

# Jordanian Elementary Teachers' Preferences for Teaching the Different School Subjects in the Primary Stage

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## Abstract

Elementary teachers' preferences of the school subjects they teach constitute the most crucial factor that affect students' achievement and enthusiasm for learning. This study investigates elementary teachers' preferences of teaching the subjects taught in primary schools in Jordan and whether teachers' preferences are influenced by the grade level they teach or their secondary education stream (scientific stream and literary stream). A total of (324) in-service primary stage teachers were asked to rank their preference of teaching all the school subjects. The ranks of cohort are ordered descendingly as follows: Arabic language, mathematics, Islamic education, science, social education, vocational education, art, and physical education. Results showed that teachers' preferences were not influenced by the students' grade level with the exception of science. Results revealed that science and mathematics were more preferred by elementary teachers who finished secondary school in scientific stream, whereas Arabic language, Islamic education, and social education were more preferred by those who studied in the literary stream. Teachers' preferences regarding the remaining three subjects, i.e., vocational education, art, and physical education, were not statically significant. The study recommended the crucial need for rethinking the nature of elementary teachers' education programs.

**Keywords:** Elementary teacher, Preferences, School subjects, Primary stage

## 1. Introduction and Literature Review

It goes without saying that man's beliefs and attitudes towards the work he/ she is doing affects the way of doing that work, the motivation and preferences of doing it, and eventually the degree of mastering it. Miller et al., (1961) early pointed out that the attitudes one has affect his/ her motivation and interests. Attitudes represent the individual's predisposition to respond in a favorable or unfavorable manner to a given attitude object (person or group of people, institutions or events). Attitudes comprise affective, cognitive, and conative/behavioral aspects (Oskamp and Schultz, 2005; Icek, 2005; Morris and Maisto, 2005).

In teaching, effective attitudes and actions of teachers can make a positive difference on students' lives (Gourneau, 2005). Teachers' attitudes toward a specific subject are highly influence the way in which that subject is taught, and the way in which the students view that subject (Richardson, 1996). Likewise, the way teachers teach, how they behave, and how they interact with students can be more paramount than what they teach (Olatunde, 2009). Many studies revealed that teachers' attitudes affect students' learning, achievement, and attitudes (Wilkins, 2008; Wallace and Loudon, 1992; Schoeneberger and Russell, 1986), eventually, the positive attitudes the students have towards any subject positively affect their achievement, enhance lifelong learning, and boost their cognitive development (Bruce et al., 1997). Motivation to learn is higher when overall attitudes towards a particular part of the curriculum are positive (West et al., 1997)

Being aware of teacher's attitudes toward the subject he/she teaches is one of the major factors that affect students' attitudes toward that subject. Unlike the upper elementary stage and secondary stage teachers, who are trained to teach certain school subjects; the lower elementary stage teachers; in Jordan called class teachers, are expected to teach all subjects in the first three grades (6, 7 and 8 year old pupils); as such, elementary teachers play a crucial role in determining their pupils' attitudes towards all school subjects, and eventually to school itself as well. Wilkins (2010) remarked that the expectation to teach all subjects by elementary teachers places a vast responsibility on them, in this way, the teacher is supposed to teach all subjects regardless whether he/she likes teaching each subject or not. It is generally believed that elementary teachers prefer to teach languages rather than teach science and mathematics; in other words they prefer to teach some subjects and not other subjects (Wilkins, 2010).

The literature review showed that the shortage in research studies in this field is two-fold. On the one hand, it lacks studies that compare elementary teachers' attitudes to teaching the different subjects taught in the first three grades, but rather studies that investigated teachers' attitudes toward specific subjects. On the other hand, the majority of studies that were conducted to investigate elementary teachers' attitudes towards different subjects have been limited to mathematics and science, with little emphasis on social studies (Aiken, 2002; Wilkins, 2010). The study conducted by Wilkins (2010) in southeastern United States is an exception. Wilkins investigated (490) K-5 elementary teachers' favorite school subjects. The results of Wilkins' study revealed that

reading and language ranked as the most favorite and most enjoyed subjects to teach, whereas science, mathematics, and writing ranked as the least favorite and the least enjoyed subjects to teach. Other studies (Palmer, 2004; Trumper, 1998; Harlen and Holroyd, 1997) showed that pre-service and in-service elementary teachers tend to have negative attitudes towards science itself and towards teaching it. Moreover, Dunlop and Fraser (2007) remarked that many elementary teachers have a rooted phobia of teaching science. Researchers (Appleton and Kindt, 1999; Schoeneberger and Russell, 1986) have pointed out that science in primary schools is the weakest link and is given low priority compared with other subjects, specifically language and mathematics. Worth and Grollman (2003) remarked that science is an important subject for children, and the time given to science should not be seen as a competitor to the time given to language, math, and social skills. In the study conducted by Manning et al., (1982) revealed that 52% of 191 elementary teachers ranked science among the fourth or fifth preferred subjects to teach. Regarding the other subjects taught in primary schools, e.g. physical education, art education, and vocational education; there are limited research studies that addressed elementary teachers' attitudes towards these subjects. In Kenya, schools give low priority to art education and vocational education; schools are not prepared to teach such subjects, and students seem to be less interested in these subjects (Indoshi et al., 2010). On the other hand, physical education seemed to be a marginalized subject, shortened in the amount and length of time and in some cases is completely eliminated from students' education (Barney and Deutsch, 2009; Johns and Dimmock, 1999; Carlson, as cited in Barney and Deutsch, 2009). The present study was conducted in the Jordanian context to detect elementary teachers' preferences of the different school subjects taught to pupils in the lower elementary stage.

## 2. Significance of the Study

Teachers' preferences of different subjects affect their teaching practices, which finally influence students' attitudes toward these subjects. Hence, understanding teachers' attitudes toward different subjects can provide explanations for their instructional practices and can also enlighten educators about students' attitudes toward different subjects. This study was conducted to investigate elementary teachers' attitudes towards teaching the different subjects in the first three grades of primary stage in Jordanian schools. To our knowledge, on the one hand, there is lack of across research studies that compared elementary teachers' attitudes towards teaching the different subjects. On the other hand, no studies were conducted in Jordan or in other Arab countries in this field of research.

## 3. Definitions of Terms

*Elementary teachers:* Teachers who teach all school subjects in the lower elementary cycle (K-3) in Jordanian schools; i.e. Arabic language, mathematics, science, vocational education, Islamic education, social education, art and physical education. The elementary teacher has, at least, a bachelor's degree in general education. In Jordan the elementary teachers are called class teachers.

*Secondary education stream:* The educational stream which the elementary teacher studied during his/her secondary schooling (scientific and literary). Teachers who studied the scientific stream studied four courses in science (biology, chemistry, physics, and geology) and an advanced mathematics course. In contrast, elementary teachers who studied the literary stream did not study such scientific courses, instead they studied history, geography, an advanced course in Arabic language and a basic mathematics course.

*Grade level:* The grade which the elementary teacher was teaching at the time when the current study was implemented. There are three grades, which represent the first three grades of formal schooling in Jordan: the first grade, second grade and third grade (K-3).

## 4. Statement of the Problem

This study investigates elementary teachers' self-reported rating of their favorite school subjects; i.e. Arabic language, mathematics, science, vocational education, Islamic education, social education, art and physical education. This purpose was fulfilled by answering the following main research questions:

1. What is the rank of the elementary teacher's favorite school subjects to teach in the first three grades?
2. Are there statistically significant differences in the preferred subjects to teach as ranked by elementary teachers that can be attributed to the pupils' grade level (the first grade, second grade, and third grade)?
3. Are there statistically significant differences in the preferred subjects to teach as ranked by elementary teachers attributed to the teachers' secondary education stream (scientific, literary)?

## 5. Method

### 5.1 Sample

This study examined the ranking of (324) in-service elementary teachers' favorite subjects to teach. The study sample is distributed in (45) public and private schools in Amman and Zarqa governorates. The sample was selected from schools whose principals and teachers expressed cooperation for the implementation of the study.

The cohort of the study was fully informed about the aims of the study.

### 5.2 Data collection and analysis

Elementary teachers in this study were asked to rank each of the eight school subjects, i.e. Arabic language, mathematics, science, vocational education, Islamic education, social education, art and physical education, from one to eight. The rank eight represents the teacher's most favorite subject to teach, and rank one represents his/her lowest favorite subject to teach. To answer the study questions, a set of descriptive analysis methods and one-way analysis were administered among the study sample.

## 6. Results and Discussions

To answer the first question of the study, i.e., what is the rank of the elementary teacher's favorite school subjects to teach in the first three grades? The Mean scores and standard deviations were calculated (see Table 1).

Table1. Elementary teachers' rankings of the favorite school subjects to teach

Subject	Mean	Std. dev.
Arabic language	6.88	1.33
Mathematics	6.66	1.62
Islamic education	5.64	1.28
Science	5.46	1.41
Social education	4.23	1.25
Vocational education	2.46	1.63
Art	2.36	1.36
Physical education	2.31	1.37

As illustrated in Table1, Arabic language is the most favorite school subject to teach by elementary teachers in the first three grades (mean rank 6.88; Table 1), whereas mathematics ranked second (mean rank 6.66; Table 1). The other subjects, e.g., physical education, art, and vocational education ranked the lowest favorite subjects (mean ranks 2.31, 2.36, 2.46 respectively; Table 1). This result may due to the highest priority given to language and mathematics in primary schools compared to other subjects. The highest priority given to language and mathematics may be attributed to the common conviction that the most important skills that pupils should master in primary schools are reading, writing, and arithmetic. This result is in consistent with the results of other studies (Appleton and Kindt, 1999; Schoeneberger and Russell, 1986). The last three subjects which got the lowest rank in this study may due to the prevailing misbelief that such subjects are ornamental knowledge, which means that pupils will never lose anything if they did not learn them. This misconception is in conformity with the results of other studies (Indoshi et al., 2010; Barney and Deutsch, 2009; Johns and Dimmock, 1999)

To answer the second question of the study, i.e., are there statistically significant differences in the preferred subjects to teach as ranked by elementary teachers that can be attributed to the pupil's grade level (the first grade, second grade, and third grade)? A set of descriptive analysis methods, the one-way analysis, and Fisher's Least Significant Difference (LSD;  $\alpha=0.05$ ) test were administered among the study sample (see Table 2).

Table2. Mean ranking of elementary teachers' favorite subjects to teach by grade level

Subject	Grade			Sig.
	1 (n=107)	2 (n=109)	3 (n=108)	
Arabic language	7.09	6.78	6.76	0.12
Mathematics	6.71	6.60	6.68	0.87
Islamic education	5.64	5.81	5.74	0.22
Science	5.47	5.13	5.79	0.01*
Social education	4.04	4.34	4.31	0.17
Vocational education	2.38	2.63	2.36	0.20
Art	2.36	2.45	2.28	0.65
Physical education	2.32	2.29	2.31	0.99

\*Statistically significant difference ( $\alpha=0.05$ )

As can be seen in Table 2, there are differences in means related to elementary teachers' preferences of teaching the different school subjects in the first three grades. Except science, differences in elementary teachers' preferences of teaching all school subjects are not statistically significant (see Table 2). The multiple comparisons related to science, LSD results revealed that the differences are in favor of teaching science in the third grade, whereas there are no differences between the first grade and second grades. This result is consistent with the results shown in Wilkins' study (2010). The results of the present study may be attributed to the assumption that teachers' interest in teaching science in the elementary stage increases alongside in the subsequent grades. Teachers may believe that pupils might have mastered the basic skills of reading, writing, and

arithmetic in the earlier stages of schooling; as such its science time. At the same time, other subjects, e.g., vocational education, art, and physical education are still viewed as ornamental whereas Arabic language and mathematics are still viewed as the most important.

To answer the third question of the study, i.e., are there statistically significant differences in the preferred subjects to teach as ranked by elementary teachers attributed to the teachers' secondary education stream (scientific, literary)? A set of descriptive analysis methods, and one-way analysis were administered to the study sample.

Table3. Mean ranking of elementary teachers' favorite subjects to teach by secondary school stream

Subject	Stream		Sig.
	Scientific (n=90)	Literary (n=234)	
Arabic language	6.28	7.11	0.00*
Mathematics	7.36	6.39	0.00*
Islamic education	5.14	5.83	0.00*
Science	6.29	5.14	0.00*
Social education	3.74	4.41	0.00*
Vocational education	2.26	2.54	0.07
Art	2.57	2.28	0.09
Physical education	2.39	2.27	0.50

\*Statistically significant difference ( $\alpha=0.05$ )

Table 3 shows statistically significant differences for all school subjects except vocational education, art, and physical education. In science and mathematics, the differences are in favor of teachers who studied in the scientific stream in the secondary school whereas the difference in Arabic language, Islamic education and social education are in favor of teachers who studied in the literary stream in the secondary school. This result shows that teachers who studied in the scientific stream prefer to teach scientific subjects. On the other hand teachers who were finished literary stream prefer to teach literary subjects. This result may due to factors that determine teachers' attitudes towards teaching a subject; it can be said that teachers who studied in the scientific stream in the secondary school trust their scientific knowledge because they studied four courses in science (biology, chemistry, physics, and geology) and an advanced course in mathematics, whereas teachers who studied in the literary stream did not study such courses. On the other hand, teachers who studied in the literary stream in the secondary school trust their knowledge in Arabic language, social education, and Islamic education. This result conforms with results of other studies which revealed that many elementary teachers do not prefer teaching science because they lack appropriate scientific knowledge (Koc, 2006; Bencze and Upton, 2006; Sarikaya, 2004). The study conducted by Abed (2009) revealed positive correlation between elementary teacher pre-service students' understanding level of scientific concepts and their beliefs in science teaching. Abed's study also showed that elementary teacher students who studied in the scientific stream in the secondary school had had more positive beliefs in science teaching in comparison with elementary teacher students who studied in literary stream in the secondary school.

## 7. Summary and Conclusion

Teachers' attitudes towards the subjects they teach are an important predictor of students' achievement in each subject as well as their attitudes towards learning these subjects. Therefore, teachers' preferences and attitudes should be frequently examined by research. In this context, the current study investigated elementary teachers' preferences of and attitudes toward teaching the different school subjects they teach in the first three grades of the elementary stage in Jordanian schools. Such preferences reflect teachers' attitudes which ultimately affect what they teach and how they teach each subject; consequently determine students' attitudes, degree of interest in these subjects and their achievement. The general result of the current study showed that Arabic language and mathematics are the most preferred school subjects to teach by the cohort of the study whereas vocational education, art, and physical education are the least. With the exception of science, results also revealed that elementary teachers' preference is not affected by the grade level. The most remarkable result of this study is that elementary teachers' preferences were distributed into two groups. Teachers in the scientific stream prefer teaching science and mathematics to other subjects and literary stream teachers prefer teaching Arabic language, Islamic education, and social education to teaching other subjects. Specifically, the latter result should stimulate educators to rethink seriously of the pre-service elementary teachers' education programs and the enrolment conditions of the involved cohort and its mechanism. One of the suggested options is to prepare elementary teachers in pre-service education programs in two tracks: scientific subjects elementary teacher and literary subjects elementary teacher. The former should be qualified to teach science and mathematics while the latter to teach Arabic language, Islamic education, and social education. Other research studies in the field of this study

should investigate other variables related to elementary teachers' preferences to teach the different subjects such as the teacher's years of teaching experience and gender. Moreover other studies may be necessary to be conducted in other cultural and educational contexts.

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