Competencies needed for the teachers of visually impaired and blind learners in Al Balqaa Province area schools

Mezyed A.S. Al-Adwan *1,2, Munadel R.F. Khatib1,2
1Al-Balqa Applied University, Salt, Jordan
2Zarqa University College, Az-Zarqa, Jordan

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ABSTRACT

Background: Effective teaching needs the teacher to have competencies in personality, knowledge and skills. This ensures a quality and quantity of desired outcomes. That is the same for teaching of individuals with disabilities. The presence of criteria and standards, or what we call competencies is important to deliver educational services to individuals with disabilities. Literatures mentioned very different competencies that help the professionals in their work. The competencies are considered as a milestone for instruction; however, despite the presence of the required competencies worldwide in this field, it is still unapplied well. There are many agencies which don’t apply these competencies. This study aimed at investigation of the competencies needed for the staffs in schools at Al Balqa province area.

Methods: A special tool consists of demographic variables and 31 statements which measures the competencies of the teachers of the visually impaired and blind learners. The study sample consists of 120 participants of both sexes. The sample was selected from 50 schools in Al-Balqa province area. A convenient statistical approach was used to analyze the data.

Results: The result of the study revealed no relationship between the variables (sex, education level, experience, and class level) and the competencies. However, there was a marked difference in competencies due to the characteristics of the teachers. Furthermore, the results indicated a significant difference in the quality and quantity of competencies due to the teachers’ characteristics. This was in favor of the sighted teachers. As for the difference between the blind and poor sightedness, the result was in favor of the latter.

Conclusions: The teachers of the visually handicapped learners in Al-Balqa province schools need to have special education competency-based services, that need general reviewing for the system of special education.

Key Words: Competencies, Teacher, Visually impaired, Blind, Learners

1. INTRODUCTION

The exceptional learners constitute around 2.4% of school age children in United States of America, regardless of the ethnicity, and the level of education.1 This category have the rights to learn, live and grow physically, socially and psychologically, as the other non-exceptional learners.2 So that, all societies should consider them as collaborating partners in developing the country. Exceptional learners have an actual and potential capabilities to share the others with their efforts and participate in the community development as well as the non-exceptional learners.3,4 As for blind and visually impaired students in Jordan, especial education schools are
limited to Amman. Not all provinces area included, but the visual impaired and blind who are easily integrated go to the regular schools which are nearby their homes. These schools are not well prepared, but some resource rooms are available in some of these schools, and the teachers aren’t prepared and confident to work with visually impaired and blind students. However, in Jordan only two schools are for blind students, they are Abdullah Bin Um Muktoom (The blind Prophet Muhammad friend) school which provides the basic (elementary) education from the 1st grade to the 6th grade. The second school is the Blind High School which provides education from 7th grade to the Second Literary Secondary grade. Both schools are located on the capital (Amman) of Jordan. The two schools contain 220 blind students and hire 120 teachers.\[5\]

For that, there is currently a critical need for well qualified teachers of learners with visual impairments and blindness, as there is worldwide shortage of professionals who work with learners with visual impairments. Many countries managed to overcome this shortage.\[6\] For example, in United States many universities created two professional programs (California University, Florida University, etc.) which allow the teaching staff to work with school age exceptional learners. One is a “Teacher of students with Visual Impairment, the second is program of Orientation and Mobility Specialist”. The mentioned programs are based on a separate professional standard.\[7\]

Effective teaching needs to have certain competencies in teaching, such as, modifying behavior, management, knowledge, and skills of related field. These competencies ensure quality and quantity of educational services.\[8\] That is, the same for individuals with disabilities, the presence of criteria and standards or what we called competencies is important to deliver educational services to the individuals with disabilities. Literatures mentioned different competencies which helped the professionals in their work.\[9\] These competencies are considered a milestone in special education strategies; however, despite the presence of the required competencies worldwide, it is still not applied in Jordanian special education intuitions as required. Due to the absence of legislations, control and follow up; many centers and intuitions don’t apply these competencies on their institution.\[10\] This brief study works on investigation the competencies needed for teachers in schools on one of the widest province area in Jordan; Al Balqa Province.

1.1 Literature review
An article was reported on a descriptive study standards and criteria for competence in Braille literacy within teachers’ preparation program and specific role played in the achievement of proficiency in Braille literacy by university teachers’ preparation programs in blindness and visual impairments. It contains a summary of need for such research, historical background, research methods, discussion of standards and implication for personal preparation.\[11\]

A study to determine the degree to which the professional standards for Turkish teachers of students with visual impairments were addressed to pre-service training and the degree to which in service teachers of visual impairment implemented these professional standards. The result of national wide survey showed that the teachers faced problems in both attaining and implementing certain important knowledge and skill areas for teaching students with visual impairments.\[12\]

A few studies were presented to evaluate the competencies of the teachers who taught the visually impaired and deaf students. But in a study based on the opinions of more than 30 professionals set out to develop a set of assistive technology competencies for teachers of students with visual impairments. The result of the study was the development of highly reliable and valid set of 111 assistive technology competencies.\[13\]

According to national survey, about 6% of teachers who work with deaf-blind students have specialized training in the field. The few new graduate of teacher preparation programs in the field coupled with the shortage of specialized trained teachers indicated that there was a critical need to train more teachers to meet the unique needs of these students.\[14\]

In another study,\[15\] a survey was made on 165 teachers and students with visual impairments from Texas.\[16\] The perceptions of their knowledge of assistive technology were examined. The result indicated that there was significant difference in knowledge in 55 (74.32%) of the 74 assistive technology competencies that were examined, and that 57.5% of them lacked adequate confidence about teaching assistive technology to students.

Unless there are some programs for preparing the teachers of visually impaired and blind students in United States and Canada, there aren’t in Jordan. But some Jordanian Universities deliver a general program, diploma and Bachelor, Master or even PHD in Special education in general which is not enough to teach specific disability such as visual impairment or hearing impairment or other categories of exceptional-learners.\[17\] For that, the curriculum of special education in Jordan needs to be revised and modified to specify a certain knowledge and skills to build up programs to prepare teachers for those students.\[18\]

The competencies “Braille Teachers” who teach in elementary and secondary school were studied by using a survey
containing a list of skills. The participants were asked to rate these skills.\[19\]

Also, the training needs and supervisors’ competencies were studied among paraeducators to determine if there are differences. The study result revealed that the paraeducators in local school schools reported more training, the provision of less direct service and greater supervision by more competent teachers of students with visual impairment than did their residential schools counterpart.\[20\]

A survey for 72 secondary teachers of students with visual impairments performed.\[21\] The researcher found that the teachers encounter continuing difficulties in providing materials and equipment for mathematics instruction and that few students with visual impairment are participating in advanced mathematics.

The characteristics of the teachers in supporting deaf-blind was investigated.\[22\] Study findings indicated that teachers' training were positively and significantly related to the level of support provided to deaf-blind learners. However, the findings indicated that teachers were not well trained and experience in supporting deaf-blind learners. Since, there were some gaps on teachers support for deaf-blind learners. This study recommended the need for the stakeholders to enhance training as well as capacity building so that the teachers well informed on the needs of multisensory impairment (MSI) learners.

1.2 The importance of the study
The importance of the study came from the following points:

(1) The study results will improve the theoretical knowledge and skills in the field of visual impairment among the teachers who teach visually impaired and blind learners in Jordan.

(2) The study explored the actual and potential problems facing the teachers of the visually handicapped learners in Jordanian schools who enrolled visually impaired students.

(3) The teachers verbalized their needs in the field of visual impairment and blindness.

(4) The study results are used to improve and develop in-service training and preparing rehabilitation programs for the teachers of visually impaired students.

1.3 Research questions
For the purpose of this study the following questions were thrown:

(1) What are the teaching competencies of the teachers of visually handicapped learners in AL-Balqa Province area schools?

(2) Is there a significant differences in evaluating the teachers competencies in congruent of the study variables?

(3) Do the competencies differ in the quantity and quality according to the characteristics of the teachers?

1.4 Study variables
Independent variables: Sex, educational level, experience, characteristic of the teacher.

Dependent variable: The competencies of the teachers of visually impaired and blind teachers.

1.5 Study terminology
Competencies (operational definition): A group of changes occur in the knowledge, skills, attitudes and behaviors of the teacher who works with the visually impaired students as it measured by the tool of the research.

Teacher (operational definition): The teachers from the schools where the questionnaire were applied participate in the study whether he/she is sighted, poorly sight, or blind.

Visually impaired (operational definition): Any people with visual acuity between 20/70 and 20/400 with the best possible correction or visual field of 20 degree or less.

Blind (operational definition): Any people with visual acuity of 20/200 or worse with best possible correct or visual field of 10 degree or less.

School (operational definition): Any institution that includes sighted teacher, or visually impaired or blind, in Al-Balqa province area.

Learner (operational definition): Any visually impaired or blind person attends the school at the area of the research to learn.

1.6 Study limitation
The results of the study are limited by the subjectivity of the participants. The results of the study represent sample of the teachers of visually impaired students at the governmental and none-governmental schools in Balqa province area during the school year 2015/2016. The study is limited to some determinants (sex, educational level, experience, school level, and teachers’ characteristics).

2. Methodology
Community research: The community research is all the teachers in Al-Balqa Province area controlled by the Department of education in the Al-Balqa province area. The total number of the schools is 100 (Boys school = 60 girls schools = 40) of the two levels, primary and secondary. The schools contain around 2,000 teachers of both sexes.
2.1 Study sample
The study sample consists of 140 participants of the teachers who work for governmental and non-governmental schools in Al-Balqa Province area. Fifty schools (30 primary schools, 20 secondary schools) from both sexes. Twenty (20) of the participants’ responses were excluded because of incom­pleted information.

Table 1. Sample characteristics

| Variable              | Group | Frequencies | %   |
|----------------------|-------|-------------|-----|
| Sex                  | M     | 38          | 31.67 |
|                      | F     | 82          | 68.33 |
|                      | T     | 120         | 100.00 |
| Educational level    | Diploma | 28        | 23.33 |
|                      | Bachelor | 74      | 61.67 |
|                      | Graduate | 18      | 15.00 |
|                      | Total | 120         | 100.00 |
| Experience           | 1-3yrs | 30          | 25.00 |
|                      | 4-6 yrs | 32       | 26.67 |
|                      | More than 6 yrs | 58  | 48.33 |
|                      | Total | 120         | 100.00 |
| School level         | Primary | 82       | 68.33 |
|                      | Secondary | 38     | 31.67 |
|                      | Total | 120         | 100.00 |
| Teacher Characteristics | Sightedness | 60   | 50.00 |
|                      | Visual impaired | 42   | 35.00 |
|                      | Blind | 18          | 15.00 |
|                      | Total | 120         | 100.00 |

Research tool: To answer the research questions, the researcher developed a questionnaire consists of 31 statements. To identify the teachers’ competencies, the researcher followed the next stages:

(1) Reviewing the literatures and articles related to the subject.
(2) Taking the opinions of some experts in this field from public and private sectors.
(3) The researcher suggested a draft of tool consist of two sections:
   - Section I: Represent demographic variables which include (sex, experience, level education, class level) which test the independent variables.
   - Section II: Which include 40 items related to teaching competencies which measure the independent variable.
(4) A draft of the suggested instrument were organized to be answered by relevant or irrelevant, then the instrument were e-mailed to 10 experts in the field of special education and other related fields (i.e. psychology, curriculum, medicine) in Jordanian universities. The item which matched by irrelevant by 8 out of 10 out were omitted from the instruments. After taking the opinions of experts nine statements of the questionnaire were excluded and 31 statements were included.

The tool included general information (sex, experience class level, educational level), and item that measure competencies. The Likert scale of the statements consist of four levels (Highly competent, moderately competent, little competent, no competent) coded 4,3,2,1, respectively.

The tool was validated by a group of experts from Jordanian universities and some experts in the field. For the purpose of the study, the internal consistencies of the statements were calculated by Kornbach’s Alpha and it was 0.92. So Alpha coefficient is the most widely used index of internal consistency reliability measure which is most frequently employed for cognitive measures that are concern with assessing subject achievement or knowledge in specific content area.[23]

2.2 Data collection
After constructing the tool, the schools were assigned as the research purposes and objectives. An informed consent was
signed by the participants. 140 copies of the research tool were handed to the teachers within 10 successive days. After 20 days, the copies were returned. 10 copies were excluded because of incomplete information.

2.3 Data analysis

The researcher used SPSS program (version 21) to analyze the participants’ responses ($\bar{X}$, SD, Sig, $T$-test, shiffes’s test, Anova, Ancova)

3. RESULTS

As the data were treated, the researcher used the following scale to calculate the means for the questionnaire statements: (Less than 1-1.99) Incompetent, (2-2.33) Little competent (LC), (2.34-3.66) Moderate competent (MC), (3.67 or more) Highly competent (HC).

Table 2. Analysis of the participants’ responses

| Statement No. | $\bar{X}$ | SD  | %   | Category | Rank |
|---------------|----------|-----|-----|----------|------|
| Q7            | 3.52     | 1.37| 87.92| MC       | 1    |
| Q29           | 3.47     | 1.26| 86.67| MC       | 2    |
| Q24           | 3.33     | 1.47| 83.33| MC       | 3    |
| Q26           | 3.17     | 1.33| 79.17| MC       | 4    |
| Q23           | 3.15     | 1.52| 78.75| MC       | 5    |
| Q5            | 3.13     | 1.52| 78.33| MC       | 6    |
| Q22           | 3.12     | 1.28| 77.92| MC       | 7    |
| Q30           | 3.12     | 1.26| 77.92| MC       | 8    |
| Q31           | 3.07     | 1.23| 76.67| MC       | 9    |
| Q27           | 3.00     | 1.21| 75.00| MC       | 10   |
| Q3            | 2.98     | 1.36| 74.58| MC       | 11   |
| Q28           | 2.97     | 1.21| 74.17| MC       | 12   |
| Q20           | 2.95     | 1.24| 73.75| MC       | 13   |
| Q1            | 2.88     | 1.38| 72.08| MC       | 14   |
| Q21           | 2.88     | 1.35| 72.08| MC       | 15   |
| Q25           | 2.88     | 1.61| 72.08| MC       | 16   |
| Q4            | 2.85     | 1.38| 71.25| MC       | 17   |
| Q6            | 2.82     | 1.37| 70.42| MC       | 18   |
| Q8            | 2.77     | 1.45| 69.17| MC       | 19   |
| Q9            | 2.75     | 1.41| 68.75| MC       | 20   |
| Q2            | 2.62     | 1.53| 65.42| MC       | 21   |
| Q18           | 2.55     | 1.58| 63.75| MC       | 22   |
| Q14           | 2.53     | 1.50| 63.33| MC       | 23   |
| Q16           | 2.45     | 1.32| 61.25| MC       | 24   |
| Q13           | 2.42     | 1.23| 60.42| MC       | 25   |
| Q19           | 2.40     | 1.56| 60.00| MC       | 26   |
| Q12           | 2.38     | 1.44| 59.58| MC       | 27   |
| Q17           | 2.35     | 1.40| 58.75| MC       | 28   |
| Q11           | 2.32     | 1.46| 57.92| MC       | 29   |
| Q15           | 2.27     | 1.34| 57.67| MC       | 30   |
| Q10           | 2.07     | 1.41| 51.67| MC       | 31   |
| Total         | 2.81     | 0.90| 70.28| MC       |      |

As it appears in Table 2, the statement No. Q7: The need for the early intervention programs such as (A VISI) occupied the first priority between the statements (i.e. Mean = 3.52 and the percentage = 87.92%, while the statement No. Q10...
which stated “the need for training reading and writing with
Braille system”, has the lowest rank (i.e. Mean = 2.81) with
percentage of 70.28%. These values indicate the moderate
need according to the scale value. Also the total mean in
general was (M = 2.81) and the percentage was 70.28%.

Table 3. Differences in competencies in training among
teachers

| Variables                      | Test     | Value | Sig  |
|--------------------------------|----------|-------|------|
| Sex                            | T-test   | 0.43  | .673 |
| Educational level              | ANOVA    | 2.46  | .094 |
| Experience                     | ANOVA    | 0.85  | .434 |
| School level                   | T-test   | 0.99  | .322 |
| Characteristics of the teacher | ANOVA    | 6.37  | *.003|

* p < .05

Table 3 shows the differences in competencies in training
among the teachers according to sex, educational level, expe-
rience and school level and the characteristics of the teacher. The T-values for competencies according to sex, educational
level, experience, school level were not significant because
the significant value is greater than .05, while the F-value for
the competencies according to the variable characteristics of
the teacher (F = 6.37) at the significantly level (.003) and this
value is significant because it is less than .05. To differenti-
ate the competencies according to the characteristics of the
teachers, Post Hoc Comparison-Scheffe’s test was used (see
Table 4).

Table 4. Post Hoc Comparison-Scheffe’s test of the
characteristics of the teachers

| Teacher characteristics | Visually impaired | Blind | Mean |
|-------------------------|-------------------|-------|------|
| Sightedness             | -0.13             | * .76 | 3.06 |
| Visually impaired       | .89               |       | 3.19 |
| Blind                   | 2.30              |       |      |

* p < .05

As a result of Post Hoc Comparison-S’ cheffe test for compar-
ing the dimensional to identify the source of differences in
needs for the teachers related to their characteristics. The
differences were between the blind and the sightedness and its
on the favor of sightedness teacher mean (X̄ = 3.06) and
between the blind and partially sight and it is on the favor of
partially sightedness (X̄ = 3.19).

In more details, the following tables explain the means, SD
and T-values for training needs of the teachers of the visually
handicapped learners according to the independent variables
(sex, experience, level of education teachers characteristics
and school level) (see Tables 5-9).

Table 5. Analysis of the teachers’ training needs

| Variable | Sex | No. | X | SD | T-value | sig |
|----------|-----|-----|---|----|---------|-----|
| Total    | M   | 38  | 2.74 | 0.54 | 0.43 | .673 |
|          | F   | 82  | 2.85 | 1.03 |      |     |

As the values of means, SD and T-value were calculated for
teachers and the Significance compare with the sig. value
(.05) with competencies compare the calculated (0.673)
which is greater than .05, so that there is no significant dif-
fferences related to sex.

As we compare the results of Ancova analysis for teach-
ers competencies related to educational level the significant
value attendant the F-value (0.85) which is 0.434. That is greater
than .05 which indicated no significant difference in teachers
competencies related to experience (see Table 7).

Table 7. The results of ANCOVA analysis for teachers’ competencies related to experience

| Variable | Source of variance | ΣΧ² | df | Χ² | F | Sig  |
|----------|-------------------|-----|----|----|---|------|
| Total    | Inter-categories  | 1.37| 2  | 0.69|   |      |
|          | Intra-categories  | 46.11| 57 | 0   | 0.85| .434 |
|          | Total             | 47.48| 59 |     | 0.81|     |

* p < .05
As the values of means and SDs, T-values for teachers' competencies related to school level were calculated and compared the value of significance attendant T-value (0.99) which is 0.322, that is greater than 0.05. This means there are no significant differences related to the school level.

**Table 8.** ANCOVA analysis for teachers’ competencies according to school level

| Variables | School level | No. | X   | SD  | T   | Sig |
|-----------|--------------|-----|-----|-----|-----|-----|
|           | Primary      | 38  | 2.73| 0.91| 0.99| .322|
|           | Secondary    | 19  | 2.98| 0.88|     |     |
|           | Total        | 59  |     |     |     |     |

* p < .05

Table 9 shows the results of ANCOVA analysis for the teachers’ competencies according to the characteristics of the teachers and comparing significant value .003 attending the F-value 6.37 with 0.05. This means that there is significant difference in teachers’ competencies related to the teacher characteristics.

**Table 9.** ANCOVA analysis for teachers’ competencies according to the teachers characteristics

| Source of variance | ∑X² | df | X² | F   | Sig. |
|--------------------|-----|----|----|-----|------|
| Inter-categories    | 8.68| 2  | 4.34| 6.37| .003 | (*p<0.05)*
| Intra-categories    | 38.80| 57 | 0.68|      |      |
| Total               | 47.48| 59 |     |     |      |

Concerning the third question: Do the competencies differ in quantity and quality according to the characteristics of the teachers (blind, partially sighted, sightedness)?

The study results revealed that the differences between the blind and the sightedness were on flavor of the sightedness. That is the mean was 3.06. As for the blind and partially sighted the significance was on flavor of partially sighted, the mean was the higher (M = 3.190).

The researchers give the rationality for the results concerning this question, even though both blind and partially sighted represent the visual handicap, the teachers’ competencies are dissimilar in quality and quantity because the partially sighted teacher has more functional residual vision and he/she used it better than the blind teacher.

**4. DISCUSSION AND CONCLUSION**

Concerning the first question which involved the identification of the teachers competencies “What are the competencies for the teachers of visually handicapped learners?”. The study revealed that all the questionnaire statements were answered by moderate; the total mean was 2.81. And the total percentage for the statements were 72.28% and SD = 0.90. This result is a clear evidence that all the teachers need training and knowledge related to visual impaired and blind, but the statement Q7 which states “I need to know early intervention programs” has the highest percentage among all the questionnaire statement (87.92%) while the statement (Q10) which states “I need to know how to read and write by Braille system” has the lowest percentage (51.6). This result revealed the actual needs for the teachers. This result is applicable with result of Grooser (2005)[25] which stated that “the workers needs knowledge and skills in early intervention, assessment and evaluation of developmental growth for children below thirteen”. As for the second question “Is there significance differences in evaluating the teachers’ competencies in congruent of the study variables?” The study reveals that there are no significant differences in teachers evaluation for their competencies related to the sex, educational level, and experience and school level. However, there are significant differences in teacher responses related to the teachers’ characteristics (Partially blind, sightedness, blind).

This study is congruent with the study by Al Hadidi[25] which stated that the age and experience does not play an important role in specifying the teachers knowledge and training skills.

The researchers indicate the present of statistical significance related to teacher characteristics might be due to the absent of knowledge and training skills as it for the blind and partially sighted teachers who are the target category. They own their students characteristics. In other words, they don’t need training on Braille system and tailor or to know the cause of visual impairment. The opposite is said about the sighted teachers who form a different category. They have characteristics dissimilar with the target group, so that they need knowledge and skills more than their counterpart. In other words, the teacher doesn’t know who to use Braille system for reading and writing, or the art of orienting and transportation.

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**5. RECOMMENDATION**

According to the study results the researcher recommended the following point to improve the teachers’ competencies.

1. Develop special educational system through criteria and standards and competencies for the teachers of visually impaired students.
2. Correlate between knowledge and practice in preparing special education teachers specialized visual impairments and blind.
3. Develop continuing educational training programs during their work.
4. Follow up the programs objectives in the practicum.
5. The mangers and the Principals of the special education institutions and schools should actually be involved in the programs.

**CONFLICTS OF INTEREST DISCLOSURE**

The authors declare that there is no conflict of interest.

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