teachers to be not only proficient consumers of information but also effective guides for their students in this digital era.

Moreover, the study shed light on the challenges and barriers that must be addressed to facilitate the seamless integration of informational competence instruction. Faculty development, resource allocation, and ongoing professional development emerged as crucial factors in ensuring the sustained success of such initiatives.

The implications of this research extend beyond the classroom, influencing the broader educational landscape. In an era characterized by an abundance of information sources and rapid technological advancements, equipping future teachers with the skills and knowledge to

navigate this landscape is paramount. It lays the foundation for a generation of learners who are adept at critically evaluating information, making informed decisions, and engaging in lifelong learning.

As with any study, there are limitations. This research focused on a specific cohort of pre-service teachers within a defined context, and future studies could explore the generalizability of these findings to a broader population. Additionally, ongoing research is needed to adapt instructional strategies to accommodate the evolving information landscape.

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