The Competence of Teachers Embedded in the Classroom and Child Education Programs in Jordan, and It's Compatibility with the Required Competence of Teacher in the Age of Information Technology

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Abstract The aim of this study is to determine the competencies and technological roles of teachers who are able to employ technology in education and keep themselves up-to-date with the requirements of the era of information and communication technology. Moreover, it aims to identify the presented image of the teacher and his/her roles as reflected by the teacher education programs courses (namely, Child Education and Classroom Teacher Education Programs) from the viewpoints of faculty members; as well as to determine the image of the teacher and his/her roles from the viewpoint of students enrolled in the Child Education and Classroom Teacher Education Programs. Additionally, the study aims to explore and identify the perceptions of students majoring in Classroom Teacher Education and Child Education and their future roles as teachers. The researcher based her work on theoretical papers, published research, and different literature in a collection of relevant data to extract facts and conclusions, as well as following the descriptive analytical method which relies on the quantities method to determine the roles of teacher preparation programs to grade students enrolled in Classroom Teacher and Child Education programs through a questionnaire which included (78) items. In order to determine the roles of the teacher through the student's views, the researcher employed another questionnaire consisting of (63) items. The same approach was also used in determining the students' perceptions of their future roles as teachers through a third questionnaire that consisted of (42) items. The scales have been applied to all students enrolled in Classroom Teacher and Child Education programs at Petra Private University. The study concluded that most of undergraduate courses for Classroom Teacher and Child Education programs have failed to reflect the competencies of the teachers and technological competencies of the preparation and design of teaching from the perspective of teachers. The study also showed that students have a blurry image of their future roles as teachers, and the roles of guidance and counseling and skills related to ethical and professional technology employing the most mysterious of these roles.

Keywords: competence, Classroom and Child Education, information technology

1. Introduction

Education is the engine that drives any society forward toward sophistication, and we are now witnessing the era of information technology. We have enough evidence to illustrate the great impact of information technology on the processes of learning and teaching, of which the teacher was, and still is, a basic building block. Information communication is an important part of the educational process, as it helps in maintaining a positive environment inside the classroom. Learning occurs when the teacher impacts the learner and helps him/her gain knowledge, necessary skills, values, and positive attitudes.

Thus, Communication and Information Technology is viewed as an educational tool that can motivate students' interests and encourage them to participate more in their own personal learning process. This requires teachers to be more technologically efficient, in order to push their students further into integrating communication and information technology into the classroom, as well as making use of new technologies. This makes room for new teacher roles, and facilitates advanced educational methods. The success of the integration of communication and information technology into education is dependent on the teachers' ability to build an effective learning environment, incorporating new technologies into modern educational methods, creating and developing socially active learning environments, encouraging interactive

methods, and developing different sets of learning, management skills on the learning environment level whether in ordinary classrooms or through employing networks, finding an electronic learning environment, developing creative methods for using technology to enhance the learning environment, encouraging technological advancement, and deepening and creating knowledge.

The process of teacher education should be catch up of the quick-paced development in the field of teaching, which calls for educational institutions interested in preparing teachers to reconsider teacher preparation programs and educational approaches on which they are based, updating them, and constantly aiming at developing and enhancing them.

1.1. Problem of the Study

Our current reality can be expressed through the rapid changes and various developments enforced by communication and information technology, which has become as utterly significant as to name this the "Information Era". Based on these changes, many fields have changed accordingly, including education and teaching. Teaching requirements of the current era are no longer similar to those which were dominant in past decades, in which traditional education was largely prominent through dictation and memorization, where the teacher played the largest role possible, while learners were kept passive. The current study firstly aims to identify the competencies and roles of technological teachers as molded by information and technological advancement; and secondly to analyze teacher education programs in Jordan, and determine their level of consistency with these standards and roles, as well as reveal the perspectives and viewpoints of students aspiring to become teachers in the two above mentioned programs (Classroom Teacher and Child Education) on the roles they will play after graduation, when they begin working in the field of teaching in kindergartens and elementary schools, which will require them to make use of communication and information technology in the teaching process.

1.2. Significance of the Study

Teachers in our schools are still practicing traditional teaching methods, and rarely apply any type of technology in teaching; which, even if applied, they are only applied for simple tasks that are not up to the standards of modern teaching, such as deeper learning, more rigorous assessment, lifelong learning skills, self-learning, mastery learning, etc. All of these standards rely on information technology. Additionally, these are of no help when it comes to finding graduates properly prepared for teaching jobs, who are capable of adapting to the needs of the rapidly changing age of technology, communication, and information. This has lead the researcher to explore the gaps that make educational science graduates (who become responsible for raising children and preparing them for life) drawn further from technology and the proper use of it in the teaching process. To study the lack of using technology in the classroom, teacher preparation programs will have to be reassessed to ensure they are consistent with the image of the teacher who works hand in hand with required technologies, as well as exploring the viewpoints of students aspiring to become teachers on

their future roles, and how consistent their visions are with the roles they are required to play, and which they are expected to practice when joining the teaching workforce. Identifying the gaps in these programs will help develop and renew them for the purpose of preparing the developed technological teacher that goes hand in hand with the current era and its needs.

1.3. Aims of the Study

This study aims to explore the image of the teacher and identify his/her role in classroom teacher and child education programs in Jordan; as well as to verify how consistent they are with the technological roles of teachers in the information era. The study specifically aims to:

1. Identifying the competencies and roles of the technological teacher who is capable of employing technology in teaching, and constant developing alongside the requirements of the era of communication and information technology.
2. Identify the roles of teachers as presented by teacher preparation courses in the Child Education and Classroom Teacher programs from the viewpoint of university faculty members in both formerly mentioned majors.
3. Identify the roles of teachers as reflected by Child Education and Classroom Teacher programs through the courses they teach to students, as well as through the behaviors of faculty members from the viewpoint of students.
4. Identify the future roles of students in Child Education and Classroom Teacher programs as teachers from their viewpoint.
5. Inquire whether variations and differences exist among these perceptions in different academic levels.
6. Inquire whether variations and differences exist among these perceptions between Child Education and Classroom Teacher majors.

1.4. Study Questions

This study aims to answer the following questions:

1. What is the image of the teacher in classroom teacher and child education from the viewpoint of university faculty members who work in both majors?
2. What are the roles of teachers as reflected by classroom teacher and child education programs and elementary school (classroom teacher) education programs through the courses being taught as seen by students?
3. What are the perspectives of students in Classroom Teacher and Child Education programs regarding their future roles as teachers?
4. Do the perspectives of students regarding teacher roles differ as the educational level differs?
5. Are the perspectives of students majoring in Classroom Teacher Education different than those majoring in Child Education?

1.5. Theoretical Framework

1.5.1. Literature Review

More attention has been given to the teacher for being the base and corner stone of the development and

innovation process, as well as being the main guide of the educational process, and he/she holds the biggest responsibility when it comes to achieving the goals of the educational system.

The teacher's role has shifted from providing, presenting, and explaining the contents of school books, preparing lessons, using teaching aide, and scoring papers toward planning and designing the educational process and being aware of every single detail, making him/her the major planner, guide, instructor, manager, and assessor of the educational process, as well as allowing students to participate more freely while acquiring more and more skills. This has allowed students to gain the skills of communication, giving them creative outlets and allowing them to build their personalities and being exposed to the newest advancements in all fields of science and communication. For this to succeed, teachers will need to become aware of the learning environment, capable of analyzing it and identifying the characteristics and skills of his/her learners, then identifying proper teaching methods, set reasonable teaching goals for them, and respect their individual and personal differences [25]. All of that and more is required from teachers, where he/she must fully aware of the educational process and how to properly plan it before integration, so that students become capable and skilled in self-learning by going back to references and using them. This will reflect positively on students and society as a whole, where students are enabled to face life challenges connected to the current era and what is known as globalization, being a major cultural, social, and economic challenge itself.

Kirschner & Selinger [15] asserts that students, and for the first time in history, will be more capable of dealing with technology compared to their teachers in exchanging information, sharing knowledge with their peers, using social media and e-mails, forming discussion groups, and browsing through virtual worlds. This itself makes students constantly bored and frustrated when taught through traditional teaching methods. Teachers, too, might feel shocked and frustrated due to their inability to be effective in the teaching process. This has led the Ministry of Education in Holland to conduct numerous studies aimed at integrating communication information technology into teacher preparation programs, and incorporating this within the standards of teachers' preparation and college curricula.

Cavanaugth [8] asserts that using modern technology and internet has affected the performance of teachers and learners alike inside the classroom, and has helped develop technological teaching based on employing computers, internet, networking, social networks, and smart phones in the learning/teaching process. This emphasizes the rights of individuals to have educational opportunities that are not bound to time or location, and that is consistent with the needs of all members of society. The teacher in the internet age has to play new roles focused on planning, designing, and preparing the educational process, aside from him/her being a researcher and helper, guide, technician, designer, manager, and simplifier of content and processes [6].

Rabah [23] defines the technological teacher as the teacher who interacts with the learner electronically, is directly responsible for facilitating education and supervising the learning process. The teacher may work within an educational institution, or could hold a home-based job. This teacher not usually restricted to a certain time, and most likely deals with the educational institutions based on how many courses he/she is supervising; where he/she is responsible for these classes and the students enrolled in them.

O'Neil [21] indicates that education has changed due to the incorporation of computers and information technology within schools, which has changed student and teacher roles, as well as teaching methods. This has led the teacher to become the manager and designer of the learning process, and a processor of information, after previously having been restricted to being the source and transmitter of knowledge. Moreover, teachers and students now undergo an interactive process in building knowledge through the constructivist method of learning.

Interaction between teachers and students has become a vital and basic part of the teaching/learning process. For instance, the latest report from the National Center of Education and Economy (2007) asserts that our educational system and training systems were built for a time different than ours, and do not suit modern age.

Siemens [24] indicates that students in the era should use learning technology for communication, collecting information, collaboration, and playing; as well as employing smart phones, computers, laptops, and the internet efficiently and in impressive complex ways. Additionally, the skills necessary for tomorrow's society, as indicated by the American Library Association (2000), include cognitive literacy skills, which are the ability to deal with, and employ, information technology with a high level of efficiency. Siemens [24] has indicated, through developing his constructivism theory, the transition toward the role of construction in teaching by shifting the focus toward the role of the learner, as opposed to the traditional role of the teacher to promote learning.

Moreover, Faraj [11] sees that the teaching career needs to be developed and revised line in line with the massive scientific, research, and technological advancements, as well as by employing additional thinking skills and helping learners acquire them. Kan'aan [13] asserts that cognitive, scientific, and technological advancements have occurred in all fields of life, and thus should also affect teachers through preparation, rehabilitation, and training so that teachers can better understand and deliver their educational message, and that rehabilitating teachers functionally can have direct (positive and negative) affects in developing future generations and building their personalities. At this point, it is important to consider the issue of preparing competent teachers capable of taking the wheel of constant development and advancement, and to contribute to overall development of society. Kan'aan [13] also sees that educational preparation college are incapable of providing students aspiring to become teachers with the skills of self-learning, which makes future teachers incapable of keeping up with changes that occur to the content of the curriculum as a result of technological and scientific advancements in our modern age. Additionally, these programs are more focused on theoretical studies, and give only little attention to practical scientific aspects of teaching.

In his report on preparing and developing school leaders in the 21st century, Andreas [5] emphasized on the

new needs of students, and how necessary it is to change and review teacher and student roles to be more consistent with these requirements; additionally, Schleicher believes that preparing teachers to use information technology in the learning process is the tool necessary to uplift the quality of the learning process to better suit the new century.

In light of this drastic change in the roles of both teacher and student, Berge [6] asserts that the student, now engaged in technological learning, becomes in charge of setting learning goals and standards; whilst teachers are in charge of guiding the student in fulfilling his/her role, and serve as a source of support and engagement. Moreover, the teacher should be a good discusser and debater to the student through the learning process, and not simply answer questions.

Nikbakhsh [20] sees that the technological advancements that occurred during the last two decades point toward meeting points between technological cognitive advancements, and learning, in hopes of setting new standards and requirements for employing information technology in education and teaching. Based on this, specialists have implemented new methods that support teacher training through employing information technology in teacher preparation programs.

Moreover, Palak & Walls [22] asserts that the extent to which teachers employ learning technology highly depends on their perceptions about teaching and information technology, and its roles and significance in creating a proper teaching environment. At this point, one can sense the importance of preparing students for their future teaching careers through mature programs aspiring to meet the standards of the current era.

Furthermore, the Arabic Organization of Education and Culture (2000) states that the preparation of the teacher of the future must begin at university level [14].

1.5.2. Previous Studies

In a study conducted to explore the factors affecting the extent to which teachers use and employ communication and information technology, Mumtaz [18] lists reasons which prevents teachers from employing information technology in the learning process, of which one in their lack of practical experience and sufficient knowledge of information technology, as well as the lack of support given to teachers when it comes to using this sort of technology, and the lack of assistant teachers and specialists to teach students how to use computer technology, mainly due to the short periods of time reserved for using technology within the curriculum. This, no doubt, is reflected on students, creating a barrier between them and technology. The study has also listed reasons that drive teachers away from information technology to the point of resisting it, of which one is teachers' false impressions toward technology, in addition to further personal and psychological reasons, and the tendency to resist change and development.

In a study conducted by Cox &etal., [9] concerning factors that employ information technology in the teaching process, the researchers concluded that teachers acknowledge the importance of using technology in teaching, stating that it makes learning more entertaining, motivates learners further, while expanding their independence, and further supports teachers and increases

their ability to manage classes efficiently. The study also showed that teachers who employ information technology have positive attitudes toward technology and the use of it in teaching. The study stresses the importance of focusing on the active role of students in the learning process, rather than on direct teaching.

In a study conducted by Palak & Walls [22] to explore the relationship between teachers' beliefs regarding the employment of technology through technology-integration-based teaching methods. The study found that teachers seek to employ technology in preparing and managing classes, but rarely support student learning; and that teachers commence in a teacher-centered learning process. Therefore, the study called for focusing on the efforts directed toward improving teachers' professionalism and the active integration of technology, while emphasizing the role of the learner. The study further stressed the importance of exerting more efforts in preparing teachers and changing their perspectives and practices in the technological learning environments.

A study conducted by Mahaftha [17], which aimed to explore the favorable characteristics of effective teachers in students, in addition to identifying the standards of preparing and rehabilitating them, concluded that the most critical characteristics of an effective teacher are personal (21 characteristics), cognitive (29), and educational (28). To answer questions related to the standards of teacher preparation and rehabilitation, it is evident that the majority of countries have focused on personal, professional, scientific, cultural, social, ethical, and pedagogical standards, in addition to possessing modern educational technology. The study indicated that education in the information era, which is known for its expanding knowledge, the various sources and methods of acquiring it, and its learning methods that require special preparation on part of the teacher, nurture a sense of self-learning in students. Now it has become critical for teachers to expand their skills, abilities, and knowledge, as well as becoming largely competent in using modern techniques, thinking skills, cognitive theory, and class management skills, as teachers have lost their authority and his/her exclusivity of knowledge. The teacher's role has shifted from being a mere transmitter of knowledge to engaging with students, guiding them, and supporting them to finding sources of information. In other words, the teacher career has become a mix of being a parent, a leader, a manager, a critic, and a consultant.

Another study conducted by Hussein [12] pointed out that the type and level of preparation received by pre-service teachers, as well as the quality of training received during service, are some of the basics of developing and updating teaching to make it more fitting for this era. The study also asserts that teacher preparation facilities are facing numerous challenges and instabilities due to constant change and a lack in material resources necessary for the learning-teaching process in the reign of globalization. The study suggests that such organizations are in dire need of keeping themselves up to date through reality checks, and future planning in accordance with modern standards, which will aid them in facing the future and all its advancements. It further indicated that the role of the teacher is the corner stone of the learning-teaching process; the majority of psychological and pedagogical studies (be they Arabic or Foreign) agree that up to 60%

of the success of the learning-teaching process depends on the teacher alone, while the remaining 40% is in the hands of curriculum, textbooks, and administrators. Furthermore, teacher preparation programs are dependent on four major basics: Academic Preparation, which includes teachers' knowledge of the constantly changing material, curriculum, facts, concepts, and principles in the era of a grand cognitive boom; where teachers will need to stay put and be aware of the accelerating change that knowledge undergoes constantly, and be armed with all necessary skills included in the scientific method that will allow them to keep up with knowledge in their field of study; General Cultural; Professional Preparation, where teachers need to focus on finding appropriate methods to channel knowledge, and be capable of using teaching tools and aids that properly fit the era of computers and technological advancement. The study mentioned above has also listed the most prominent approaches adopted by teacher preparation establishments, which include:

1. Focusing on pedagogical and psychological sciences both theoretically and practically, as these help quench the spiritual, physical, mental, and social needs of teachers and students alike.
2. Working to gain information base on competencies so that teachers can perform their roles as nurturers and teachers alike.
3. Focusing on the holistic aspects of the job; in other words, focusing on the cognitive aspect of a teacher's career, and the necessary skills and behaviors in a teacher.
4. Preparing teachers through the System approach, which is considered to be one of the prominent aspects of modern civilization, and is based on the General System Theory, implemented in thinking, planning, and scientific research, and considered to be one approach to solving complex humanitarian problems with high efficiency.
5. Focusing on providing learners/teachers with technological literacy, as information technology has influenced, and given rise to, new concepts in the fields of work and life, as well as diminishing barriers of place and time.
6. Training in-service teachers on school campus.

A study conducted by Almufreh et al., [1] lists the modern attitudes to preparing and developing teachers career-wise, through the following roles:

- Global modern attitudes toward accepting policies for students in educational science faculties
- Contemporary attitudes toward the complementary of pre-service teacher preparation and developing teachers career-wise during preparation
- Current attitudes in teaching systems and programs in educational science faculties
- Current attitudes related to field education
- Current attitudes concerned with in-service teacher training programs
- Current attitudes related to developing the teacher staff at educational science faculties

The study was concluded by suggesting a proposal to develop the teacher preparation system career-wise, as goes best alongside modern attitudes. Moreover, the study strongly emphasized the transition from traditional teaching toward electronic teaching in teacher preparation, as well as employing modern technology with the aid of

specialists, programs, and programmers, and by making technology and its employment widely accessible.

In Mahaftha's study [16], which aimed to explore the characteristics, skills, and competencies required to prepare the teacher of the future, concluded that the most critical characteristics that should be present in the teacher of the future are: good knowledge of the content of his/her field of specialty, good knowledge of learners' capabilities and personalities, high skills in teaching and assessment methods, being highly capable of interacting with students, being prepared for a sustainable professional career path, and being skilled in using computers and different teaching techniques. As for competencies, the study results indicated that competencies required by teachers are: theoretical and practical preparation, abiding by the ethical rules of the career, being prepared to serve, and reach the local community, and the ability to conduct scientific research. On the other hand, the procedures necessary for improving teachers' quality are: professionalization of teaching, and setting high standards for choosing teachers.

Additionally, Alnaga and AbuWard [2] conducted a study on teacher preparation and career development in light of future challenges. This descriptive and analytical study aimed to identify modern attitudes in teacher preparation and professional development through reviewing a group of Arabic and foreign literature (related to the study) in order to identify the most recent modern attitudes and systems for teacher preparation and development. The study showed that advanced and developing countries have increased their focus on teacher preparation and teacher professional development in general teaching levels. Moreover, the study concluded that teacher preparation is a continuous process that includes both pre-service preparation and in-service training; therefore, teacher professional development is an ongoing propitious process that does not end with the graduation of students from college. The study further emphasized the importance of developing a teacher preparation and teacher professional development system that are consistent with modern attitudes, and that the development of educational science faculties should be initiated by work groups and committees assigned by the Ministry of Higher Education to implement comprehensive quality standards in teacher preparation colleges, so that the preparation programs cover all fields related to the educational process, and to ensure its success and continuity. Surely, this entails that such committees have to be aware of the concept of comprehensive quality and application standards in higher education, so to transfer from traditional to electronic teaching in teacher preparation and advanced technology employment with the aid of specialists, programs, and programmers to fully implement the study material and transmitting it through as multimedia through the internet, as well as to provide the skills of using technology and dealing with computer programs to every student-teacher and teacher-teacher alike.

Alsarhid [3] conducted a study aimed to analyze previous studies on the professional competence of teachers in the Arab region, using analysis approach on a sample of 30 research papers published between the years of 1986 and 2010. The study concluded that the most prominent and required professional competencies of the

Arab teacher are planning and implementing lessons, assessment, humanitarian relations, academic follow-up, general knowledge, student acceptance, ability to deal with students and understanding their characteristics and developmental and social needs, wide scope of knowledge, linking scientific subjects to everyday life, serving society, and the active engagement with parents and teacher committees. Furthermore, Alsarhid [3] emphasized in his study on the importance of using the most advanced techniques when teaching, as well as developing the rules and instructions that give importance to professional development in the teaching process, and setting quality standards and including them within the necessary conditions for job promotions.

In the study conducted by Ertmer [10] to compare teacher perception and practices using information technology in teaching with the perceptions and practices as they appear in theoretical research, the researcher found significant differences; and to identify the underlying factors that affect this difference, he found that academic level, classroom, future vision, available resources, and curriculum had the greatest impact on the extent to which teachers employ technology in teaching.

Another study conducted by Najadat &Malkawi [19] aimed to explore the most important challenges and issues that face Arab education in the current century, cultural challenges, sustainable education, driving change, the technological revolution, professionalizing teaching, and the environmental crisis as the starting point for shedding light on the role, importance, and features of the teacher of the future. The study indicated that what teachers have been prepared for in the past century is not consistent with the requirements of the role teachers will need to play in the current century, where school's future lies in technology and technological teaching. Furthermore, the study lists a number of features and roles of the teacher of the future that he/she must apply in order to get his/her message through, and grow more aware of the significance of this career in practice. According to the study, the teacher of the future should acknowledge that, in the era of the technological revolution and advanced communication technology, he/she is no longer the only source of knowledge which learners use; on the contrary, there are other sources that have greater and deeper effects. This entails the creative and conscious use, and the active employment of such aids in serving the educational process. Teachers of the future are also required to base their work, behavior, and practices on a solid intellectual and educational basis, a strong leap of faith that comes from believing in Almighty God for an actual understanding of Islam, and recognizing it as an actual and comprehensive moral system that upholds the mind. Teachers of the future should build upon these intellectual basics in how they deal with themselves, students, school, and both local and global society.

After reviewing previous studies and literature, we could list the following roles and competencies of technological teacher, next to a group of competencies known to traditional teachers, such as:

Teaching Designing Competencies, which include all activities performed by the person in charge of designing school materials such as curricula, programs, school books, study units, or teaching lessons, as well as analyzing all internal and external conditions related to the formerly mentioned, in aims to set their goals, analyzing and organizing their content, choosing appropriate methods for them to be taught, recommending cognitive aiding methods, designing assessment tests for the content, and presenting the study material in an interesting style decorated with harmonious colors and shapes as layout design; additionally, this person ought to be fully aware of everything new in the internet world, particularly in the field of website design and all shapes of multimedia; and possess up-to-date knowledge of information technology and its use, and how to acquire information and good acquaintance with new sources.

Technology Employment Competencies:

The main role of teachers in technological teaching now lays in the use of technological equipment in teaching and information acquirement. Such a role can be summarized as follows:

- The role of the teacher who uses educational media; in this role, the teacher would give the class while employing computers, internet, and multimedia to enrich the lesson and properly clarify any ambiguities, and later assigns projects and homework to them.
- The role of the teacher who motivates students to participate in the educational process; in this role, the teacher helps students use, and interact with, technological aids through encouraging them and stimulating them by asking questions and inquiring about certain points related to their education and how to use computers to gain knowledge in different fields, and motivating students to communicate with their teachers and peers via computers through email services, social media, and internet networks inside the classroom, and enhance their responses and provide them with detailed information on various subjects.
- The teacher who motivates students to gain knowledge and practice creativity; in this role, teachers should encourage students to be creative, such as asking them to create web pages, write research papers in groups, and set up discussion sessions through e-mail, which require the collective participation of the student and the teacher.

1.6. Study Limitations

This study has been conducted on students at Petra University who major in Child Education and Classroom Teacher in the first semester of the academic year 2012/2013.

2. Methodology

A theoretical and documentary approach has been used in this study, in addition to reviewing previous literature and different publications for collecting related data that could contribute to formulating conclusions, and to answer the study questions, the researcher has used the descriptive and analytic approach based on the quantitative method as follows:

First: By reviewing previous literature to list the roles and competencies of the technological teacher, and categorizing these roles as competencies which teachers are required to practice in order to fulfill their roles. The

researcher has also used these roles as a reference point in designing the three scales used in this study.

Second: Using the Descriptive Approach to explore the roles of teachers in curriculum and teacher preparation programs in the two majors of Child Education and Classroom Teacher from the viewpoint of tutors who design, develop, and teach courses.

Third: Using the descriptive approach to explore the perceptions of students aspiring to become teachers in the majors: Child Education and Classroom Teacher programs when it comes to teachers' roles and competencies.

Fourth: Using the descriptive approach to explore teacher roles and competencies from the viewpoint of students majoring in Child Education and Classroom Teacher programs as they have been presented in curriculum and applications presented by instructors through study courses.

2.1. Study Society & Sample

The study sample consisted of the following: All Classroom Teacher and Child Education courses, as follows:
Classroom Teacher Courses:
- Introduction to Curriculum & Teaching Design
- Curricula& Teaching Methods in Arabic Language
- Curricula& Teaching Methods in Social Studies
- Curricula& Teaching Methods in Science
- Curricula& Teaching Methods in Mathematics
- Vocational Education
- Evaluation& Assessment
- Computer Use in Education
- Practicum for Classroom Teachers

Child Education Courses:
- Introduction to Child Fine Arts
- Mathematical & Scientific Concept Development
- Religious & Social Concept Development
- Music & Drama in Teaching
- Cognitive and Linguistic Development
- Teaching Reading and Writing
- Field Training for Child Educators

Students registered at the University in the majors of Child Education and Classroom Teacher programs in the academic year of 2012/2013, 193 male and female students in total, of which 145 major in Classroom Teacher program and 48 in Child Education. Students were sophomore, seniors and juniors in both majors. Table 1 shows the number of students in both majors categorized by academic year. The questionnaire was distributed among all students mentioned above. 37 students majoring in Child Education and 114 in Classroom Teacher Preparation successfully answered and returned the questionnaire.

Table 1. Students number in both majors categorized by academic year

Year	Major		Total
	Child Education	Classroom Teacher	
Second	8	62	70
Third	7	15	22
Fourth	22	37	59
Total	37	114	151

2.3.1. Study Tools

To answer the study questions, the researcher has employed the following tools:

- To identify teacher roles as represented in Child Education and Classroom Teacher courses, the questionnaire has been designed, hoping to explore the roles of teachers as described in these curricula from the viewpoint of faculty members teaching these courses. The questionnaire consisted of 78 items covering the following standards:
a. Academic Preparation Standards and Competencies, represented by 12 items.
b. Professional Preparation Standards and Competencies, represented by 25 items.
c. Technological Preparation Standards and Competencies, represented by 14 items.
d. Ethical and Moral Preparation Standards and Competencies, represented by 12 items.
e. Class Management Standards and Competencies, represented by 12 items.
f. Standards and Competencies of Preparing and Giving Lessons, represented by 8 items.
- To identify teacher roles as represented in the Child Education and Classroom Teacher courses, the questionnaire has been designed hoping to explore the roles of teachers as portrayed by the curricula from the viewpoint of students in these two majors. This questionnaire consisted of 63 items, divided as follows:
a. Academic Preparation Standards and Competencies, represented by 12 items.
b. Professional Preparation Standards and Competencies, represented by 25 items.
c. Technological Preparation Standards and Competencies, represented by 14 items.
d. Ethical and Moral Preparation Standards and Competencies, represented by 12 items.
- A third questionnaire has been designed to investigate the perceptions of students majoring in Child Education and Classroom Teacher Program who aspire to become teachers in the future toward their future roles as teachers when becoming engaged in a teaching profession. This third questionnaire consisted of 42 items, as follows:
a. The roles of teachers in class management and the teaching process, represented by 7 items.
b. The roles of teachers in designing teaching and teaching classes, represented by 8 items.
c. The roles of teachers in employing educational and computer technologies, represented by 13 items.
d. Ethical and Professional Competencies, represented by 7 items.

2.3.2. Reliability& Validity of the Tools

- The Scale measuring teacher roles as represented by university curricula and courses in the two majors (Classroom Teacher Education and Child Education) has been reviewed by a number of professionals specializing in measurement and assessment, curriculum development, and teaching methods. The scale was reviewed, and a final version of it has been prepared after taking all notes presented by these professionals into consideration. To ensure reliability, the researcher applied the scale to a Pilot Sample consisting of 10 faculty members who teach Child Education & Classroom Teacher courses. The

Reliability Coefficient has been calculated using the Kuder–Richardson Formula (20-KR); where α = 0.95.

- Student perceptions toward Teacher roles Questionnaire: this questionnaire has been reviewed by a number of professionals specializing in measuring and assessment, curriculum development, and teaching methods. A final version of it has been prepared after taking all notes presented by these professionals into consideration. For reliability, the researcher has conducted the scale on a Pilot Sample consisting of 30 male and female students majoring in Classroom Teacher and Child Education. The reliability coefficient has been calculated using the Kuder–Richardson Formula (20-KR); where α = 0.946.

- Perceptions of student-teachers majoring in Child Education and Classroom Teacher toward their future roles as Teachers. This questionnaire has been reviewed by a number of professionals specialized in Evaluation and assessment, curriculum development, and teaching methods. A final version of it has been prepared after taking all notes presented by these professionals into consideration. For reliability, the researcher has conducted the scale on a pilot sample consisting of 50 male and female students majoring in Classroom Teacher and Child Education. The Reliability Coefficient has been calculated using the Kuder–Richardson Formula (20-KR); where α = 0.904.

2.4. Study Terminology

2.4.1. Technological Teacher

A teacher capable of employing information and communication technology in the teaching process efficiently and with competence, and is capable of following up with new advancements in the fields of information and communication technology.

2.4.2. Educational Competencies

Educational Competencies are definite and carefully chosen behavioral and procedural goals that a teacher performs with a high level of professionalism and competence that comes with knowledge and formerly-gained experience when practicing his/her different educational, administrative, and humanitarian roles required from teachers to ensure high quality of educational process outcomes [7].

3. Study Results & Findings

This study aimed to explore the image of the teacher and identify teacher roles in two teacher preparation programs in Jordan: Classroom Teacher and Child Education, and investigate to what extent these programs are consistent with the technological roles of teachers in the era of information.

3.1. Results

The results were as follows: Firstly: Results related to the roles of teachers as represented by curriculum and study courses from the viewpoint of university faculty members in the Child Education and Classroom Teacher Departments.

Table 2. Response of Faculty members to the Questionnaire on Teacher Roles and Competencies as Represented by study courses

	Academic Preparation Standards		Professional Preparation Standards		Technological Preparation Standards		Ethical and Moral Preparation Standards		Class Management Standards		Preparing and designing Lessons Standards	
No. of Items	(12)		(25)		(14)		(12)		(7)		(8)	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Slightly	17	8.4%	46	11%	66	28%	36	19%	21	19%	29	22%
Moderately	75	37.1%	127	29%	70	30%	63	33%	24	21%	38	30%
Highly	110	54.5%	259	60%	98	42%	93	48%	67	60%	61	48%
Total	202		432		234		192		112		128	

To determine whether statistically significant differences exist among these six standards, the t-value has been calculated to compare the means of the response rate; shown in Table 3 are the means and standard deviations of the six standards, and shows the t-values calculated for these means.

Table 3. Mean, Standard Deviation and (t) values for the all six standards

	Mean	S. Deviation	t
Academic Preparation	29.8125	3.27045	36.353
Professional Preparation	63.3125	10.60012	23.554
Technological Preparation	29.3750	7.47329	15.412
Ethical and Moral	27.5625	4.64713	23.194
Class Management	16.8750	3.03040	21.912
Preparing Lessons	18.0000	2.03306	36.200

To compare how different courses reflect these six standards of teacher preparation, frequencies and percentages of faculty members' responses have been calculated, and are shown in Table 4. To determine whether the differences between different courses were statistically significant, the t-value has been calculated to compare the means of the scores on the standards.

Secondly: The findings related to the image and role of teachers as represented by the Child Education and the Classroom Teacher programs from the view point of students enrolled in them. The number of students who answered the questionnaire was 151 majoring in Child Education and Classroom Teacher programs; of which are 114 students from the Classroom Teacher preparation program (with a percentage of 75.5%) in the sample, and 37 majoring in Child Education (with a percentage of 24.5%). Of these, 64 students were in their sophomore years (45.7%), 20 in their junior year (13.2%), and 69 in their senior year (41.1%). Table 5 shows the numbers of students in each major.

Table 4. Numbers, Percentages and (t) values of Responses on the Six Standards On Different courses

Course	Slightly		Moderately		Highly		t	Sig.
	N	%	N	%	N	%		
Introduction to Child Fine Arts	9	11%	21	26%	51	63%	3.801	.013
Music & Drama in Teaching	14	18%	17	22%	45	59%	3.930	.011
Contemporary Issues and trends in Child Education	22	29%	27	36%	27	36%	5.245	.003
Mathematical and Scientific Concept Developing.	7	13%	18	33%	30	55%	4.250	.008
Teaching Reading and Writing	18	23%	12	15%	48	62%	4.106	.009
Introduction to Curricula and teaching design.	0	0%	78	100%	0	0%	4.937	.004
Vocational Education	20	26%	28	36%	30	38%	4.188	.009
Teaching Audio-Visual aides	8	10%	22	28%	49	62%	4.640	.006
Curricula& Teaching Methods of Mathematics	2	3%	20	26%	56	72%	4.960	.004
Curricula & Teaching Methods of Social Studies	27	35%	23	29%	28	36%	3.911	.011
Curricula& Teaching Methods of Science	4	5%	26	35%	45	60%	4.592	.006
Curricula &Teaching Methods of Islamic Education	7	9%	6	8%	63	83%	4.020	.010
Evaluation & Assessment	35	46%	18	24%	23	30%	6.395	.001
Computer Use in Education	3	4%	22	28%	53	68%	4.960	.004
Practicumin Classroom Teachers	12	16%	18	24%	45	60%	3.873	.012
Field Training for Child Educators	11	13%	6	7%	71	81%	3.958	.011

Table 5. Number of Students and their Percentages Categorized by Year of Study and Major

Major	Sophomore Year		Junior Year		Senior Year		Total
	N	%	N	%	N	%	
Classroom Teacher	61	88.4%	13	65%	40	64.5%	114
Child Education	8	11.6 %	7	35%	22	35.5%	37
Total	69	45.7%	20	13.2%	62	41.1%	151

To answer the question of identifying the image and roles of teachers as represented by teacher preparation programs for Kindergarten Teachers (Child Education) and the Elementary School level (Classroom Teacher) from the viewpoint of students enrolled in them, the numbers, percentages, and means of students who answered the questionnaire (consisting of 63 items) were calculated and categorized into four different groups of standards: Academic Preparation, Professional Preparation Standards &Competencies, Technological Preparation Standards &Competencies, and finally Ethical & Moral Preparation. Table 6 shows the numbers, percentages, and means of students' responses on the questionnaire on three levels: highly, moderately, and slightly.

Table 6. Numbers and Percentages of Students in Responding to the Survey on Teacher Roles as Illustrated by study courses from the Viewpoint of the Students

Standards &Competencies	Repetition			%			Mean		
	High	moderate	Slight	High	moderate	Slight	High	moderate	Slight
Academic Preparation	98	223	1491	5.4%	12.3%	82.3%	8.2	18.6	124.3
Professional Preparation	321	374	3080	8.5%	9.9%	81.6%	12.8	15.0	123.2
Technological Preparation	241	232	1641	11.4%	11.0%	77.6%	17.2	16.6	117.2
Ethical & Moral Preparation	169	200	1443	9.3%	11.0%	79.6%	14.1	16.7	120.3
Total	829	1029	7655	8.7%	10.8%	80.5%	13.1	16.7	121.3

Thirdly: study findings related to students' perception of teachers roles in the Child Education and Classroom Teacher Preparation programs.

The total number of students who answered this questionnaire was 151, of which 114 were majoring in Classroom Teacher Preparation (75.5%) of the sample, and 37 majoring in Child Education (24.5%). Of these, 9 were in their sophomore year (45.7%), 20 in their junior year (13.2%), and finally 69 seniors (41.1%).

To answer the question regarding the perceptions of student-teachers toward their future roles as teachers, the numbers and averages of their answers (on the scale "I agree"; "I Am Certain"; & "I disagree") for each role in the questionnaire in five different aspects as follows:

First: Competencies and Teacher Roles in managing the classroom and the teaching process, measured using 7 items, with which 43 students disagree, 60 are uncertain about, and 48 agree.

Second: Competencies and teacher roles in designing teaching and implementing lessons, measured using 8 items, with which 100 students disagree, 44 are uncertain about, and 7 agree.

Third, Competencies and teacher roles in employing computers and technology in teaching, measured using 13 items, which with 110 students disagree, 38 are not certain about, and only 2 agree.

Fourth, Competencies and teacher roles in guiding, counseling, and understanding learners' characteristics, measured using 7 items, to which 141 disagree, 7 are uncertain about, and only 3 agree.

Fifth, Competencies and teacher roles in ethical and professional dimension measured using 7 items to which 126 disagree, 21 are uncertain about, and only 4 agree. Table 7 shows the numbers and Percentages of Students' Responses to the Items of the Future Teacher Roles & Competencies Scale.

Table 7. Numbers and Percentages of Students' Responses to the Items of the Future Teacher Roles &Competencies Scale

Response	Managing the Classroom & the Teaching Process		Designing &Teaching Lessons		Employing Computers & Technology		Directing, Counseling, & Understanding Learners' Characteristics		Ethical and Professional Competencies	
	N	%	N	%	N	%	N	%	N	%
I disagree	43	28.5%	100	66.24%	110	72.85%	141	93.4%	126	83.44%
I am uncertain	60	39.7%	44	29.13%	39	25.83%	7	4.6%	21	13.91%
I agree	48	31.8%	7	4.63%	2	1.32%	3	2%	4	2.65%
Total	151	100%	151	100%	151	100%	151	100%	151	100%

To compare the different aspects (or competencies) of the different teacher roles, the means of students in these different aspects were calculated. Table 8 shows these means and standard deviations. To know whether the differences between students' mean values on the efficiency aspects and future roles as teachers were statistically significant, the t-value was calculated. Table 8 shows the calculated t-values for the give different roles and competencies.

Table 8. Mean Values, Standard Deviations and (t) values of students' Scores on the Future Teacher Roles & competencies Scale

Teacher Roles & Competencies	Means	S.D	t	sig
Managing the Classroom & the Teaching Process	2.03	.778	.000	24.632
Designing &Teaching Lessons	1.38	.576	.000	16.111
Employing Computers & Technology	1.28	.479	.000	15.355
Directing, Counseling, & Understanding Learners' Characteristics	1.09	.345	.000	10.332
Ethical and Professional Competencies	1.19	.458	.000	11.836

It was found as shown from Table 8 that all calculated t-values were significant.

There are noticeable statistically significant differences as shown in the table above. If we were to re-arrange these five competencies and future roles of teachers, we would get the following: Managing the Classroom & the Teaching Process, Designing &Teaching Lessons, Employing Computers & Technology, Ethical and Professional Competencies, and finally Directing, Counseling, & Understanding Learners' Characteristics.

To answer the fourth question, of whether students' perceptions of their future roles as teachers differ as the academic year (sophomore, junior, senior) differs, students' means and standard deviations throughout the three academic year levels were calculated for each different aspect of teacher competencies and roles. Table 9 shows these mean values and standard deviations for each aspect and each academic level. To know if the differences between students' scores on these different aspects for each academic year were statistically significant, the f-values were calculated

Table 9. Mean Values, Standard Deviations and Calculated f-values of Students' Scores on the Different Aspects By Academic Year

		N	Mean	S.D	F	Sig
Managing the Classroom & the Teaching Process	Sophomore	70	2.11	.772	3.482	.033
	Junior	22	1.64	.658		
	Senior	59	2.08	.794		
	Total	151	2.03	.778		
Designing &Teaching Lessons	Sophomore	70	1.36	.615	.142	.868
	Junior	22	1.41	.503		
	Senior	59	1.41	.561		
	Total	151	1.38	.576		
Employing Computers & Technology	Sophomore	70	1.23	.423	.142	.868
	Junior	22	1.27	.456		
	Senior	59	1.36	.550		
	Total	151	1.28	.481		
Directing, Counseling & Understanding Learners' Characteristics	Sophomore	70	1.03	.168	1.831	.164
	Junior	22	1.14	.468		
	Senior	59	1.14	.434		
	Total	151	1.09	.345		
Ethical and Professional Competencies	Sophomore	70	1.19	.427	.279	.757
	Junior	22	1.14	.468		
	Senior	59	1.22	.494		
	Total	151	1.19	.458		

The f-values were indeed found to be statistically significant in one aspect, which is managing the Classroom & the Teaching Process, with an f-value of 0.03. Therefore, sophomore students' perceptions were better than those of older students, followed by seniors and juniors respectively.

To answer the sixth question, of whether the perceptions of Classroom Teacher Preparation students were different than Child Education students, means and standard deviations were calculated. These are shown in Table 10. To see whether there were any differences amongst students' mean values on these different aspects which were statistically significant for each major (Child Education and Classroom Teacher Preparation), the f-value has been calculated, Table 10 shows the calculated f-values of Child Education and Classroom Teacher Preparation students on the different aspects.

Table 10. Means and Standard Deviations of Students' Different Competencies Based on Major

Teacher Roles & Competencies	Major: Classroom Teacher / Child Care	N	Mean	S.D	F	sig
Class Management & the Teaching Process	Classroom Teacher	114	2.05	.739	.291	.590
	Child Education	37	1.97	.897		
	Total	151	2.03	.778		
Designing &Teaching Lessons	Classroom Teacher	114	1.39	.604	.158	.692
	Child Education	37	1.35	.484		
	Total	151	1.38	.576		
Employing Technology & Computers	Classroom Teacher	114	1.32	.507	3.227	.074
	Child Education	37	1.16	.374		
	Total	151	1.28	.481		
Direction, Guidance, & Understanding Learners' Characteristics	Classroom Teacher	114	1.07	.318	.989	.322
	Child Education	37	1.14	.419		
	Total	151	1.09	.345		
Ethical and Professional Competencies	Classroom Teacher	114	1.21	.470	.756	.386
	Child Education	37	1.14	.419		
	Total	151	1.19	.458		

It has been found that the f-value was not statistically significant, meaning that students enrolled in the Child Education program were not different from those enrolled in the Classroom Teacher program in their perceptions toward teacher roles and competencies that will be practiced in the future.

4. Discussion:

This study succeeded in identifying new competencies and roles for teachers which are far more consisting with the age of knowledge, and information technology advancements, as well as identifying a set of roles related to ethical and moral competencies. These roles and competencies can be used as standards which faculty members, and teacher preparation committees, could refer to when planning their curriculum and courses related to teacher preparation. These could also be treated as standards for holistic quality and quality assurance that these faculties aspire to achieve as one of their major goals.

The study has concluded the following:

1. Most curriculum and university courses in the two majors Classroom Teacher Preparation and Child Education do not properly reflect the technological teacher competencies and teaching design and preparation, which are two integral standards for teachers in the age of technology. Thus, both majors need to be reviewed, so that those two standards should be met. Additionally, more attention should be paid to the ethical and moral dimension which has become a cornerstone in relation to this massive development of knowledge and technology.

2. There are differences between the courses and the teacher roles they reflect, as the t-value was statistically significant for all courses, which indicates the importance of curriculum designers to coordinate with each other to focus on adding the roles of the technological teacher into these courses. This emphasizes on the planning for a holistic quality process for teacher preparation programs in teacher preparation faculties and within a unified framework that is consistent with the standards of holistic quality assurance which the Ministry of Higher Education and Scientific Research aims to fulfill.

3. The formerly mentioned lack is also visible in the results of the questionnaire on teacher roles from the viewpoint of students; their scores reflected low levels of teacher standards on all aspects, which indicates that this lack is not only from the viewpoint of faculty members specialized in classroom teacher preparation, but also from the viewpoint of students themselves.

4. As for the aspect related to students' perceptions, the results indicated that students' future perceptions as teachers are blurred and lack clearness; they were shy and lacking; and the majority of their perspective were related to class preparation and implementation within the traditional framework of teacher roles. Additionally, roles related to counseling, guidance, ethical and professional competencies, and the employment of technology were the most ambiguous of all. This is consistent with the studies of Kan'aan [13] and Palak [22] on the importance of teacher attitudes toward information technology and its role in aiding teachers in doing their job.

5. The study indicated differences between students' attitudes toward their future roles in different academic years in one aspect, which is class and teaching process management. The results further indicate that the other roles did not differ between Classroom Teacher and Child Education students in their attitudes toward their future roles as teachers. Students' attitudes were very similar across all academic years, indicating that the academic year (sophomore, junior, senior) did not cause any change in their attitudes nor did it develop them in any way. Additionally, there were no statistically significant differences among students from both majors (Classroom Teacher and Child Education), which indicates how unfamiliar students are to their truly needed roles in the era of information technology, and how their preparation programs lack the ability to constructively show and emphasize on these roles.

What the current study has concluded in reflecting the reality of teacher preparation programs and exposing their points of weakness in emphasizing the proper roles of the modern teachers (which can keep up with this rapidly changing fast-paced era), is consistent with the findings of Hussein [12], who recommend that teacher preparation institutions should take into account the technological and quite fast development, and be appropriate for the hopes of a more prosperous future. The current study is also consistent with Mahaftha [16], which explores the

characteristics of the teacher of the future in teacher preparation, and the importance of upholding professional and ethical values related to the information technology era.

These results emphasize the educators' and managers' responsibility inside teacher preparation faculties; in addition to the major responsibilities held by the Ministry of Higher Education and Scientific Research in reviewing these programs and courses, and renewing the strategies with which they approach teacher preparation programs, so that these students are properly equipped with what it takes to manage in a world of fast-paced technological, cognitive, and information development.

Future Implications:

1. Focusing on the role of active students and learner activities in the teaching process.
2. Practicing high ethics and professionalism, and be willing to serve and communicate with the local community
3. Setting up teacher preparation programs, as teacher preparation is an ongoing process of continuity, and includes pre- and in-service preparation training.
4. Developing Educational Sciences faculties through committees and follow-up teams assigned by the Ministry of Higher Education and Scientific Research to ensure quality control and fully implement quality standards in teacher preparation colleges, and ensure that these include all fields related to the educational process and their success and continuity. This requires the following:

a. Such committees need to acknowledge and fully understand the concept of holistic quality assurance and its integration standards in higher education, so to move from traditional education toward electronic education in teacher preparation.

b. Implementing advanced techniques with the help of professionals, programs, and programmers to deliver and transfer the curriculum through multimedia programs and the internet, and providing it to the students as visual and audio multimedia, as well as the skills necessary for using and dealing with these programs for every teacher-student and teacher-teacher alike.

c. Employing and using multimedia, the internet, e-mail services, social networks, and smart phones.

d. Affirming the teaching design process based on modern pedagogical theories, and the employment of technology efficiently.

e. Widening the scope of students regarding their various and modern roles as teachers.

f. Training students to employ thinking, problem solving, and decision making skills, and including these in the curriculum.

g. Focusing on the role and importance of self-learning in learners and preparing them for the information era.

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