

# Integrating generic skills into college courses to meet the changing workforce needs

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**Abstract---** *This study addresses the issue of integrating generic skills into college courses to help meet workforce needs through an analysis of preservice teachers' perception of their preparation at the College of Education, Teaching English as a Foreign Language (TEFL) Program. This study highlights the role of high education institutions in providing the workplaces with graduates who have transferrable skills. In this study, four sets of generic skills were embedded in preservice teachers' courses. Descriptive statistics were used to analyse preservice teachers' responses to a questionnaire on generic skills. Results show that they perceived their preparation as being effective in helping them develop generic skills. The highest mean (4.83) goes for the teaching/learning activities related to generic skills. The lowest mean (3.54) goes for the content of the courses. This indicates that courses content should be modified to cover generic skills in addition to discipline-specific skills. It also suggests that there is a further need to develop curricula, instructional strategies and assessment techniques that target the development of generic skills throughout the teacher preparation programs. The results of this research are expected to have an implication for individuals, educational institutions and business entities.*

**Keywords---** *Generic Skills; Higher Education; Workforce Needs; Teacher Preparation*

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## I. INTRODUCTION

The term "Generic Skills" has been used since the late 1990s as a response to the new technology and global competitiveness. Egan (2004) identified leadership, communication, teamwork and project management as important factors to building sustainable communities by incorporating them in the curriculum. Both Egan (2004) and Arup (2007) pointed to a range of missing generic skills including aspects of communication, motivation and interpersonal skills (Rogerson, 2011).

De Lange et al. (2006) defined generic skills as transferable qualities to suit the industry in which one works. Generic skills are needed for graduates to help lining outcomes of high education with the requirements of an increasingly globalized, technology-driven workplace. Learning to learn, self-confidence, networking and the capacity to embrace change are highly valued by employers and are mostly needed in higher education training (Sugahara, 2010).

## II. LITERATURE REVIEW

### II.I Integrating Generic Skills into College Courses

#### II.I.I The Changing workforce Needs

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The workplace of today is changing. The rise of smart machines drives human workers away from rote learning and repetitive tasks. As the world has increasingly become a programmable system, new media ecology necessitates new literacies. There is a sort of competitiveness between the requirements for content and mastery of knowledge on one side and other competencies such as generic skills and positive professional attitudes on the other side. Accordingly, there should be a comprehensive understanding of the skills needed by workplaces as well as of the anticipated future needs. Graduates' skills must keep pace with employers' expectations.

In a survey of 400 employers on their perception of workplace basic skills and competencies required for current and potential employees, the employers mentioned employability as the most important skills (Richens and McClaine, 2000). Concurrently, Cropley (2001) mentioned that in Australia, the University of Adelaide used academic standing, an aptitude test and interviews to identify applicants' personal qualities such as compassion, empathy, problem-solving ability, communication skills and the ability to work in teams. It is argued that these skills are crucial for success in the real-life practice of medicine.

### II.I.II. Higher Education and the Need for an Array of Generic Skills

Cropley (2001) criticized universities where teaching and learning focus on discipline-specific content while generic skills are an incidental outcome of the process of acquiring discipline materials. He supported the inclusion of a curriculum that involve students in tackling problems rather than mastering traditional subject matter material from a particular discipline at the Faculty of Medicine at McMaster University in Ontario, Roskilde University in Denmark and Evergreen College in Washington State.

Related research showed that these skills should be learnt in a meaningful context through the right teaching approaches in normal learning programs. Cotterell (2001); Biggs (2003); Casey (2007) and Canning (2007) suggested that skills should be delivered within subjects. In this way, learners can relate strategies to the program outcomes and to specific subject learning tasks (Ariffin, 2012). Fink (2003) supported their views and emphasized creating significant learning experiences at the university level especially when designing college courses.

## III. PROBLEM OF THE STUDY

This study is a response to the problem of skill deficiencies in the fresh graduates coupled with the increasing rate of retirement of experienced teachers in the UAE. The shortage of generic skills in the new entrants to the field of teaching is a source of concern to stakeholders. The professional development courses for novice teachers are tailored to performance evaluation rather than to their generic skill training. Consequently, there is a pressing need for the colleges of education in the UAE to shoulder the responsibility of offering high-skilled graduates.

Several generic skills have been shown to be transferrable. Clanchy and Ballard (1995) pointed out that generic skills do not need to be learned anew in each context of learning and that effective learners find relevance of previously learnt skills to the new contexts and adapt them. This view was also supported by Assiter (1995) who clarified the nature of generic skills that requires an awareness of context, the capacity to move between viewpoints, self-reflection and learning how to learn (Hambur & Jackson, 2000).

Students who acquire sets of generic skills during their college preparation perceive the importance of generic skills in the work environment (Rainsbury et al., 2002, Keneley and Jackling, 2011). The Higher Education Funding Council for England has identified a gap between the skills students develop during their study before graduation and the skills that employers need (HEFCE, 2003 cited in Barrie, 2007).

#### **IV. THE STUDY QUESTIONS**

This study answers the main question “What is the role of generic skills needed for graduates of the College of Education/TEFL Program in meeting the changing workforce needs?”. From this question, a number of sub-questions emerges as follows:

- 1- What are the generic skills needed for student teachers at TEFL Program to meet work force needs?
- 2- How far does their preparation help develop such generic skills?
- 3- To what extent are generic skills integrated into their Major courses?
- 4- To what extent do they perceive their preservice preparation contribute to the development of their generic skills?

#### **V. SIGNIFICANCE OF THE STUDY**

This study is one of the few studies on the development of generic skills in the field of teacher preparation. It seeks to enhance preservice teachers’ development of employment skills through faculty use of effective instructional strategies and assessment techniques. It shows the importance of the context of teaching in helping close the gap between learning and doing through a focus on generic skills in addition to discipline-specific knowledge.

#### **6. LIMITATIONS OF THE STUDY**

This study is conducted on 52 preservice teachers enrolled in a teacher preparation program at higher education in the United Arab Emirates (UAE).

#### **VI. METHOD AND PROCEDURES**

##### **VI.I Method**

The Descriptive Method is used as it helps provide information on the behavior, attitude or other characteristics of a particular group (Penwarden, 2014). To validate the findings of this study, descriptive statistics such as means and standard deviation are used. An analysis of the participants’ responses to the questionnaire helps answer the questions of the study and explore student teachers’ perception of the integration of generic skills in their studies.

##### **VI.II Procedures**

Based on the review of the relevant literature, the researcher identified four sets of generic skills to be embedded in the curriculum and assembled the items of the instrument for data collection. The following is a briefing on each set of the highlighted generic skills:

Creativity: Clapham and Schuster (1992) administrated creativity tests to students from a variety of majors. About half of them received creativity training that emphasized deferment of judgment, brainstorming, incubation and idea-

getting techniques. The statistical analysis showed that the trained students outperformed the control group who received no training according to the test scores. Feldhusen and Goh (1995) concluded that it is possible to enhance creativity by teaching students to seek new ideas, recognize novel approaches and assess the effectiveness of novel solutions (Cropley, 2001).

Angelo & Cross (1993) recommended the use of “Invented Dialogues” to ignite and assess college students’ creativity. Realizing that invented dialogues enhance higher-order thinking skills makes it necessary for faculty at higher education institutions to use them in preparing preservice teachers.

Communication Skills: Covey (2004) emphasized that communication is the most important skill in life. He highlighted the importance of empathetic listening. For him, it comes before problem solving as diagnosis comes before prescribing. He mentioned that the low level of communication would be characterized by defensiveness and protectiveness while open communication would be characterized by synergy and a change of paradigms. He called for synergistic communication in the classroom and a restatement of mission.

Cognitive Skills - Critical Thinking and Problem-solving: Critical thinking involves the ability to raise questions about what is read, viewed or listened to. Developing students’ capacity for critical reflection is the goal of many teacher education institutions. An inquiry-oriented program at the University of Wisconsin-Madison targeted three levels of reflection: technical competence, analytical practice and critical reflection. It supplemented the traditional student teaching experience with journals, a reflective seminar and supervisory conferences. Students became more articulate about whatever perspective they held when they entered the program, however, they did not change levels as the students’ technical orientation fostered resistance to reflection in addition to the pressure of time that limited the development of close supervisory relationships. It was noted that the context of teaching did not encourage student thinking (Zeichner and Liston, 1987 cited in Kurfiss, 1988).

Bowden and Marton (1998) emphasized that higher education institutes should ground students in their capability to see the critical aspects of situations that characterize the variations of situations and the variations within situations and deal with them competently and confidently (Sin & Reid, 2006). Bransford & Stein (1993) emphasized that engaging students in complex, ill-structured problem-solving tasks helps them apply knowledge in real-world situations. It also facilitates knowledge transfer (Brown et al., 2000).

Adams & Hamm (1990) suggested that “in the process of solving a problem, memory, collaboration, critical and creative thinking merge in order to identify, analyze and evaluate responses and products” (Adam & Hamm, 1990). Studies by Rubinstein (1980) and Woods (1993) reported a success in training engineering students in problem-solving (Cropley, 2001). Angelo & Cross (1993) pointed out that effective problem solving skills require mastery of knowledge and skills as well as metacognition. They offered four assessment techniques for faculty to assess and promote problem-solving skills of different kinds.

A study by Xun Ge and Land (2001) examined the use of question prompts and peer interactions as scaffolding strategies to help undergraduate students with their problem-solving processes on ill-structured tasks. The findings of that study confirmed the benefits of both question prompts and peer interactions in facilitating students' recognition and metacognition.

**Interpersonal Skills - Leadership and Team Work Skills and Collaboration:** Shannon (2010) identified leadership as the process of influencing others towards the achievement of a goal in a particular situation. He emphasized that all teachers, tutors and advisers can be effective leaders. Leadership requires teamwork and problem-solving abilities. Adams & Hamm (1990) pointed the need for knowledgeable workers who are good at creative teamwork. They mentioned that the global positioning of countries is depending more and more on the extent to which they have a population with high-level thinking and problem solving abilities.

Providing students in the higher education context with collaborative learning opportunities helps them develop teamwork skills. It can ensure the development of other generic skills such as problem solving and communication. Related research emphasizes the importance of helping students make a paradigm shift from personal achievement, personal ambition, personal goals and personal rewards into team achievements, team goals, and team results which is highly demanded at the workplace.

In the current study, the integration of generic skills into four Major courses was initiated at the fourth year the enrollment of the preservice teachers at the TEFL Program and over two subsequent academic semesters. They agreed to be participants in this study after a discussion on the importance of generic skills as they take courses that lead to their degree completion and approach teaching practice where they need to employ transferrable skills. They were reminded of their right to opt out of responding to the questionnaire.

The researcher was the instructor who trained the participants on generic skills through the courses entitled "Methodology III" and "Textbook Analysis" at the first semester. These courses are advanced courses and integral to preservice teacher education. In the following semester, the participants were trained on generic skills through the Major courses "Testing in EFL" and "Short Stories". Preservice teachers usually enroll for the "Practical Training" course either at the first or at the second semester of their fourth year of study based on their preference and individual study plan. The participants filled in the questionnaire towards the end of the second semester so that all participants had internship.

The researcher assigned course textbooks that helped students use a balanced content that cover both discipline-knowledge and generic skills. The designed classroom activities and the use of instructional strategies helped generic skills training. Participants implemented the use of technology in the creative designing of teaching aids and in lesson planning. There were some difficulties for introducing generic skills as students were concerned with getting grades and being recipients to information rather than being active learners. Another challenge was using journal writing as it

required a lot of time and effort on the part of the participants. Students' tendency to focus on subject knowledge and to memorize rather than to synthesize and evaluate information was also a challenge. The researcher had to hold meetings with teams and emphasize the importance of teamwork, meeting deadlines and working creatively under the pressure of time. Participants' skill development was regularly monitored and reflected upon.

## **VII. INSTRUMENT FOR DATA COLLECTION**

A questionnaire of five domains was developed by the researcher as the main instrument for data collection in this study. The purpose of the questionnaire is to explore student teachers' perception of the integration of generic skills in their Major college courses. A cover letter was included clarifying the aim of the study and the confidentiality of the required information. The questionnaire in its original version consists of five main sections. The researcher got a feedback on the questionnaire from four experts in the field to measure its face validity and jurors' validity. After conducting modifications based on jurors' ratio of agreement, the questionnaire in its final version was applied on 52 female students.

Statistical analysis shows that the items of the questionnaire are reliable (Cronbach's alpha 0.82). A correlation matrix using Kaiser Meyer Olkin (KMO) and Bartlett's Test shows that the value of the determinant is greater than 0.0001. It also shows that sample size is sufficient. The researcher personally distributed and collected the copies of the questionnaire. The researcher managed to get a total of 52 filled-in copies of the questionnaire.

The questionnaire, in its final version, consists of five sections with 59 items. The first section of the questionnaire (21 items) covers the generic skill elements related to tendencies of work mode. A five-point Likert scale has been used ranging from 5 highly effective to 1 not effective. The second section (6 items) covers the generic skill type that participants developed during their preparation at the Program. The third section (12 items) targets students' teaching practice at the practical training schools. The fourth section (5 items) investigates the level of students' agreement/disagreement related to the integration of generic skills in the course description, content, teaching and assessment. The fifth section (15 items) aims at eliciting students' responses to the teaching/ learning techniques encouraged by the teaching faculty.

## **VIII. FINDINGS**

To answer the questions of the study, descriptive statistics such as means and standard deviations were used to analyze participants' responses. The **first section** of the questionnaire answers the question "How far does their preparation help develop such generic skills?"; items 1,3 and 18 investigate creativity, items 4,5,12 and 21 investigate leadership, items 7,14,15 and 19 investigate teamwork, items 8,13 and 20 investigate critical thinking, items 2,11,16 and 17 investigate communication and items 6,9 and 10 investigate problem-solving. The table below shows the means and standard deviations for each skill.

No.	Skill (Tendencies of Work Mode)	Mean	Std. Deviation
1	Creativity	3.66	0.27
2	Leadership	4.37	0.44
3	Team Work	4.46	0.41
4	Critical Thinking	4.60	0.23
5	Communication	4.70	0.15
6	Problem Solving	4.42	0.50

**Table (1):** Descriptive Statistics of the Sample's Responses to the First Section of the Quest. (Skill Element-Tendencies of Work Mode)

This analysis indicates that student teachers perceive their preparation at TEFL Program as being effective in helping them develop generic skills related to tendencies of work mode. All skill elements obtained a mean value higher than the theoretical average mean 3.00. The highest mean 4.70 was for communication skills followed by critical thinking, teamwork, problem solving, leadership and then creativity. This finding corresponds with Ashton's study (2004) where he identified key supports for workplace learning such as access to task-relevant information, the existence of mentoring relationships and the opportunity to experiment with and share the results of practice. This result is also consistent with the view of Jacques (1984) that "skills do not develop merely by talking about them or recognizing them, but by practicing and incorporating them into one's behavioral repertoire." (Watson, 2002).

The table below shows the means and standard deviation of the sample's responses to the **second section** of the questionnaire. Each item is related to a specified generic skill (skill type). As the mean for each item is greater than the mid-point mean, results indicate that student teachers perceive their preparation at TEFL Program as being effective in helping them develop generic skills (skill type). The highest mean (4.81) goes for creativity.

No.	Skill (Educational Practices)	Mean	Std. Deviation
1	Creativity	4.81	0.40
2	Leadership	4.29	0.46
3	Team Work	4.52	0.50
4	Critical Thinking	4.02	0.78
5	Communication	4.58	0.78
6	Problem Solving	4.62	0.80

**Table (2):** Descriptive Statistics of the Sample's Responses to the Second Section of the Quest. (Generic Skills -Skill Type)

The analysis of the sample's responses to the **third section** of the questionnaire helped answer the fourth question of the research: "To what extent do they perceive their preservice preparation contribute to the development of their generic skills?" as shown in the table below. Items 2 and 9 investigate creativity, items 4 and 6

investigate leadership, items 7 and 10 investigate teamwork, items 3 and 8 investigate critical thinking, items 1 and 11 investigate communication and items 5 and 12 investigate problem solving. The mean for each item (skill) is greater than the theoretical average mean as the table below shows. This result (Overall mean 4.56) indicates that student teachers at the TEFL Program are using generic skills in their teaching practice at practical training schools.

No.	Skill (Educational Practices)	Mean	Std. Deviation
1	Establishing communication with students	4.83	0.51
2	Stimulating students' interest	4.81	0.40
3	Relating information to students' life	4.56	0.73
4	Taking the initiative for activities	4.08	0.74
5	Designing challenging, yet manageable activities	3.56	1.06
6	Managing classroom discussion	4.19	0.86
7	Promoting communication among students	4.90	0.30
8	Recognizing students' needs	4.58	0.50
9	Encouraging students to express different points of view	4.77	0.43
10	Encouraging cooperation among students	4.96	0.19
11	Sharing students their fun	4.98	0.14
12	Identifying problems	4.52	0.50

**Table (3):** Descriptive Statistics of the Sample's Responses to the Third Section of the Quest. (Educational Practices)

The means of student teachers' responses to the items of the fourth section of the questionnaire helped answer the third study question: "To what extent are generic skills integrated into their Major courses?". This section consists of 5 statements related to the integration of generic skills into course description, course content, assignments and tasks, tests, quizzes and projects and the teaching and learning activities. The percentage of students' responses "Strongly agree" and "Strongly disagree" was obtained as shown in the table below. The highest mean goes for the teaching/learning activities (4.83) which shows the effect of these activities in developing generic skills. The lowest mean (3.54) goes for the courses content which indicates that courses content should be modified to cover some generic skills in addition to discipline-specific skills.

No.	Statement	Mean	Std. Deviation
1	Generic skills are explicitly emphasized in the courses description	3.60	0.50
2	Courses content made me aware of the importance of generic skills	3.54	0.50
3	The assignments at the classroom focus on generic skills	4.52	0.50
4	Tests are used to assess both knowledge and generic skills	4.29	0.46
5	Teaching/ learning activities help me acquire generic skills	4.83	0.38

**Table (4):** The Percentages of the Sample's Responses to the Fourth Section of the Quest. (Generic Skills Implementation- Course Delivery, Content and Assessment)



The analysis shows that academic curricula should be rethought to ensure that they include ways for generic skills to be acquired and practiced. This result is consistent with the viewpoints of Bowden and Marton (1998) whose approach to teaching and learning focuses on enriching the learning experiences of students. They recommended curriculum that exposes students to variation of experiences and engages them in learning activities that encourage a differentiated understanding of the critical aspects of situations to develop meaningful understanding and conception in the learning experience (Sin & Reid, 2006).

The **fifth section** of the questionnaire was structured to get student teachers responses to the techniques used by the instructor/researcher to help them develop generic skills. Items 1, 2 and 4 investigate creativity, items 8 investigates leadership, items 11 and 12 investigate teamwork, items 7, 3 and 9 investigate critical thinking, items 5, 14 and 15 investigate communication and items 6, 10 and 13 investigate problem-solving. Table 5 below shows the means and standard deviation for each item:

No.	Technique	Mean	Std. Deviation
1	Journal Writing	4.83	0.47
2	Visual Representations	4.12	0.76
3	Mind-Maps	4.50	0.50
4	KWL Charts	4.27	0.87
5	Note-taking	4.77	0.43
6	Use of Authentic Materials/ Authentic Content	4.87	0.34
7	Classification and Labeling	3.96	0.19
8	Self- evaluation	4.58	0.50
9	Rubrics and checklists	4.29	0.46
10	Researching	3.90	0.53
11	Blogging	3.46	0.58
12	Team Work in Group Work and in Assignments/Projects	4.74	0.65
13	Internet Surfing	4.73	0.66
14	Discussion Webs	4.38	0.49
15	Humor and Comic Strips	4.29	0.85

**Table (5):** Descriptive Statistics of the Sample's Responses to the Fifth Section of the Quest. (Techniques Used by the Teaching Staff)

This result indicates that the teaching techniques that were used helped participants develop generic skills. The table above indicates that the technique that was used regularly (mean 4.87) was the use of authentic materials as the researcher used anchor, authentic textbooks. Teamwork (mean 4.74) was effective. This result is consistent with findings by Boud and Feletti (1997) who stated that students develop their communication skills through sharing ideas and working as a team in learning. This result is also consistent with a study by Watson (2005) on innovative teaching, teamwork and generic skills in the university environment. He concluded that teamwork has promoted student autonomy and generic skills development.

This result helps answering the main question of the study "What is the role of generic skills needed for graduates of the College of Education/ TEFL Program in meeting the changing workforce needs?". The emphasis on

the integration of generic skills into college courses in a holistic approach helps student teachers use transferrable skills. This notion is supported by Sfard (1998) who pointed out “there is a need to distinguish between learning as acquisition and learning as participation” as the learning task is conceived as a sense-making process where learners build up a base of knowledge directly related to practice.

## **IX. DISCUSSION AND CONCLUSION**

This study emphasizes the importance of integrating generic skills in the context of higher education to help meet the changing workforce needs. This emphasis is congruent with a number of relevant researches such as the study by Sulaiman Yassin et al. (2008) which investigated the implementation of generic skills in the curriculum. It also resonates with the study at the School of Education, University of Nottingham by Murphy (2001). The findings of this study imply that developing students’ generic skills requires a development of instructional strategies. This implication is in line with Luca and Oliva’s study (2002) which proposed an instructional strategy to help develop students’ generic skills through a combination of face-to-face and on line delivery as they used three principles of learning; authenticity, self-regulation and reflection, as the basis for designing learning activities that were integrated into the delivered course. This study concludes that both the institution and the students themselves should be involved in the monitoring of students’ development. Students need to recognize that they are developing lifelong skills in the discipline context and that they have gained confidence in utilizing these skills. Getting students to reflect upon their learning experience at the university continuously and make a full use of their time and the available resources help students become highly employable. This conclusion is in line with the studies by Bowden et al. (2000), Fallows & Stevens (2000), Bowden and Marton (1998), Brown and McCartney, 1995 and Barnett (1994). They concluded that the focus of curriculum should be on enabling students in higher education context to apply knowledge to deal with new situations in the future, to judge a situation, and to develop an understanding of that situation (Sin & Reid 2006). This study recommends that there should be a specification of the amount of learning effort allocated for generic skills development. A continuous survey of employers’ requirements from graduate students should be done. Assessment tools need to be modified to focus on generic skills as well as content knowledge such as course evaluation forms, graduate students’ satisfaction forms, and observation forms of trainees’ performance. Quantitative tests and student self-assessment are much needed. In line with Yassin & Others (2008) recommendations, “there is a need for a coordinated and sequenced program implemented across the whole course of study and an institutional climate supportive of “change” and the specific objectives of the program being implemented”.

It is recommended that more research should be done on embedding generic skills at an array of courses at universities to provide graduates with better employment opportunities and enable them to meet the expectations of employers. More research should be done to investigate employers’ expectations of teacher preparation programs and ways of meeting these expectations.

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