

Examining the Effect of College Type, Study level, and Gender of Students on Their Use of Teamwork Skills as They Perceived at Yarmouk University of Jordan

EXAMINER LES EFFET DU TYPE DE COLLEGE, LE NIVEAU D'ETUDE ET LE SEXE DES ETUDIANTS SUR LEUR UTILISATION DES COMPETENCES DE TRAVAIL EN EQUIPE QU'ILS PERCEVAIENT A L'UNIVERSITE YARMOUK DE LA JORDANIE

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Abstract

The purpose of this study is to investigate whether there is a statistical significant difference in ratings of teamwork skills between students as they perceived based on type of college, study level, and gender variables. A total of 270 students from Yarmouk University participated in the study. The study shows a strong to moderate significant correlation between all six dimensions of teamwork skills. In addition, the study shows a significant difference in interpersonal and communication skills related to gender. Furthermore, the study shows a significant statistical difference in adaptability and coordination skills related to college type. Finally, the findings are discussed and educational implications are provided.

Key words: Soft Skills; Teamwork skills; Colleges' Students Skills

Résumé

Le but de cette étude est de déterminer s'il existe une différence statistique significative dans les cotes du travail d'équipe entre les élèves car ils perçus selon le type de collège, niveau d'étude, et les variables sexe. Un total de 270 étudiants de l'Université Yarmouk participé à l'étude. L'étude montre une forte corrélation significative entre modérée tous les six dimensions de l'esprit d'équipe. En outre, l'étude montre une différence significative dans les relations interpersonnelles et de communication liées au genre. Par ailleurs, l'étude montre une différence statistiquement significative dans l'adaptabilité et les compétences de coordination lié au type de collège. Enfin, les résultats sont discutés et les implications pédagogiques

sont fournis.

Mots clés: Soft Skills; Travail en équipe; étudiants des collèges des compétences

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INTRODUCTION

The world has been changing at an accelerated rate that it became so hard to follow up with these changes. Globalization and the technology trends are some of the reasons for those changes. Consequently, the world of work is changing as well, goes along with shifting in skills that is needed by the labor market. However, according to Brungardt (2009), there are some types of skills that will be continuously on demand, that is, generic skills. Those skills are marked as high performance in the workplace.

Acquiring generic skills has an impact on the human factor the most important factor in the production process. For that, educators should emphasize generic skills in the academic field, at the same time employers are responsible for providing employees with necessary on-job-training in the workplace.

Generic skills, soft skills, and employability skills are some of terms that are used interchangeably to refer to the same concept-that is the non-technical skills needed by the labor market. Furthermore, it is unacceptable for the universities and colleges to graduate students who acquire knowledge and major-related skills without generic skills that help them to become compatible and employable in the workplace.

Generic skills have been categorized into three-

categories, first: fundamental skills which include (demonstrating verbal communication, using different computer applications, demonstrating listening skills etc.), second: personal management skills which include (time management, time discipline, identifying and solving problems, the ability to work independently, etc.), and third: teamwork skills that include but are not limited to understanding and using language in which business is conducted, understanding the role of conflict in a group, etc.) (Conference of Canada, 2000; Al-Alawneh, 2009). However, Secretary's Commission on Achieving Necessary Skills (SCANS, 1990) puts that as: I. Resource Management II. Information Management III. Social Interaction, IV. System Behavior and Performance, V. Human and Technology Interaction and VI. Affective Skills. Other scholars and projects categorized those skills into other categories. However, for the purpose of this study- which concentrates on teamwork skills- we have chosen to categorize those skills as coordination, decision-making, leadership, interpersonal, adaptability, and communication skills (Brungardt, 2009).

This study examines teamwork skills which have been defined as a set of certain behaviors, knowledge, and attitudes that contribute to the team's efforts to achieve specific goals (Stout, Cannon, Bowers & Salas, 1996). Furthermore, McIntyre and Salas (1995) refers to teamwork as the interrelated actions that include assessing-performance, exchanging feedback, interaction-communication, and adaptability. Moreover, teamwork skills are considered as one of the leadership skills that require working with others to accomplish a goal or promote positive change (Brungardt, 2009). In that respect, equipping students with technical skills alone is not enough to compete in today's labor market. Teamwork skills might be considered as one of the most needed skills that should be taught and learned by the students in colleges and universities upon graduation.

While researchers recognize the teamwork skills as vital for college and university students, some others (Aarnio, Nieminen, Pyörälä, & Lindblom-Ylänne, 2010) found that teaching students teamwork skills in the second-year and third-year is more useful and more significant than in the first year. In addition, Reinig, Horowitz, & Whittenburg (2011) examined students' attitudes toward a team-based learning methods and found that students were generally positively disposed toward the learning method and recognizing its benefits in terms of developing teamwork skills.

Moreover, today's workers' skills and knowledge requires the ability to be multiple tasked in autonomy and team work at every level of the organization (Overtoom, 2000). According to Smith (2002) workers required to be proficient in these soft skills, not on the entry level, but on all organizational levels.

This study sought to add to the body of literature and shed the light on teamwork skills that students in colleges

and universities believe they acquire and practice during their period of study. Therefore the study purposes to determine whether students know, practice, and perform these skills and if that is influenced by determined demographic variables.

This paper is aligned with other studies and projects that are conducted on employability skills such as Berkitt (1996), Pool and Swell (2007), Rothwell and Kolb (1999), (Employability Skills for the Future Project (2002), and Secretary's Commission on Achieving Necessary Skills" (SCANS, 1991).

SIGNIFICANCE OF THE STUDY

This study is significant because it addresses one of the most important skills that are on demand by the Jordanian labor market. That is, in Jordan, teamwork skills are ranked by educators and employers as very important in the labor market after computer skills and English language skills (Alawneh and Ashour, 2011). The results of this research may add to the body of the literature important information that could be utilized in developing soft skills for students from colleges and universities upon graduation. In addition, it is important for stakeholders in the higher education and business and industry. In the higher education, educators, curriculum developers and planners, and administrators will be able to recognize the level of teamwork skills that students know and practice on the one hand, which provides an indicator to the strength of the available skills and provide those that are in lack. On the other hand, employers in business and industry will be able to provide additional information to the educational institutions about the level and the type of skills that are related to the workplace. Also, the results may play a part in strengthening the relationship between education and labor market in programs like co-op programs and apprenticeship and put emphasis on teamwork skills to integrate them in the formal and informal curricula.

The current study explores the students' readiness not just in academic skills and major related knowledge, but more important in teamwork skills as a part of employability skills. The employers need reliable, responsible workers who can be adjustable, adaptable, and work together with others on solving problems in the workplace environment (Retrieved from <http://proquest.umi.com/pqdweb?did=2287987911&Fmt=3&clientId=75576&RQT=309&VName=PQD>).

STATEMENT OF PROBLEM

It is clear that the focus of the educational system in Jordan is to equip colleges' and university students with academic and technical skills for the purpose of attaining government employments or similar occupations. Unfortunately, assisting students in developing a career

path is often missing within our schools (Holland, 2011, p.8). Career path will be developed when students are equipped with skills that prepare them to the need of the labor market. Unfortunately, generic skills are far away from the curriculum and study plans that students need to learn and practice. Also, there is not one study that purposed to explore the level of acquiring and practicing teamwork skills in Jordan. Missing this type of skills from the workforce will hinder them from the competition in the labor market on the national and global level. Moreover, equipping students with these skills may lead to achieve the purpose of the educational system in preparing graduates to find jobs and to enable them to serve on the community and nation's level. That is, according to Stuart & Dahm (1999), a nations' competitiveness of the individual workers is closely correlated to the education and skill attainment of the workforce. Furthermore, private and public sectors are still hiring on one criterion, which is whether the applicant holds a diploma or certificate in a specific major. According to Gray and Herr (1998), certificates or diploma is not enough per se, however, it should be coupled with employability skills and the hiring process should take that type of skills into consideration.

THEORETICAL FRAMEWORK

Learning occurs mostly in a social environment; however, goals and objectives of the formal learning may be interrupted by individuality on the one hand. On the other, when a group of people is committed to the same goals, the leaning that occurs will be enhanced. The believe is that they will regulate each other's performance, and in consequence support collaborative meaning making among a group of workers (Jonassen, et al. 1999). Therefore it is vital to enhance teamwork skills through colleges and universities' students to learn better, to strengthen the social relationships and to serve the individual, group and community better.

Social learning focuses on how people learn by interacting with and observing other people. This type of learning focuses on the social context in which learning occurs. A foundational contribution of social learning is that people can learn vicariously by imitating others. Albert Bandura is probably the best-known name in this area. It was his works in the 1960s and extending through the 1980s that fully developed social leaning theory.

Based on that, Ormond (1999) lists four core assumptions of social leaning theory:

1. People can learn by observing the behaviors of others and the outcomes of those behaviors.
2. Learning can occur without a change in behavior.
3. The consequences of behavior play a role in learning.
4. Cognition plays a role in learning (In Swanson & Holton, 2001, p.156).

Therefore, and because of the nature of learning,

students need to understand the concept of team and need to see that teamwork skills that they learn and practice have an impact and immediate results on their study and personal life.

RESEARCH QUESTIONS

The study purposes to determine whether students know, practice, and perform teamwork skills as they report it and if that is influenced by determined demographic variables. Therefore the basic question of this study revolves around the following question:

Q1. Is there a statistically significant difference in ratings of teamwork skills between students as they perceived based on type of college, schooling year, and gender variables?

METHODOLOGY AND STUDY CONTEXT

Population and Sample

The Yarmouk University population was examined through a "Life Skills" course the University offers. Yarmouk University is the second largest university in Jordan that was established in 1976 after University of Jordan which was established in (1962). More that 40,000 students are enrolled in thirteen colleges for undergraduate and graduate degrees. Those colleges are: College of Arts, College of Science, College of Economics and Administrative Sciences, College of Hijjawi for Engineering Technology, College of Shari's and Islamic Studies, College of Education, College of Physical Education, College of Law, College of Fine Arts, College of Information Technology, College of Archaeology and Anthropology, and College of Mass Communication.

This study aligns with the vision and the mission of the university that purposes to: (1) equip students with pedagogical and behavioral experiences that focuses on academic and generic skills; (2) enhance students' personal, social, and professional development that qualifies them to lead in the workplace and; (3) participate in cultural, social, and economic progress to supply the community with its needs. Equipping students with teamwork skills is very important and is associated with the university's goals- specifically those that are related to social and interpersonal skills.

All students are who enrolled in the "Life Skills" course during the second semester 2011 were chosen to participate in the study. Life skill Course is an elective course which any student can enroll in. The course aims to equip students from all over the university with employability skills starting from writing a curriculum vitae, and statement of purpose, learning basic skills in verbal and non-verbal communication, interpersonal skills, and teamwork skills. The sample represents

students in their freshmen, sophomores, and juniors level; however, a very little number of senior students enrolled in this course at the time of conducting this study.

The sampling in this study is considered as a convenience method of sampling, and has been chosen from a large population equal to 40, 000 students. Data were collected in the spring semester of 2011. A total of 270 students who were enrolled in “Life Skills” course from thirteen-colleges were invited to participate in the study. The final sample was composed of 254 participants, with 16 outliers excluded from the analysis. The demographic information includes college type which is divided into Humanities colleges and Sciences colleges; Study level that is divided into freshman, sophomore, and junior; and gender of the participants- male or female as shown in Table 1.

Table 1
Demographic of Sample Population by Type of College, Schooling Year, Number of the Family Members, Student’s Rank in the Family, and Gender of the Participants

Independent Variables	Independent Variables Levels	#	%
College’s Type	Humanities	182	71.7
	Science	72	28.3
Study Level	First (Freshman)	158	62.2
	Second (Sophomore)	66	26.0
	Third (Junior)	30	11.8
Gender	Male	78	30.7
	Female	176	69.3
Total		254	100.0

Instrumentation

Survey research procedures were used to collect data for this study. The questionnaire was adopted from Brungardt (2009) and has been translated from English language to Arabic language through a rigorous translation process. The questionnaire is divided into three sections: (1) instructions that include rationale of the study and direction for answering the survey, (2) thirty-six-item teamwork skills categorized into six-categories: coordination (five-items), decision-making (six-items), leadership (seven-items), interpersonal skills (six-items), adaptability (five-items), communication skills (seven- items), and (3) demographic information that includes College’s type, Schooling year, and gender of the responders. For the purposes of measuring teamwork, the researchers will use the total scores from the 36 items of the teamwork. Respondents rated the 36-item on the extent to which they agree with each statement using a 4-point Likert scale range from 1(never) to 4 (always).

INSTRUMENT TRANSLATION PROCESS

The survey used to employ this study was adapted from Brungardt’s (2009) study which is developed in English language and based on Skills Questionnaire (O’Neil

et al., 1999). However, the survey applied to native Arabic speakers at Yarmouk University, producing an identical version in conceptual, meaning, and construction Arabic version was vital for this study. For that, the researchers followed an accurate process of translation that includes forward and backward translation taking into consideration the internal consistency, face validity, content validity, construct validity (Alawneh, 2009). Adapted from Al-Alawneh, the same exact process in forward and backward translation was followed in this study as well.

FORWARD TRANSLATION

Evaluating a questionnaire translation must combine three basic steps: involving a bilingual translator, pre-testing the instrument, and establishing subject matter experts reviewers (Bislin, 1970). Based on Brislin’s recommendation, those three steps were taken into account in the process of forward translation. First: two translators who are fluent in speaking, reading, and writing both Arabic and English were asked to translate the instrument; both translators are faculty member in the department of Curricula & Instruction. Both translators did a parallel translation and used common language that could be understandable for most people in Jordan.

BACKWARD TRANSLATION

The backward translation was a necessary process for finding an equivalent version to the original version in the meaning. The backward translation was produced by a bilingual faculty member from the department of C&I who works in a major university in Jordan. After he finished translating the instrument from Arabic to English, two other professors revised the items of the two versions and affirmed that the original version and the backward version are the same after they completed very minor changes to both. The process of translation focused on the conceptual equivalence of the instrument. All items have been reviewed one by one and the decision proceeded on the equivalence of the English- Arabic version and English-English version was based on the conceptual equivalence despite the non-wording equivalence sometimes. Based on the results of these translations, an appropriate translated Arabic version had been confirmed and in consequence adapted for collecting data from the target population.

VALIDITY AND RELIABILITY

In order to establish face and construct validity for the translated instrument, three faculty members from the department of C&I and from the department of psychology reviewed the items for clarity and preciseness and insured that the validity have been translated to items

on the measurement tool correctly (Schmidt, 2009, p.303).

The reliability of the Teamwork Skills Questionnaire was determined by investigating participants from four of the settings: (1) 269 participants from the U.S. Marine Corps Aviation Logistics Squadron; (2) 273 participants from a Taiwanese Electronics company; (3) 120 participants from Asian American junior and high school students; and (5) 149 participants from a sample of nurses in Australia (Marshall, 2003). Finally, this study which determines the reliability of the questionnaire in 270

undergraduate students from Yarmouk University.

Cronbach's alpha measure of internal consistency reliability ranged from .84 to .97 (Chen, 2002; Hsieh, 2001; Kuehl, 2001; Marshall, 2003; Marshall et al., 2005; O'Neil et al., 2003; Weng, 1999) across these various populations. In previous studies, construct validity for the six dimensions of the Teamwork Skills Questionnaire was determined by using confirmatory factor analysis. Table 2 shows a comparison of the Cronbach alpha coefficients for each of the varied populations.

Table 2
Cronbach's Alpha Coefficients for the Teamwork Skills Scales for Four Previous Studies and Current Study

Subscale	U.S. Marin Corps (Kuehl, (2001)	Taiwanese Electronics Company Chen (2002)	American and High School Hsieh (2001)	Australia Nurses Marshall (2003)	Brungardt (2009)	Current Study Al-Alawneh et. al. (2011)
Coordination	0.76	0.79	0.70	0.81	0.70	0.83
Decision	0.82	0.85	0.81	0.86	0.72	0.80
Leadership	0.86	0.88	0.88	0.92	0.84	0.92
Interpersonal	0.85	0.86	0.78	0.86	0.77	0.93
Adaptability	0.81	0.85	0.78	0.86	0.69	0.96
Communication	0.84 (n=269)	.081 (n=273)	0.73 (n=120)	0.86 (n=149)	0.71 (n=301)	0.96 (n=254)

Adapted from Brungardt (2009)

The study purposes to determine whether students know, practice, and perform teamwork skills as they self-report it and if that is influenced by determined demographic variables. Therefore the basic question of this study examines the differences in self-reporting ratings of teamwork skills between students.

In order to examine the degree of the correlation among variables, a Pearson's correlation was performed and revealed statistical significant correlations between all six dimensions. Table 4 reports the correlation matrix of the six dimensions and the correlation ranged from .043 to 0.70. All six dimensions of teamwork skills have a statistically significant relationship.

humanities college and they registered for this course in their first year of study.

Table 3
Number and Percentage of Demographic Factors

IV	IV Levels	#	%
College	Humanities	182	71.7
	Science	72	28.3
Study Level	First	158	62.2
	Second	66	26.0
	Third	30	11.8
Gender	Male	78	30.7
	Female	176	69.3
Total		254	100.0

Table 4 shows the standard deviation and the mean score of the respondents based on the independent variables of the study. Despite the fact that the mean scores and standard deviations were very close to each other, students from humanities colleges scored (3.11) better than students from scientific colleges (3.013), the second year students also scored (3.138) better than the students in first (3.037) and third (3.012) year, and finally female students scored (3.096) slightly better than male (3.054) respondents.

DATA COLLECTION AND ANALYSIS

Three independent variables were collected for this study: first, college type which is divided into two levels: humanities colleges which was represented by 182 (71.7 %) of the sample and science colleges was represented by 72 (28.3%) of the sample. Second, study level and it has four levels- first year students which represent 158 (62.2%), second year students represent 66 (26%), third year students represent 30 (11.8%) of the sample, and fourth year of study. However, the number of students who are in the fourth year of study was very small, therefore this level was excluded and has been added to third year students. One-third of the independent variables were gender of the participants- male students represent 78 (30.7%) and female students represent 176 (69.3%) of the sample. As shown in the table 3 females were represented in the higher number, the majority came from

Table 4
Means and Standard Deviations of Each Level of Independent Variables

IV	IV Levels	Mean	Std. Dev.
College	Humanities	3.111	0.40
	Science	3.013	0.38
Study Level	First	3.073	0.40
	Second	3.138	0.33
	Third	3.012	0.53
Gender	Male	3.054	0.42
	Female	3.096	0.39

One-way analysis of variances (ANOVA) was used to test the differences between independent groups. In general, table 5 shows no statistically significant differences in the mean scores between group of students based on college type, study level, and gender of respondents. However, college type was very close to be significant (0.064).

Table 5
Sum of Squares Based on the Three Independent Variables (College Type, Study level and Gender of the Participants)

Source	Sum of Squares	df	Mean Square	F	Sig.
College	0.543	1	0.543	3.449	0.064
Study Level	0.424	2	0.212	1.345	0.262
Gender	0.085	1	0.085	0.541	0.463
Error	39.231	249	0.158		
Total	40.235	253			

Table 6 shows the six-domain of the dependent variables and the means and standard deviations for each level of the independent variables. There is a visible difference between the mean scores of teamwork skills based on the independent variables of the study.

Table 6
Means and Standard Deviations of Teamwork Skills Based on the Study's Independent Variables

Dimension	IV	IV levels	Mean	Std. Dev.
Coordination	College	Humanities	3.071	0.52
		Science	2.864	0.56
	Study Level	First	3.006	0.51
		Second	3.076	0.52
		Third	2.907	0.69
	Gender	Male	3.005	0.56
Female		3.016	0.53	
Decision-making	College	Humanities	3.019	0.47
		Science	2.935	0.47
	Study Level	First	2.991	0.47
		Second	3.038	0.44
		Third	2.928	0.57
	Gender	Male	2.955	0.52
Female		3.013	0.45	
Leadership	College	Humanities	2.969	0.53
		Science	2.956	0.52
	Study Level	First	2.962	0.53
		Second	3.006	0.47
		Third	2.890	0.61

To be continued

Continued

Dimension	IV	IV levels	Mean	Std. Dev.	
Interpersonal	Gender	Male	3.042	0.49	
		Female	2.931	0.54	
	College	Humanities	3.373	0.55	
		Science	3.303	0.46	
		Study Level	First	3.349	0.54
	Adaptability	Study Level	Second	3.402	0.43
Third			3.267	0.65	
Gender			Male	2.935	0.58
Communication		Gender	Female	3.405	0.50
			College	Humanities	3.021
		Study Level	Science	2.842	0.43
	First		2.954	0.50	
	Second		3.021	0.45	
	Communication	Gender	Third	2.940	0.57
Male			3.008	0.51	
College		Female	2.953	0.49	
		Humanities	3.198	0.51	
		Science	3.115	0.47	
Study Level		First	3.151	0.51	
	Second	3.258	0.39		
	Third	3.114	0.66		
Gender	Male	3.062	0.56		
	Female	3.224	0.47		

In order to make sure that the visible differences are real, the researchers calculated the correlation factors between the teamwork to decide whether to use the statistic ANOVA or MANOVA. Bartlett's Test of Sphericity was conducted to find out the real differences between correlations factors that related to the teamwork skills based on the study variables as shown in table 6.

Also Table 6 summarizes the correlation and shows statistically significant ($\alpha=.05$). The Pearson's correlations (r) ranged from 0.43 to 0.69 which considered moderate to strong positive correlation between the dependent variables.

Table 7
Correlation Factor Between Teamwork Skills and Bartlett's Test based on the Study's Independent Variables

Pearson Correlation	Coordination	Decision-making	Leadership	Interpersonal	Adaptability	Communication
Coordination	1					
Decision-making	0.57	1				
Leadership	0.48	0.55	1			
Interpersonal	0.46	0.51	0.45	1		
Adaptability	0.43	0.56	0.51	0.45	1	
Communication	0.56	0.64	0.49	0.69	0.58	1
Bartlett's Test of Sphericity		Likelihood Ratio	Approx. χ^2	df		Sig.
		0.000	677.626	20		0.000

As reported in Table 7 there is a strong correlation between teamwork skills domains based on the independent variables, therefore, MANOVA (non

significant interaction) statistic were conducted as shown in Table 8.

Table 8
Results of MANOVA Test on Teamwork Skills Based on the Study's Independent Variables

Effect	MANOVA test	Value	F	Hypothesis df	Error df	Sig.
College	Hotelling's Trace	0.067	2.731	6	244	0.014
Study Level	Wilks' Lambda	0.979	0.424	12	488	0.954
Gender	Hotelling's Trace	0.090	3.669	6	244	0.002

Overall, Table 8 shows the main effect ($\alpha=0.05$) regarding the colleges' type and gender of the participants on the teamwork skills, however, the results shows no effect of study level on the teamwork skills. To identify which of the teamwork skills' domain has an effect from the colleges' type and the gender of the study, the researchers conducted a non interaction statistic MANOVA on the teamwork skills individually based on the study's independent variables as reported in Table 9.

Table 9 shows the ANOVA of the six-domain teamwork skills on the three independent variables and their levels. In terms of coordination there is a significant difference on the college type variable $p=0.003$ at ($\alpha=0.05$)

based on the college type of the respondents. Also, there is a significant difference on adaptability domain based on the college type of respondents as well when the $p=0.008$. The gender of the respondents has an effect on interpersonal skills and communication skills when the $p=0.019$ and 0.018 respectively. However, the ANOVA shows no significant differences in coordination skills based on study level and gender of the respondents, and no significant differences on the decision-making or leadership based on any of the independent variables. Moreover, the analysis finds no significant differences on interpersonal skills based on the college type or study level and adaptability skills based on the study level or gender of the respondents.

Table 9
Results of ANOVA on Teamwork Skills Domain Based on the Study's Independent Variables

Dependent Variable	Source	Sum of Squares	df	Mean Square	F	Sig.
Coordination	College	2.466	1	2.466	8.824	0.003
	Study Level	0.853	2	0.427	1.526	0.219
	Gender	0.002	1	0.002	0.006	0.937
	Error	69.601	249	0.280		
	Total	72.680	253			
Decision-making	College	0.410	1	0.410	1.820	0.178
	Study Level	0.312	2	0.156	0.694	0.501
	Gender	0.169	1	0.169	0.753	0.387
	Error	56.060	249	0.225		
	Total	56.911	253			
Leadership	College	0.023	1	0.023	0.084	0.773
	Study Level	0.300	2	0.150	0.544	0.581
	Gender	0.678	1	0.678	2.461	0.118
	Error	68.632	249	0.276		
	Total	69.610	253			
Interpersonal	College	0.281	1	0.281	1.017	0.314

To be continued

Continued

Dependent Variable	Source	Sum of Squares	df	Mean Square	F	Sig.
	Study Level	0.426	2	0.213	0.771	0.464
	Gender	1.530	1	1.530	5.528	0.019
	Error	68.902	249	0.277		
	Total	71.124	253			
	College	1.713	1	1.713	7.100	0.008
Adaptability	Study Level	0.272	2	0.136	0.565	0.569
	Gender	0.178	1	0.178	0.739	0.391
	Error	60.066	249	0.241		
	Total	62.173	253			
	College	0.336	1	0.336	1.351	0.246
Communication	Study Level	0.675	2	0.337	1.357	0.259
	Gender	1.401	1	1.401	5.635	0.018
	Error	61.901	249	0.249		
	Total	64.319	253			

Table 9 shows a significant difference at ($\alpha=0.05$) on two out of six domains teamwork skills (Coordination and Adaptability) to the advantage of the humanities colleges comparing to the sciences colleges. Moreover, Table 9 shows a significant difference at ($\alpha=0.05$) between mean scores of teamwork skills (Interpersonal and Communication) to the advantage of females comparing to the males.

RESULTS

The study purposes to determine whether students know, practice, and perform teamwork skills as they report it and if that is influenced by determined demographic variables. Therefore the basic question of this study revolves around the following question:

Q1. Is there a statistically significant difference in ratings of teamwork skills between students as they perceived based on type of college, study level, and gender variables?

This study aligned with previous studies (Chen, 2002; Hsieh, 2001; Kuehl, 2001; Marshall, 2003) in terms of internal consistency which implies that the items of the instrument used in the study are related to each other and is parallel with other cultures such as Australia, the United States, Taiwan, and Asian American.

Overall, the study shows that the mean score is relatively high which indicates that the students practice teamwork skills in a high manner. Moreover, the results show that there are significant differences between teamwork skills domains based on the independent variables.

Regarding participants' perception on the six dimensions teamwork skills based on their college type: Coordination and Adaptability there is a statistical significant difference related to college type with Humanities scoring higher than Science colleges. That could be explained by the type of courses and consequently experiences Humanity students have. Unlike Science students, whereby heavy emphasis is put

on providing students with mathematical and science opportunities and not so on teamwork skills.

In terms of participants' perceptions on the six dimensions of teamwork skills based on their study level: Finally, the study shows that students in the second year scored higher than first year which is consistent with the recommendation of some research that implies teaching generic skills in the second year (Aarnio, Nieminen, Pyörälä, & Lindblom-Ylänne, 2010).

Regarding participants' perceptions on the six dimensions of teamwork skills according to their gender. The study shows that Interpersonal skills are a statistically significant different related to gender with females scoring higher than males. This could be explained by the psychological nature of Jordanian women who are described to be more serious about their responsibilities and commitment to their families and the society in general than their counterparts Jordanian males. Though not significant, the study shows that males scored higher than females in terms of leadership skills. Once again this could be explained with Jordanian culture that provides males with more opportunities to lead and make decisions more than females.

Moreover, the study found that teamwork skills dimensions such as decision-making and leadership are not influenced by college type, study level, or gender of the participants. Also, it is vital to mention that despite the fact that participants who are in their second year of study scored higher than their counterparts from the first and the third year, study level did not show significant difference on any of the six-dimension of teamwork skills.

RECOMMENDATIONS AND IMPLICATIONS

In light of the results, the study recommends providing college students with ample opportunities and learning experiences that are designed to promote teamwork skills so that our students can confront problems and make rational decisions. Also, because workplace demands graduates who acquire teamwork skills, colleges and

universities should emphasize and include that in the curricula.

The results of this research may add to the body of the literature important information that could be utilized in developing soft skills for students from colleges and universities upon graduation. In addition, it is important for stakeholders in the higher education and business and industry. In the higher education, educators, curriculum developers and planners, and administrators will be able to recognize the level of teamwork skills that students know and practice on the one hand, which provides an indicator to strength of the available skills and provide those that are in lack. On the other hand, employers in business and industry will be able to provide additional information to the educational institutions about the level and the type of skills that are related to the workplace. Also, the results may play a part in strengthening the relationship between education and labor market in programs like co-op programs and apprenticeship and put emphasis on teamwork skills to integrate them in the formal and informal curricula. In addition, teamwork skills are not static, however, it is changeable and can be developed from place to another and from time to time, that is the concept of teamwork skills is different from the one used years ago as an example.

It is recommended for the future research to add some other independent variables such as participants' number of family members and participants' rank in the family to see whether those social variables have an impact on the participants' knowledge and practice of teamwork skills. Moreover, future research may choose a representative sample from different Jordan universities, so the result will be generalizable to the whole higher educational system in Jordan. Also, it is vital to reveal educators and employers perceptions on the level of acquiring teamwork skills in the education setting and in the workplace.

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